

Elektror Side Channel Blowers

- NON-CONTACT OPERATING PRESSURE AND VACUUM GENERATORS
- COMPACT DESIGN
- LOW NOISE LEVEL
- MAINTENANCE FREE
- COMPLETELY OIL-FREE

DESIGN

Elektror side channel blowers are directly driven by asynchronous squirrel cage motors of Elektror's own make. In addition, a range of models without motor are available for external drive by means of V-belt or other drive elements. Amply dimensioned sealed bearings ensure maintenance-free operation. As standard equipment, silencers are mounted on the discharge and intake side, thereby reducing the noise level considerably. All blower and motor parts are cast aluminium and therefore highly resistant to corrosion. The ribs on the blower housing provide for good heat dissipation, further assisted by the air flow of the motor fan. All blowers are equipped generally with base plate on the silencer and with rubber feet for mounting in a vertical or horizontal position.

INSTRUCTIONS FOR OPERATION

Elektror side channel blowers may be operated pulsation-free over the whole range of their performance curves. They are designed for the conveying of air as well as for generating pressure or vacuum. The use of the units for aggressive and toxic media, air of high humidity and medium temperatures exceeding 40 degrees C is subject to a detailed clarification. The conveying of explosive gases is not permitted. The units are to be installed in weather protected places and must not be exposed to vibrations or shocks. If the medium to be conveyed contains solid particles or other pollutions, they are to be removed before entering the blower by installing a filter, or similar device on the intake side.

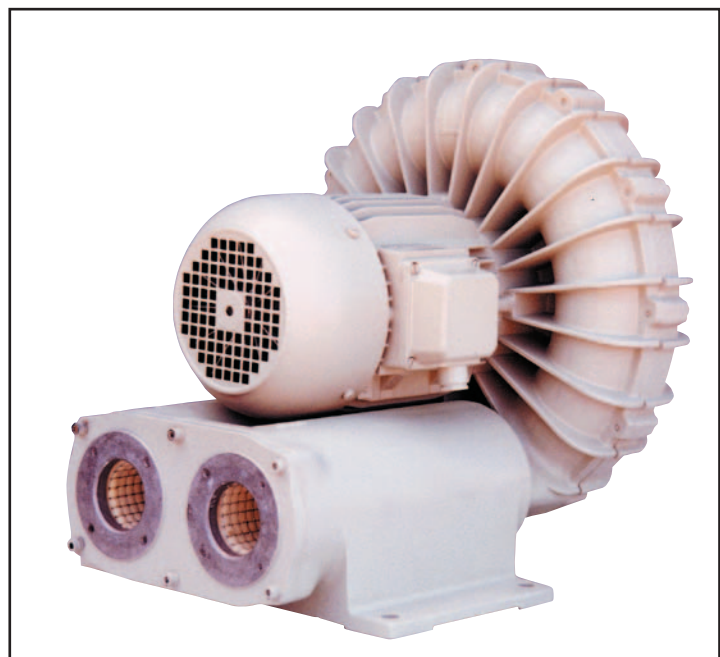
Blowers with limited performance curves in the high pressure/vacuum range should be fitted - depending on the application - with the appropriate pressure/vacuum relief valves in order to avoid an overload of the motor. Pressure relief valves can be mounted directly on the discharge port, vacuum relief valves directly on the intake port of the blower. Adjustment of the permitted maximum pressure of the blower is made in the factory. It is possible to adjust the valves below the maximum pressure.

An increase of the volumetric flow or the pressure may be achieved by connecting two blowers either in series or in parallel. If connected in parallel the volumetric flow rates are added whereas the pressure remains the same. If connected in series, the pressures are added whereas the volumetric flow remains the same.

Units above 3.5 kW must be started in Y/Δ configuration. As a standard, the motor insulation is class B and enclosure IP54. Permitted ambient temperatures range from -20°C to +40°C. Special voltage or frequency, improved enclosure IP55, Exe, tropical and humidity insulation, thermal class F as well as full motor protection may be supplied on request.

FIELDS OF APPLICATION

- * *Pneumatic air tube systems*
- * *Pneumatic conveying systems*
- * *Vacuum cleaning systems*
- * *Vacuum lifting gear*
- * *Vacuum transport systems*
- * *Bottle-filling stations*
- * *Printing machines*
- * *Screen printing machines*
- * *Air-cushion tables*
- * *Drying systems*
- * *Welding fume extraction*
- * *Textile machinery*
- * *Agricultural machines*
- * *Dental equipment*
- * *Water Fish pond aeration*
- * *Aquarium aeration*
- * *Aeration of galvanic tanks.*



Motorised

AUTOMATIC REVERSING VALVES

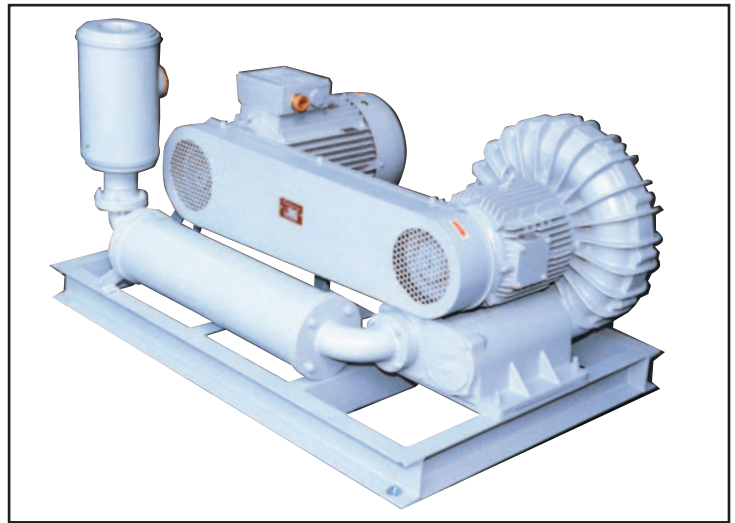
Elektror reversing valves are motor driven and are mounted directly onto the side channel blowers. They allow for generating alternate pressure or vacuum in pipes, installations or systems within the shortest possible time, or to reduce pressure or vacuum to zero, without having to change the direction of rotation of the blower nor switching it off. The non-contact actuating piston is driven by a reversible synchronous gear motor, which is set into the required position by pole reversal. All reversing valves are cast aluminium and therefore highly resistant to corrosion. One-side sealed, deep groove ball bearings are used for the bedding of the actuating piston. Dimensions on reversing valves are available on request.

