COMPLETE PRODUCT RANGE

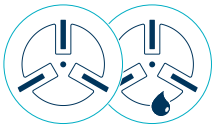
Vacuum Pumps and Systems, Compressors and Pressure/Vacuum Pumps

MAKE IT BECKER.



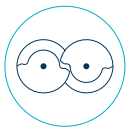
BECKER

FUNCTIONAL PRINCIPLES
DISPLACEMENT PUMPS



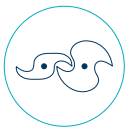
ROTARY VANE PUMPS

The robustly constructed rotary vane pumps are also suitable for higher pressure differences in vacuum and/or pressure applications. An eccentrically mounted rotor with slots rotates in a cylindrical housing and the precisely fitting sliding vanes move in the slots and separate the individual working chambers. Compared to dry-running rotary vane pumps, oil-lubricated pumps additionally seal the working chambers with the oil that is also transported. The pumps are thus able to generate a fine vacuum and are therefore suitable for applications that require a high vacuum.



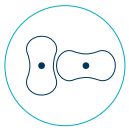
SCREW PUMPS

Thanks to the direct drive via an integrated frequency inverter, a drive gear is no longer required. The rotors with screw profile rotate in opposite directions and contact less. The working chamber of the machines is 100% oil-free. The integrated speed control enables energy-optimised operation of the devices.



CLAW PUMPS

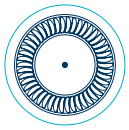
Claw vacuum pumps are 100% free of oil and contact during operation. To achieve this, the claw-like rotors rotate within the compression chamber in opposite directions and are contact less. This makes the pump particularly low-maintenance. The claw technology ensures a high degree of efficiency and low energy consumption.



ROOTS BOOSTER PUMPS (PUMPING STATIONS)

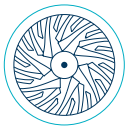
In the case of contact less and oil-free compressing Roots booster pumps, two symmetrical lobes rotate in the working chamber. In combination with a displacement pump (e.g. rotary vane pump), Roots blowers are often used in pumping stations in order to achieve a very high volume flow with a high final vacuum.

TURBO DYNAMIC PUMPS



SIDE CHANNEL BLOWERS

Side channel blowers generate suction or blowing air for a wide variety of industrial applications. They contain a contact less, fast rotating impeller and are therefore wear and maintenance free. On both sides of the impeller there are two ring-shaped separate side channels along with the housing. This means that a single-stage device with a high volume flow or a two-stage device with higher pressure differences is possible.



RADIAL BLOWERS

Radial blowers are designed for high delivery volumes. The volume flow can be precisely adapted to customer requirements using the frequency inverter integrated on the motor. Radial blowers contain a very fast and contact less rotating impeller and are therefore wear and maintenance free.

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KVT 3.60–140
VTLF 2.200–500
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U 5.71–301
U 4.400–630
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VARIAIR Direct Screw VADS 250–1500

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VARIAIR
The frequency inverter integrated in the VARIAIR UNIT significantly enhances the performance data of each pumps. It matches pump delivery exactly to customer requirements. Energy consumption is optimised and constant vacuum or pressure is guaranteed even where demand is subject to Variation or severe fluctuation. As no unnecessary blast or suction air is generated, (air discharge) noise is kept to a minimum. Dirt from the surrounding environment is kept out of the pumps via inlet filtration. "Gentle" pump start-up reduces strain on mechanical components and reliably extends their useful life. Variable Output ranges minimise the number of different types required, thus also providing logistical advantages.

VT • KVT • VTLF

ROTARY VANE VACUUM PUMPS

- Oil-free
- Air-cooled
- Integrated suction filter and blow off valve
- VT/KVT with vacuum regulating valve
- VTLF with vacuum safety valve
- Version /0-400 with VARIAIR frequency inverter



VT 4.8



VT 4.25

		m^3/h – Refers to intake pressure [1]										
mbar absolute		1000	900	800	700	600	500	400	300	200	150	100
mbar relative		0	-100	-200	-300	-400	-500	-600	-700	-800	-850	-900
VT 4.2	50 Hz	1.9	1.8	1.6	1.3	1.1	0.9	0.7				
	60 Hz	2.3	2.2	2.0	1.8	1.5	1.3	1.0				
VT 4.4	50 Hz	4.1	4.0	3.8	3.6	3.4	3.2	3.0	2.3	1.5	0.7	
	60 Hz	4.7	4.6	4.5	4.3	4.1	3.8	3.5	3.0	2.5	2.0	
VT 4.8	50 Hz	8.0	7.9	7.8	7.6	7.3	7.0	6.5	6.0	5.0	4.0	
	60 Hz	9.1	8.9	8.9	8.7	8.5	8.2	7.4	6.8	5.2	4.0	
VT 4.10	50 Hz	10	9.8	9.6	9.2	8.8	8.2	7.4	6.0	2.9	0.1	
	60 Hz	12	11.8	11.5	11.1	10.6	9.9	8.8	7.1	3.5	0.1	
VT 4.16	50 Hz	16	15.7	15.3	14.9	14.2	13.2	11.8	9.4	4.7	0.1	
	60 Hz	19	18.6	18.2	17.6	16.8	15.6	14.0	11.2	5.6	0.1	
VT 4.25	50 Hz	25	24.5	23.9	23.1	22.1	20.6	18.4	14.7	7.4	0.1	
	60 Hz	30	29.4	28.7	27.7	26.5	24.7	22.1	17.6	8.8	0.1	
VT 4.40	50 Hz	40	39.2	38.2	37.0	35.3	32.9	29.4	23.5	11.8	0.1	
	60 Hz	48	47.1	45.9	44.4	42.4	39.5	35.3	28.2	14.1	0.1	
KVT 3.60	50 Hz	55	55	54	53	52	50	48	45	37	20	0.1
	60 Hz	66	65	64	63	61	59	55	49	37	25	0.1
KVT 3.80	50 Hz	67	66	65	63	61	59	55	49	38	24	0.1
	60 Hz	78.5	77	76	75	73	70	65	58	44	29	0.1
KVT 3.100	50 Hz	98	97	96	93	90	86	80	71	56	35	0.1
	60 Hz	112	111	109	107	104	100	93	83	62	41	0.1
KVT 3.140	50 Hz	129	127	125	123	120	116	108	96	75	47	0.1
	60 Hz	154	152	150	147	143	138	130	117	90		
VTLF 2.200	50 Hz	178	174	170	165	158	152	140	115	85		
	60 Hz	218	214	210	204	197	189	178	160	125		
VTLF 2.250	50 Hz	244	242	238	235	230	222	210	197	165		
	60 Hz	286	284	281	276	270	261	248	230	195		
VTLF 2.250 SK	50 Hz	247	242	236	229	220	213	204	188	159	140	89
	60 Hz	295	292	289	284	276	269	257	240	208	191	142
VTLF 2.360	50 Hz	351	351	350	347	343	334	324	302	283 @ 250 mbar		
	60 Hz	402	403	401	399	391	382	370	360	352 @ 250 mbar		
VTLF 2.400	50 Hz	390	380	371	361	351	325	307	273	243		
	60 Hz	460	456	451	444	435	423	404	373	310		
VTLF 2.500	50 Hz	495	487	480	472	464	450	424	397	376 @ 250 mbar		
	60 Hz	570	565	559	552	541	526	504	463	446 @ 250 mbar		
KVT 3.100/0-400	60 Hz	112	111	109	107	104	99	94	84	68	56	35
KVT 3.140/0-400	60 Hz	145	140	137	134	131	127	121	110	95	83	61
VTLF 2.250/0-400	60 Hz	280	279	278	272	266	256	243	222	178		
VTLF 2.500/0-400	60 Hz	560	552	546	537	527	512	489	454	425 @ 250 mbar		

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%
[2] Alternatively available as DC variant
[3] Power of the VARIAIR frequency inverter



