

Robuschi



RB-DV 85 High Vacuum Blower

Call **1-780-962-1827** for technical, application and sales support.

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.

- Vacuum rate up to 93% (blank off) – 28" Hg and 90% Hg continuous
- Nominal capacity from 840 to 10.500 m³/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

RB-DV High Vacuum Blower key benefits:

- 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 Bearings – allow for greater flexibility setting up belt or close coupled transmission
- Patent Air Injection Nozzle – ensures cool operation under all vacuum conditions
- Double Ended Oil Bath Lubrication – ensures long bearing life



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Specifications

Max Vacuum	28" Hg
CFM	912
Free Air Delivery (MAX)	1602 m ³ /h
Maximum RPM	3800
Minimum RPM	700
Shaft Dia.	2.165" (55mm)
Gear Side Oil Quantity (Horiz*)	0.90 Liters
Gear Side Oil Quantity (Vert*)	2.00 Liters
Drive Side Oil Quantity (Horiz*)	0.40 Liters
Drive Side Oil Quantity (Vert*)	0.90 Liters
Bare Unit Weight	551 lb
Shipping Weight on Skid	591 lb
Shipping Container	Wood Skid
Shipping Options	Ground Freight, Air or Sea

**Robuschi defines horizontal and vertical blower orientation following airflow direction*



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RB-DV 85 Approximate Oil Fill Amounts

Model No. / Drive Shaft Location	Gear Side	Drive Side	Total Liters
	Liters	Liters	
Horizontal Orientation*	0.9	0.4	1.3
Vertical Orientation*	2	0.9	2.9

These capacities are provided to assist stocking the correct amount of oil. Exact sump capacity may differ slightly. Review the proper filling instructions in OEM Manual.

*Robuschi defines horizontal and vertical blower orientation following airflow direction

RB-DV 85 Lubrication Data

OIL TYPE	VISCOSITY	USE			
		T ambient	T2	T oil	Note
Mineral	100	< 0	< 90	< 50	Check the pour point
Mineral	150	< 35	< 110	< 80	
Mineral	220	< 50	< 130	< 110	
Synthetic	220	> 50	> 130	> 110	Installation in soundproof enclosure

