

ROBUSCH®

HIGH VACUUM
BLOWERS



WIDE RANGE OF VACUUM SOLUTIONS FOR EVERY NEED

Since 1941, Robuschi has been engineering pressure and vacuum technologies from our manufacturing facilities in Parma, Italy. As a global leader in blowers and pumps across a wide range of industries, we are dedicated to supporting our customers and communities with high-efficiency products that help conserve energy and protect the environment.

Our equipment, **systems and services are designed** to optimize the performance of air compression and vacuum applications — delivering **superior reliability**, **efficiency**, and **sustainability**.



A SMARTER VACUUM RANGE

Robuschi's vacuum product portfolio has been developed in close collaboration with our customers to meet their most demanding requirements. To further enhance performance and reliability, we have upgraded our high vacuum blower technology: moving from 3-lobe to 2-lobe designs. This new configuration allows for improved efficiency, lower ultimate pressures, and better integration into multi-stage systems.

Our vacuum solutions now cover a wide range of technologies — including lobe, screw, and liquid ring pumps — capable of **achieving vacuum levels down to 0.001 mbar(a)** when used as boosters.

With a focus on simplicity, robustness, energy efficiency, and cost-effectiveness, Robuschi vacuum systems are the smart choice for a variety of industrial applications.

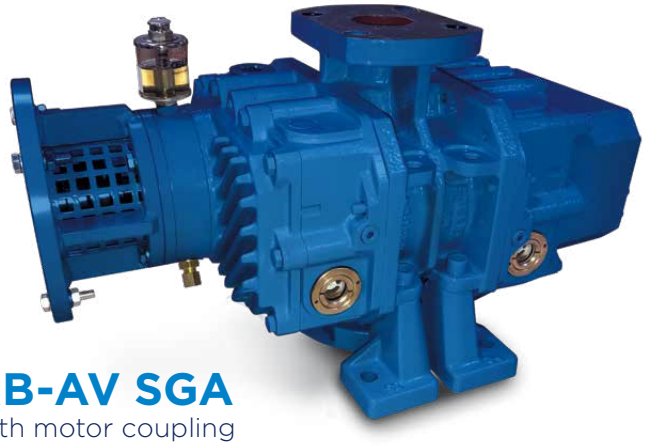
RB-AV SERIES – HIGH VACUUM BOOSTER BLOWERS

The **RB-AV series** features **rotary 2-lobe blowers** specifically designed for high vacuum applications. These blowers are used as boosters in combination with primary vacuum pumps, helping to achieve significantly lower pressures when required by the process.

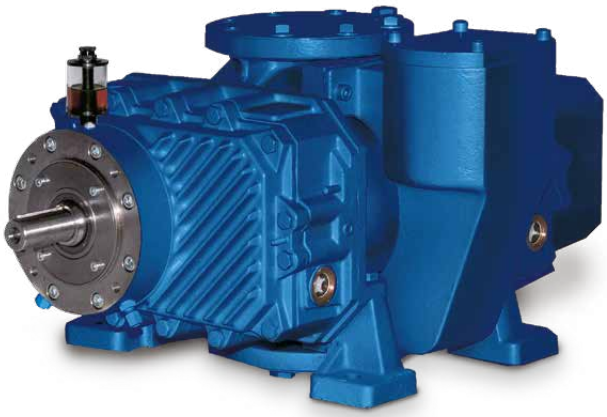
RB-AV blowers are ideal in systems where the **final pressure is below 33 mbar(a)**. They are typically paired with primary vacuum pumps such as:

- **Liquid ring vacuum pumps** (e.g., Robuschi RVS series)
- **Screw, claw, vane, or piston pumps**

