

Elektror Side Channel Blowers

- NON-CONTACT OPERATING PRESSURE AND VACUUM GENERATORS
- LOW NOISE LEVEL
- MAINTENANCE FREE
- COMPACT DESIGN
- 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. Ample 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

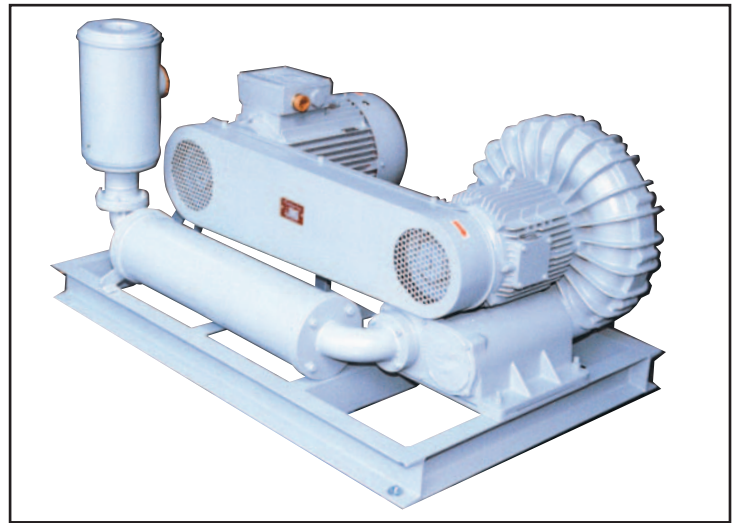
Elektor reversing valves are motor driven and are mounted directly onto the side channel blowers. They allow for generating alternate pressure or vacuum in pipes, installations or systems within the shortest possible time, or to reduce pressure or vacuum to zero, without having to change the direction 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 Elektor 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



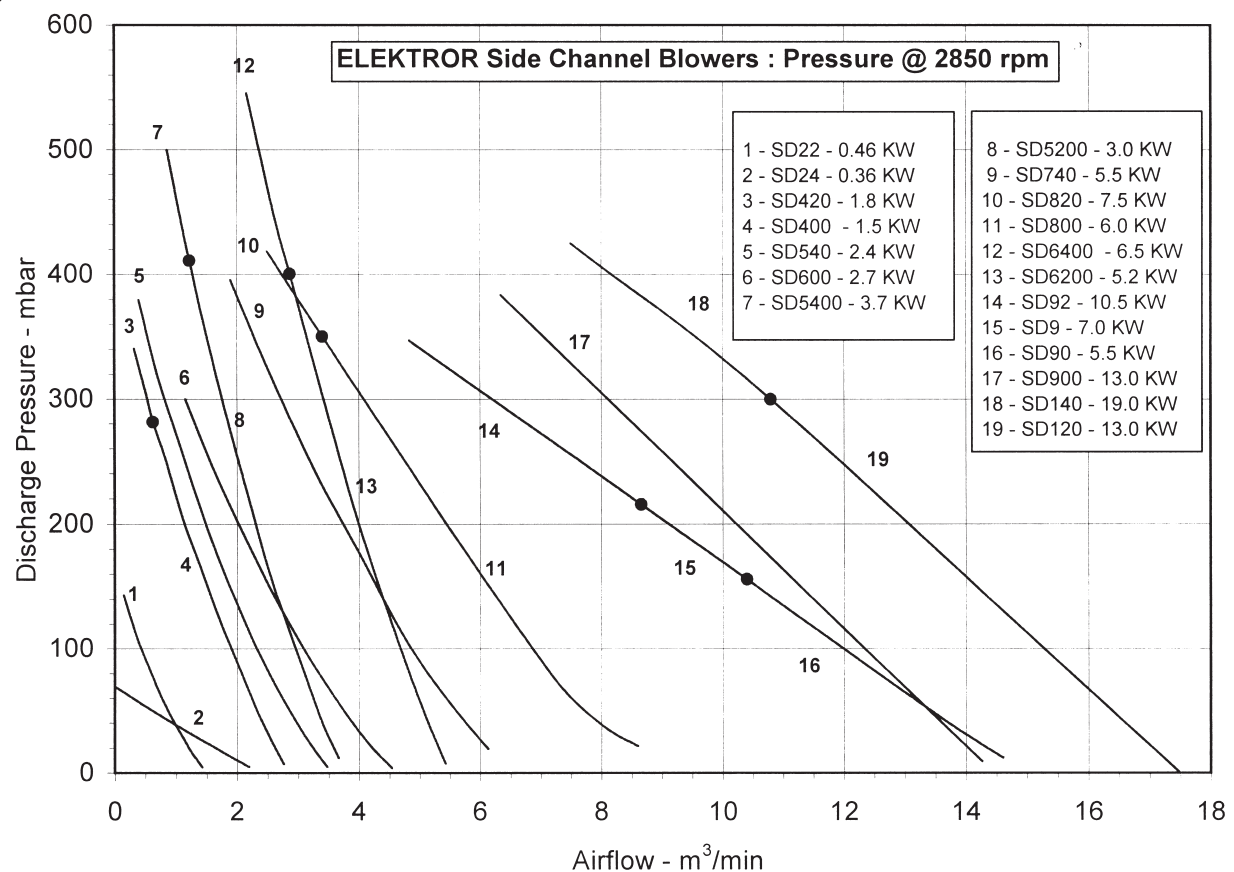
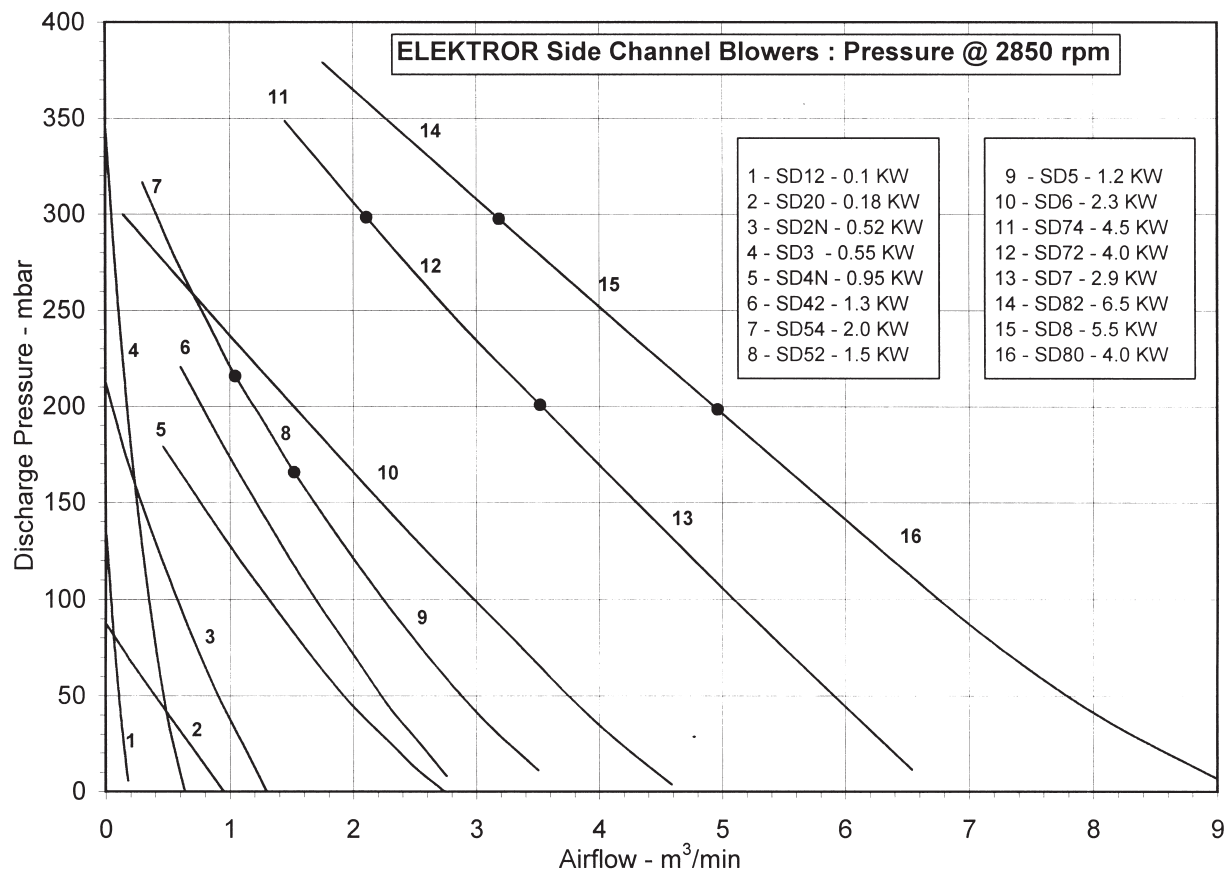
Threaded Flange