ACCESSORIES

A wide variety of accessories allow for convenient installation of the Elektror side channel blowers. These include filters, silencers, pressure or vacuum relief valves, hose connectors, welding or threaded flanges, and throttle valves.



Bare Shaft



Belt Driven Package with Inlet Filter & Silencer



Pressure & Vacuum Relief Valve



Reversing Unit



Hose Connector



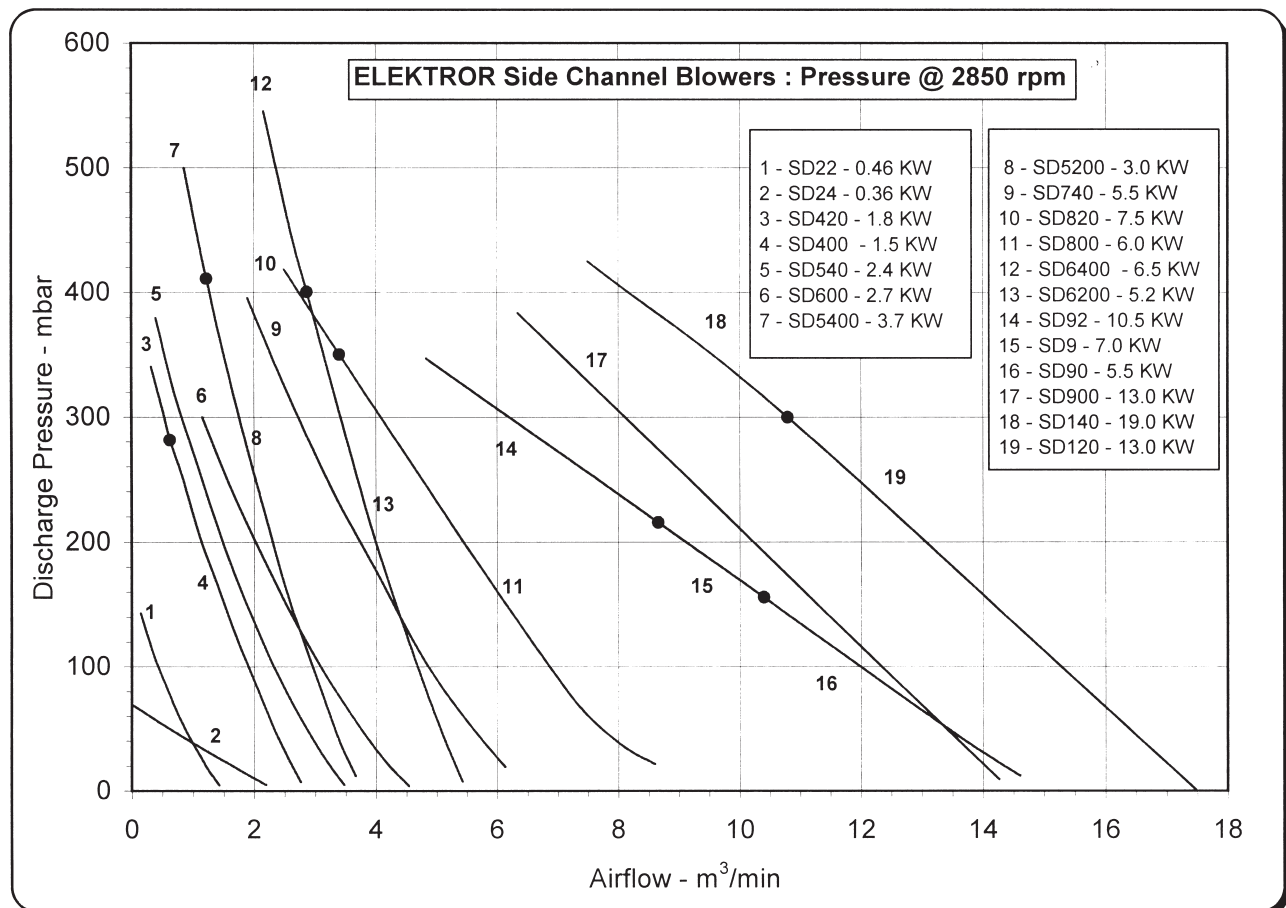
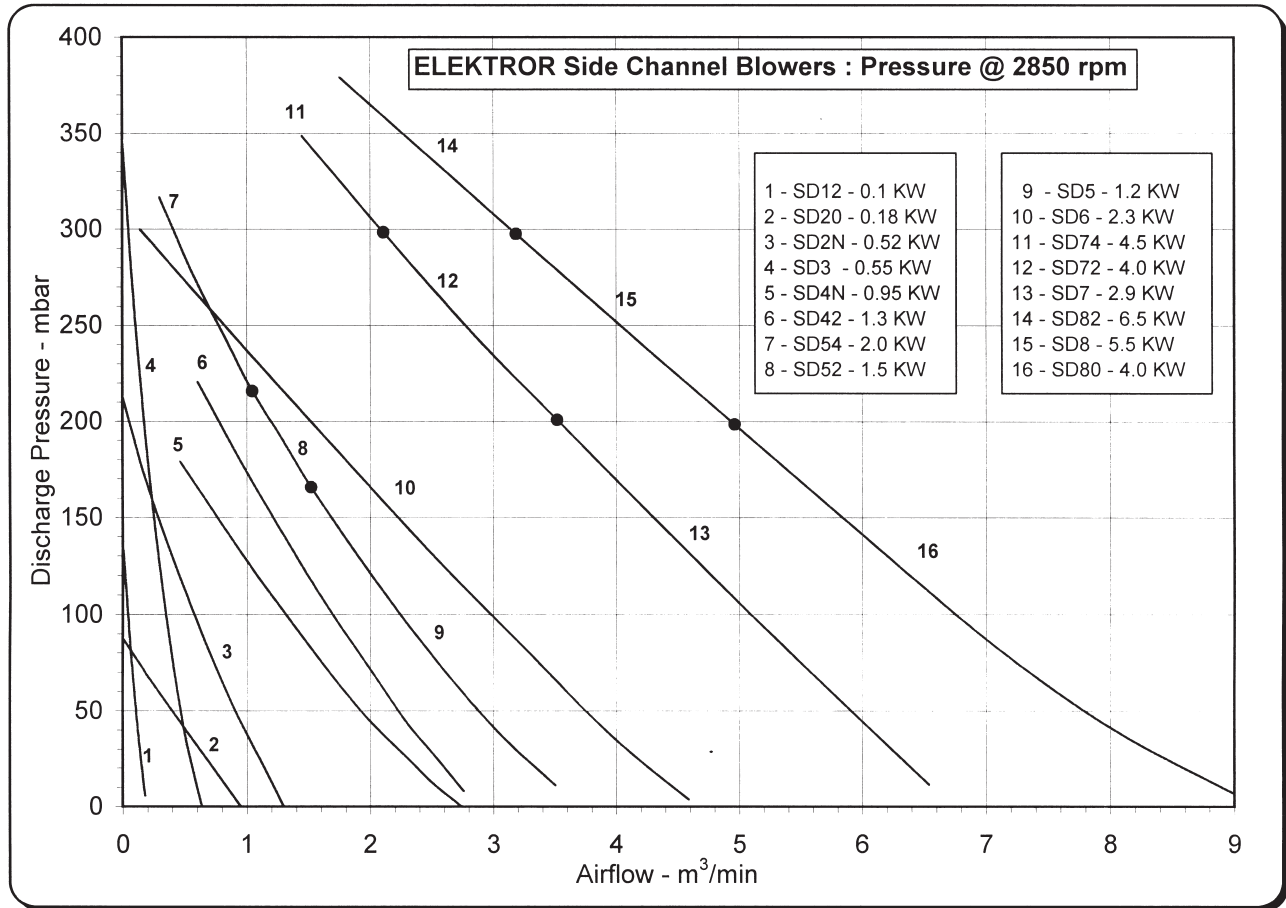
Threaded Flange