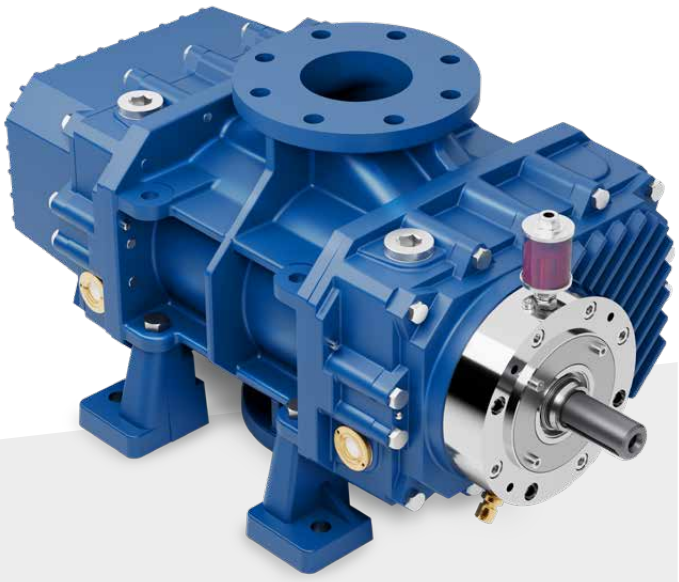
The most common system configuration is vertical, with the **RB-AV installed above the primary vacuum pump**, allowing for a compact and efficient layout. In many cases, **multi-stage systems** incorporating two or more RB-AV units are used to meet more demanding requirements for suction pressure or capacity.



RB-AV SGA
with motor coupling



RB-AV/V BY-PASS
with by-pass



RB-AV Series
Benefits at a Glance

- **Vacuum levels down to 0.001 mbar(a)**
- **Suction capacity from 200 to 30,000 m^3/h**
- **Handles gases and vapours**
- **No sliding parts – no internal wear**
- **Safe and reliable operation**
- **Minimal maintenance and easy servicing**
- **ATEX version available**

DISTINCTIVE FEATURES

The **RB-AV series** features two conjugate rotors rotating with **ultra-tight clearances**—just hundredths of a millimeter—inside a precision casing. This ensures **effective gas sealing** without contact between moving parts, minimizing wear and maximizing reliability. **High-precision gearing** synchronizes the rotors for **smooth**, **high-speed operation** in demanding vacuum applications.

ROBUST CONSTRUCTION

Labyrinth seals protect the compression chamber, preventing oil aerosols from entering and ensuring **clean**, **reliable performance**. **FKM elastomer O-rings** provide additional sealing between the chamber and the environment.

Thanks to **Robuschi's advanced rotor grinding technology**, every unit offers **outstanding dimensional accuracy** and long-lasting performance.

ENHANCED SAFETY

The shaft sealing system uses dual FKM rings with opposite lips, lubricated by an integrated oiler.

The oil ring housing can be water-cooled for added protection, while a hardened, replaceable sleeve safeguards the shaft—ensuring consistent, safe operation.

MATERIAL EXCELLENCE

Built from high-quality cast iron, the RB-AV series guarantees strength and durability. Nodular cast iron rotors deliver superior resilience, while optional nickel alloy coatings provide enhanced corrosion resistance for aggressive gases or vapors.

A range of sealing systems, including mechanical and PTFE options, ensures maximum efficiency and protection in every environment.

The precision and quality of materials used in our high-performance vacuum systems ensure outstanding reliability and durability in every operating condition.