Welding Flange

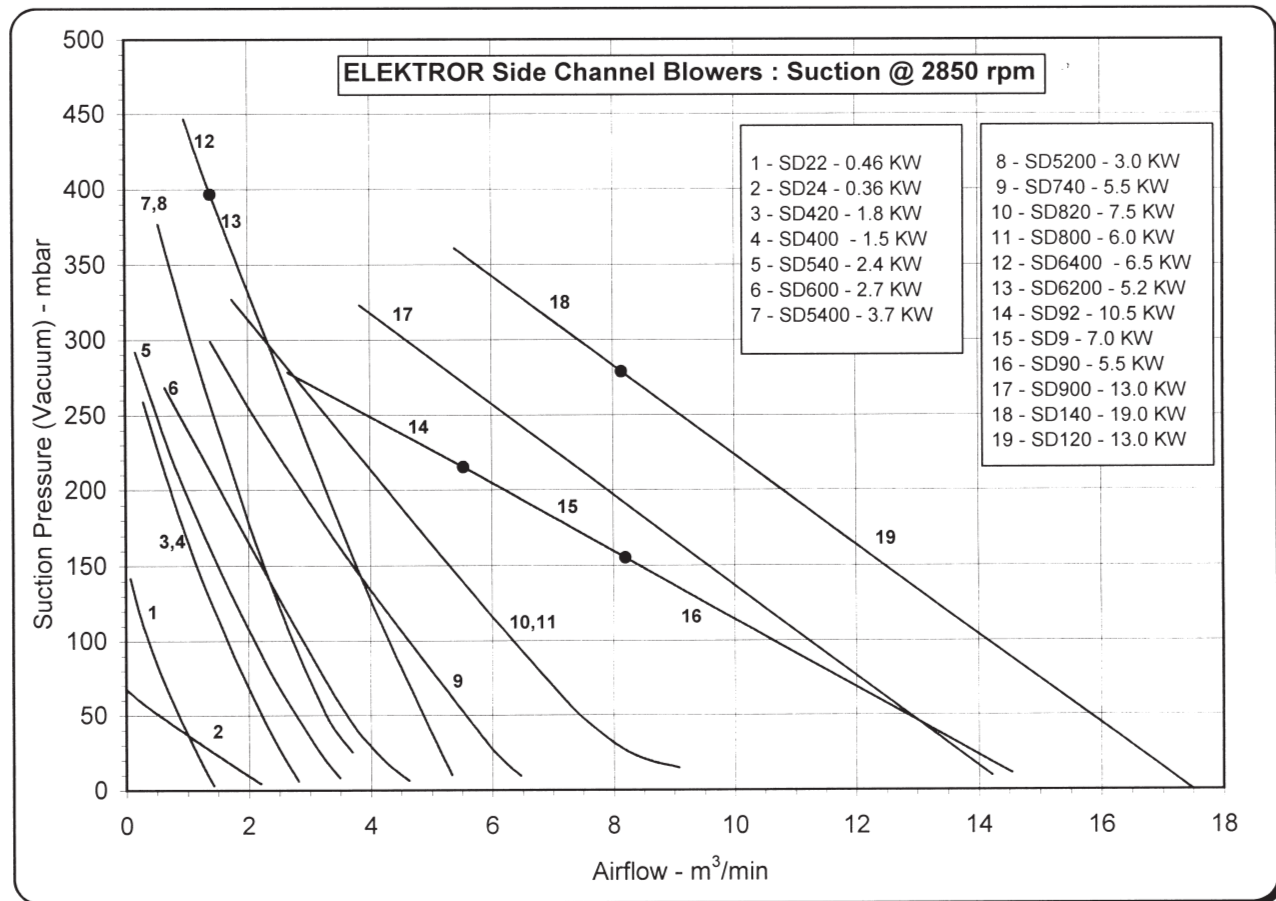
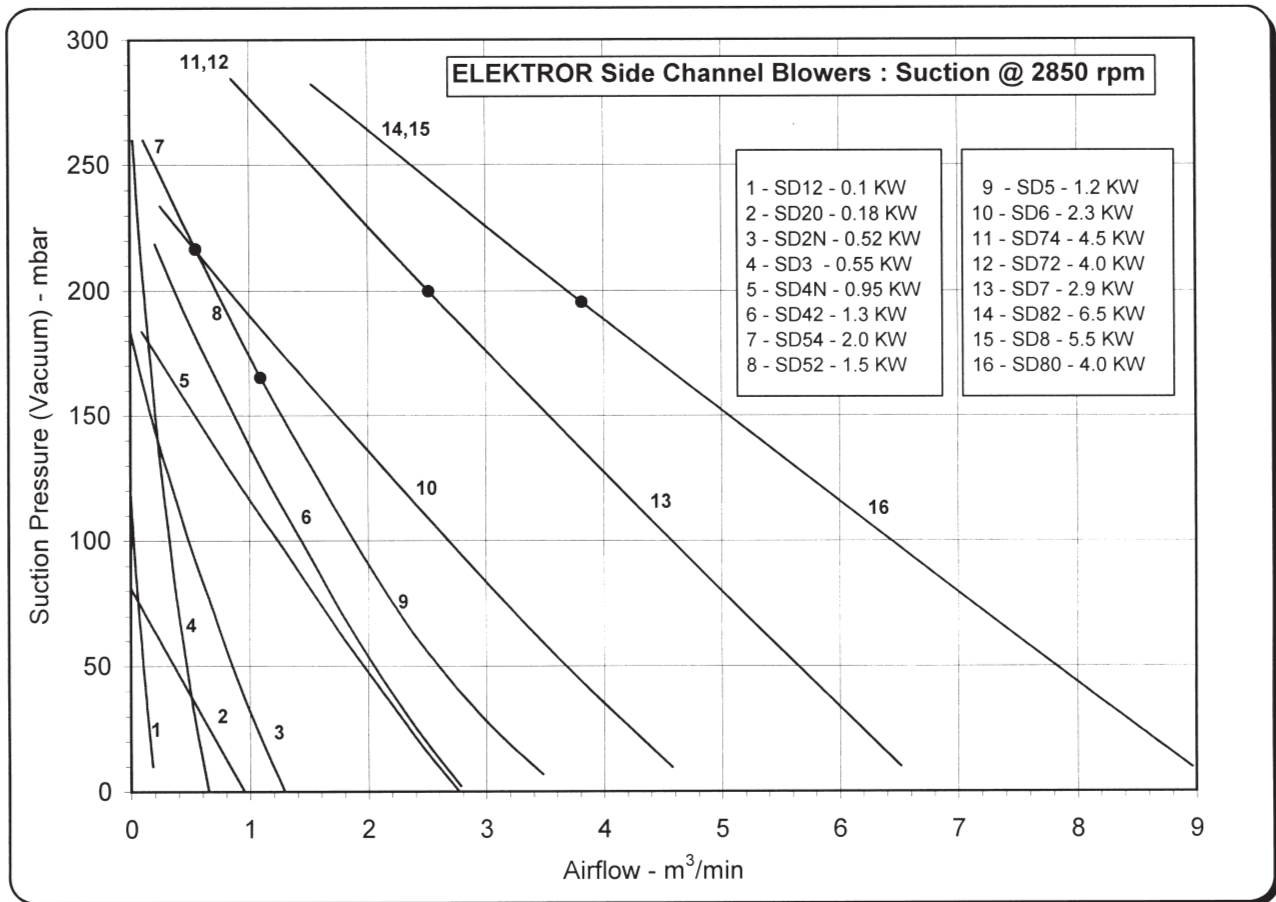


