Pneumatic Grain Conveying

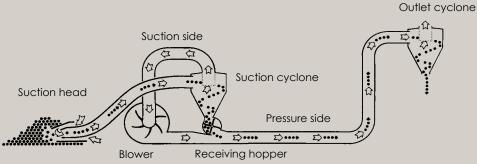


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Suction Blowers





How a suction blower works

The suction blower is a unique solution when flexible conveying is needed and is used everywhere for transporting grain. It sucks grain directly from the floor or pit through a flexible or fixed pipe system.

At the blower, the grain is led over to the pipe on the pressure side.

Pipes, bends and diverters can be fitted so that the grain can be conveyed to its desired destination.

Benefits

- Tractor-powered models are independent of electric power supply
- Moves the grain horizontally, vertically and around corners
- Can be used in fields for loading grain
- No requirements for configuration of buildings or grain pit
- Indoor storage means that it is less exposed to the weather
- If higher capacity is needed, the suction blower can be replaced by a larger model

Electric-Powered Suction Blowers Type SUC –E





Type SUC-E is trolley mounted and easy to move.

either electric or tractor power.

electrically powered devices.



Control cabinet for automatic starting/ stopping the motor.

Kongskilde's wide range of suction blowers can be supplied for

Permanently installed conveying systems are usually based on



SUC 300E with automatic air regulation.



Belt transmission protects drive of both blower and cell wheel.

El-powered suction blower SUC -E:

- For grain transport in barns
- Capacities up to 33 t/h
- On wheels and easy to move

Technical specifications	SUC 100 E	SUC 150 E	SUC 200 E	SUC 300 E	SUC 500 E
Motor power (blower), kW/hp	7.5/10	11/15	15/20	22/30	37/50
Motor power (receiving hopper), kW/hp	0.37/0.5	0.37/0.5	0.37/0.5	1.1/1.5	1.5/2.0
Electrical connection, V/hz	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50
Total amps consumption	16	22	30	44	73
Min. amp. fusing (recommended)	25	35	50	63	100
Weight incl. motors, kg	210	243	285	477	668
Max. air output, m³/h	1800	1800	1800	1800	2000
Type of conveying pipe	OK/OKR	OK/OKR	OK/OKR	OK/OKR	OK/OKR
Diameter of the conveying pipe, mm	160	160	160	160	160
Control cabinet with automatic star/delta starter*	Yes	Yes	Yes	Yes	Yes

^{*} Only motorised blowers

The above data refer to electrical connection 3x400V/50Hz. For other power supplies please contact Kongskilde.

Selecting the Suction Head for the Suction Blower



The suction head makes the difference The suction blower can be used with different types of suction heads to suit any specific conveying job.



Universal Suction head:A flexible solution for versatile applications.



Long suction head:Suitable for conveying from grain pits.



Round suction head:For suction from opening in the silo wall.



Suction head for cleaning purposes: Easily picks up the last remnants of grain on the floor.



Short suction head:For conveying directly from a vehicle or floor drying wall

Conveying of Crops with High Dust Content



Crops sometimes contain abrasive particles such as soil dust, and it is inevitable that some of the dust will be sucked through the blower. When working at high capacities, large amounts of dust may be carried with the grain.

Excessive wear of the blower is avoided by fitting the Fan Guard system, which filters out the dust before it enters the blower. SUC 1000 TR and SupraVac 2000 are available with the Fan Guard system.

Conveying Capacities for Suction Blowers

Example 1

Suction pipeline

1 x universal suction head 1 x 2 m steel flex hose

Pressure pipeline

A number of metres of horizontal piping 4 m vertical piping

2 x 90° bends



Conveying distance									
Model	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	

Example 2

Suction pipeline

1 x vertically-fixed universal suction head

1 x 90° bends

1 x 2 m horizontal piping

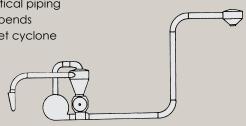
Pressure pipeline

A number of metres of horizontal piping

4 m vertical piping

2 x 90° bends

1 x outlet cyclone



Conveying distance				Metres					
Model	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	

Conveying capacities in the tables are listed as wheat as t/hour. The examples are for guidance purposes, as several factors influence the capacity. The capacities in the tables apply for the suction length indicated above the table.

Use the wide range of OK piping components, that are available and take advantage of the pipe components' easy connection method.

Capacities

High performance is achieved when:

- The flexible modular OK piping system is used.
- The correct pipe diameter is used.
- The grain is dry i.e. max. 15% H₂O.
- OK 200 piping for SupraVac
- OK 160 piping for all other models

^{*)} Spec. round suction head.