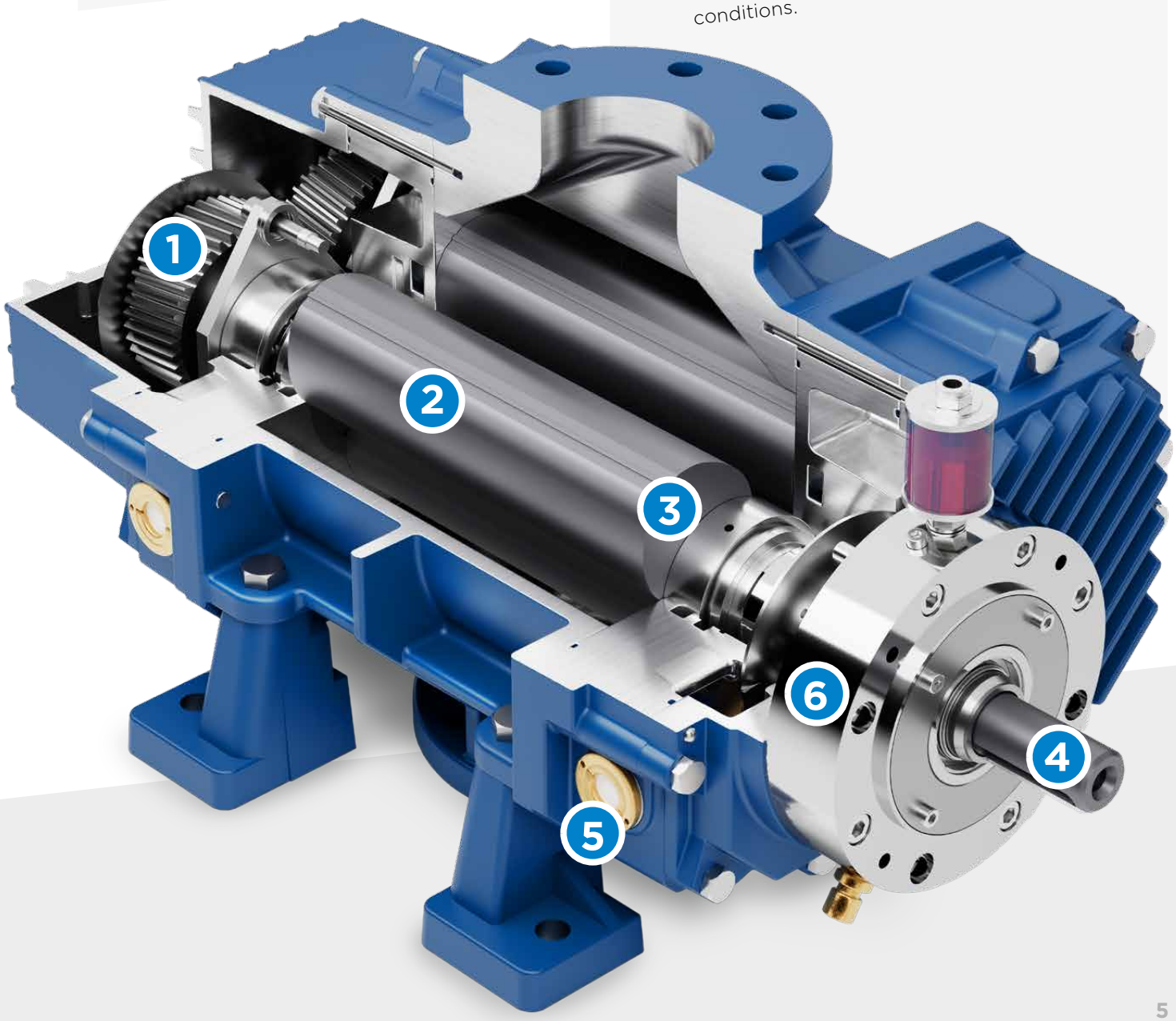
The main casing is made from robust cast iron, while the rotors are crafted from nodular cast iron for superior strength and resilience.

For processes involving corrosive gases or vapours, all wetted parts can be optionally coated with a stainless nickel alloy, providing enhanced corrosion resistance.

To meet diverse application needs, the RB-AV series offers a selection of high-performance sealing systems, including mechanical and PTFE seals, ensuring maximum protection and efficiency in demanding environments.

Benefits at a Glance

1. **Proven Expertise** – Proven Expertise: Backed by decades of engineering excellence and field experience, our proven expertise ensures high-precision gearing that synchronizes the rotors for smooth, high-speed operation in demanding vacuum applications.
2. **Reliable Performance** – Precision rotor synchronization through high-quality helical gears ensures smooth, consistent operation.
3. **High Efficiency** – Optimized lobe profiles deliver maximum output with minimal energy loss.
4. **Exceptional Durability** – Robust shafts and steel cage bearings guarantee a long and dependable service life.
5. **Easy Maintenance** – Clear Pyrex oil inspection windows simplify routine checks and servicing.
6. **Enhanced Protection** – Double sealing system with oil and water-cooling chambers ensures safe operation under demanding conditions.