Throttle Valve



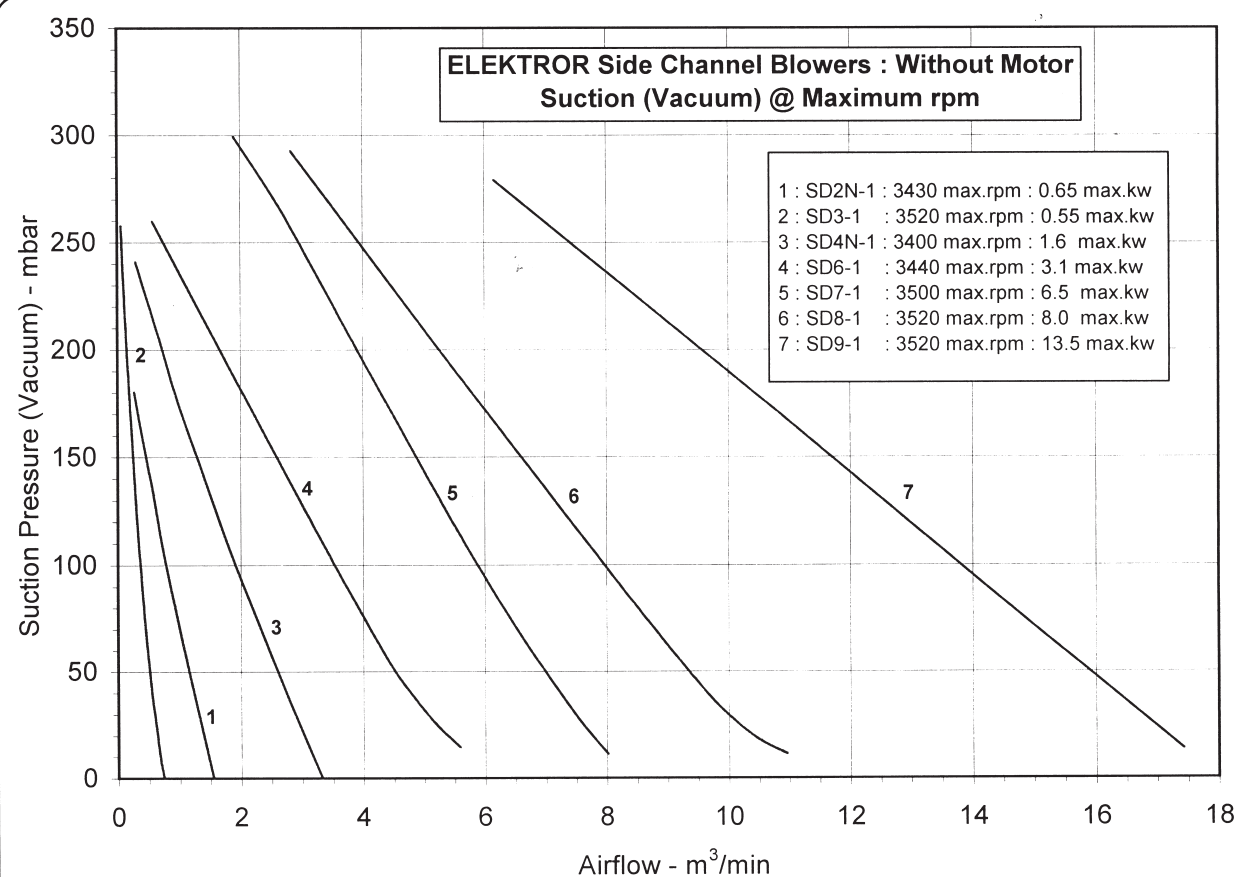
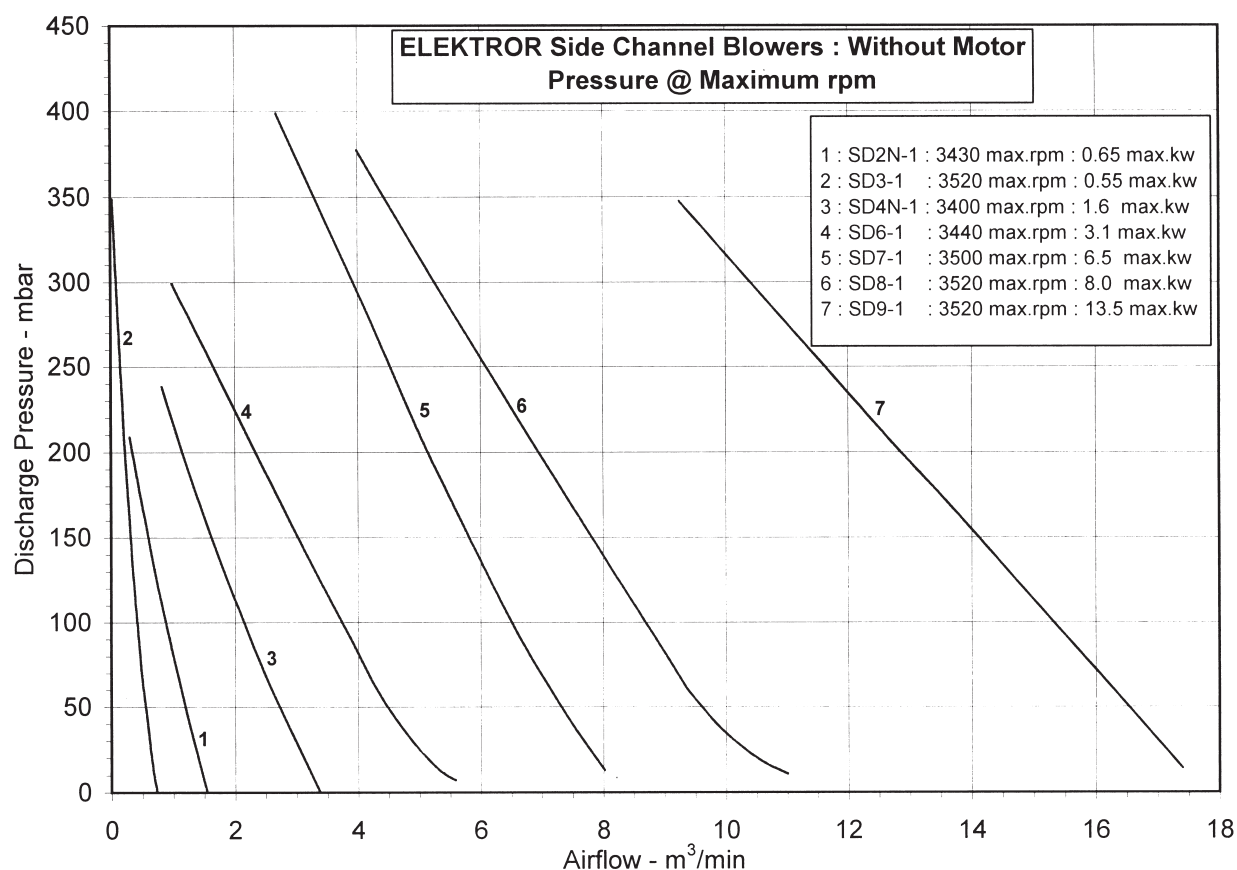
1 mbar = 0.1 kpa = 0.4 in.wg