Welding Flange

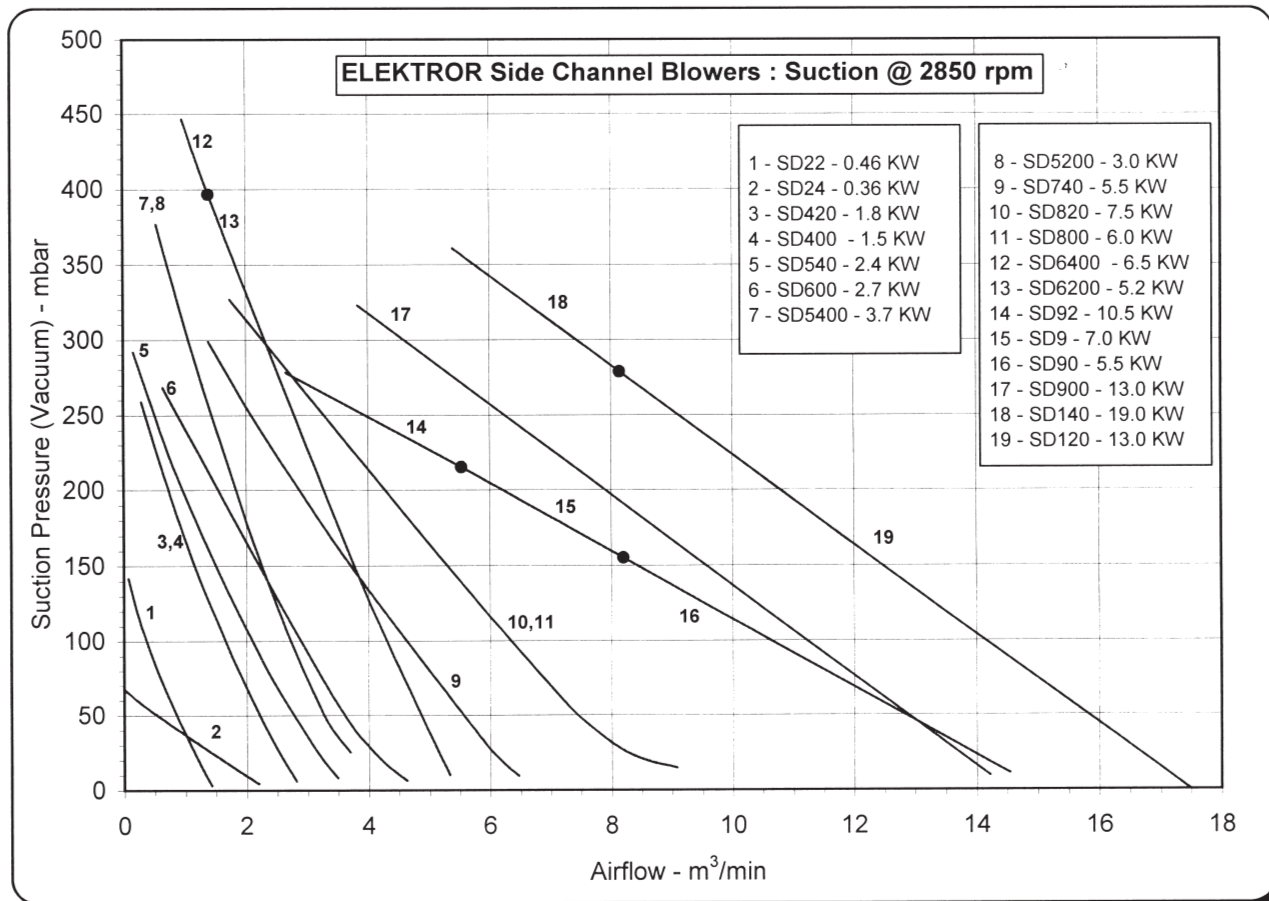
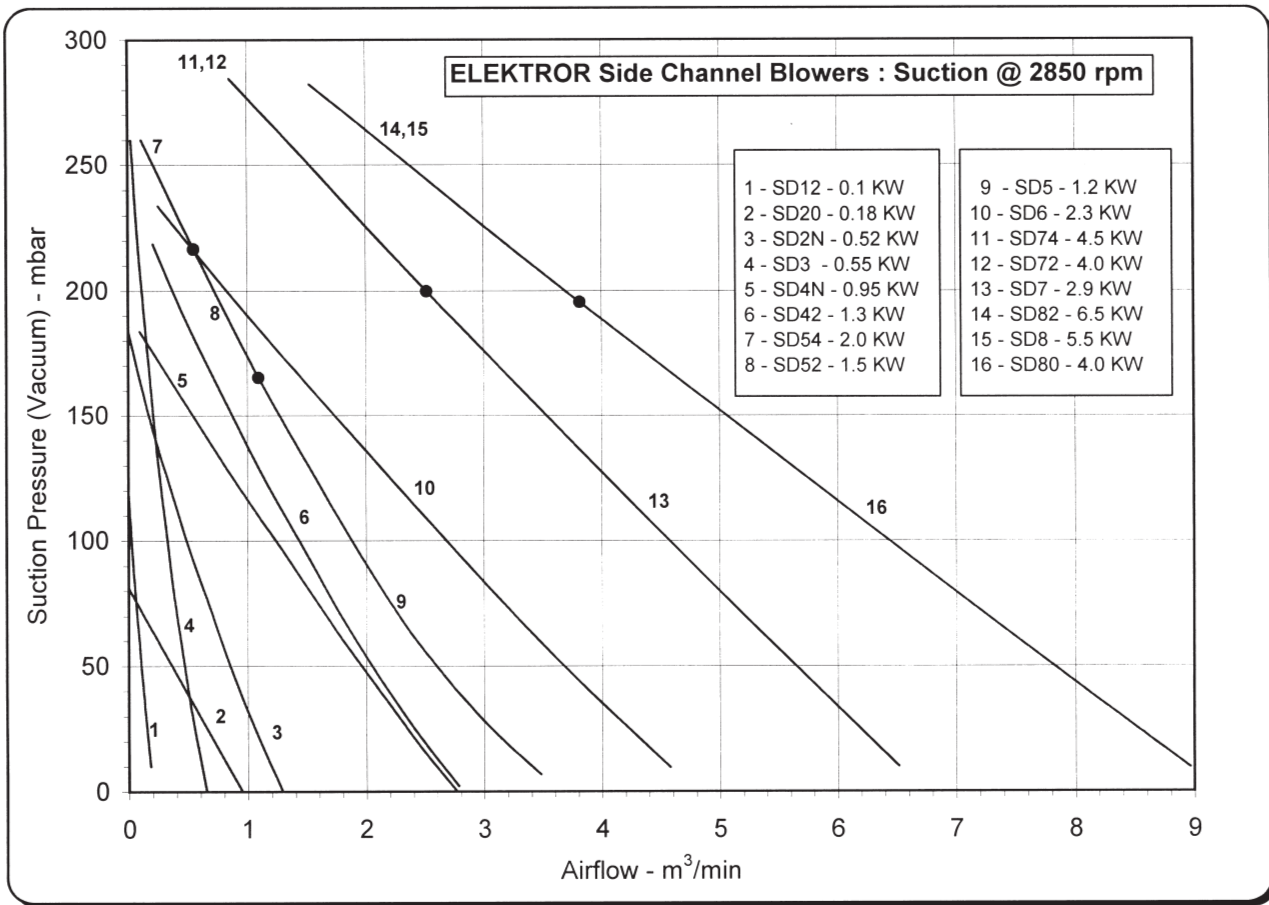


