



# ***RB-DV - TRB-DV***

The Vacuum Blowers



**ROBUSCHI®**  
PUMPS AND BLOWERS



RB-DV series of rotary three lobe PD blowers can operate at high vacuum levels thanks to a **ROBUSCHI patented device that injects atmospheric air**.

The new patented device allows the blower to operate at maximum vacuum without overheating.

RB-DV series blowers can reach vacuum levels of up to **93% on a dead head - 28" Hg** without the need to water inject or uses an upstream heat exchanger. Consequently lowering installation and operating costs.

Main blowers features are:

- **Vacuum rate up to 93% (blank off) - 28" Hg and 90% -27" Hg continuous;**
- **Nominal capacity from 840 to 10.500 m<sup>3</sup>/h - from 494 CFM to 6200 CFM;**
- Gases and vapours can be handled;
- Lack of sliding parts, reduces wear;
- Safe operation environmentally friendly;
- No oil mist;
- **Available RB-DV in ATEX version on request.**



## APPLICATIONS

RB-DV series blowers are selected by applications requiring **vacuum levels greater than 50% or 15" Hg** (for applications requiring vacuum 0-50% / 0-15" Hg see ROBUSCHI RBS P.D. Blowers).

RB-DV series blowers are used in the following applications:

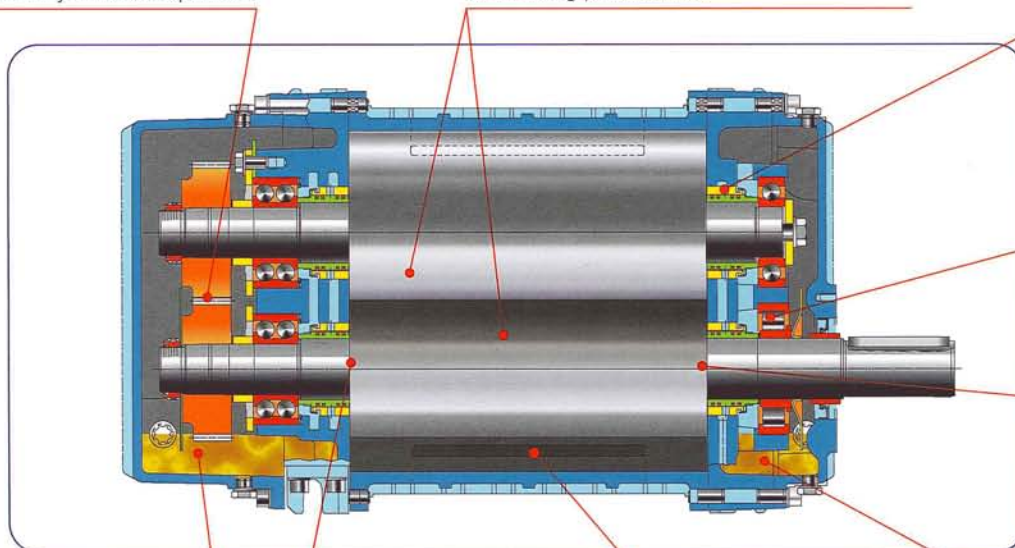
- Vacuum trucks handling wet and/or dry waste (Industry, Municipalities etc...);
- Pneumatic conveying (Ash transport, Chemicals, Pharmaceuticals industry etc...);
- Central vacuum systems (Packaging, Vacuum cleaning etc...);
- Deaeration plants (Plastic extrusion, Brick production, etc...).

Available complete and compact groups for truck applications (TRB-DV).

**Helical gears** provide near noiseless smooth and synchronized operation.

**Heavy duty rotor** and shaft assemblies safely allows operation at higher rpms providing outstanding performance.

**Labyrinth piston ring** provides low wear.



**Heavy duty bearing** for belt or gear transmission.

Heavy duty bearings allow greater flexibility setting up belt or close coupled transmission.

**Double ended oil bath lubrication** ensures long bearing life.

Patent tri (3) lobe rotors with ROBUSCHI high performance profile (**Low Pulse**).

**Patent air injection nozzle** ensures cool operation under all vacuum conditions.

Double ended oil bath lubrication ensures long bearing life.