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



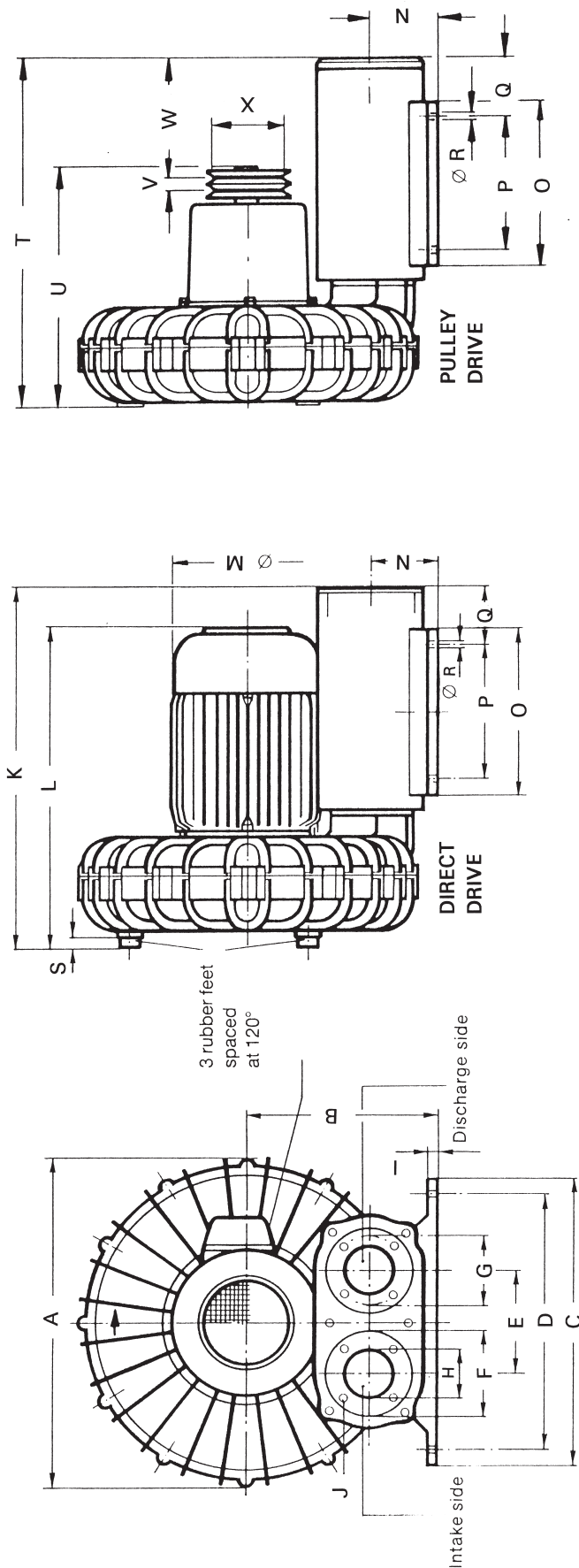
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ELEKTOR Side Channel Blowers		Dimensions in mm - subject to modifications																				
DIRECT DRIVE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	MOTOR KW	
SD20, SE20		224	121	215	190	80		56	30	10	M5		247	123	34	106	70	15	9		0.18,0.19	
SD22, SE22		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	12	M5	323	284	123	60	140	110	73	9	17	0.36/0.34	
SD2n, SE2n		296	160	220	200	90	70	58	38	10	M5	333	303	138	52	120	100	96	9	17	0.52,0.52	
SD3, SE3		282	160	220	200	90	60	48	24	10	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	12	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	12	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	18	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	12	M6	435	383	176	80	200	160	72	13	17	2.3,2.7	
SD6200, SD6400		470	302	420	365	145	130	110	65	18	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	18	M8	505	437/475	194/218	85	300	260	43	14	20	2.9,4.0,4.5,5.5	
SD80, SD8, SD82		500	282	420	365	145	130	110	65	18	M8	530	472,510	218,258	85	300	260	43	14	20	4.0,5.5,6.5	
SD800/SD820		500	282	420	365	145	130	110	65	18	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	20	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	20	M6	680	658	310	105	410	44	44	17		13.0,19.0	
WITHOUT MOTOR																						
SD2n-1		296	160	220	200	90	70	58	38	10	M5	52	120	100	96	9	316	220	109	100		PULLEY
SD3-1		282	160	220	200	90	60	48	24	10	M5	52	120	100	96	9	348	219	146	100		1*SPZ
SD4n-1		358	196	250	220	90	79	68	45	12	M5	60	150	120	66	11	340	241	109	100		1*SPZ
SD6-1		396	225	350	310	125	100	85	55	12	M6	80	200	160	72	13	418	287	12	146	100	2*SPZ
SD7-1		460	260	420	365	145	130	110	65	18	M8	85	300	260	43	14	485	413	12	83	100	2*SPZ
SD8-1		500	282	420	365	145	130	110	65	18	M8	85	300	260	43	14	510	510	12	24	160	4*SPZ
SD9-1		560	325	450	400	160	145	118	80	20	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