KVT 3.140



VTLF 2.250 SK



VARIAIR VTLF 2.250/0-400

Technical data											
	kW 3~		kW 1~		db(A)		kg	mm			Connection
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
VT 4.2			0.09	0.105	56.0	58.0	7.0	222	156	166	1/4"
VT 4.4	0.18 [2]	0.21 [2]	0.18 [2]	0.21 [2]	59.0	61.0	7.0	222	156	166	1/4"
VT 4.8	0.37 [2]	0.44 [2]	0.35 [2]	0.42 [2]	58.0	61.0	9.5	233–253	156–164	171.5–179.5	3/8"
VT 4.10	0.37	0.45	0.37	0.44	60.0	62.0	16.0	429	206	192	1/2"
VT 4.16	0.55	0.7	0.55	0.66	61.0	64.0	22.5	452	231	208	1/2"
VT 4.25	0.75	0.9	0.8	1.0	62.0	67.0	26.0	505	260	293	3/4"
VT 4.40	1.25	1.5	1.1	1.1	67.0	72.0	38.5	572	280	293	3/4"
KVT 3.60	2.2	2.6			71.0	73.0	84.0	747	353	328	1"
KVT 3.80	2.2	2.6			72.0	75.0	86.0	747	353	328	1"
KVT 3.100	3.0	3.6			75.0	77.0	108.0	851	470	336	1 ½"
KVT 3.140	4.0	4.8			76.0	79.0	142.5	967	470	336	1 ½"
VTLF 2.200	4.0	4.8			75.0	77.0	265.0	1174	644	528	2 ½"
VTLF 2.250	5.5	6.6			77.0	79.0	258.0	1144	644	528	2 ½"
VTLF 2.250 SK	7.5	9.0			77.0	79.0	268.0	1180	644	558	2 ½"
VTLF 2.360	11.0	13.2			80.5	82.5	263.0	1174	644	528	2 ½"
VTLF 2.400	7.5	9.0			77.0	79.0	425.0	1477	747	579	4"
VTLF 2.500	11.0	13.2			79.0	80.0	411.0	1477	747	579	4"
KVT 3.100/0-400	4.0 [3]					77.0	109.5	829	470	400	1 ½"
KVT 3.140/0-400	4.0 [3]					77.9	115.5	829	470	400	1 ½"
VTLF 2.250/0-400	7.5 [3]					79.0	270.0	1250	644	580	2 ½"
VTLF 2.500/0-400	11.0–22.0 [3]					80.0	445.0	1459	747	712	4"

SERIES X: BECKER INNOVATION WITH TOP WARRANTY

Equipped with specially developed vanes, these oil-free rotary vane pumps distinguish themselves by high abrasion resistance, and with that extremely long service lives. Due to the low wear there is also minimal dust, so the series X pumps are perfectly suited for precision processes under clean room conditions.

This innovation branded by Becker is outstanding not only because of its 100 percent oil-free operation, excellent degree of efficiency and low power consumption.

In the area of sensitive vacuum, series X also guarantees precise low-pulsation air conduction.

Becker guarantees for these pumps a vane life-time of 20,000 operating hours or a maximum of 3 years. The enhanced longevity of X series pumps also extends service life intervals, and can cut out the need for frequent service visits with costly pump failures now no longer an issue.

Available as
- VX 4.10 – VX 4.40 (100 mbar absolute)
- KVX 3.60 – KVX 3.140
- VXLF 2.200, 2.250, 2.400 & 2.500

ADVANTAGES

- Quick, clean and quiet
- Oil-free
- Wear resistant
- Energy saving
- Long-life reliability

O • U

ROTARY VANE VACUUM PUMPS

- Oil-lubricated
- Air-cooled
- Non return valve and oil separator
- U 5.40 XL K – U 5.301 additionally with gas ballast valve and oil filter
- VARIAIR pumps including frequency inverter



O 6.4



O 5.25 XL K

		m³/h – Nominal air flow refers to intake pressure [1]													m³/h [1]	
mbar absolute		1000	900	800	700	600	500	400	300	200	100	50	25	10	@ max.	
mbar relative		0	-100	-200	-300	-400	-500	-600	-700	-800	-900	-950	-975	-990	mbar (abs.)	
O 6.4	50 Hz	4.0	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.4	3.3	2.6	2.4	1.9	0.1	≤2.0
	60 Hz	4.8	4.7	4.6	4.6	4.5	4.4	4.3	4.2	4.1	3.9	3.2	3.0	2.4	0.1	≤2.0
O 6.8	50 Hz	8.0	7.5	7.5	7.5	7.4	7.4	7.3	7.3	7.3	7.2	6.2	5.9	5.2	0.1	≤2.0
	60 Hz	9.6	9.2	9.1	9.1	9.0	9.0	8.9	8.8	8.8	8.7	8.4	8.0	7.0	0.1	≤2.0
O 5.10 XL	50 Hz	10.5	10.0	10.0	10.0	10.0	9.5	9.5	9.5	9.0	9.0	8.5	8.0	6.5	0.1	2.0
	60 Hz	12.5	12.0	12.0	12.0	12.0	12.0	11.5	11.5	11.5	10.5	9.5	8.5	7.5	0.1	2.0
O 5.16 XL	50 Hz	16.0	16.0	15.5	15.5	15.5	15.0	15.0	14.5	14.0	13.5	12.5	12.0	9.5	0.1	2.0
	60 Hz	19.0	19.0	16.5	18.5	18.0	17.5	17.5	17.0	16.5	15.5	14.5	13.5	11.0	0.1	2.0
O 5.21 XL	50 Hz	23.5	23.0	22.5	22.5	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.0	15.0	0.1	2.0
	60 Hz	27.0	26.5	26.5	26.0	26.0	25.0	24.5	24.5	24.5	24.5	24.5	24.0	19.0	0.1	2.0
O 5.25 XL K	50 Hz	26	25.5	25.0	25.0	24.5	24.5	24.5	24.5	24.5	24.5	24.5	23.5	16.0	0.1	2.0
	60 Hz	30	29.5	29.5	29	29	28	27.5	27.5	27.5	27.5	27.5	27.0	20.0	0.1	2.0
U 5.40 XL K	50 Hz	40	39.5	39.0	38.5	38.1	37.6	37.1	36.4	36.5	34.5	34.6	33.6	32.7	0.1	1.0
	60 Hz	48	47.2	46.5	45.7	45	44.4	43.8	43	41.9	40.9	39.4	37.8	36.2	0.1	1.0
U 5.45	50 Hz	45	45	45	45	45	45	45	44	43	43	43	42	41	0.1	0.5
	60 Hz	54	54	54	54	54	54	53	52	51	51	51	50	48	0.1	0.5
U 5.65 XL K	50 Hz	65	63	62	61	60	59	58	57	56	54	50	47	40	0.1	0.5
	60 Hz	78	76	74	72	71	70	69	68	66	64	59	57	48	0.1	0.5
U 5.101	50 Hz	100	98	96	94	92	91	89	87	85	83	81	77	73	0.1	<0.1
	60 Hz	120	117	115	112	109	107	104	101	99	96	94	91	80	0.1	<0.1
U 5.166	50 Hz	165	162	159	157	154	151	148	145	141	136	133	121	106	0.1	<0.1
	60 Hz	198	195	191	188	184	181	177	174	170	163	159	141	127	0.1	<0.1
U 5.201	50 Hz	200	196	193	189	185	182	178	174	171	168	163	149	137	0.1	<0.1
	60 Hz	240	235	230	226	221	216	211	206	203	194	189	167	154	0.1	<0.1
U 5.301	50 Hz	300	294	290	284	278	273	267	261	257	252	245	236	218	0.1	<0.1
	60 Hz	360	353	345	339	332	324	317	309	305	291	284	263	248	0.1	<0.1
U 4.400 SA/K U 4.400 F/K	50 Hz	435	435	435	435	435	435	435	434	434	433	431	428	413	0.1	3.0/0.5
	60 Hz	508	508	508	508	508	508	508	507	507	506	503	498	583	0.1	3.0/0.5
U 4.630 SA/K U 4.630 F/K	50 Hz	624	624	624	624	624	624	624	623	623	621	617	612	592	0.1	3.0/0.5
	60 Hz	732	732	732	732	732	732	732	731	731	729	724	718	696	0.1	3.0/0.5
VARIAIR U 5.101	60 Hz	140	124	121	119	117	115	113	111	108	105	100	94	89	0.5	0.1
VARIAIR U 5.201	60 Hz	240	233	227	219	211	202	194	193	208	225	211	196	177	32	0.1
VARIAIR U 5.301	60 Hz	330	331	332	333	335	336	336	335	334	331	328	320	300	0.5	0.1