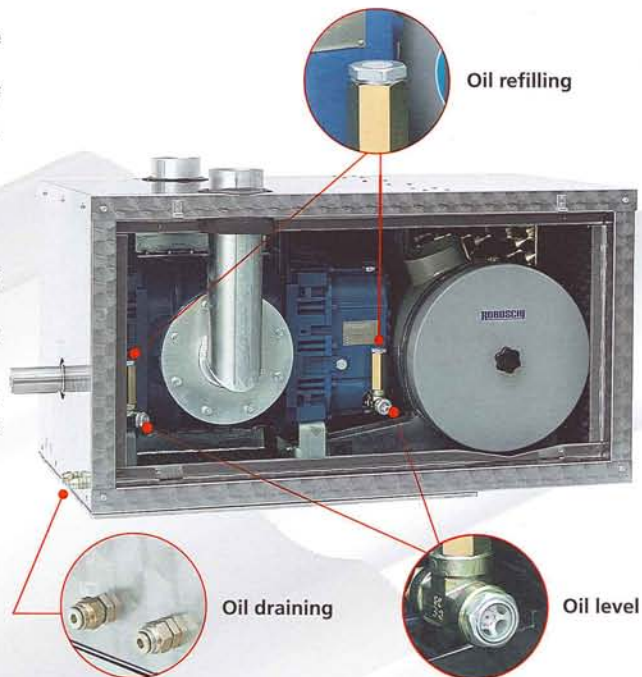
TRB-DV are completely assembled compact group sets with noise enclosure developed for vacuum truck handling wet and /or dry waste.

It is possible to install this group with up to 5° degree tilt. Power take off connection can be made by either hydraulic motor and or V- belt transmission.

TRB-DV group main features are:

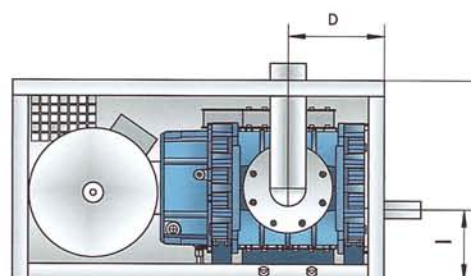
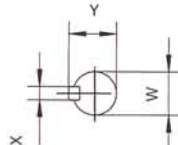
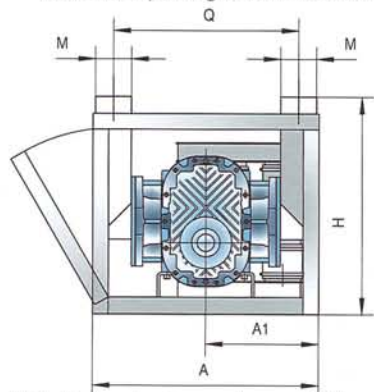
- No oil mist from the blower discharged into the environment;
- No water cooling required;
- Compact design allows flexibility positioning on truck and takes up less space;
- Easy installation;
- Simple maintenance thanks to front mounted site glasses giving clear view of oil level and easy access to draining and refilling lubricant;
- Options available: left side opening door and counter clock wise; right side opening door and counter clock wise; left side opening door and counter clock wise; right side opening door and counter clock wise;
- Stainless steel noise enclosure available on request.

TRB-DV can replace liquid ring vacuum pumps and vane vacuum pumps.



## TRB-DV - OVERALL DIMENSIONS

Left side opening door enclosure.

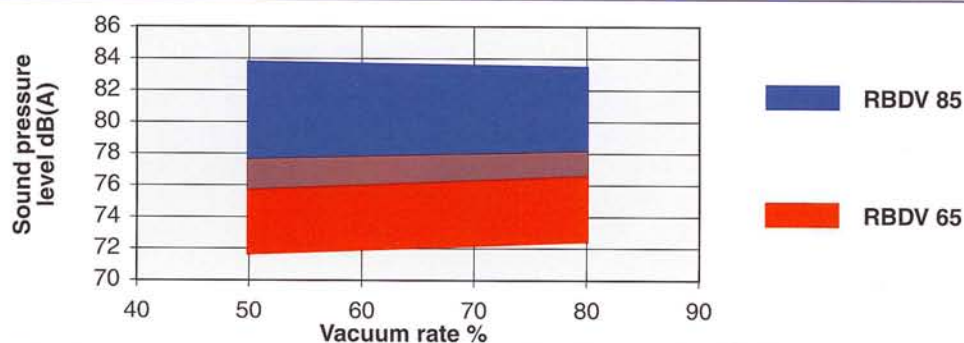


Blower	A	B	C	A1	D	H	L	M	Q	W	Z	X	Y	Weight lbs
65 inches	25,98	42,91	22,05	12,99	9,84	24,02	47,24	4	20,87	1,89	4,33	0,55	2,03	705,48
85 inches	28,35	46,85	25,59	14,17	12,20	27,56	51,18	4	23,23	2,17	4,33	0,63	2,32	959,01

Right side opening door enclosure available too.