FOR DIVERSE **APPLICATION REQUIREMENTS**



The RB - AV series surpasses the most extreme durability tests, thereby meeting the requirements of several industrial high-vacuum applications.

At Robuschi, we have the experience in implementing high vacuum blowers for various industries and processes, such as:

FOOD INDUSTRY

- **Packaging**
- **Vacuum filtration**
- **Evaporation, drying, distillation**





AUTOMOTIVE, ELECTRONICS, SEMI-CONDUCTORS, OPTICAL INDUSTRY

- **Polimerisation**
- **Ionisation**
- **Metallization**





METALLURGY

- **Degassing**

PHARMA & CHEMICAL INDUSTRY

- **Vacuum filtration**
- **Evaporation, drying, distillation**







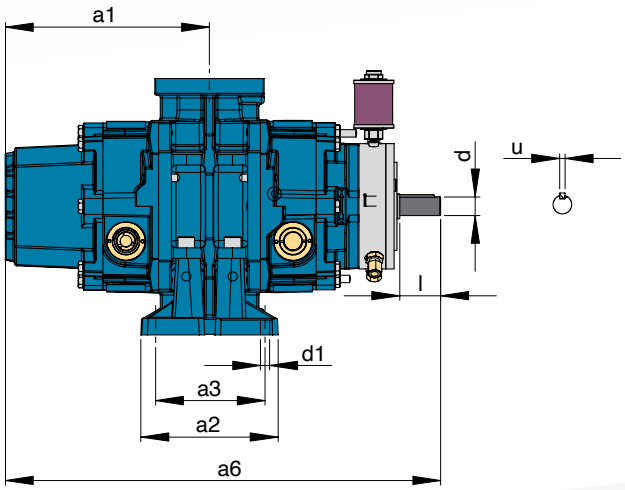
THERMOELECTRIC PLANT, NUCLEAR & AEROSPACE INDUSTRY