U 5.40 XL K



U 5.65 XL K



U 5.101

Technical data													
	max. mbar absolute		kW 3~		kW 1~		db(A)		kg	mm			Connection
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
O 6.4	≤2.0	≤2.0			0.12	0.15	48.0	52.0	5.4	247–258	139–217.5	138	Ø9 mm
O 6.8	≤2.0	≤2.0			0.25–0.3	0.3–0.36	58.0	60.0	10.0	295	166–230	132.5	Ø17 mm
O 5.10 XL	2.0	2.0	0.37	0.45	0.37–0.55	0.45–0.66	58.5	64.0	18.5	291–320.5	223.7	158–187.7	½" / ¾"
O 5.16 XL	2.0	2.0	0.55	0.66	0.55	0.66	60.5	67.0	18.5	320–320.5	223.7	158–187.7	½" / ¾"
O 5.21 XL	2.0	2.0	0.75	0.90	0.75	0.90	64.0	69.0	21.5	320.5–353.5	227–278.5	196.4	½" / ¾"
O 5.25 XL K	2.0	2.0	0.75	0.90	0.75	0.90	63.0	63.0	24.5	431.8	227.5–282.6	211–219.4	½" / ¾"
U 5.40 XL K	1.0–300	1.0–300	1.1	1.35	1.1	1.35	67.0	71.0	≤28.5	≤457	≈250	≤192.1	1"
U 5.45	0.5–300	0.5–300	1.5	1.5–1.8			62.0	64.0	31	≤615	283	263	1 ¼"
U 5.65 XL K	0.5–300	0.5–300	1.5	1.5–1.8			72.0	74.0	36	≤651	356	263	1 ¼"
U 5.101	<0.1–400	<0.1–400	2.2	2.6			65.0	68.0	77.0	741	380	330	1 ¼"
U 5.166	<0.1–100	<0.1–100	3.0	3.6			70.0	72.0	107.0	842	510	399	2"
	<0.1–400	<0.1–400	4.0	4.8			70.0	72.0	104.0	820			
U 5.201	<0.1–100	<0.1–100	4.0	4.8			72.0	75.0	102.0	820	510	399	2"
	<0.1–400	<0.1–400	5.5	6.6			72.0	75.0	121.0	884			
U 5.301	<0.1–100	<0.1–100	5.5	6.6			73.0	76.0	161.5	974	549	409	2"
	<0.1–400	<0.1–400	7.5	9.0			73.0	76.0	161.5				
U 4.400 SA/K	3.0	3.0	11.0	13.2			78.0	81.0	400.0	1368	672	506	3"
U 4.400 F/K	0.5	0.5	11.0	13.2			78.0	81.0	400.0	1368	672	506	3"
U 4.630 SA/K	3.0	3.0	15.0	18.0			80.0	83.0	545.0	1538	695	506	3"
U 4.630 F/K	0.5	0.5	15.0	18.0			80.0	83.0	545.0	1538	695	506	3"
VARIAIR U 5.101	0.1	0.1	4.0 [2]				65.0	68.0	71.5	736	380	373	1 ¼"
VARIAIR U 5.201	0.1	0.1	4.0 [2]				72.0	74.0	107.0	821	510	410	2"
VARIAIR U 5.301	0.1	0.1	7.5 [2]				73.0	76.0	170.0	980	549	468	2"

VARIAIR UNIT



VARIAIR U 5.101

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10% (U4. ±5%)
[2] Power of the VARIAIR frequency inverter

VADS

SCREW VACUUM PUMPS

- Non-contact compression
- Air-cooled
- Direct drive
- VARIAIR frequency inverter



VADS 250



VADS 1500+

		m³/h – Refers to intake pressure [1]														
mbar absolute		1000	900	800	700	600	500	400	300	200	100	50	25	10	5	≤0.1
mbar relative		0	-100	-200	-300	-400	-500	-600	-700	-800	-900	-950	-975	-990	-995	≤-999.9
VADS 250	340 Hz	240	241	241	243	245	247	247	249	250	263	287	293	296	290	0.1
VADS 1500+	200 Hz	1380	1385	1390	1375	1360	1330	1300	1230	1160						

Technical data						
	Frequency inverter	db(A)	kg	mm			Connection
				Length	Width	Height	
VADS 250	7.5 kW • 400/480 V ±10% • 50/60 Hz	68	280	1192	520	905	2 ½"
VADS 1500+	30.0 kW • 400/480 V ±10% • 50/60 Hz	75/80 (110/200 Hz)	1200	1600	1510	1806	DN 150



[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%

BCV • VARIAIR BCV

CLAW VACUUM PUMPS

- Non-contact compression
- Air-cooled
- Integrated suction filter (BCV 100–500)
- VARIAIR BCV with VARIAIR frequency inverter



BCV 300



BCV 500



BCV 500 FD

		m^3/h – Refers to intake pressure [1]											
mbar absolute		1000	900	800	700	600	500	400	300	200	150	100	50
mbar relative		0	-100	-200	-300	-400	-500	-600	-700	-800	-850	-900	-950
BCV 100	50 Hz	100	88	86	84	81	77	73	67	57	38	19	0.1
	60 Hz	120	108	106	103	101	97	94	89	74	49	25	0.1
BCV 150	50 Hz	150	137	132	129	124	121	114	106	96	77	50	
	60 Hz	180	162	158	155	150	145	139	133	131	111	86	
BCV 300	50 Hz	275	256	253	250	246	243	239	230	191	154		
	60 Hz	325	305	302	300	293	288	283	271	250	204		
BCV 400 **BCV 400 FD**	50 Hz	400	401	402	402	402	400	398	393	0.1			
	60 Hz	470	466	465	464	462	460	457	453	0.1			
BCV 500 **BCV 500 FD**	50 Hz	500	499	497	495	493	492	491	469	0.1			
	60 Hz	600	598	595	593	589	587	583	559	0.1			
VARIAIR BCV 100	60 Hz	120	102	101	99	98	96	94	90	82	73	59	10
VARIAIR BCV 150	60 Hz	180	150	149	147	145	142	140	130	110	92	60	
VARIAIR BCV 300	60 Hz	325	289	286	286	289	291	289	260	196	146		

Technical data									
	kW 3~		db(A)		kg	mm			Connection
	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
BCV 100	2.2–3.0	2.2–3.0	67	71	121–133	768–805	537	532.5	2 ½"
BCV 150	3.0–4.0	3.0–4.0	67	71	190–201	805–847	537	579.5	2 ½"
BCV 300	5.5–7.5	5.5–7.5	69	70	323–331	918	580	624.0	2 ½"
BCV 400 FD	7.5	9.2	73	75	339–346	1248.5	520	527	3"
BCV 500 FD	9.2	11.8	74	77	356–395	1311.5–1374	520	527	3"
VARIAIR BCV 100	4.0 [2]		70		178	847	537	532.5	2 ½"
VARIAIR BCV 150	4.0 [2]		71		208	823	537	579.5	2 ½"
VARIAIR BCV 300	7.5 [2]		74		340	956	580	624.0	2 ½"

VARIAIR UNIT



VARIAIR BCV 300

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%
[2] Power of the VARIAIR frequency inverter

SV

SIDE CHANNEL VACUUM PUMPS

- Non-contact compression
- Single or double stage
- Air-cooled



SV 130



SV 400



SV 1100

		m³/h – Refers to intake pressure [1]									m³/h [1]	
mbar absolute		1000	950	900	850	800	750	700	650	600		@ max.
mbar relative		0	-50	-100	-150	-200	-250	-300	-350	-400		mbar (rel.)
Single stage												
SV 130/1	50 Hz	130	104	77	51	24					3	-240
	60 Hz	160	136	110	83	57	35				22	-270
SV 200/1	50 Hz	180	138	103	68	26					12	-215
	60 Hz	230	181	143	108	71					47	-230
SV 201/1	50 Hz	190	159	131	104	76	51				38	-275
	60 Hz	230	198	170	142	115	89				72	-285
SV 300/1	50 Hz	325	284	242	203	160	121				87	-290
	60 Hz	390	350	311	271	227	185	135			127	-310
SV 400/1	50 Hz	390	354	315	274	231	186	138			123	-315
	60 Hz	470	435	397	356	312	266	216			174	-340
SV 500/1	50 Hz	510	472	427	384	343	300	252			191	-355
	60 Hz	610	580	540	499	456	410	361			286	-370
SV 700/1	50 Hz	750	684	613	547	475	407	326			258	-340
	60 Hz	900	832	763	697	631	560	483			424	-340
SV 1100/1	50 Hz	1050	963	878	788	700	603	499			454	-320
	60 Hz	1250	1168	1091	1006	919	824	726			684	-320
Double stage												
SV 130/2	50 Hz	70	58	47	39	31	24	17	9		4	-380
	60 Hz	85	74	65	56	48	40	33	26	18	18	-400
SV 200/2	50 Hz	90	75	60	48	39	27	14			6	-330
	60 Hz	110	95	81	71	60	49	37	23		23	-350
SV 201/2	50 Hz	90	82	72	64	55	47	39	28	17	17	-400
	60 Hz	110	101	92	84	74	65	56	46	35	35	-400
SV 300/2	50 Hz	160	144	131	119	105	92	77	63	46	45	-405
	60 Hz	190	177	164	153	140	126	111	97	80	78	-410
SV 400/2	50 Hz	195	181	166	151	136	121	107	92	77	65	-440
	60 Hz	235	222	208	194	180	166	151	136	120	107	-440
SV 500/2	50 Hz	260	240	218	199	177	158	139	122	104	101	-410
	60 Hz	305	292	274	256	238	220	202	183	164	164	-400
SV 700/2	50 Hz	375	352	332	312	292	272	250	226	198	198	-400
	60 Hz	435	418	401	383	365	345	323	304	273	273	-400
SV 1100/2	50 Hz	510	468	424	380	337	295	254	217		189	-390
	60 Hz	605	559	512	466	421	376	333	290		257	-390