## TRB-DV: NOISE LEVEL ISO 3746 \*



\* Free field 22,967'



## PERFORMANCE

BLOWER		VACUUM																	
SIZE	QG	RPM	30% 9"HG		50% 15"HG		60% 18"HG		70% 21"HG		80% 24"HG		85% 25,5"HG		90% 27"HG		93% 28"HG		
			CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	
45	494 CFM	2000	139	4,7	107	7,2	85	8,4	49	9,6									
		2500	188	5,9	156	9,0	134	10,6	98	12,1	26	13,7							
		3000	238	7,1	206	10,9	184	12,7	148	14,6	75	16,5							
		3500	287	8,2	255	12,6	233	14,7	197	17,0	125	19,2	45	20,2					
		4000	336	9,4	305	14,3	282	16,9	246	19,4	174	21,8	95	23,2					
		4500	386	10,6	354	16,2	332	19,0	296	21,8	224	24,7	144	26,0					
65	912 CFM	5000	435	11,8	400	18,0	381	21,2	345	24,3	273	27,3	194	28,9	14	30,6	BO	31,5	
		2000	312	7,8	272	12,6	224	14,7	176	17,4									
		2500	405	10,1	371	16,1	318	18,8	265	22,1	200	25,2							
		3000	500	12,7	465	20	412	23,5	359	26,8	300	30,8	176	32,6					
		3500	595	15,5	559	24	506	28,1	453	32,8	394	36,2	282	38,9					
		4000	691	18,8	647	28,4	618	33,5	547	37,5	494	42,9	371	45,6	171	48,9			
85	m1602 CFM	4500	786	22,4	735	32,8	694	38,7	647	44,1	582	49,6	459	52,3	235	54,9			
		4800	843	24,8	794	36,3	735	42,1	706	47,6	647	53,6	529	56,5	265	59,6	BO	61,6	
		1500	484	12,7	424	20,8	353	24,8	282	28,8									
		2000	696	17,7	641	28,8	529	33,5	424	39,1	335	44,5							
		2500	908	23,2	853	36,6	776	43,3	647	50	500	56,7	353	60					
		3000	1119	29,6	1059	45,7	953	53,6	818	61,8	676	69,8	529	73,8	244	80,4			
105	2294 CFM	3500	1331	36,7	1235	55,5	1200	64,3	1094	74,2	935	83,6	794	88,3	406	93			
		3800	1458	41,5	1412	61,6	1335	71,7	1200	82,3	1059	92,5	918	97,6	441	102,6	BO	105,9	
		1500	946	23,5	824	37,9	765	44,6	588	52,5	353	59,8							
		1750	1138	28	1012	45	941	52,7	765	61,9	529	70,5	206	74,6					
		2000	1329	32,8	1200	52,3	1118	62	941	71,7	706	81,3	382	86,3					
		2250	1521	38,1	1388	59,9	1294	70,9	1118	81,7	882	92,7	559	98,2	176	104			
125	3500 CFM	2500	1713	43,7	1576	67,9	1471	80,1	1294	92,2	1059	104,4	735	110,4	353	116,8			
		2750	1905	49,8	1765	76,5	1647	89,8	1471	103,2	1235	116,6	912	123,1	529	130,4			
		3000	2096	56,3	1953	85,5	1824	100	1647	114,6	1412	129,2	1088	136,4	706	144,5	BO	149,3	
		1070	1276	31,4	1118	51,2	1000	61,1	882	70,9	588	80,8							
		1200	1466	35,6	1294	65,3	1206	69	1076	80	782	91,1							
		1340	1671	40,5	1512	60,3	1412	77,7	1265	90	988	102,4	488	108,7					
145	6176 CFM	1500	1904	46,2	1747	74	1647	87,9	1471	101,7	1224	115,6	706	122,6					
		1680	2167	53,2	2012	84,2	1912	99,7	1765	115,2	1482	130,8	988	138,6	606	146,7			
		1875	2452	61,1	2294	95,8	2176	113,1	2059	130,5	1765	147,8	1271	156,5	882	165,6			
		2100	2781	71	2624	109,9	2529	129,3	2382	148,7	2100	168,2	1600	177,8	1218	188,3			
		2200	2927	75,7	2765	116,4	2706	136,7	2529	157	2235	177,4	1765	187,6	1365	198,6			
		2400	3219	85,6	3000	130	2941	152,2	2765	174,5	2441	196,6	1924	207,7	1471	219,8	BO	226,5	
145	6176 CFM	1070	2767	66,1	2500	107,7	2294	128,6	2047	149,5	1582	170,3	941	180,8					
		1200	3168	75	2882	121,8	2706	145,3	2447	168,6	1982	192	1353	203,7	512	215,6			
		1340	3599	85,1	3294	137,4	3118	163,5	2882	189,6	2412	215,7	1794	228,9	941	242,3			
		1500	4092	97,3	3806	155,4	3618	184,9	3376	214,3	2906	243,5	2288	258,1	1441	273,4			
		1680	4647	111,6	4353	176,9	4176	209,8	3929	242,5	3459	274,7	2844	291,7	1988	308,9			
		1800	5016	121,7	4706	191,6	4512	227	4265	262,1	3782	297,2	3147	314,8	2265	333,7			
2000	5633	139,5	5355	217,1	5124	255,9	4879	294,8	4398	339	3759	359	2888	380,2	BO	392,6			