Throttle Valve



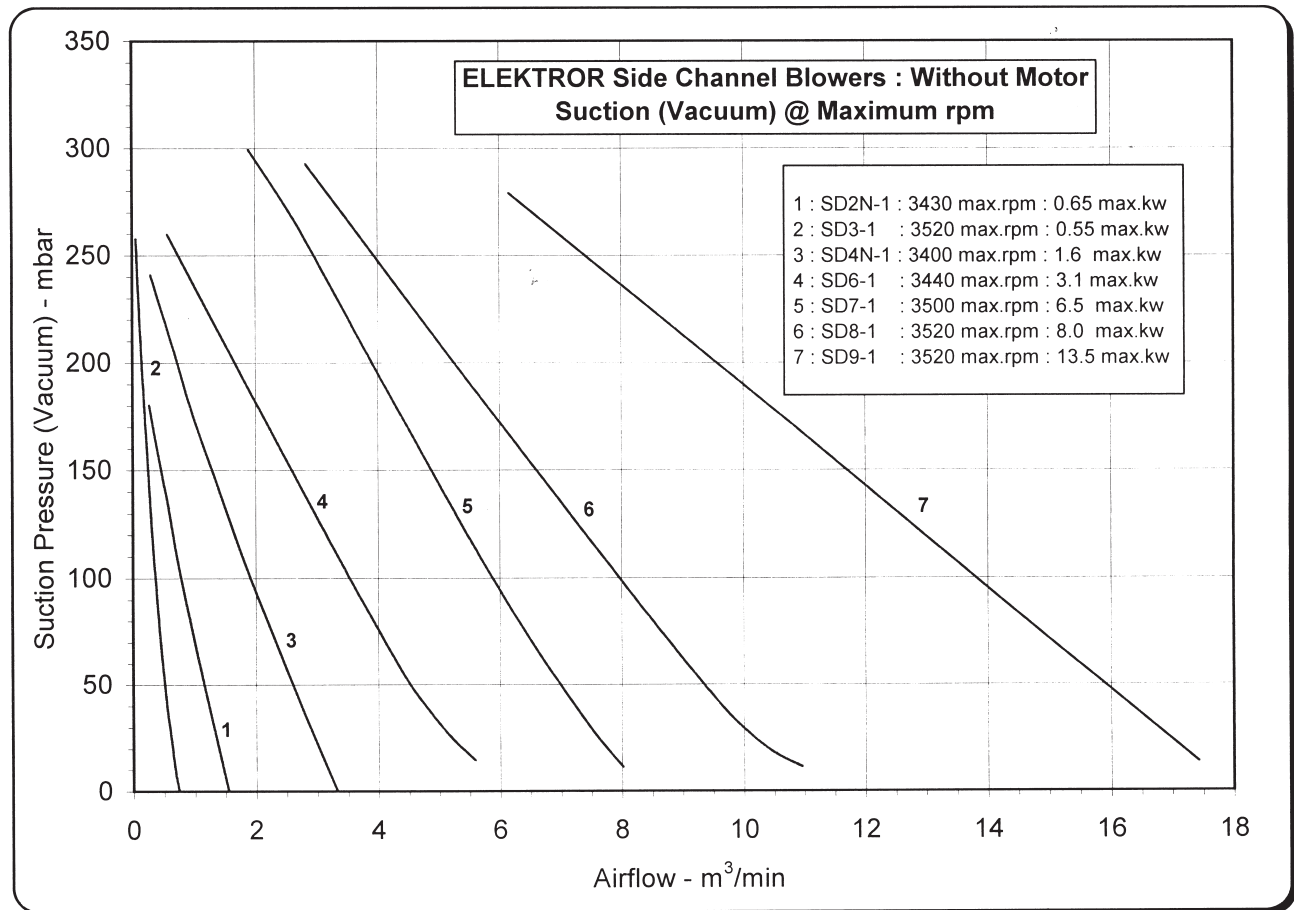
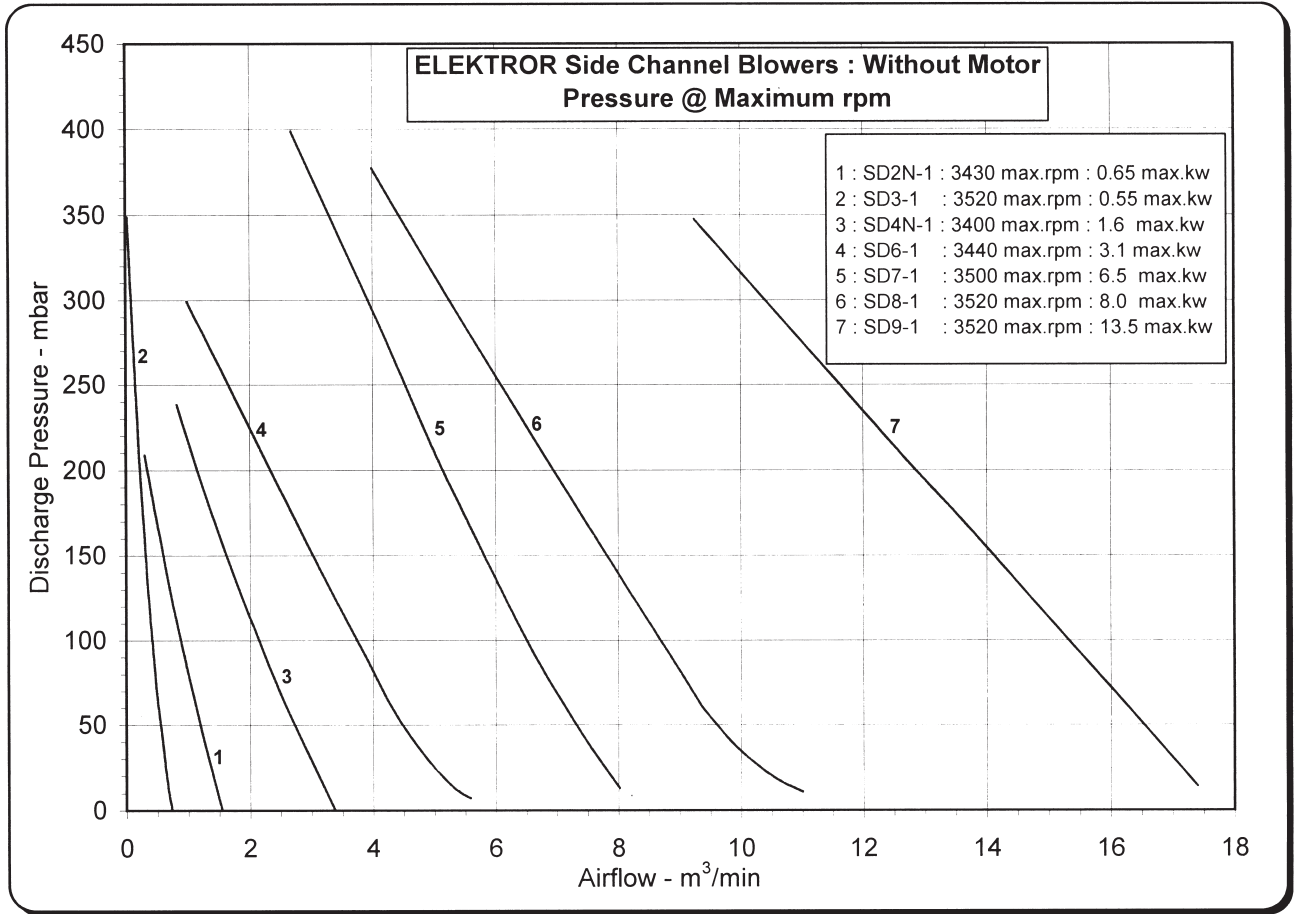
1 mbar = 0.1 kpa = 0.4 in.wg