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%

Technical data													
	max. mbar relative		kW 3~		kW 1~		db(A)		kg	mm			Connection
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
Single stage													
	-75	-65	0.55	0.66			60.9	63.6	21.0	380.5			
	-125	-115	0.75	0.90	0.75	0.90	60.9	63.6	22.0	384–400			
SV 130/1	-210	-200	1.10	1.29	1.10	1.30	63.4	64.8	22.5	387–423	264	309	1 ½"
	-240	-245	1.25	1.50			63.4	64.8	24.5	423			
	-240	-270	1.50	1.80	1.50	1.80	64.0	65.4	26.0	423–427			
SV 200/1	-150	-140	1.10	1.29	1.10	1.30	63.9	69.2	25.5	421	306	357	2"
	-215	-230	1.50	1.80	1.50	1.80	63.9	69.2	28.5	431			
	-140	-125	1.10	1.29	1.10	1.30	65.2	68.3	25.5	421			
SV 201/1	-220	-210	1.50	1.80	1.50	1.80	66.5	68.2	28.5	431	306	357	2"
	-275	-285	2.20	2.65			66.3		32.5	452			
	-170	-155	2.2	2.65			67.3	68.3	40.0	469			
SV 300/1	-265	-245	3.0	3.6			70.1	71.0	42.5	494	370	426	2 ½"
	-290	-310	4.0	4.8			71.4	72.7	54.5	538			
	-210	-190	3.0	3.6			72.5	74.4	52.5	489			
SV 400/1	-315	-290	4.0	4.8			72.5	74.4	53.0	502	390	454	3"
	-315	-340	5.5	6.6			74.5	74.0	54.5	536			
	-200	-175	4.0	4.8			75.5	76.7	≤61.5	496			
SV 500/1	-315	-290	5.5	6.6			75.5	76.7	66.5	530	474	523	3"
	-355	-370	7.5	9.0			75.5	76.7	75.5	600			
	-200	-170	5.5	6.6			69.0	71.0	89.0	572			
SV 700/1	-300	-280	7.5	9.0			72.0	73.0	112.0	614	496	596	4"
	-340	-340	11.0	13.2			73.0	74.0	119.0	635			
	-160	-130	7.5	9.0			73.0	77.0	118.0	622			
SV 1100/1	-290	-270	11.0	13.2			75.0	79.0	125.0	643	525	611	4"
	-320	-320	15.0	18.0			75.0	79.0	157.0	680			
Double stage													
	-170	-150	0.55	0.66			57.3	59.0	21.5	385.5			
SV 130/2	-270	-250	0.75	0.90	0.75	0.90	60.4	59.6	22.0	385.5–400	264	309	1 ½"
	-380	-400	1.10	1.29	1.10	1.30	59.8	62.7	23.0	387–423			
SV 200/2	-330	-300	1.10	1.29	1.10	1.30	63.7	68.4	25.5	426	306	357	2"
	-330	-350	1.50	1.80	1.50	1.80	63.7	68.4	28.5	431			
SV 201/2	-280	-250	1.10	1.29	1.10	1.30	65.6	68.7	25.5	426	306	357	2"
	-400	-400	1.50	1.80	1.50	1.80	65.6	68.7	28.5	431			
SV 300/2	-350	-315	2.20	2.65			67.8	67.5	40.5	469	370	426	2 ½"
	-405	-410	3.00	3.60			69.9	69.7	43.0	494			
SV 400/2	-440	-400	3.0	3.6			71.1	73.0	53.5	489	390	454	3"
	-440	-440	4.0	4.8			71.1	73.0	54.0	502			
SV 500/2	-280	-240	3.0	3.6			68.9	71.7	58.0	485	474	523	3"
	-410	-400	4.0	4.8			68.9	71.7	≤62.5	496			
SV 700/2	-390	-340	5.5	6.6			68.0	69.0	89.0	572	496	596	4"
	-400	-400	7.5	9.0			69.0	73.0	112.0	614			
SV 1100/2	-340	-250	7.5	9.0			69.0	76.0	118.0	622	525	611	4"
	-390	-390	11.0	13.2			71.0	77.0	125.0	643			

VARIAIR SV • VARIAIR Speed Flow

SIDE CHANNEL VACUUM PUMPS

- Non-contact compression
- Single or double stage
- Air-cooled
- VARIAIR frequency inverter



VARIAIR SV 300



VASF 2.120 AC [2]

		m³/h – Refers to intake pressure [1]									m³/h [1]	
mbar absolute		1000	950	900	850	800	750	700	650	600		@ max.
mbar relative		0	-50	-100	-150	-200	-250	-300	-350	-400		mbar (rel.)
Single stage												
VARIAIR SV 130/1	100 Hz	285	249	214	180	148	117	87			83	-305
VARIAIR SV 201/1	100 Hz	350	351	331	304	272	238	121			88	-310
VARIAIR SV 300/1	87 Hz	560	532	499	461	350	169				121	-255
VARIAIR SV 300/1	100 Hz	640	621	589	554	515	403	249			247	-305
VARIAIR SV 400/1	100 Hz	865	844	805	759	706	644	544			369	-340
VARIAIR SV 500/1	100 Hz	1000	984	952	914	867	811	742	659		584	-370
VARIAIR SV 700/1	80 Hz	1180	1148	1096	1028	949	867	789			735	-336
VASF 2.50/1	300 Hz	48	43	40.5	37.5	33.5	28 AC 20 DC				0.1	-290 AC -280 DC
VASF 2.80/1	250 Hz	90	79	72	67	61	51				0.1	-280 AC -290 DC
VASF 2.120/1	200 Hz	143	125	115	109	93					0.1	-230 AC
Double stage												
VARIAIR SV 130/2	100 Hz	140	125	112	100	88	76	65	55	45	42	-410
VARIAIR SV 201/2	100 Hz	175	172	166	159	152	144	135	125	113	105	-420
VARIAIR SV 300/2	100 Hz	300	298	290	281	272	262	249	225	198	192	-410
VASF 2.50/2	300 Hz	24	22	20.5	19.5	18.5	17.5	16.5	15	14	0.1	-560 AC -550 DC
VASF 2.80/2	250 Hz	45	42	38	35	33	30	27	24	19	0.1	-500 AC -570 DC
VASF 2.120/2	200 Hz	71	64	59	55	51	48	45	41	34	0.1	-460 AC

Technical data						
	Frequency inverter	db(A)	kg	mm			Connection
				Length	Width	Height	
VARIAIR SV 130/X	4.0 kW • 400/480 V ±10% • 50/60 Hz	70.0	30.5	424	264	380	1 ½"
VARIAIR SV 201/X	4.0 kW • 400/480 V ±10% • 50/60 Hz	77.2	32.0	428	306	407	2"
VARIAIR SV 300/1 87 Hz	4.0 kW • 400/480 V ±10% • 50/60 Hz	70.2	46.0	493	370	456	2 ½"
VARIAIR SV 300/X 100 Hz	7.5 kW • 400/480 V ±10% • 50/60 Hz	71/74	49.5	512	370	499	2 ½"
VARIAIR SV 400/1	11–22 kW • 400/480 V ±10% • 50/60 Hz	76.8	75.0	572	390	592	3"
VARIAIR SV 500/1	11–22 kW • 400/480 V ±10% • 50/60 Hz	80.6	97.5	599	474	625	3"
VARIAIR SV 700/1	11–22 kW • 400/480 V ±10% • 50/60 Hz	74.5	120.0	633	496	682	4"
VASF 2.50/X	0.65 kW • AC~ • 200 V -10% ... 230 V +10% • 50/60 Hz	61.0	12.3	353	176	257	1"
	0.60 kW • AC~ • 100 V -10% ... 115 V +10% • 50/60 Hz	61.0	12.3		176	257	
	0.75–0.77 kW • DC~ • 24 V ±20%	65.0	11.5		173	233	
VASF 2.80/X	1.1 kW • AC~ • 200 V -10% ... 230 V +10% • 50/60 Hz	61.0	15.0	391	176	291	1 ¼"
	1.1 kW • DC~ • 48 V ±20%	65.0	14.7		173	268	
VASF 2.120/X	1.4 kW • AC~ • 200 V -10% ... 230 V +10% • 50/60 Hz	63.0	18.8	432	200	320	1 ½"

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%
[2] Optionally with integrated VARIAIR frequency inverter, fan and silencers

VARIAIR RV • VATP

RADIAL VACUUM PUMPS

- Non-contact compression
- Air-cooled
- VARIAIR RV with external VARIAIR frequency inverter
- VATP (VARIAIR Turbo Package) consisting of RV 2.1944/10, VARIAIR frequency inverter, intake filter and sound enclosure



