KONGSKILDE

Suction Blowers









Kongskilde Suction Blowers – a Flexible and Dependable Conveying System

Kongskilde has been developing and manufacturing grain blowers since 1949 and is today one of the leading producers of suction blowers world-wide.

Kongskilde offers a wide range of electrical and tractor powered suction blowers with capacities up to 120 tons of grain per hour. There is a suitable blower for every job.

With the Kongskilde OK pipe system it is easy and quick to establish temporary and permanent pipelines.



SupraVac 2000 is the latest member of Kongskildes large product family of suction blowers.

With a capacity of up to 120 tons/hour the SupraVac 2000 quickly loads even the largest farm trailers and trucks.



The well-known SUC TR trailer models with loading equipment available in 3 different sizes.



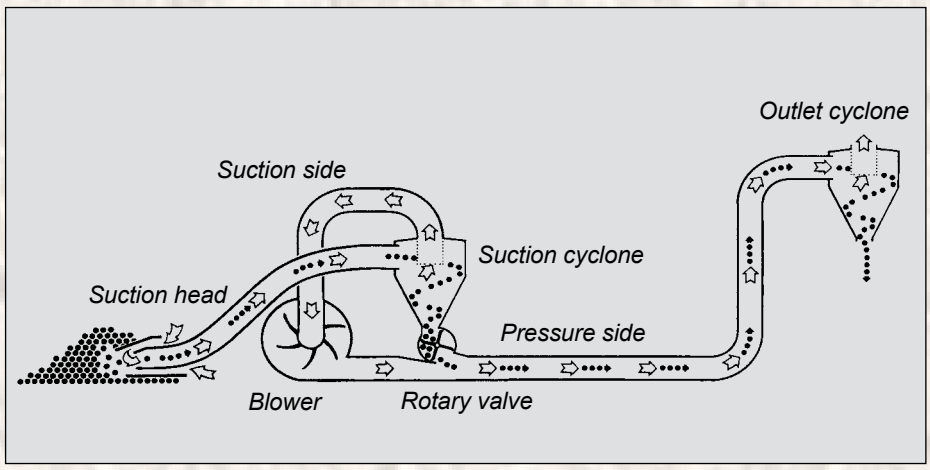
Electrical powered suction blowers type SUC-E are often used for permanent conveying systems. Choose between 5 different sizes with capacities up to 33 tons/hour.



Tractor powered suction blowers type SUC-T mounted on the lift arm and driven by the PTO shaft. Available in 2 sizes with a capacity of up to 33 tons/hour.

How a Suction Blower Works

A mix of grain and air is suck in on the blowers suction side. This is conveyed into to the suction cyclone, where the grain and air are separated. The grain drops into the rotary valve whereas the air continues into the blower. The rotary valve forwards the grain into the pipeline on the pressure side of the blower. When the grain reaches the outlet cyclone, this cyclone slows down the speed of the grain before the grain is dropped out of the outlet. The air is blow out of the top of the outlet cyclone.











Suction Blowers – a Variety of Opportunities

Suction blowers can be used for a variety of conveying tasks in the field and home on the farm. They are used for sucking crops from heaps and out of pits and blow it directly on a truck, into a silo or an on-floor-storage system. The suction blower are also used for emptying the storage or silo again. The suction blowers can blow vertically and horizontally. As long as there is plenty grain at the suction head the suction blower takes care of the rest.











Tractor Powered Suction Blowers Type SupraVac 2000

The SupraVac 2000 is the ideal suction blower for today's farmer and commercial users. The SupraVac 2000 offers a flexible conveying solution with truck loading capacities up to 120 tons per hour.

The PTO driven SupraVac 2000 requires 170hp. The hydraulic folding boom allows for quick positioning for loading use and conveniently locks into place for transport and storage.

For storage loading duties, pipes are quickly connected to the SupraVac 2000 at the rear of the machine to blow into grain bins, flat storage or sealed tower silos. The SupraVac 2000 uses OK200 piping for maximum capacity. The SupraVac 2000 is capable of using existing OK160 Kongskilde pipe lines on storage structures at reduced capacity.



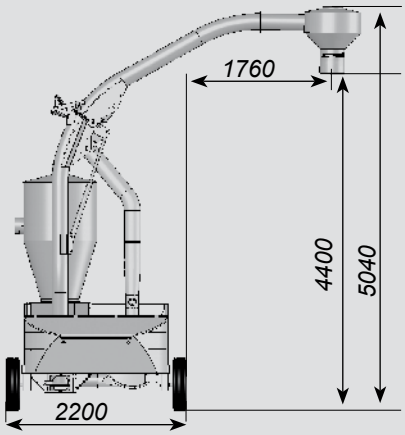
SupraVac 2000.