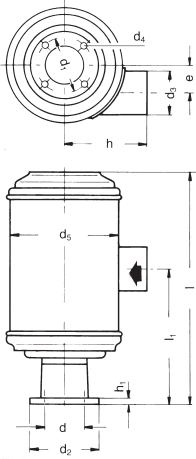
GROUP D SD 3, SE 3, SD 3-1

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

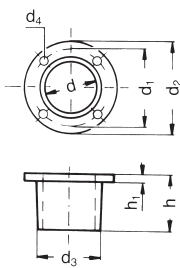
GROUP G SD 6200, SD 6400, SD 7, SD 7-1, SD 72, SD 74, SD 740, SD 80, SD 8, SD 8-1, SD 82, SD 800, SD 820

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

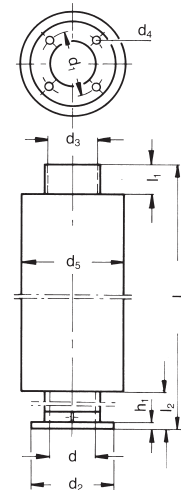


Fine filters with connector											
Group	l	l ₁	d	d ₁	d ₂	d ₃	d ₄	d ₅	e	h	h ₁
A	290	192	38	56		37	5.5	100	28	75	12
B	290	192	37	58		37	5.5	100	28	75	12
C	231	130	38	58	70	37	5.5	100	28	75	6
D	251	153	24	48	60	37	5.5	100	28	75	6
E	278	163	45	68	79	54	5.5	130	35	100	8
F	348	195	55	85	100	62	7	150	40	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	h ₁
B	606	50	150	37	58		45	5.5	90
C	606	50	150	38	58	70	45	5.5	90
D	635	50	150	24	48	60	45	5.5	90
E	608	50	150	45	68	79	55	5.5	100
F	610	50	150	55	85	100	65	7	115
G	612	50	150	65	110	130	80	9	120
H	1012	50	162	80	118	145	97	9	150

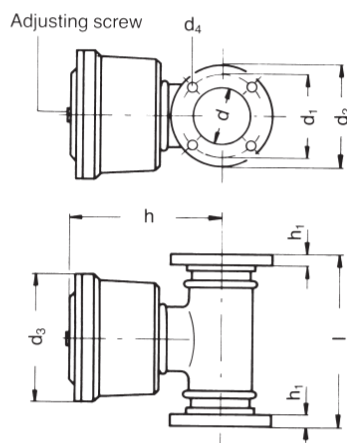
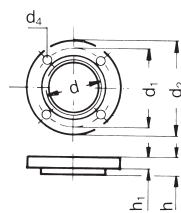


Welding flanges					
Group	d	d ₁	d ₂	d ₄	h ₁
C	38	58	70	5.5	10
D	24	48	60	5.5	10
E	49	68	79	5.5	10
F	61	85	100	7	12
G	76.5	110	130	9	12
H	90	118	145	9	12

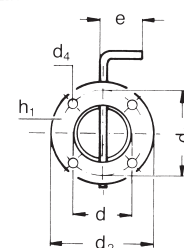


Hose Connectors							
Group	d	d ₁	d ₂	d ₃	d ₄	h	h ₁
A	30	56		41	5.5	35	6
B	37	58		45	5.5	35	6
C	38	58	70	45	5.5	35	6
D	24	48	60	30	5.5	35	6
E	45	68	79	54	5.5	50	8
F	55	85	100	65	7	50	10
G	65	110	130	80	9	60	12
H	81	118	145	97	9	60	12

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.

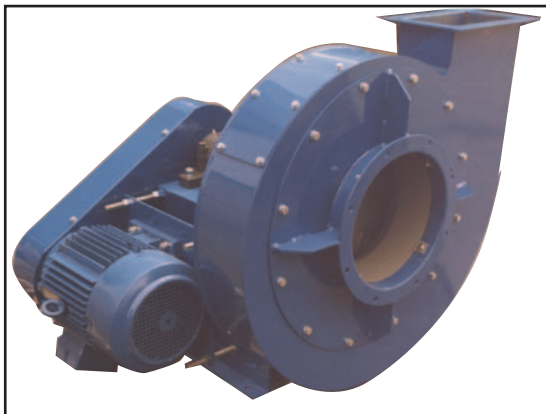
The impeller has a backplate, shroud, and blades fabricated in steel, its rigid construction will ensure many years of trouble free service.