1m³/min = 35.3 cfm = 60 m³/hr = 16.67 l/s



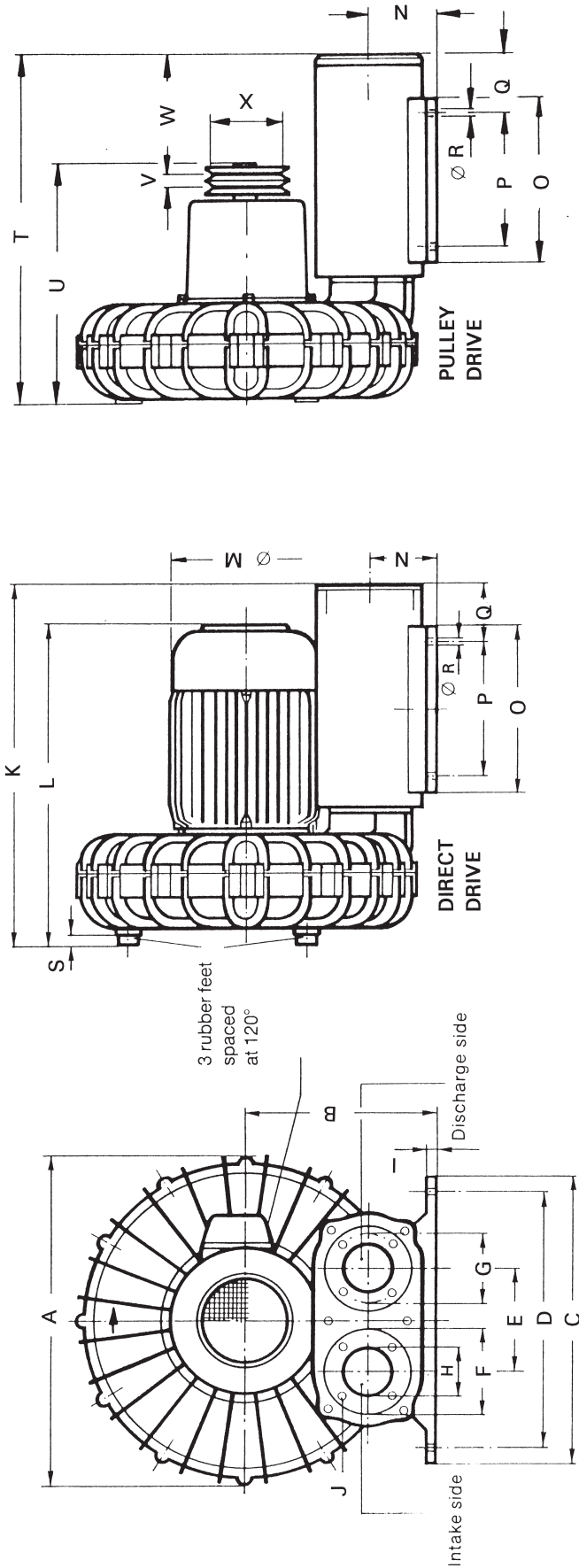
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ELEKTOR Side Channel Blowers

Dimensions in mm - subject to modifications

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	MOTOR KW	
DIRECT DRIVE																					
SD20, SE20	224	121	215	190	80	56	30	10	M5			247	123	34	106	70	15	9		0.18,0.19	
SD22, SE22	244	135	230	205	90	58	37	10	M5			266	138	47	137	85	37	9		0.46,0.48	
SD24, SE24	282	165	250	220	90	79	68	45	M5		323	284	123	60	140	110	73	9	17	0.36/0.34	
SD2n, SE2n	296	160	220	200	90	70	58	38	M5		333	303	138	52	120	100	96	9	17	0.52,0.52	
SD3, SE3	282	160	220	200	90	60	48	24	M5		365	302	138	52	120	100	96	9	17	0.55,0.55	
SD4n, SE4n, SD42, SE42, SD400, SD420	358	196	250	220	90	79	68	45	M5		357	332,357	156,176	60	150	120	66	11	17	0.95,0.95,1.3,1.3,1.5,1.8	
SD5, SE5, SD52/SD54/SD540	386	225	350	310	125	100	85	55	M6		420	345,370	156,176	80	200	160	72	13	17	1.2,1.3,1.5,2.0,2.4	
SD5200, SD5400	420	260	350	310	125	100	85	55	M6		501	463,478	194,218	90	200	160	90	13	20	3.0,3.7	
SD6, SD600	396	225	350	310	125	100	85	55	M6		435	383	176	80	200	160	72	13	17	2.3,2.7	
SD6200, SD6400	470	302	420	365	145	130	110	65	M8		686	510,528	218,258	102	300	260	143	14	20	5.2,6.5	
SD7, SD72, SD74, SD740	460	260	420	365	145	130	110	65	M8		505	437,475	194,218	85	300	260	143	14	20	2.9,4.0,4.5,5.5	
SD80, SD8, SD82	500	282	420	365	145	130	110	65	M8		530	472,510	218,258	85	300	260	143	14	20	4.0,5.5,6.5	
SD800/SD820	500	282	420	365	145	130	110	65	M8		630	530,568	258	85	300	260	143	14	20	6.0,7.5	
SD90, SD9, SD92, SD900	560	325	450	400	160	145	118	80	M8		695	559,597	258	95	430	380	58	17	25	5.5,7.0,10.5,13.0	
SD120, SD140	600	336	500	460	207	170	150	100	M6		680	658	310	105	410	410	44	17		13.0,19.0	
WITHOUT MOTOR																					
SD2n-1	296	160	220	200	90	70	58	38	M5		52	120	100	96	9	316	220	109	100	1*SPZ	
SD3-1	282	160	220	200	90	60	48	24	M5		52	120	100	96	9	348	219	146	100	1*SPZ	
SD4n-1	358	196	250	220	90	79	68	45	M5		60	150	120	66	11	340	241	109	100	1*SPZ	
SD6-1	396	225	350	310	125	100	85	55	M6		80	200	160	72	13	418	287	12	146	100	2*SPZ
SD7-1	460	260	420	365	145	130	110	65	M8		85	300	260	43	14	485	413	12	83	100	2*SPZ
SD8-1	500	282	420	365	145	130	110	65	M8		85	300	260	43	14	510	510	12	24	160	4*SPZ
SD9-1	560	325	450	400	160	145	118	80	M8		95	430	380	58	17	670	556	12	138	160	4*SPZ