SupraVac 2000 with the loading equipment in transport position.

Technical Data	SupraVac 2000
PTO power, recommended min. hp/kW	170/125
PTO shaft, rpm	1000
PTO shaft, dimensions (tractor)	1 3/8" 21 splines
Weight, kg	1600
Air flow rate (blower) max. m3/h	3300
Conveying pipes, type (suction side)	OKR
Conveying pipes, type (pressure side)	OK/OKR
Conveying pipes, diameter mm	200

SupraVac 2000



Tractor Powered Suction Blowers Type SUC-T and SUC-TR

Kongskildes tractor-powered suction blowers type SUC-T are mounted on the tractor lift arm and driven by the PTO shaft. Since no separate electrical power source is required this type can be used in many places. The SUC-T is available in 2 sizes with conveying capacities up to 33 tons/hour.

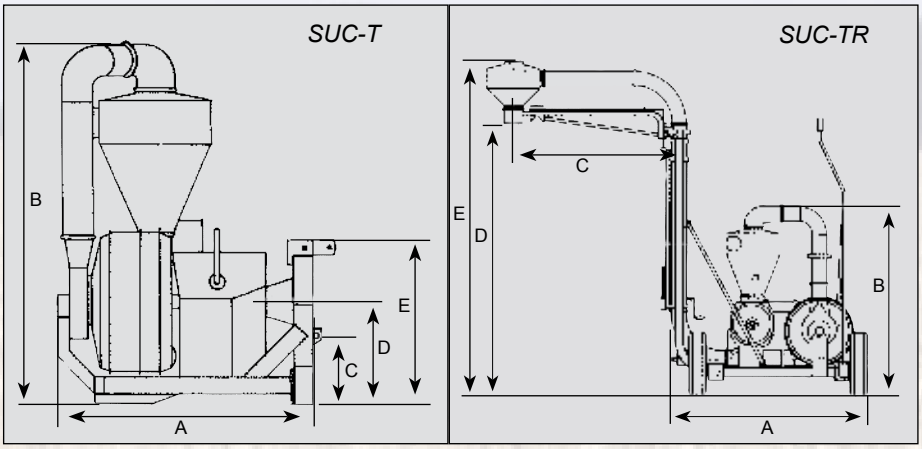
The suction blowers SUC-TR are trailer models with loading equipment and powered via the PTO shaft. These models are for loading trailers directly from the field, on-floor-storage or silos. They can also be used for a varity of other jobs where a flexible high-capacity conveying system is required The SUC-TR is available in three different sizes with conveying capacities up to 64 tons/hour.



SUC-T	300*	500*
A	1355	1360
B	1440	1900
C	515	360
D	670	570
E	995	820

SUC-TR	500*	500**	700**	1000**
A	2100	2100	2100	2460
B	2130	2130	2550	2780
C	1690	1690	1690	2090
D (min/max)	2870/3840		2985/4395	3010/4420
E (min/max)	3620/4590		3635/5045	3660/5070

SUC 500/700/1000 TR: If the wheel arms are inverted, the blower will be lowered by 110 mm.
*) 540 rpm **) 1000 rpm



Technical Data	SUC 300T	SUC 500T	SUC 500TR		SUC 700 TR	SUC 1000TR
PTO power, recommended min. hp/kW	45/34	65/48	65/48	65/48	85/62	120/90
PTO shaft, rpm	540	540	540	1000	1000	1000
PTO shaft, dimensions (tractor)	1 3/8" 6 splines	1 3/8" 6 splines	1 3/8" 6 splines	1 3/8" 21 splines	1 3/8" 21 splines	1 3/8" 21 splines
Weight, kg	350	595	820	730	770	1050
Air flow rate (blower) max. m3/h	1800	2000	2000	2000	2000	2000
Conveying pipes, type	OK/OKR	OK/OKR	OK/OKR	OK/OKR	OK/OKR	OK/OKR
Conveying pipes, diameter mm	160	160	160	160	160	160