TRB-DV application field

QG = Volume displacement

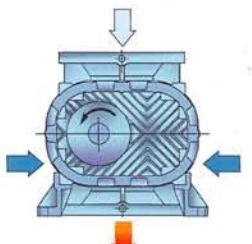
BO = Blank off

According to the application

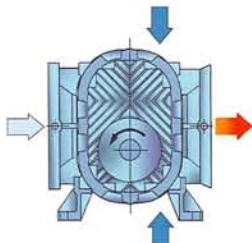
## ARRANGEMENT

### ARRANGEMENT

STANDARD

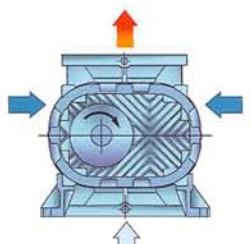


RB-DV---V

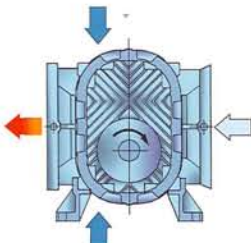


RB-DV---H

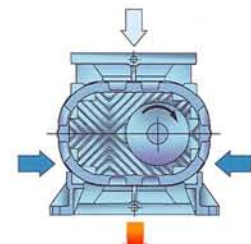
OPTION



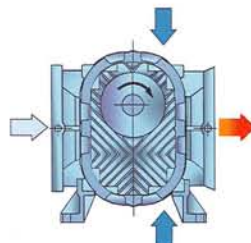
RB-DV---V-FI



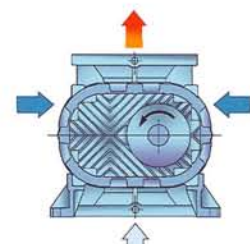
RB-DV---H-FI



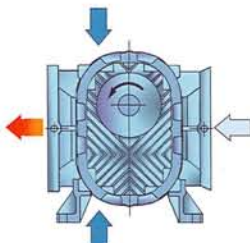
RB-DV---V-SD



RB-DV---H-SS



RB-DV---V-FI-SD



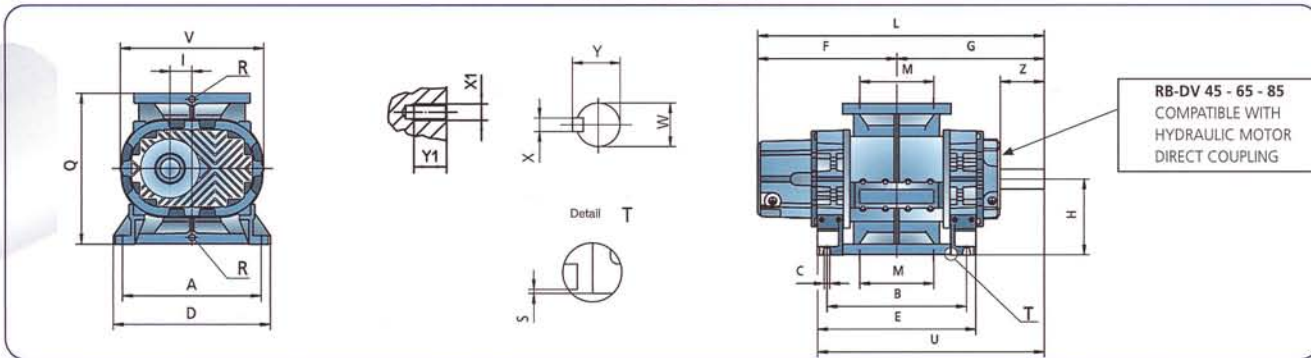
RB-DV---H-FI-SS

- H Horizontal nozzles
- V Vertical nozzles
- FI Inverted flow
- SD Right shaft
- SS Upside shaft