ELEKTOR - ACCESSORIES
GROUP A SD 20, SE 20

GROUP B SD 22, SE 22

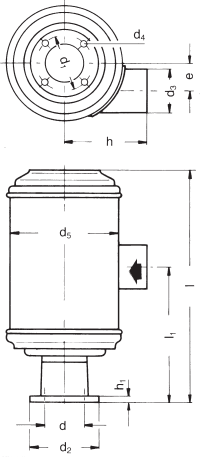
GROUP C SD 2n, SE 2n, SD 2n-1

GROUP D SD 3, SE 3, SD 3-1

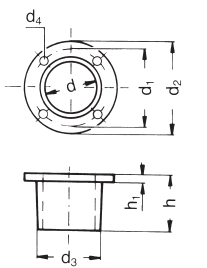
GROUP E SD 24, SE24, SD 4n, SE 4n, SD 4n-1, SD 42, SE 42, SD 400, SD 420

GROUP F SD 5, SE 5, SD 52, SD 54, SD 540, SD 5200, SD 5400, SD 6, SD 6-1, SD 600

GROUP G SD 6200, SD 6400, SD 7, SD 7-1, SD 72, SD 74, SD 740, SD 80, SD 8, SD 8-1, SD 82, SD 800, SD 820

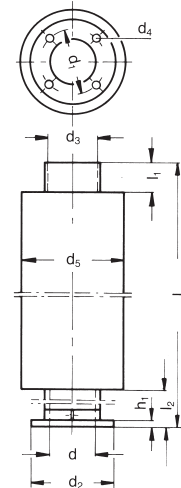
GROUP H SD 90, SD 9, SD 9-1, SD 92, SD 900


Fine filters with connector											
Group	l	l ₁	d	d ₁	d ₂	d ₃	d ₄	d ₅	e	h	h ₁
A	290	192	38	56		37	5.5	100	28	75	12
B	290	192	37	58		37	5.5	100	28	75	12
C	231	130	38	58	70	37	5.5	100	28	75	6
D	251	153	24	48	60	37	5.5	100	28	75	6
E	278	163	45	68	79	54	5.5	130	35	100	8
F	348	195	55	85	100	62	7	150	40	120	10
G	442	277	65	110	130	82	9	190	50	150	12
H	635	355	83	118	145	110	9	240	16	185	12



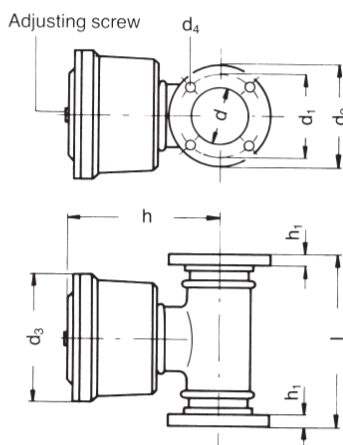
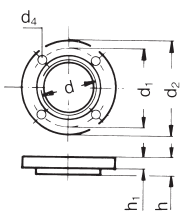
Silencers with connector										
Group	l	l ₁	l ₂	d	d ₁	d ₂	d ₃	d ₄	d ₅	h ₁
B	606	50	150	37	58		45	5.5	90	6
C	606	50	150	38	58	70	45	5.5	90	6
D	635	50	150	24	48	60	45	5.5	90	6
E	608	50	150	45	68	79	55	5.5	100	8
F	610	50	150	55	85	100	65	7	115	10
G	612	50	150	65	110	130	80	9	120	12
H	1012	50	162	80	118	145	97	9	150	12

Welding flanges					
Group	d	d ₁	d ₂	d ₄	h ₁
C	38	58	70	5.5	10
D	24	48	60	5.5	10
E	49	68	79	5.5	10
F	61	85	100	7	12
G	76.5	110	130	9	12
H	90	118	145	9	12

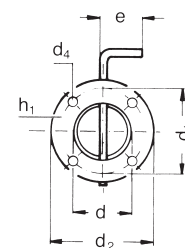


Hose Connectors							
Group	d	d ₁	d ₂	d ₃	d ₄	h	h ₁
A	30	56		41	5.5	35	6
B	37	58		45	5.5	35	6
C	38	58	70	45	5.5	35	6
D	24	48	60	30	5.5	35	6
E	45	68	79	54	5.5	50	8
F	55	85	100	65	7	50	10
G	65	110	130	80	9	60	12
H	81	118	145	97	9	60	12