Electrical-Powered Suction Blowers Type SUC-E

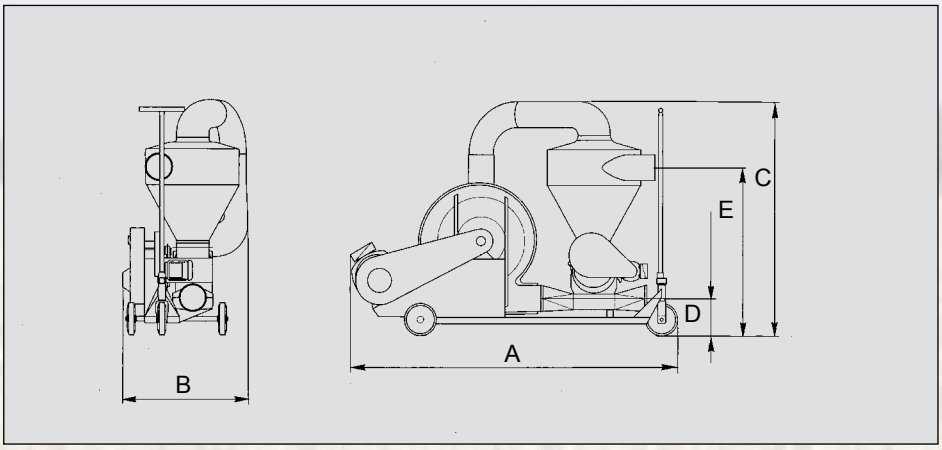
Electrical-powered suction blowers are often used for permanent conveying systems. They can be used indoors and outdoors and are suitable for all types of conveying jobs.

The wheels on the SUC-E makes it easy to move this suction blower from place to place. With the five different sizes you can choose the one that fits your purpose with regards to the capacity as well as the electrical power supply available on the farm. The smallest model has a 10 hp (7,5 kW) motor and the largest model a 50 hp (37 kW) motor – this model has a conveying capacity of up to 33 tons/hour.



SUC 300E

SUC-E	100	150	200	300	500
A	2040	2050	2050	2090	2235
B	775	775	775	1075	913
C	1460	1460	1460	1550	1820
D	230	230	230	313	308
E	1040	1040	1040	1150	1418



Technical Data	SUC 100E	SUC 150E	SUC 200E	SUC 300E	SUC 500E
Motor requirement (blower), hp/kW	10/7,5	15/11	20/15	30/22	50/37
Motor requirement (rotary valve), hp/kW	0,5/0,37	0,5/0,37	0,5/0,37	1,5/1,1	2,0/1,5
Min. voltage, V/hz	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50
Amperage, A	16	22	30	44	73
Min. fuse A (recommended)	25	35	50	63	100
Weight incl. motors, kg	210	243	285	477	668
Air flow rate, max. m3/h	1800	1800	1800	1800	2000
Conveying pipes, type	OK/OKR	OK/OKR	OK/OKR	OK/OKR	OK/OKR
Conveying pipes, diameter mm	160	160	160	160	160
Control box with automatic star-delta switch*	Yes	Yes	Yes	Yes	Yes

** Blowers with motor only*

The above data apply for a main voltage of 3x400V/50Hz. Suction blowers for different main voltages can be offered upon request.

Suction Heads

The suction blowers can be equipped with different suction heads depending on the job.
With the right suction head for the job in question the capacity will be higher and the handling easier.

You can choose between five different types of suction heads. These heads are available in various versions depending on the pipe diameter and the suction blower model in question.



Universal suction head – an all-round suction head, which can be used for most jobs. With this head high conveying capacities can be obtained.



Long suction head – for suction of grain out of pits with a high conveying capacity. This head can be prolonged with 65cm extensions.



Round suction head – for sucking grain from heaps and silos via a hole in the silo wall. High conveying capacities can be reached using this head.



Suction head for cleaning purposes – this is for sucking residual grain from the floor. The head is equipped with wheels and swivel link between suction head and hose for easy handling. Has a slightly lower conveying capacity.



Short suction head – connected with an OK 160 pipe stub for suction directly from a truck or on-floor-storage wall. Gives slightly lower conveying capacities.
NB: mount a shutter to prevent the grain from floating out.

Conveying Crops with a High Content of Dust

Crops containing a lot of abrasive particles e.g. earth dust, may cause increased wear of the blower unit, thus reducing the lifetime of the machine. Kongskilde has developed a Fan Guard system to prevent this. The Fan Guard system removes dust and impurities from the conveying air before the air enters the blower.

The Fan Guard system operates with a dust cyclone, which is mounted separately on the suction blower. The dust is removed from the air and passed on into an easily emptied bucket.

The Fan Guard system can be supplied for SUC 1000 TR and SupraVac 2000.



Conveying Capacities

Conveying capacities for pneumatic conveying systems depend on the type of crop and the pipe layout.

The conveying capacities for the examples shown on this page apply for wheat with a gravity of 750 kg/m^3.