- Inlet
- Air injection
- Outlet

## OVERALL DIMENSIONS

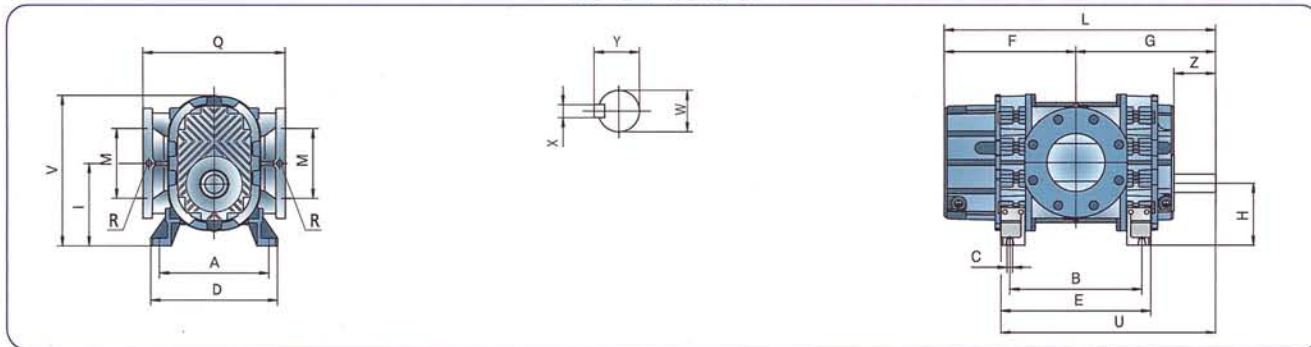
### RB-DV ... / V



Blower	Ø*	A	B	C	D	E	F	G	H inches -0,02	I	L	M	Q	S	U	V	W	Z	X	Y	R1	X1	Y1	Weight lbs	
45	inches	3,34	11,61	10,83	0,47	13,03	12,24	10,75	11,61	6,30	1,67	22,36	3	12,56	0,04	17,80	11,61	1,496	3,150	0,394	1,614	1,969	4xM8	0,591	213,8
65	inches	4,22	13,39	13,43	0,55	15,16	15,24	13,39	14,21	7,28	2,11	27,60	6	14,53	0,04	21,85	14,14	1,967	4,508	0,574	2,111	2,461	4xM10	0,591	352,7
85	inches	5,32	14,57	16,97	0,71	16,54	18,98	15,94	16,65	8,86	2,66	32,60	6	17,68	0,04	26,18	17,01	2,254	4,508	0,656	2,418	2,756	4xM10	0,591	551,2
105	inches	6,62	16,93	19,72	0,71	19,13	21,93	18,23	18,19	10,43	3,31	36,42	8	20,83	0,04	29,17	21,39	2,459	4,508	0,738	2,623				881,8
125	inches	8,34	21,65	23,23	0,87	25,20	25,43	20,79	22,36	11,81	4,17	43,15	10	23,58	0,04	35,08	25,33	2,869	5,738	0,82	3,053				1334
145	inches	10,62	26,77	29,41	1,02	30,31	31,69	25,24	60,00	14,17	5,31	52,60	12	28,31	0,04	43,23	32,38	3,484	6,967	0,90	3,69				2293

\*= Gear diameter

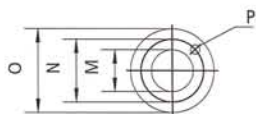
### RB-DV ... / H



Blower	Ø*	A	B	C	D	E	F	G	H inches -0,02	I	L	M	Q	S	U	V	W	Z	X	Y	R1	X1	Y1	Weight lbs	
45	inches	13,78	10,47	10,83	0,47	11,89	12,24	10,75	11,61	5,20	6,89	22,36	6	12,52		17,80	12,60	1,496	3,15	0,394	1,614	1,969	4xM8	0,591	213,8
65	inches	4,22	11,14	13,43	0,55	12,91	15,24	13,39	14,21	6,30	8,39	27,60	6	14,49		21,85	15,16	1,89	4,331	0,551	2,028	2,461	4xM10	0,591	352,7
85	inches	19,44	12,80	16,97	0,71	14,76	18,98	15,94	16,65	7,09	9,72	32,60	6	17,64		26,18	17,91	2,165	4,331	0,63	2,323	2,756	4xM10	0,591	551,2
105	inches	22,36	15,43	19,72	0,71	17,64	21,93	18,23	18,19	7,87	11,18	36,42	8	20,79		29,17	21,46	2,362	5,512	0,709	2,52				881,8
125	inches	28,04	17,13	23,232	0,87	20,71	25,43	20,79	22,36	9,84	14,02	43,15	10	23,54		35,08	26,38	2,756	5,512	0,787	2,933				1334
145	inches	32,68	22,44	29,41	1,02	25,20	31,69	25,24	27,36	11,02	16,34	52,60	12	28,27		43,23	32,09	3,346	6,693	0,866	3,543				2293