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

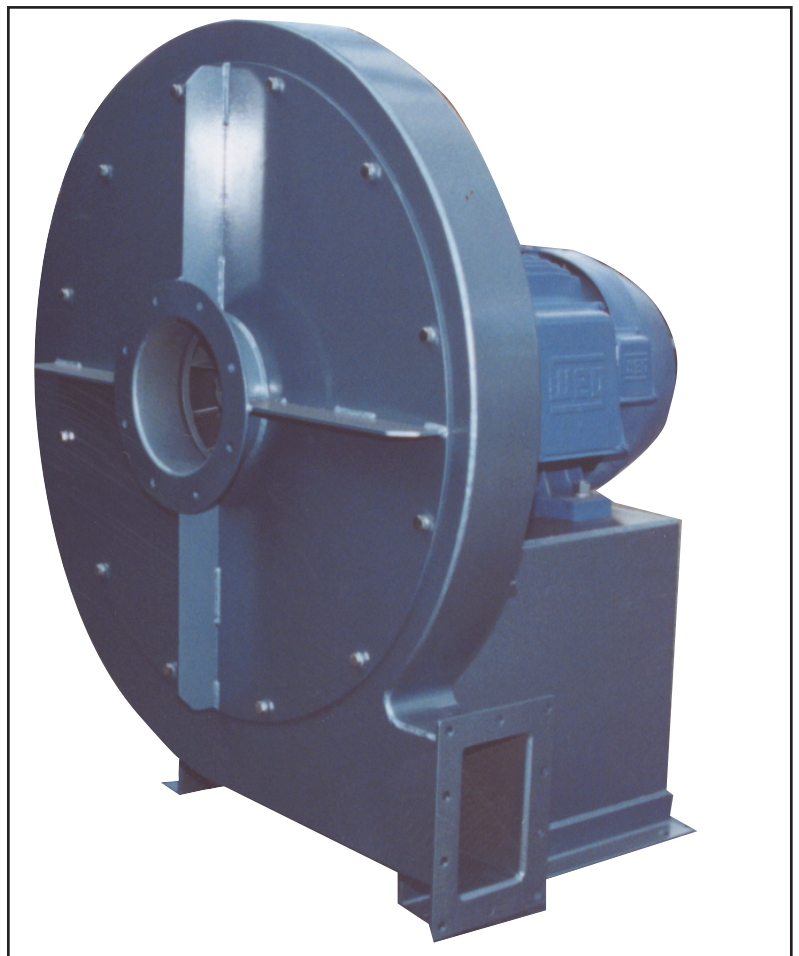
Pneumatic conveying, combustion air, product cooling, drying, water blowoff, aeration, fluidising, drying, suction, agitating, fume extraction, exhausting etc.



Arr. 9 Belt Driven

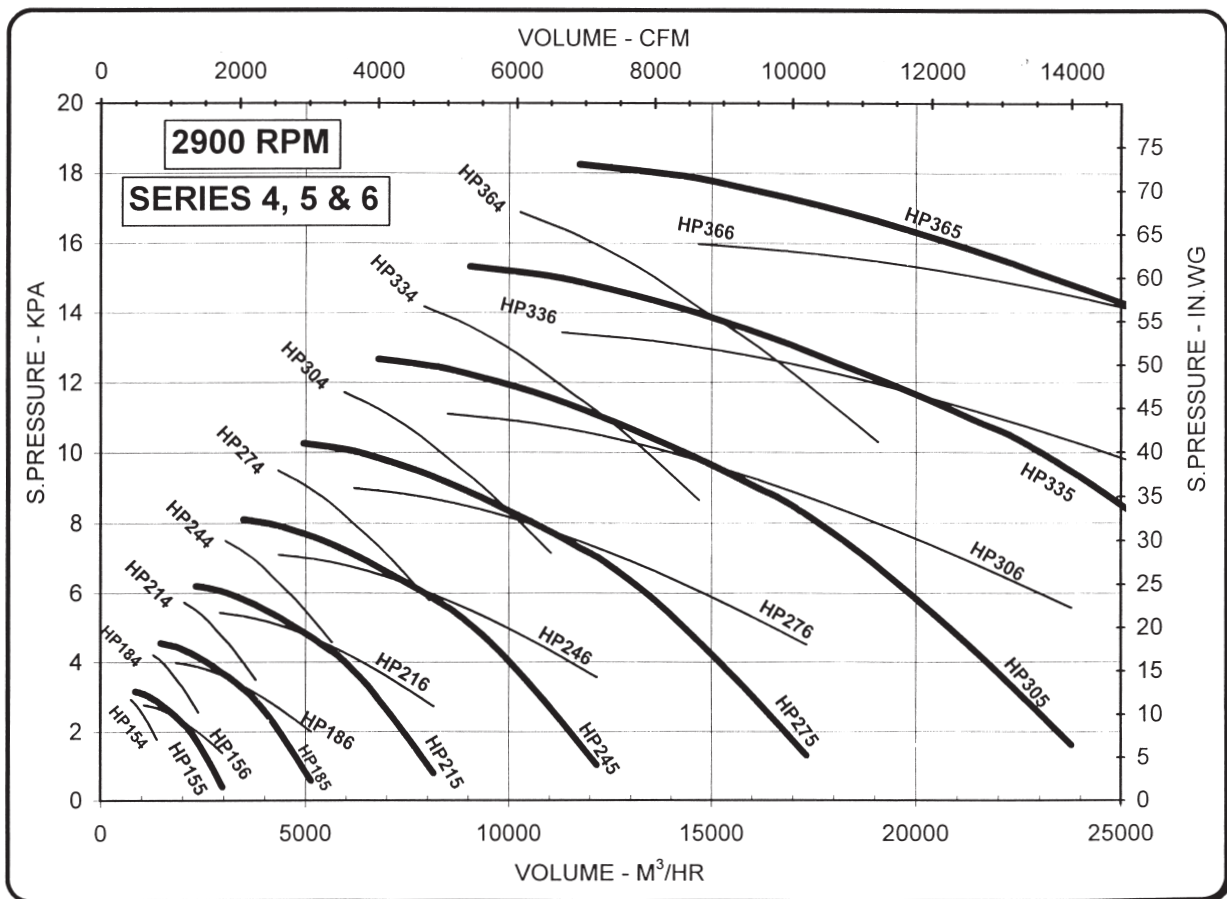
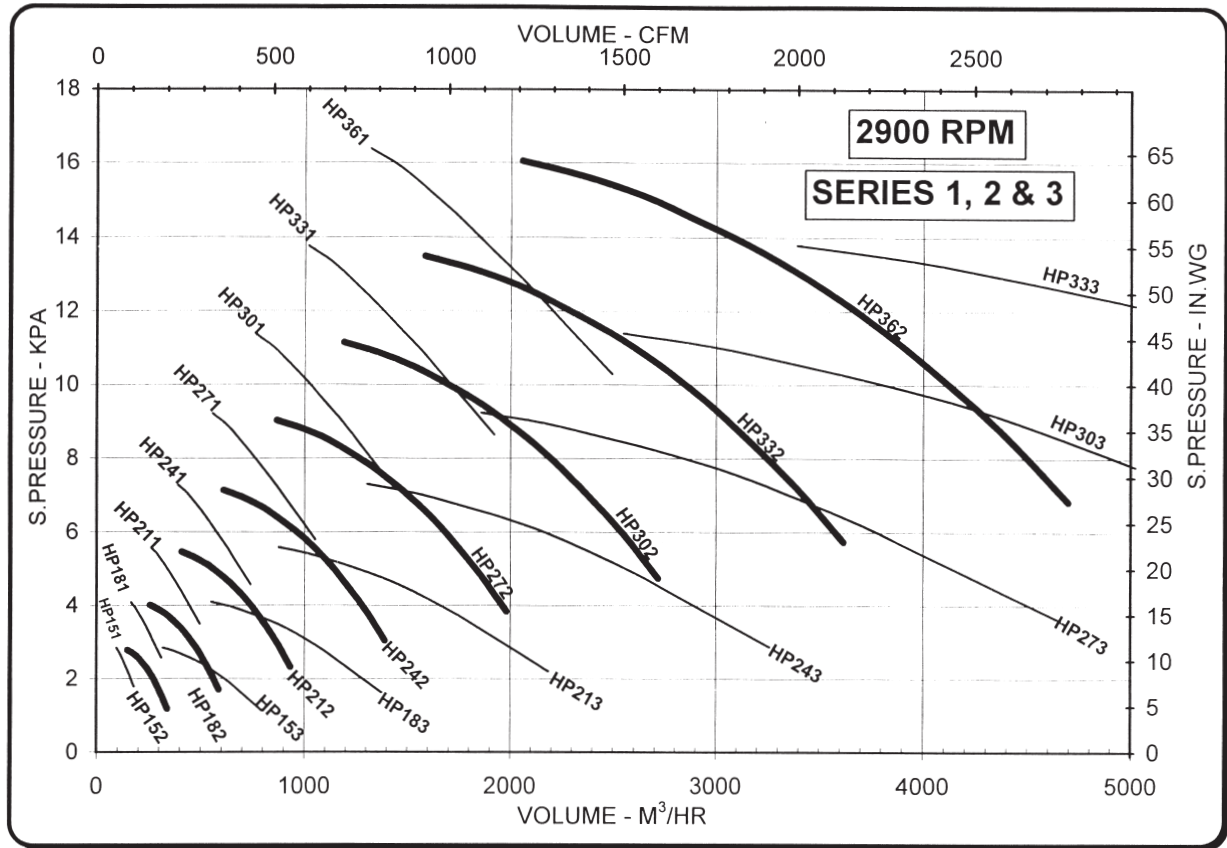