RV 2.1944/10



VATP 1600

		m^3/h – Refers to intake pressure [1]						
mbar absolute		1000	950	900	850	800	750	710
mbar relative		0	-50	-100	-150	-200	-250	-290
RV 2.1944/10	400 Hz	1570	1615	1508	1389	1254	1060	486
VATP 1600	400 Hz	1570	1615	1508	1389	1254	1060	486

Technical data							
	Frequency inverter	db(A)	kg	mm			Connection
				Length	Width	Height	
RV 2.1944/10	11–22 kW [2] • 400/480 V ±10% • 50/60 Hz	75	81	550 [3]	450 [3]	520 [3]	Ø150 mm
VATP 1600	11–22 kW [2] • 400/480 V ±10% • 50/60 Hz	64	162	814	574	1134	[4]

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%
[2] Alternatively available as 7.5 kW version (see pump data sheet)
[3] Without frequency inverter
[4] Flange for hose connector

DT • KDT • DTLF

ROTARY VANE COMPRESSORS

- Oil-free
- Air-cooled
- Integrated suction filter
- DT/KDT with pressure regulating valve
- DTLF with pressure safety valve
- Version /0-400 with VARIAIR frequency inverter



DT 4.4



DT 4.16

		m^3/h [1]									m^3/h [1]	
	bar absolute	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6		@ max.
	bar relative	0	+0.2	+0.4	+0.6	+0.8	+1.0	+1.2	+1.4	+1.6		bar (rel.)
DT 4.2	50 Hz	1.9	1.7	1.6	1.6						1.6	+0.6
	60 Hz	2.3	2.1	2.0	1.9						1.9	+0.6
DT 4.4	50 Hz	4.2	4.0	3.8	3.6	3.4	3.2				3.2	+1.0
	60 Hz	4.9	4.7	4.5	4.3	4.0	3.8				3.8	+1.0
DT 4.6/0-61	50 Hz	5.7	5.3	4.9							4.9	+0.4
	60 Hz	6.4	5.9	5.4							5.4	+0.4
DT 4.8	50 Hz	8.0	7.8	7.5	7.2	6.8	6.5				6.5	+1.0
	60 Hz	9.5	9.1	8.7	8.3	7.9	7.5				7.5	+1.0
DT 4.10	50 Hz	10	9.5	8.9	8.2	7.6	7.0				7	+1.0
	60 Hz	12	11.7	11.1	10.4	9.8	9.2				9.2	+1.0
DT 4.16	50 Hz	16	15.3	14.6	13.9	13.2	12.5				12.5	+1.0
	60 Hz	19	18.5	17.8	17.1	16.4	15.8				15.8	+1.0
DT 4.25 K	50 Hz	25	24.4	23.8	23.2	22.6	22.0				22	+1.0
	60 Hz	30	29.5	29.0	28.5	28.0	27.5				27.5	+1.0
DT 4.40 K	50 Hz	40	37.8	36.6	35.3	34.1	32.9				32.9	+1.0
	60 Hz	48	45.8	44.6	43.3	42.1	40.9				40.9	+1.0
KDT 3.60	50 Hz	54	53	51	49	47	45	44	42		41	+1.5
	60 Hz	63	62	60	59	57	55	54	52		51	+1.5
KDT 3.80	50 Hz	66	64	62	61	59	57	55	53		52	+1.5
	60 Hz	77	75	73	72	70	68	66	64		63	+1.5
KDT 3.100	50 Hz	99	97	94	92	90	88	86	84		83	+1.5
	60 Hz	118	116	114	111	109	106	104	102		101	+1.5
KDT 3.140	50 Hz	129	127	125	123	121	119	116	113		112	+1.5
	60 Hz	153	151	149	147	144	142	140	138		137	+1.5
DTLF 2.200	50 Hz	174	168	163	158	152	147	141	136	130	125	+1.8
	60 Hz	216	212	207	201	196	191	186	181	175	170	+1.8
DTLF 2.250	50 Hz	247	243	239	234	229	223	219	214	209	205	+1.8
	60 Hz	294	290	285	280	276	271	265	260	255	249	+1.8
DTLF 2.250 K	50 Hz	240	236	232	228	223	218	214	210	206	203	+1.8
	60 Hz	284	279	275	270	265	260	256	252	247	241	+1.8
DTLF 2.360	50 Hz	360	357	353	350	346					344	+0.9
DTLF 2.400	50 Hz	365	354	343	335	329	326	324	322	321	320	+1.8
	60 Hz	440	432	421	417	414	410	406	402	399	395	+1.8
DTLF 2.500	50 Hz	515	493	481	471	460	450	440	430	421	412	+1.8
	60 Hz	600	586	574	562	552	542	532	522	510	494	+1.8
KDT 3.80/0-400	60 Hz	77	74	72	70	68	66	64	62		61	+1.5
KDT 3.100/0-400	60 Hz	118	116	114	111	109	106	103	99		98	+1.5
KDT 3.140/0-400	60 Hz	150	149	147	145	143	142	130	119		114	+1.5
DTLF 2.250/0-400	60 Hz	290	287	283	279	273	267	261	257	150	118	+1.7
DTLF 2.500/0-400	60 Hz	584	573	563	552	543	535	510	461		430	+1.5



VARIAIR KDT 3.80/0-400



KDT 3.140



DTLF 2.250

Technical data										
	max. bar rel.	kW 3~		db(A)		kg	mm			Connection
	50 & 60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
DT 4.2	+0.6	0.09 (1~)	0.105 (1~)	53.0	55.0	7.0	222	156	166	1/4"
DT 4.4	+1.0	0.18 [2,3]	0.21 [2,3]	60.0	60.5	7.0	222	156	166	1/4"
DT 4.6/0-61	+0.4	0.18 [3]	0.21 [3]	67.0	69.0	7.0	233	156	172	3/8"
DT 4.8	+1.0	0.37 [3]	0.44 [3]	58.0	61.5	9.5	233–253	156–164	171.5–179.5	3/8"
DT 4.10	+1.0	0.37 [3]	0.45 [3]	60.0	62.0	16.0	429	206	195	1/2"
DT 4.16	+1.0	0.55 [3]	0.70 [3]	62.0	64.0	23.5	452	231	211	1/2"
DT 4.25 K	+1.0	1.10 [3]	1.30	65.0	67.0	36.5	545	328	290	3/4"
DT 4.40 K	+1.0	1.85 [3]	2.20	67.0	70.0	46.0	625	328	290	3/4"
KDT 3.60	+0.5/+1.0/+1.5	2.2/2.2/3.0	2.6/2.6/3.6	≤72	≤74	84.0	747	353	328	1"
KDT 3.80	+0.5/+1.0/+1.5	2.2/3.0/4.0	2.6/3.6/4.8	≤74	≤76	113.5	863	353	328	1"
KDT 3.100	+0.5/+1.0/+1.5	4.0/5.5/5.5	4.8/6.6/6.6	≤76	≤78	135.5	967	470	362	1 ½"
KDT 3.140	+0.5/+1.0/+1.5	5.5/7.5/7.5	6.6/9.0/9.0	≤82	≤84	146.0	953	470	362	1 ½"
DTLF 2.200	+0.8/+1.5/+1.8	5.5/7.5/11.0	6.6/9.0/13.2	≤82	≤83	365.0	1363	644	527	2 ½"
DTLF 2.250	+0.8/+1.5/+1.8	7.5/11.0/15.0	9.0/13.2/18.0	≤84	≤85	340.0	1300	644	557	2 ½"
DTLF 2.250 K	+0.8/+1.5/+1.8	7.5/11.0/15.0	9.0/13.2/18.0	≤84	≤85	361.0	1300	708	527	2 ½"
DTLF 2.360	+0.5/+0.9 (50 Hz)	11.0/15.0	–	≤84	–	286.0	1180	644	527	2 ½"
DTLF 2.400	+0.9/+1.25/+1.8	11.0/15.0/18.5	13.2/18.0/22.0	≤80	≤82	480.0	1535	747	579	4"
DTLF 2.500	+0.8/+1.1/+1.5/+1.8	15.0/18.5/22.0/30.0	18.0/22.0/26.0/36.0	≤81	≤82	490.0	1535	747	579	4"
KDT 3.80/0-400	+1.5	4.0 [4]		71.2		87.5	726	353	400	1"
KDT 3.100/0-400	+1.5	7.5 [4]		76.0		149.0	927	472	455	1 ½"
KDT 3.140/0-400	+1.5	7.5 [4]		82.0		149.0	927	472	455	1 ½"
DTLF 2.250/0-400	+1.7	11.0–22.0 [4]		76.7		310.0	1293	646	684	2 ½"
DTLF 2.500/0-400	+1.5	11.0–22.0 [4]		80.6		490.0	1438	747	713	4"