\*= Gear diameter

### Drilling for flat flanges UNI 2236 NP10 or ANSI 125 FF



R Manometer connection G 3/8\*  
Dimension W with tolerance m6

#### PN10 UNI 2236

M DN	N	O	P	HOLES
80 inches	6,30	7,87	0,71	4
150 inches	9,46	11,22	0,91	8
200 inches	11,65	13,39	0,91	8
250 inches	13,78	15,94	0,94	12
300 inches	15,75	18,70	0,94	12

#### ANSI 125 FF

M DN	N	O	P	HOLES
3 inches	6,00	7,87	0,71	4
6 inches	9,46	11,22	0,91	8
8 inches	11,65	13,39	0,91	8
10 inches	14,25	15,94	0,94	12
12 inches	17,00	18,70	0,94	12



## ACCESSORIES

### SPS



Exhaust silencer

### SPF



Cooling silencer

### SCE / SDL



Absorption silencer

### VALVE



4 way valve  
(For RB-DV 45-65-85 only)

### MANIFOLDS

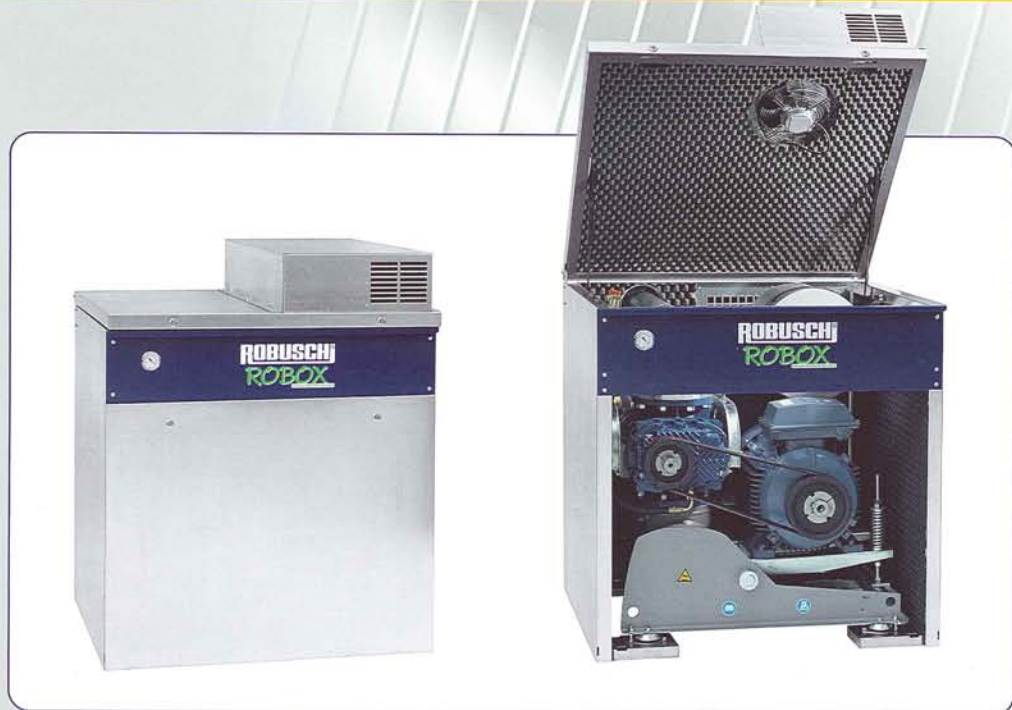


Third inlet manifolds  
conveying cooling air

## ROBOX DV EVOLUTION

ROBOX evolution suction group  
with RB-DV air injection vacuum  
blower:

- Silent operation;
- Simple inspection;
- Monitored operation;
- Compact construction.



# ROBUSCHI®

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