- **Condenser degassing**

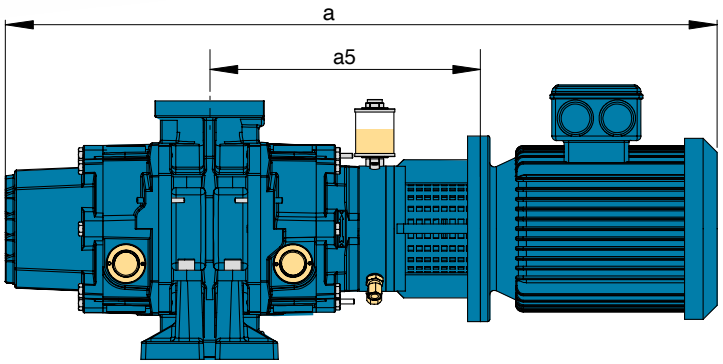
ROBUSCH®

TECHNICAL DATA OVERALL DIMENSIONS

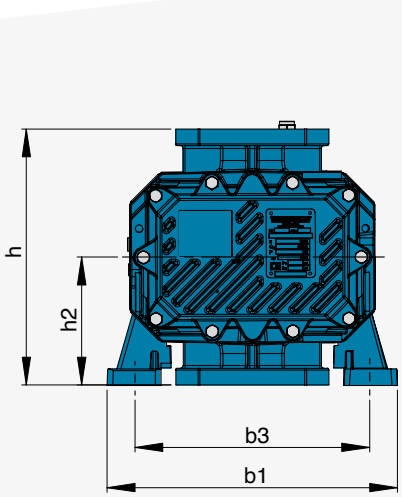
RB-AV



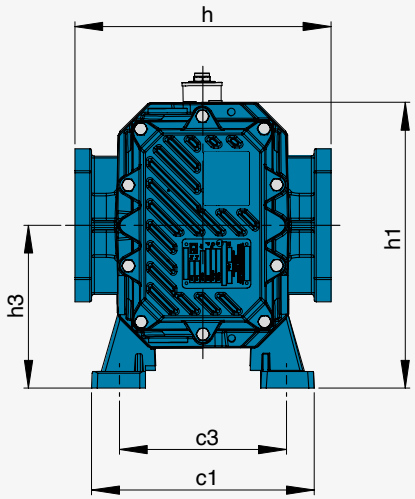
RB-AV SGA



INSTALLATION

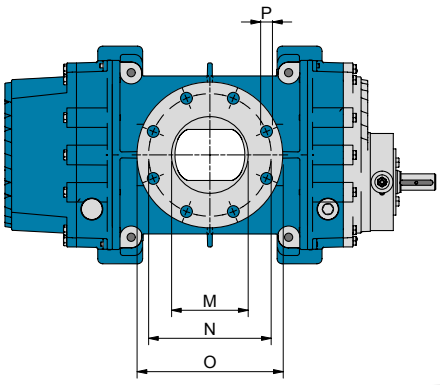


VERTICAL / V



HORIZONTAL / H

DRILLING FOR FLAT FLANGES



DIN 2532 (EN 1092-1) - RB-AV

SIZE	DIN 2532		O (OD)	M	P	NO. OF HOLES
	DN	N (PCD)				
01	50	125	165	50	18	4
02	80	160	200	80	18	4
12	100	180	220	100	18	8
22	100	180	220	100	18	8
23	150	240	285	150	23	8
32	150	240	285	150	23	8
33	150	240	285	150	23	8
42	200	295	340	200	23	8
51	200	295	340	200	23	8
52	250	350	395	250	23	12
62	300	400	445	300	23	12
63	300	400	445	300	23	12
71	300	400	445	300	23	12
72	350	460	505	350	23	16
73	400	515	565	400	26	16

RB-AV BLOWER

SIZE	OVERALL DIMENSIONS															SHAFT'S END			WEIGHT WITHOUT MOTOR (kg)	MOTOR FRAME IEC
	a	a1	a2	a3	a5	a6	b1	b3	c1	c3	d1	h	h1	h2	h3	d	l	u		
01	767	220	148	118	292	470	313	253	240	178	14	276	340	138	176	20	45	6	62	80
02	807	240	188	158	312	509	313	253	240	178	14	276	340	138	176	20	45	6	76	80
12	958	291	270	230	377	615	366	290	281	204	18	320	353	160	203	28	53	8	115	90
22	1134	345	327	282	449	731	426	354	313	240	18	350	417	175	232	32	68	10	208	112
23	1246	401	439	394	505	843	426	354	313	240	18	350	417	175	232	32	68	10	245	112
32	1286	398	412	362	517	832	534	444	388	298	24	400	494	200	271	38	68	10	320	132
33	1445	468	552	502	587	972	534	444	388	298	24	400	494	200	271	38	68	10	360	132
42	1622	470	363	288	632	993	592	528	420	356	24	500	602	250	335	42	88	12	460	160
51	1599	468	329	249	612	962	728	638	514	424	24	630	743	315	421	42	86	16	460	160
52	1762	532	458	378	676	1091	728	638	514	424	24	630	743	315	421	42	86	16	710	160
62	2088	665	620	510	831	1381	948	848	666	566	24	780	925	390	525	75	106	20	1450	180
63	2220	732	750	640	865	1512	948	848	666	566	24	780	925	390	525	75	106	20	1550	180
71	2300	717	575	450	927	1528	1147	1057	812	722	40	1000	1151	500	668	90	190	25	2250	200
72	2524	829	799	674	1039	1753	1147	1057	812	722	40	1000	1151	500	668	90	190	25	2450	200
73	2901	988	1065	940	1204	2040	1147	1057	812	724	40	1000	1153	500	668	90	190	25	2685	225