VARIAIR UNIT



VARIAIR DTLF 2.500/0-400

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%
[2] Alternatively available as DC variant
[3] Alternatively available as 1~ variant
[4] Power of the VARIAIR frequency inverter

VADS

SCREW COMPRESSORS

- Non-contact compression
- Air-cooled
- Direct drive
- VARIAIR frequency inverter



VADS 1500+

		m^3/h [1]							
bar absolute		1.0	1.2	1.4	1.6	1.7	1.8	1.9	2.0
bar relative		0	+0.2	+0.4	+0.6	+0.7	+0.8	+0.9	+1.0
VADS 1500+	165 Hz	1230	1216	1205	1194	1188	1188	1017	847

Technical data							
	Frequency inverter	db(A)	kg	mm			Connection
				Length	Width	Height	
VADS 1500+	45 kW • 400/480 V ±10% • 50/60 Hz	75/80 (80/165 Hz)	1200	1600	1468	1806	DN 150



[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%

BCP

CLAW COMPRESSORS

- Non-contact compression
- Air-cooled
- Integrated suction filter
- Pulsation damper



BCP 150 PD



BCP 300 PD

	m³/h [1]										
bar absolute	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0
bar relative	0	+0.2	+0.4	+0.6	+0.8	+1.0	+1.2	+1.4	+1.6	+1.8	+2.0
BCP 100 PD 50 Hz	100	82	78	74	70	66	61	56	52	48	44
BCP 100 PD 60 Hz	120	96	92	88	84	80	76	72	68	66	64
BCP 150 PD 50 Hz	150	124	119	114	110	105	100	95	90	85	81
BCP 150 PD 60 Hz	180	149	144	140	136	131	127	123	119	115	111
BCP 300 PD 50 Hz	275	241	233	226	219	211	205	198	191	184	177
BCP 300 PD 60 Hz	325	292	283	274	267	258	250	242	234	227	219

Technical data										
	max. bar rel.	kW 3~		db(A)		kg	mm			Connection
	50 & 60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	w/o motor	Length	Width	Height	
BCP 100 PD	+0.8/+1.3/+1.5/+2.0	3.0–7.5	3.0–7.5	≤83	≤85	≈130	1032	549	619	1 ½“
BCP 150 PD	+1.0/+1.3/+1.7/+2.0	5.5–11.0	5.5–13.2	≤85	≤87	≈143	1032	582	≈664	1 ½“
BCP 300 PD	+1.3/+1.6/+2.0	11.0–18.5	11.0–18.5	≤85	≤90	≈202	1130	628	≈716	2“

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%

SV

SIDE CHANNEL BLOWERS

- Non-contact compression
- Single or double stage
- Air-cooled



SV 130



SV 400



SV 1100

		m^3/h [1]											m^3/h [1]	
mbar absolute		1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500		@ max.
mbar relative		0	+50	+100	+150	+200	+250	+300	+350	+400	+450	+500		mbar (rel.)
Single stage														
SV 130/1	50 Hz	130	104	81	60	37	26						14	+280
	60 Hz	160	134	115	94	76	58	42					42	+300
SV 200/1	50 Hz	180	138	106	80	52							37	+225
	60 Hz	230	182	149	122	97							86	+220
SV 201/1	50 Hz	190	158	132	110	90	73	57					45	+340
	60 Hz	230	199	173	150	129	111	94					85	+330
SV 300/1	50 Hz	325	287	251	218	186	158	133	110				102	+370
	60 Hz	390	357	324	293	262	233	203					181	+340
SV 400/1	50 Hz	390	354	319	285	253	222	193	165	140			127	+425
	60 Hz	470	435	399	365	332	301	272	244	218			213	+410
SV 500/1	50 Hz	510	470	431	395	361	327	300	269	242			225	+435
	60 Hz	610	572	541	507	474	441	408	375	341			337	+405
SV 700/1	50 Hz	750	687	628	577	527	477	427	375	324			324	+400
	60 Hz	900	833	775	720	668	616	564	509	455			455	+400
SV 1100/1	50 Hz	1050	978	912	845	780	815	652	588				539	+390
	60 Hz	1250	1176	1108	1039	972	905	840	775				775	+350
Double stage														
SV 130/2	50 Hz	70	58	49	42	34	28	23	19	14			14	+400
	60 Hz	85	76	67	60	52	44	40	34				30	+390
SV 200/2	50 Hz	90	74	62	52	45	37	30	21	13			11	+410
	60 Hz	110	96	83	73	64	56	49	42	35			30	+430
SV 201/2	50 Hz	90	83	74	66	59	52	45	39	33			31	+420
	60 Hz	110	102	94	87	79	72	66	60	54			54	+400
SV 300/2	50 Hz	160	145	133	122	111	100	90	80	70	61		50	+515
	60 Hz	190	177	166	155	115	135	125	116	107	90		90	+450
SV 400/2	50 Hz	195	181	168	156	143	132	121	111	101	93	84	80	+530
	60 Hz	235	223	211	200	190	179	169	160	151	142	134	134	+500
SV 500/2	50 Hz	260	238	219	202	186	172	157	144	131	120		113	+480
	60 Hz	305	290	273	258	244	231	217	209	195	184	172	165	+530
SV 700/2	50 Hz	375	355	335	316	298	2181	265	250	236	223	211	211	+500
	60 Hz	435	416	397	380	363	348	333	319	306	293		293	+450
SV 1100/2	50 Hz	510	489	470	451	432	413	394	375	357	340		326	+490
	60 Hz	605	584	565	548	532	515	499	483	465			462	+410

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%

Technical data													
	max. mbar relative		kW 3~		kW 1~		db(A)		kg	mm			Connection
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
Single stage													
	+75	+60	0.55	0.66			61.2	64.0	21.0	380.5			
	+125	+110	0.75	0.9	0.75	0.9	61.2	64.0	22.0	384–400			
SV 130/1	+210	+195	1.1	1.29	1.1	1.3	63.9	64.7	22.5	387–423	264	309	1 ½"
	+240	+235	1.25	1.5			64.2	65.3	24.5	423			
	+280	+300	1.5	1.8	1.5	1.8	64.2	65.3	26.0	423–427			
SV 200/1	+145	+130	1.1	1.29	1.1	1.3	64.6	68.2	25.5	421	306	357	2"
	+225	+220	1.5	1.8	1.5	1.8	64.6	68.2	28.5	431			
	+135	+120	1.1	1.29	1.1	1.3	63.9	68.0	25.5	421			
SV 201/1	+210	+200	1.5	1.8	1.5	1.8	65.0	68.0	28.5	431	306	357	2"
	+340	+330	2.2	2.65			68.3		32.5	452			
	+165	+140	2.2	2.65			66.9	68.9	40.0	469			
SV 300/1	+250	+230	3.0	3.6			71.1	69.4	42.5	494	370	426	2 ½"
	+370	+340	4.0	4.8			72.8	73.4	54.5	538			
	+200	+180	3.0	3.6			71.6	74.2	52.5	489			
SV 400/1	+290	+270	4.0	4.8			71.6	74.2	53.0	502	390	454	3"
	+425	+410	5.5	6.6			76.8	76.1	54.5	536			
	+190	+175	4.0	4.8			71.6	74.1	≤61.5	496			
SV 500/1	+295	+275	5.5	6.6			71.6	74.1	66.5	530	474	523	3"
	+435	+405	7.5	9.0			75.4	77.4	75.5	600			
	+185	+150	5.5	6.6			71.0	72.0	89.0	572			
SV 700/1	+285	+250	7.5	9.0			72.0	74.0	112.0	614	496	596	4"
	+400	+400	11.0	13.2			73.0	75.0	119.0	635			
	+140	+110	7.5	9.0			74.0	76.0	118.0	622			
SV 1100/1	+260	+220	11.0	13.2			74.0	76.0	125.0	643	525	611	4"
	+390	+350	15.0	18.0			76.0	79.0	157.0	680			
Double stage													
	+160	+140	0.55	0.66			59.9	59.4	21.5	385.5			
SV 130/2	+250	+230	0.75	0.9	0.75	0.9	60.4	60.0	22.5	385.5–400	264	309	1 ½"
	+400	+390	1.1	1.29	1.1	1.3	59.8	62.7	23.0	387–423			
SV 200/2	+300	+260	1.1	1.29	1.1	1.3	64.5	67.6	25.5	426	306	357	2"
	+410	+430	1.5	1.8	1.5	1.8	64.5	67.6	28.5	431			
SV 201/2	+260	+230	1.1	1.29	1.1	1.3	66.9	70.0	25.5	426	306	357	2"
	+420	+400	1.5	1.8	1.5	1.8	66.9	70.0	28.5	431			
SV 300/2	+330	+280	2.2	2.65			68.3	68.5	40.5	469	370	426	2 ½"
	+515	+450	3.0	3.6			71.7	74.5	43.0	494			
SV 400/2	+390	+350	3.0	3.6			73.1	75.1	53.5	489	390	454	3"
	+530	+500	4.0	4.8			73.1	75.1	54.0	502			
SV 500/2	+370	+340	4.0	4.8			69.9	71.6	≤62.5	496	474	523	3"
	+480	+530	5.5	6.6			69.8	72.2	67.5	530			
SV 700/2	+330	+250	5.5	6.6			68.0	69.0	89.0	572	496	596	4"
	+500	+450	7.5	9.0			70.0	73.0	112.0	614			
SV 1100/2	+250	+160	7.5	9.0			70.0	75.0	118.0	622	525	611	4"
	+490	+410	11.0	13.2			72.0	82.0	125.0	643			