Threaded flanges						
Group	d	d ₁	d ₂	d ₄	h	h ₁
A	1" BSP	56		5.5	12	
B	1.25" BSP	58		5.5	12	
C	1.25" BSP	58	70	5.5	10	10
D	0.75" BSP	48	60	5.5	10	10
E	1.5" BSP	68	79	6	15	10
F	2" BSP	85	100	7	15	10
G	2.5" BSP	110	130	9	20	12
H	3" BSP	118	145	9	20	12



Throttle valves						
Group	d	d ₁	d ₂	d ₄	e	h ₁
C	38	58	70	6	34	12
D	24	48	60	6	34	12
E	45	68	79	6	34	12
F	55	85	100	7	34	12
G	65	110	130	9	50	12
H	80	118	145	9	70	12



Pressure and vacuum relief valves								
Group	l	d	d ₁	d ₂	d ₃	d ₄	h	h ₁
E	135	45	68	79	100	5.5	120	10
F	180	53	85	100	125	7	150	10
G	205	68	110	130	145	9	178	12
H	225	80	118	145	180	9	188	12

HP Series Pressure Blowers

These centrifugal fans have radial blades and are designed for low volume, high pressure requirements. Because the blades are narrow, the impellers are structurally strong and can run at high speeds to achieve high pressures. The peak of the static pressure curve is generally quite broad, allowing a relatively wide range of air volume at small pressure changes.

Construction

Casing – heavy welded construction from plate steel. Side plates stiffened to prevent drumming. The impeller extends far into the scroll to maximise the pressure developed by impeller.

Pedestal – top & sides fabricated from heavy mild steel plate.

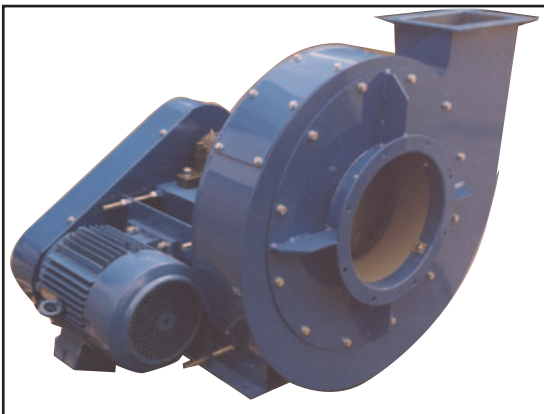
The impeller has a backplate, shroud, and blades fabricated in steel, its rigid construction will ensure many years of trouble free service.

The mechanical design can be tailored to meet different operating conditions ie. temperature, corrosion, noise, humidity, space limitation etc. the fan handing can be adapted to meet your specific requirement without restrictions.

Optional Extras – silencers, inlet filters, dampers, anti-vibration mounts, inlet elbows, matching flanges, corrosive resistant coatings, stainless steel housing & impeller, anti-sparking construction.

Applications

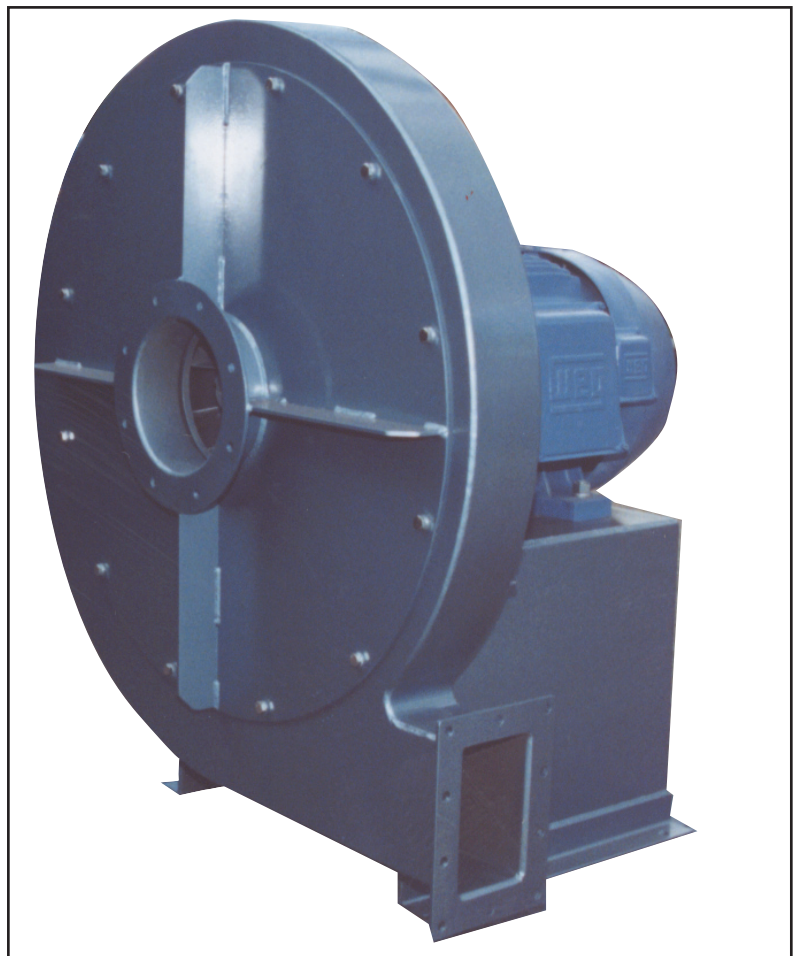
Pneumatic conveying, combustion air, product cooling, drying, water blowoff, aeration, fluidising, drying, suction, agitating, fume extraction, exhausting etc.



Arr. 9 Belt Driven



Arr. 4 Direct Driven, Heavy Duty Construction.



Arr. 4 Direct Driven

HP SERIES PRESSURE BLOWERS