Arr. 4 Direct Driven, Heavy Duty Construction.



Arr. 4 Direct Driven

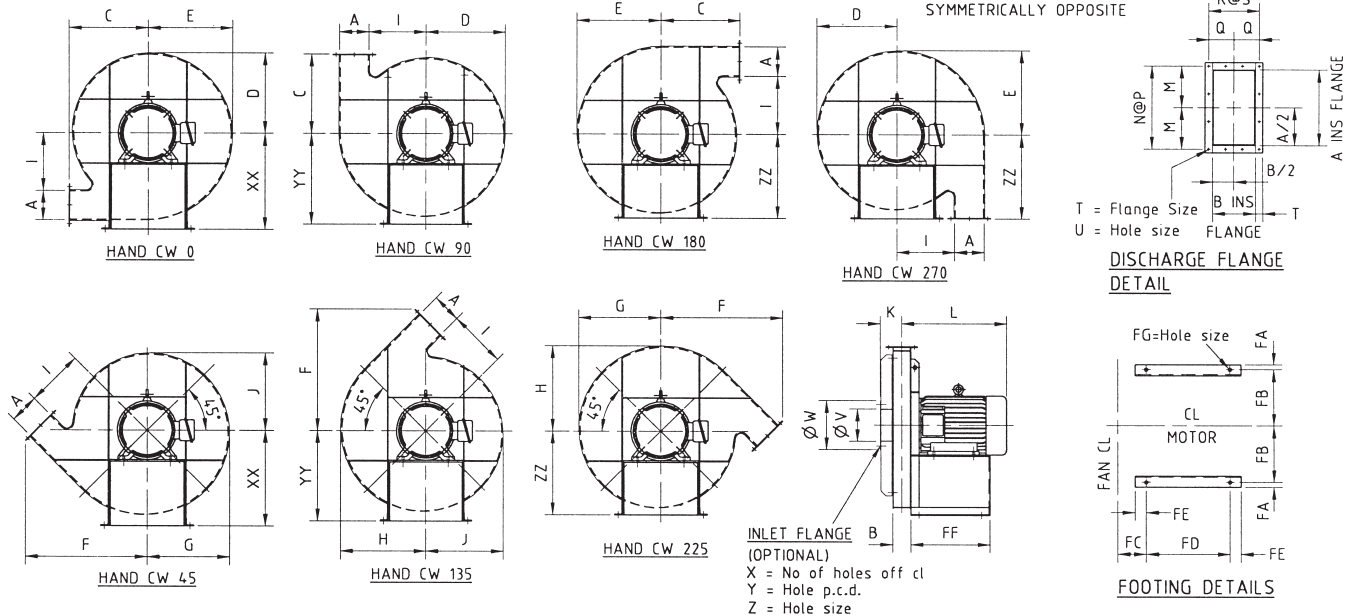
HP SERIES PRESSURE BLOWERS



HP SERIES FANS

ARR 4 DIRECT DRIVE

NOTE CLOCKWISE ROTATION SHOWN
FOR ANTI CLOCKWISE ROTATION
SYMMETRICALLY OPPOSITE



DIMENSIONS SHOULD NOT BE USED FOR CONSTRUCTIONAL PURPOSES WITHOUT OUR CERTIFICATION

SIZE	GENERAL												DISCHARGE FLANGE										INLET FL.					CENTER HT			FOUNDATION FOOTINGS						
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	XX	YY	ZZ	FA	FB	FC	FD	FE	FF	FG		
151	46	40	215	216	224	343	220	227	184	213	72	330	47	1	94	46	1	92	40	11	60	140	4	108	11	300	250	240	16	174	62	180	40	260	13		
152	68	48	220	220	228	348	224	232	168	215	84	334	58	2	58	48	1	96	40	11	82	162	4	130	12	320	270	260	16	174	64	180	40	260	13		
153	92	58	250	248	260	398	254	266	182	242	89	340	70	2	70	53	1	106	40	12	106	186	4	154	12	370	300	290	16	174	69	180	40	260	13		
154	150	88	240	254	276	410	266	288	150	242	119	352	99	2	99	68	2	68	40	12	140	220	4	188	12	400	320	300	16	174	84	180	40	260	13		
155	152	120	245	260	284	420	272	296	158	246	120	405	100	2	100	84	2	84	40	12	160	240	4	208	12	410	340	310	16	174	100	220	40	300	13		
156	178	140	250	268	296	436	282	310	148	252	130	456	113	2	113	94	2	94	40	12	192	272	8	240	12	420	350	330	16	174	110	220	40	300	13		
181	56	48	260	260	268	408	264	273	218	256	84	356	52	2	52	48	1	96	40	12	72	152	4	120	12	330	290	280	16	174	64	180	40	260	13		
182	80	56	260	264	274	412	268	278	204	258	88	360	64	2	64	52	1	104	40	12	98	178	4	146	12	380	320	310	16	174	68	180	40	260	13		
183	112	68	300	298	312	472	306	320	216	290	109	382	80	2	80	58	1	116	40	12	124	204	4	172	12	420	350	340	16	174	74	220	40	300	13		
184	180	104	300	304	332	494	320	346	180	290	127	438	114	2	114	76	2	76	40	12	166	246	8	214	12	470	380	350	16	174	92	220	40	300	13		
185	184	144	300	310	342	504	326	356	188	296	147	496	116	2	116	96	2	96	40	12	192	272	8	240	13	465	400	360	16	194	112	245	40	325	13		
186	212	166	300	320	356	518	338	372	178	302	158	508	129	3	86	107	2	107	40	12	230	310	8	278	13	475	410	370	16	194	123	245	40	325	13		
211	66	54	300	302	312	469	308	318	254	298	87	376	57	2	57	51	1	102	40	12	82	162	4	130	12	390	360	350	16	174	67	220	40	300	13		
212	94	66	300	308	320	474	314	324	236	302	108	382	71	2	71	57	1	114	40	12	114	194	4	160	12	440	360	350	16	174	73	220	40	300	13		
213	130	82	350	348	364	546	356	372	252	338	116	450	89	2	89	64	2	64	40	12	144	224	8	192	13	470	420	390	16	194	81	245	40	325	14		
214	210	120	350	356	388	572	372	404	210	338	135	484	129	3	86	84	2	84	40	12	192	272	8	240	13	520	430	400	16	194	100	245	40	325	14		
215	214	166	350	362	398	582	380	414	220	344	158	613	132	3	88	108	2	108	40	12	232	302	8	270	13	540	460	420	22	238	133	315	50	415	15		
216	248	192	350	374	414	598	394	434	208	352	171	670	147	3	98	120	3	80	40	12	266	346	8	314	13	560	470	430	22	238	146	360	50	460	15		
241	74	62	340	346	358	529	352	363	292	341	106	418	61	2	61	57	1	114	40	12	94	174	4	140	12	440	400	390	16	174	71	220	40	300	13		