VARIAIR SV • VARIAIR Speed Flow

SIDE CHANNEL BLOWERS

- Non-contact compression
- Single or double stage
- Air-cooled
- VARIAIR frequency inverter



VARIAIR SV 300



VASF 2.120 AC [2]

		m³/h [1]												m³/h [1]	
mbar absolute		1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	@ max.	
mbar relative		0	+50	+100	+150	+200	+250	+300	+350	+400	+450	+500	+550	mbar (rel.)	
Single stage															
VARIAIR SV 130/1	100 Hz	285	265	246	226	207	188	170	151	103				95	+405
VARIAIR SV 201/1	100 Hz	350	335	314	293	273	222	137						40	+340
VARIAIR SV 300/1	87 Hz	560	517	488	420	333	126							76	+255
VARIAIR SV 300/1	100 Hz	640	634	605	578	538	450	324	160					158	+355
VARIAIR SV 400/1	100 Hz	865	818	785	752	720	641	522	357					215	+380
VARIAIR SV 500/1	100 Hz	1000	985	956	925	892	858	824	790	759	678	602		514	+530
VARIAIR SV 700/1	80 Hz	1180	1127	1077	1028	978	926	870	731	443				391	+410
VASF 2.50/1	300 Hz	48	43	40	37.5	35.5	32							0.1	+290 AC +280 DC
VASF 2.80/1	250 Hz	90	80	74	71	67	59							0.1	+280 AC +290 DC
VASF 2.120/1	200 Hz	143	124	117	112	94								0.1	+230 AC
Double stage															
VARIAIR SV 130/2	100 Hz	140	132	126	119	113	107	101	96	91	85	81	76	76	+550
VARIAIR SV 201/2	100 Hz	175	169	163	158	152	147	142	137	130	116	100	81	75	+560
VARIAIR SV 300/2	100 Hz	300	296	289	281	274	267	260	251	234	212	184	149	133	+570
VASF 2.50/2	300 Hz	24	22	21	19.5	18.5	17.5	17	16	15	14.5	13.5	2.7	0.1	+560 AC
VASF 2.80/2	250 Hz	45	41	38	36	34	33	31	30	29	27	17	5	0.1	+570 AC +570 DC
VASF 2.120/2	200 Hz	71	65	60	57	54	52	51	49	46	11			0.1	+460 AC

Technical data						
	Frequency inverter	db(A)	kg	mm			Connection
				Length	Width	Height	
VARIAIR SV 130/X	4.0 kW • 400/480 V ±10% • 50/60 Hz	71.0	30.5	424	264	380	1 ½"
VARIAIR SV 201/X	4.0 kW • 400/480 V ±10% • 50/60 Hz	77.7	32.0	428	306	407	2"
VARIAIR SV 300/1 87 Hz	4.0 kW • 400/480 V ±10% • 50/60 Hz	69.6	46.0	493	370	456	2 ½"
VARIAIR SV 300/X 100 Hz	7.5 kW • 400/480 V ±10% • 50/60 Hz	72/75	49.5	512	370	499	2 ½"
VARIAIR SV 400/1	11–22 kW • 400/480 V ±10% • 50/60 Hz	77.8	75.0	572	390	592	3"
VARIAIR SV 500/1	11–22 kW • 400/480 V ±10% • 50/60 Hz	80.9	97.5	599	474	625	3"
VARIAIR SV 700/1	11–22 kW • 400/480 V ±10% • 50/60 Hz	75.1	120.0	633	496	682	4"
VASF 2.50/X	0.65 kW • AC~ • 200 V -10% ... 230 V +10% • 50/60 Hz	61.0	12.3	353	176	257	1"
	0.60 kW • AC~ • 100 V -10% ... 115 V +10% • 50/60 Hz	61.0	12.3		176	257	
	0.75–0.77 kW • DC~ • 24 V ±20%	65.0	11.5		173	233	
VASF 2.80/X	1.1 kW • AC~ • 200 V -10% ... 230 V +10% • 50/60 Hz	61.0	15.0	391	176	291	1 ¼"
	1.1 kW • DC~ • 48 V ±20%	65.0	14.7		173	268	
VASF 2.120/X	1.4 kW • AC~ • 200 V -10% ... 230 V +10% • 50/60 Hz	63.0	18.8	432	200	320	1 ½"

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%
[2] Optionally with integrated VARIAIR frequency inverter, fan and silencers

VARIAIR RV • VATP

RADIAL BLOWERS

- Non-contact compression
- Air-cooled
- VARIAIR RV with external VARIAIR frequency inverter
- VATP (VARIAIR Turbo Package) consisting of RV 2.1944/10, VARIAIR frequency inverter, intake filter and sound enclosure



RV 2.1944/10



VATP 1600

		m^3/h [1]									
mbar absolute		1000	1050	1100	1150	1200	1250	1300	1350	1400	1410
mbar relative		0	+50	+100	+150	+200	+250	+300	+350	+400	+410
RV 2.1944/10	400 Hz	1570	1570	1470	1344	1219	1094	968	843	577	455
VATP 1600	400 Hz	1570	1570	1470	1344	1219	1094	869	843	577	455

Technical data							
	Frequency inverter	db(A)	kg	mm			Connection
				Length	Width	Height	
RV 2.1944/10	11–22 kW [2] • 400/480 V ±10% • 50/60 Hz	75	81	550 [3]	450 [3]	520 [3]	Ø150 mm
VATP 1600	11–22 kW • 400/480 V ±10% • 50/60 Hz	64	162	814	574	1134	[4]

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%
[2] Alternatively available as 7.5 kW version (see pump data sheet)
[3] Without frequency inverter
[4] Flange for hose connector

T • DVT

ROTARY VANE PRESSURE/VACUUM PUMPS

- Oil-free
- Air-cooled
- Integrated suction filter
- Pressure and vacuum regulating valve



T 4.40 DSK



DVT 3.100

		m³/h – Suction | Blast air rate [1]					
		50 Hz			60 Hz		
	bar relative	0 bar	-0.25 bar	-0.50 bar	0 bar	-0.25 bar	-0.50 bar
T 4.10 DV	+0.25 bar	9.5 | 9.5	7.1 | 7.1	4.1 | 4.1	11.7 | 11.7	8.2 | 8.2	4.9 | 4.9
	+0.50 bar	9.4 | 9.4	6.4 | 6.4	3.6 | 3.6	11.0 | 11.0	7.0 | 7.0	4.5 | 4.5
T 4.16 DV	+0.25 bar	15.5 | 15.5	11.1 | 11.1	6.5 | 6.5	18.1 | 18.1	13.3 | 13.3	8.0 | 8.0
	+0.50 bar	15.0 | 15.0	10.1 | 10.1	6.0 | 6.0	17.9 | 17.9	12.3 | 12.3	7.3 | 7.3
T 4.25 DV	+0.25 bar	23.6 | 23.6	16.5 | 16.5	9.2 | 9.2	28.3 | 28.3	20.0 | 20.0	11.4 | 11.4
	+0.50 bar	22.1 | 22.1	15.0 | 15.0	7.8 | 7.8	26.9 | 26.9	18.4 | 18.4	10.2 | 10.2
T 4.40 DV	+0.25 bar	35.9 | 35.9	25.8 | 25.8	14.9 | 14.9	42.5 | 42.5	30.4 | 30.4	16.5 | 16.5
	+0.50 bar	34.2 | 34.2	24.0 | 24.0	13.5 | 13.5	41.1 | 41.1	29.3 | 29.3	13.5 | 13.5
		50 Hz			60 Hz		
	bar relative	0 bar	-0.50 bar	-0.60 bar	0 bar	-0.50 bar	-0.60 bar
T 4.25 DSK	+0.50 bar	23.4 | 24.9	9.9 | 18.2	7.1 | 16.9	28.5 | 30.7	12.3 | 21.5	9.1 | 19.6
	+0.60 bar	23.0 | 24.5	9.7 | 17.8	7.0 | 16.5	28.3 | 30.5	12.2 | 21.3	9.0 | 19.4
T 4.40 DSK	+0.50 bar	34.5 | 33.9	13.4 | 23.1	9.9 | 20.0	42.1 | 41.9	17.0 | 27.2	12.7 | 23.8
	+0.60 bar	34.1 | 33.4	13.2 | 22.7	9.7 | 19.2	41.1 | 41.1	16.4 | 26.5	12.0 | 23.0
DVT 3.60	+0.50 bar	55.2 | 56.9	22.2 | 37.4	16.2 | 32.9	65.0 | 68.3	27.0 | 43.5	21.0 | 38.7
	+0.60 bar	54.6 | 56.2	21.9 | 37.0	15.7 | 32.4	63.8 | 67.1	27.2 | 43.3	20.6 | 38.1
DVT 3.80	+0.50 bar	63.9 | 65.9	25.0 | 47.1	18.1 | 43.0	76.5 | 81.4	31.9 | 56.8	23.4 | 50.6
	+0.60 bar	63.0 | 64.8	24.7 | 46.8	17.5 | 42.3	76.0 | 80.6	31.6 | 56.0	23.5 | 50.2
DVT 3.100	+0.50 bar	95.6 | 98.0	40.2 | 66.9	29.7 | 58.8	113.7 | 119.0	50.0 | 78.2	37.6 | 67.8
	+0.60 bar	96.1 | 98.5	39.9 | 66.6	29.9 | 58.8	112.7 | 117.8	49.3 | 77.7	37.6 | 67.9
DVT 3.140	+0.50 bar	126.0 | 138.0	55.0 | 91.0	41.0 | 80.0	149.0 | 163.0	66.5 | 104.0	50.0 | 91.0
	+0.60 bar	126.0 | 138.0	51.0 | 89.0	38.0 | 78.0	148.0 | 162.0	66.0 | 103.0	50.0 | 90.0