PERFORMANCES

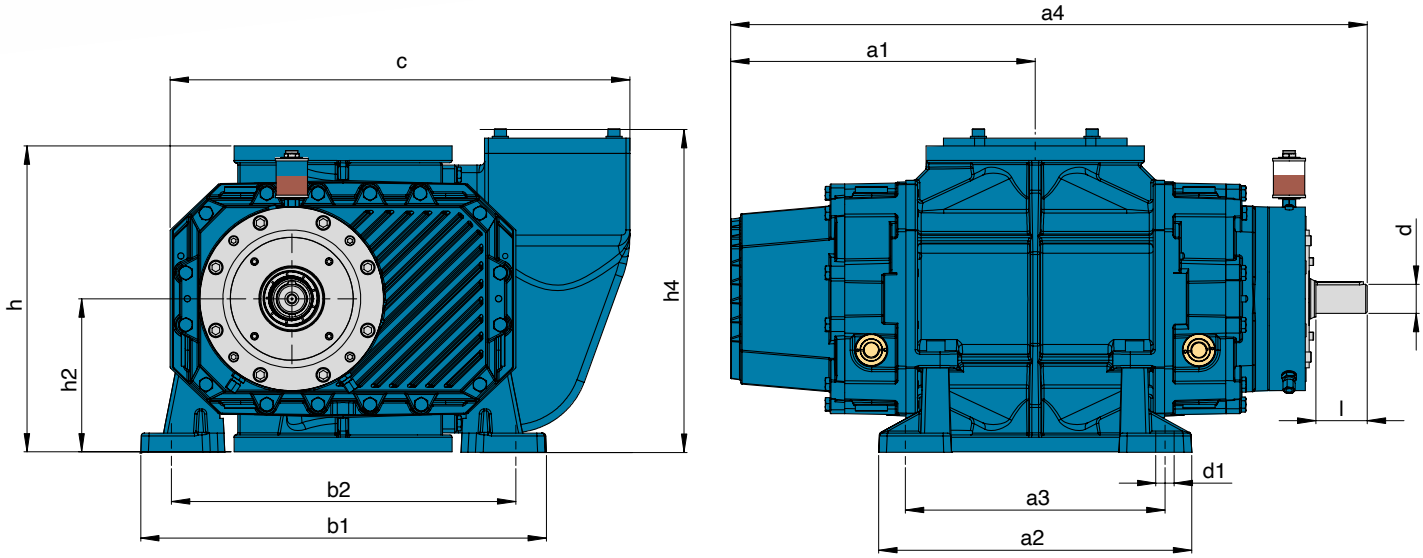
RB-AV BLOWER

SIZE	BLOWER THEORETICAL SUCTION CAPACITY		DIFFERENTIAL PRESSURE MAX	MOTOR	
	m³/h		mbar	POWER [kW] - NO. OF POLES	
	50 Hz	60 Hz			
01	200	240	130	0.75 - 2	1.1 - 2
02	280	336	80	1.1 - 2	1.5 - 2
12	500	600	80	2.2 - 2	3.5 - 2
22	1000	1200	80	4 - 2	5.5 - 2
23	1430	1716	66	4 - 2	5.5 - 2
32	2000	2400	50	5.5 - 2	7.5 - 2
33	2880	3456	40	7.5 - 2	11 - 2
42	3725	4470	50	11 - 2	15 - 2
51	5422	6506	66	15 - 2	18.5 - 2
52	7295	8754	50	18.5 - 2	22 - 2
62	7954	9545	50	22 - 4	27 - 4
63	9470	11364	40	22 - 4	30 - 4
71	11515	13818	40	30 - 4	32 - 4
72	15558	18670	30	30 - 4	37 - 4
73	20393	30000	25	37 - 4	37 - 4