The examples show capacities for the different piping layouts illustrated a various conveying distances. Conveying Distance: The total length of all the horizontal and vertical piping on both the suction and pressure side including the suction hose.

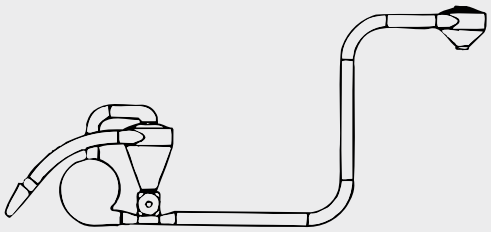
Bends and suction heads are not included. If using the long suction head 1,5 m must be added to the conveying distance, and for every extension further 0,65 m must be added.

The capacities for the SupraVac 2000 apply when using Kongskildes OK200 pipe system (diameter 200mm). For all the other suction blowers the capacities apply when using Kongskildes OK160 pipe system (diameter 160mm).

Conveying Capacities (tons/hour)

Suction pipeline
1 pcs. universal suction head
1 pcs. 2 m steel flex hose

Pressure pipeline
A number of meters of horizontal piping
4 m vertical piping
2 pcs. 90° bends
1 pcs. outlet cyclone



Conveying distance

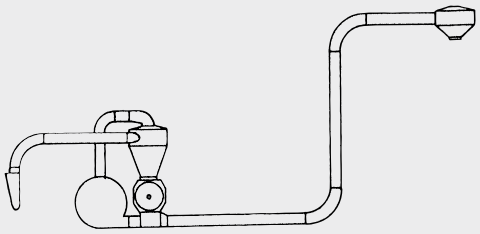
(meter)	10	20	30	40	50	60	80	100
SUC 100	6,8	6,0	5,2	4,6	4,0	3,5	2,7	2,0
SUC 150	11,5	10,3	9,3	8,4	7,6	6,9	5,7	4,8
SUC 200	14,7	13,3	12,0	11,0	10,0	9,2	7,8	6,7
SUC 300	19,6	17,7	16,0	14,6	13,3	12,3	10,5	9,0
SUC 500	31,8	28,9	26,5	24,4	22,6	21,0	18,3	16,1
SUC 700	42,1	38,6	35,5	32,9	30,6	28,6	25,1	22,4
SUC 1000*	61,0	56,0	51,5	47,7	44,4	41,5	36,4	32,5
SupraVac 2000	111,0	91,0	82,0	71,0	64,0	59,0	52,0	43,0

*) Spec. round suction head.

Conveying Capacities (tons/hour)

Suction pipeline
1 pcs. vertically placed universal suction head
1 pcs. 90° bends
3 m horizontal piping

Pressure pipeline
A number of metres of horizontal piping
4 m vertical piping
2 pcs. 90° bends
1 pcs. outlet cyclone



Conveying distance

(meter)	10	20	30	40	50	60	80	100
SUC 100	7,1	6,2	5,4	4,7	4,1	3,6	2,7	2,0
SUC 150	12,1	10,7	9,6	8,6	7,8	7,0	5,8	4,8
SUC 200	15,7	13,9	12,5	11,2	10,1	9,1	7,5	6,2
SUC 300	20,4	18,2	16,4	14,9	13,6	12,5	10,6	9,1
SUC 500	33,2	30,1	27,4	25,1	23,1	21,4	18,6	16,3
SUC 700	44,2	40,3	36,9	34,0	31,5	29,3	25,6	22,7
SUC 1000*	64,0	58,4	53,5	49,3	45,7	42,5	37,1	32,9
SupraVac 2000	120,0	106,0	92,0	81,0	71,0	64,0	55,0	50,0

*) Spec. round suction head.

The capacities stated are only guidelines, because other aspects can influence the capacity.
Above capacities are with the stated suction pipeline lengths and extended pressure pipelines.

Kongskilde Suction Blower and Kongskilde OK Piping - A Perfect Combination

With Kongskilde's OK pipe system, temporary as well as permanent pipelines are easily and quickly installed. The OK pipe system is a modular system with a wide assortment of straight pipes, telescoping pipes, elbows, diverters and cyclones in standard and heavy duty thickness'. The OK components are manufactured with rolled lips that are connected with quick release or bolt style clamps.

Different Pipe Diameters

For the SupraVac 2000 OK 200 pipes are used (diameter 200mm) in order to obtain the best possible conveying capacity. Transitions from OK 200 to OK160 (diameter 160mm) can be used, but will reduce the conveying capacity. For all other Kongskilde suction blowers the OK 160 pipe system is used.



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