Technical data													
	max. bar relative		kW 3~		kW 1~		db(A)		kg	mm			Connection
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz		Length	Width	Height	
T 4.10 DV	±0.5	±0.5	0.37	0.45	0.37	0.44	55	58	16.0	429	207	194	½"
T 4.16 DV	±0.5	±0.5	0.55	0.70	0.55	0.66	61	63	24.0	452	231	211	½"
T 4.25 DV	±0.5	±0.5	0.75	0.90	0.80	1.10	69	69	26.0	505	260	290	¾"
T 4.40 DV	±0.5	±0.5	1.25	1.50			66	68	38.5	572	280	290	¾"
T 4.25 DSK	±0.6	±0.6	1.10	1.30	1.10		69	69	35.0	545	328	290	¾"
T 4.40 DSK	±0.6	±0.6	1.85	2.20			68	68	46.0	625	328	290	¾"
DVT 3.60	±0.5/±0.6	±0.5/±0.6	2.2/3.0	2.6/3.6			≤75	≤76	84.0	≤747	353	328	1"
DVT 3.80	±0.5/±0.6	±0.5/±0.6	4.0/4.0	4.8/4.8			≤76	≤77	113.5	≤863	353	328	1"
DVT 3.100	±0.5/±0.6	±0.5/±0.6	5.5/5.5	6.6/6.6			≤77	≤78	134.5	≤951	470	336	1 ½"
DVT 3.140	±0.5/±0.6	±0.5/±0.6	7.5/7.5	9.0/9.0			≤78	≤79	146.0	≤953	470	336	1 ½"

[1] Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±5%

PS

ROOTS BOOSTER PACKAGES (PUMPING STATIONS)

- Consisting of an oil-lubricated rotary vane vacuum pump and a booster pump (roots) with integrated bypass as a backup for packaging processes with quick cycling times for high operational reliability and availability



PS 200/500

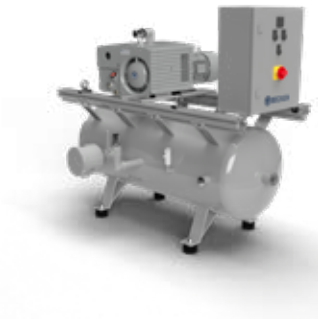
Technical data													
	m^3/h [1]		mbar abs.	RBP	kW 3~		U 5 / U 4	kW 3~		kg	mm			Connection
	50 Hz	60 Hz	50+60 Hz		50 Hz	60 Hz		50 Hz	60 Hz	Σ	Length	Width	Height	
PS 200/500	500	600	< 0.1	RBP 500	2.2–3.0	2.2–3.0	U 5.201	4.0	4.8	≈330	958	704	1090	DN100
PS 300/500	500	600	< 0.1	RBP 500	2.2–3.0	2.2–3.0	U 5.301	5.5	6.6	≈380	1022	704	1090	DN100
PS 300/1000	1000	1200	< 0.1	RBP 1000	4.0–5.5	4.0–5.5	U 5.301	5.5	6.6	≈480	1134	704	1122	DN100
PS 630/2000	2000	2400	< 0.1	RBP 2000	5.5–7.5	5.5–7.5	U 4.630	15.0	18.5	≈1100	1539	875	1497	DN150

[1] Nominal air flow refers to intake pressure; Reference (atmosphere): 1000 mbar, 20°C / tolerance: ±10%

D1 • D2 • D3 • L1 • L2 • L3

VACUUM SYSTEMS

- Dry-running (D) or oil-lubricated (L)
- 1, 2 or 3 rotary vane vacuum pumps
- Vacuum vessel, condensate drain and suction filter



D1/D2/D3			Technical data per pump		
	Pumps	Vessel [l]	m^3/h 50/60Hz	mbar abs. 50/60Hz	kW 50/60Hz
D1-060X/0250-34D	1x KVX 3.60	250	55/66	100/100	2.4/3.0
D1-080X/0250-34D	1x KVX 3.80	250	67/78.5	100/100	2.4/3.0
D1-100X/0250-34D	1x KVX 3.100	250	98/112	100/100	3.0/3.6
D1-140X/0250-34D	1x KVX 3.140	250	129/154	100/200	4.0/4.8
D1-250X/0500-34D	1x VXLF 2.250	500	244/276	200/200	5.5/6.6
D2-040X/0250-34D	2x VX 4.40	250	40/48	100/100	1.25/1.5
D2-060X/0250-34D	2x KVX 3.60	250	55/66	100/100	2.4/3.0
D2-080X/0500-34D	2x KVX 3.80	500	67/78.5	100/100	2.4/3.0
D2-100X/0500-34D	2x KVX 3.100	500	98/112	100/100	3.0/3.6
D2-140X/0500-34D	2x KVX 3.140	500	129/154	100/200	4.0/4.8
D3-025X/0250-VC+	3x VX 4.25	250	24/40	100/100	0.75/0.9
D3-040X/0250-VC+	3x VX 4.40	250	40/48	100/100	1.25/1.5
D3-060X/0500-VC+	3x KVX 3.60	500	55/66	100/100	2.4/3.0
D3-080X/0500-VC+	3x KVX 3.80	500	67/78.5	100/100	2.4/3.0
D3-100X/0500-VC+	3x KVX 3.100	500	98/112	100/100	3.0/3.6

L1/L2/L3			Technical data per pump		
	Pumps	Vessel [l]	m^3/h 50/60Hz	mbar abs. 50+60Hz	kW 50/60Hz
L1-5.101/0250-34D	1x U 5.101	250	100/120	<0.1–400	2.2/2.6
L1-5.166/0250-34D	1x U 5.166	250	165/198	<0.1–400	4.0/4.8
L1-5.201/0500-34D	1x U 5.201	500	200/240	<0.1–400	5.5/6.6
L2-5.45/0250-34D	2x U 5.45	250	45/54	0.5–300	1.5/1.8
L2-5.101/0250-34D	2x U 5.101	250	100/120	<0.1–400	2.2/2.6
L2-5.101/0500-34D	2x U 5.101	500	100/120	<0.1–400	2.2/2.6
L2-5.166/1000-34D	2x U 5.166	1000	165/198	<0.1–400	4.0/4.8
L2-5.201/1000-34D	2x U 5.201	1000	200/240	<0.1–400	5.5/6.6
L2-5.301/1000-34D	2x U 5.301	1000	300/360	<0.1–400	7.5/9.0
L3-5.101/0500-VC+	3x U 5.101	500	100/120	<0.1–400	2.2/2.6
L3-5.166/1000-VC+	3x U 5.166	1000	165/198	<0.1–400	4.0/4.8
L3-5.201/1000-VC+	3x U 5.201	1000	200/240	<0.1–400	5.5/6.6
L3-5.301/1000-VC+	3x U 5.301	1000	300/360	<0.1–400	7.5/9.0

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