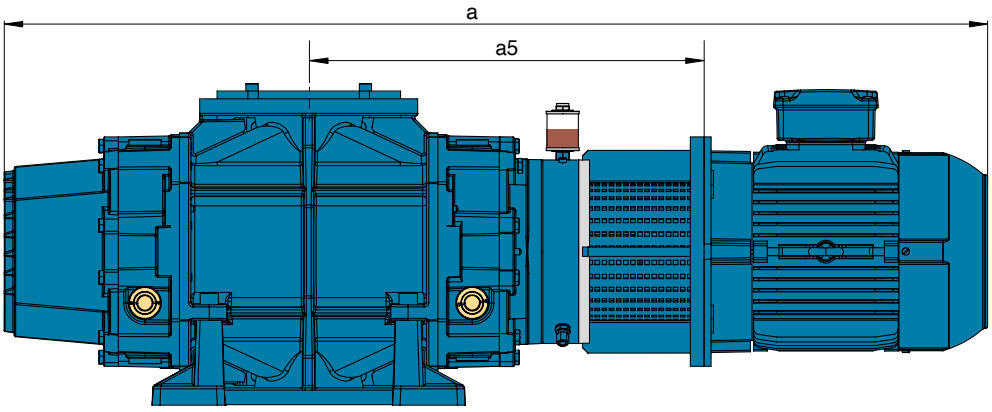
Note valid for all the tables: Not binding dimensions in mm.

TECHNICAL DATA OVERALL DIMENSIONS RB-AV/V BY-PASS

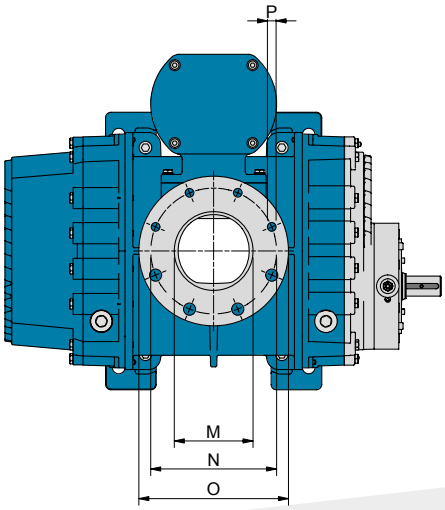
RB-AV/V BY-PASS



RB-AV/V BY-PASS SGA



DRILLING FOR FLAT FLANGES



DIN 2532 (EN 1092-1) - RB-AV/V BY-PASS

SIZE	DIN 2532		O (OD)	M	P	NO. OF HOLES
	DN	N (PCD)				
12-BY	100	180	220	100	M16	4
					18	4
22-BY	100	180	220	100	M16	4
					18	4
32-BY	150	240	285	150	M20	4
					23	4

RB-AV/V BY-PASS BLOWER

SIZE	OVERALL DIMENSIONS													SHAFT'S END		WEIGHT WITHOUT MOTOR (kg)	MOTOR FRAME IEC
	a	a1	a2	a3	a4	a5	b1	b2	c	h	h2	h4	d1	d	l		
12-BY	958	291	270	230	615	377	366	290	395	320	160	328	18	28	53	135	90
22-BY	1134	345	327	282	731	449	426	354	474	350	175	350	18	32	68	220	112
32-BY	1286	398	412	362	832	517	534	444	601	400	200	410	24	38	68	348	132

PERFORMANCES

RB-AV/V BY-PASS BLOWER

SIZE	BLOWER THEORETICAL SUCTION CAPACITY		DIFFERENTIAL PRESSURE MAX	MOTOR	
	m^3/h		mbar	POWER [kW] - NO. OF POLES	
	50 Hz	60 Hz			
12-BY	500	600	60	2.2 - 2	3.5 - 2
22-BY	1000	1200	60	4 - 2	5.5 - 2
32-BY	2000	2400	60	5.5 - 2	7.5 - 2

Note valid for all the tables: Not binding dimensions in mm.

ROBUSCHI®

An Ingersoll Rand Business

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We provide a range of services to ensure our customers' machines are well maintained to deliver maximum performance.
We offer preventative and planned maintenance programs, genuine parts, on-site service, professional maintenance and efficient training.
Within our service portfolio, you will find many and varied options and services needed to get optimal performance, maximum uptime and operating efficiency from your Robuschi equipment.

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