242	108	74	350	352	366	544	358	372	270	344	112	460	78	2	78	61	2	61	40	12	128	208	4	176	12	470	420	400	16	194	77	245	40	325	14		
243	148	92	390	396	416	612	406	426	288	388	121	455	98	2	98	70	2	70	40	12	164	244	8	212	12	525	470	445	16	194	86	245	40	325	14		
244	240	136	400	406	442	650	426	460	240	388	143	598	144	3	96	92	2	92	40	13	218	298	8	266	13	580	500	460	22	238	118	315	50	415	15		
245	244	190	390	414	454	654	434	474	252	394	170	775	147	3	98	120	3	80	40	13	254	354	8	310	13	600	530	480	22	238	145	360	50	460	15		
246	284	220	400	428	474	688	452	496	236	404	185	690	171	3	114	138	3	92	50	14	304	404	8	364	13	620	540	480	22	238	160	360	50	460	15		
271	84	68	390	390	402	596	396	409	328	384	109	458	66	2	66	58	1	116	40	12	104	204	4	164	13	500	450	440	16	194	74	245	40	325	14		
272	120	86	400	394	410	612	404	418	306	388	118	552	85	2	85	68	2	68	40	12	144	224	8	192	13	540	470	450	22	238	93	315	50	415	15		
273	166	104	440	446	468	686	458	478	326	436	127	582	107	2	107	74	2	74	40	13	184	284	8	244	13	560	530	500	22	238	102	315	50	415	15		
274	270	156	440	456	498	722	478	518	270	436	151	756	159	3	106	100	2	100	40	13	246	326	8	294	13	640	540	500	22	288	126	460	50	560	18		
275	274	216	440	466	512	734	490	532	284	442	183	788	162	3	108	132	3	88	40	13	284	394	8	354	13	670	560	520	22	288	158	460	50	560	18		
276	318	250	450	480	532	768	508	558	268	454	210	510	189	3	126	153	3	102	50	14	342	442	8	402	13	710	590	540	22	288	175	460	50	560	18		
301	94	80	430	432	446	658	440	454	364	426	115	570	71	2	71	64	2	64	40	13	116	210	4	166	13	550	500	490	22	238	90	315	50	415	15		
302	134	94	450	438	456	673	448	464	338	430	122	578	90	2	90	70	2	70	40	13	158	258	8	214	13	580	520	490	22	238	97	315	50	415	15		
303	184	114	480	496	520	754	508	532	484	362	132	738	116	2	116	81	2	81	40	13	204	304	8	264	13	640	580	560	22	288	107	460	50	560	18		
304	300	172	480	508	552	800	532	576	300	484	171	812	180	3	120	116	2	116	50	14	272	372	8	330	13	720	620	560	22	308	136	460	50	560	18		
305	306	240	480	518	568	814	544	592	314	492	205	936	183	3	122	150	3	100	50	14	316	416	8	376	13	750	640	590	29	336	185	520	65	650	18		
306	354	276	500	534	592	850	564	620	296	504	223	954	207	3	138	168	3	112	50	14	378	478	8	438	13	770	670	610	29	336	203	520	65	650	18		
331	102	86	500	476	490	726	484	500	402	468	127	573	75	2	75	67	2	67	40	13	126	206	4	174	13	600	550	540	22	238	93	315	50	415	15		
332	148	102	480	482	500	764	492	510	372	474	126	625	104	2	104	81	2	81	50	14	174	274	8	234	13	620	560	540	22	238	101	360	50	460	15		
333	204	124	530	546	572	834	558	586	396	532	147	742	132	3	88	97	2	97	50	14	224	324	8	284	13	720	610	600	22	288	112	460	50	560	18		
334	330	190	530	558	608	876	586	634	330	532	180	910	195	3	130	125	2	125	50	14	304	404	8	364	13	800	680	630	29	336	160	520	65	560	18		
335	336	262	530	570	624	892	598	652	346	542	216	948	198	3	132	159	3	106	50	14	346	446	8	406	13	810	700	650	29	336	196	520	65	650	18		
336	390	304	550	588	650	942	620	682	326	554	237	1090	231	3	154	189	3	126	65	18	416	516	8	488	14	880	740										