Recommended Mineral Oils

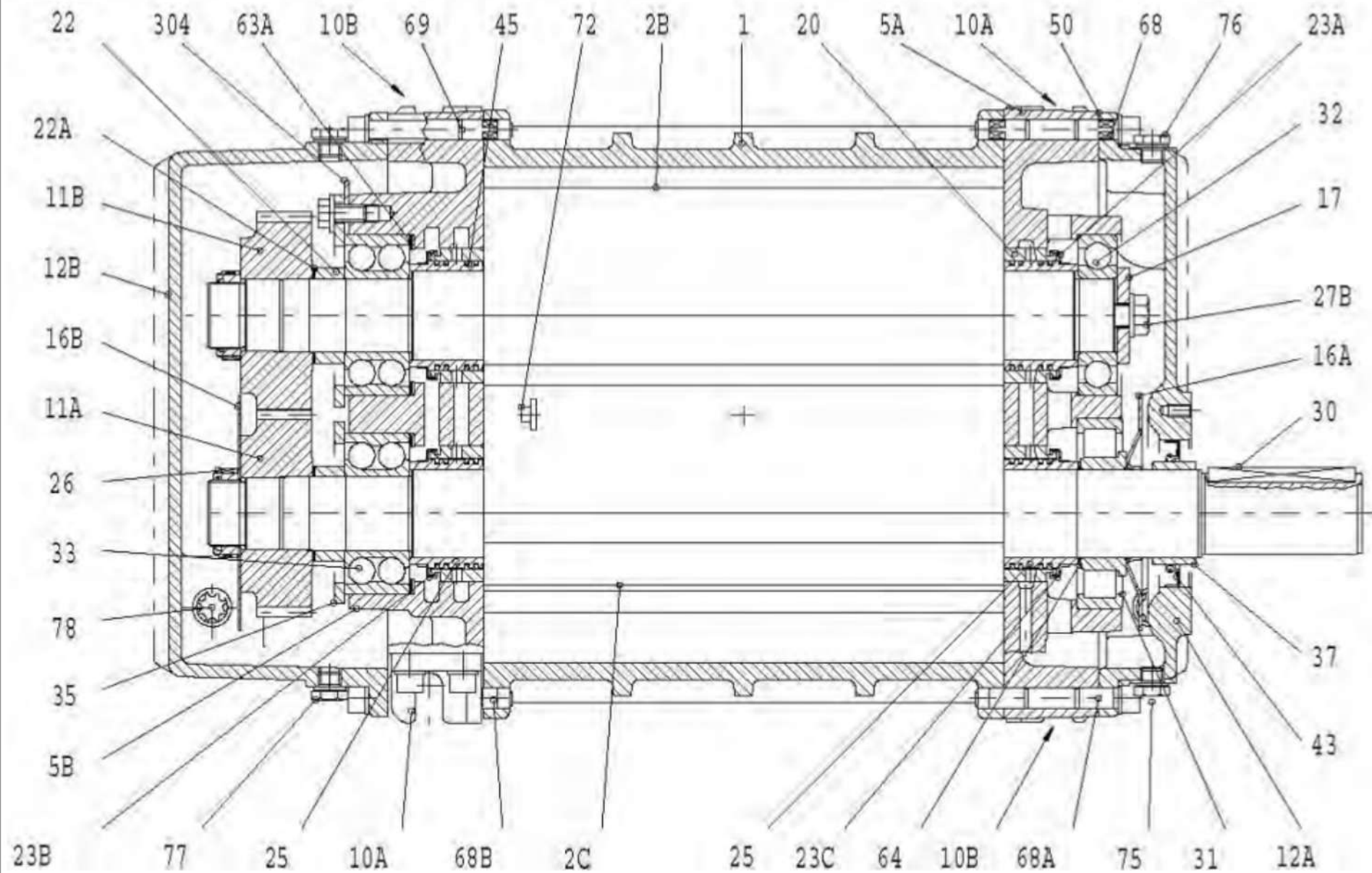
MAKE	AGIP	BP	ESSO	MOBIL	SHELL
TYPE	RADULA	ENERGOL	NUTO	D.T.E.	TELLUS
ISO VG - 150	150	CS 150	150	EXTRAHEAVY	C 150
Poor Point	-20	-12	-18	-9	-18
ISO VG - 220	220	CD 220	220	BB	C 220
Poor Point	-18	-12	-18	-7	-15

RB-DV 85 Components

Part No.	Part Description	Quantity
1	Casing	1
2B-2C	Shaft + Rotor	2
5A-5B	Cover	2
10A	Right Foots	2
10B	Left Foot	2
1A	Driving Gear	1

Part No.	Part Description	Quantity
11B	Driven Gear	1
12A-12B	Sump	2
16A-16B	Lubricating Disk	2
17	Bearing Lock Disk	1
20	Sealing Chamber	4
22	Gear Spacer	2
23A	Oil Splash Disk	1
23B	Oil Splash Disk	2
23C	Oil Splash Disk	1
25	Sealing Spacer	4
26	Gear Locking Nut	2
27B	Bearing Locking Screw	1
30	Key	1
31	Rolling Bearing	1
32	Rolling Bearing	1
33	Rolling Bearing	2
35	Bearing Cover	2
37	Shaft Sleeve	1
43	Seal Ring	1
45	Flexible Piston Ring	16
50	Gasket	2
63A	Compensating Ring	6
64	Compensating Ring	1
68	Centering Pin (Only RB-DV 85 - 105)	2
68A	Centering Pin (Only RB-DV 65 No. 4)	2
68B	Centering Pin (Only RB-DV 65 No. 2)	1
69	Centering Pin (Only RB-DV 85 - 105)	1
72	Plug	2
75	Oil Draining Plug (Only RB-DV 65)	1
76	Oil Filling Plug	2
77	Oil Draining Plug (RB-DV 65 No. 3)	4
78	Oil Level Plug	4
304	Adjustment Plate	4

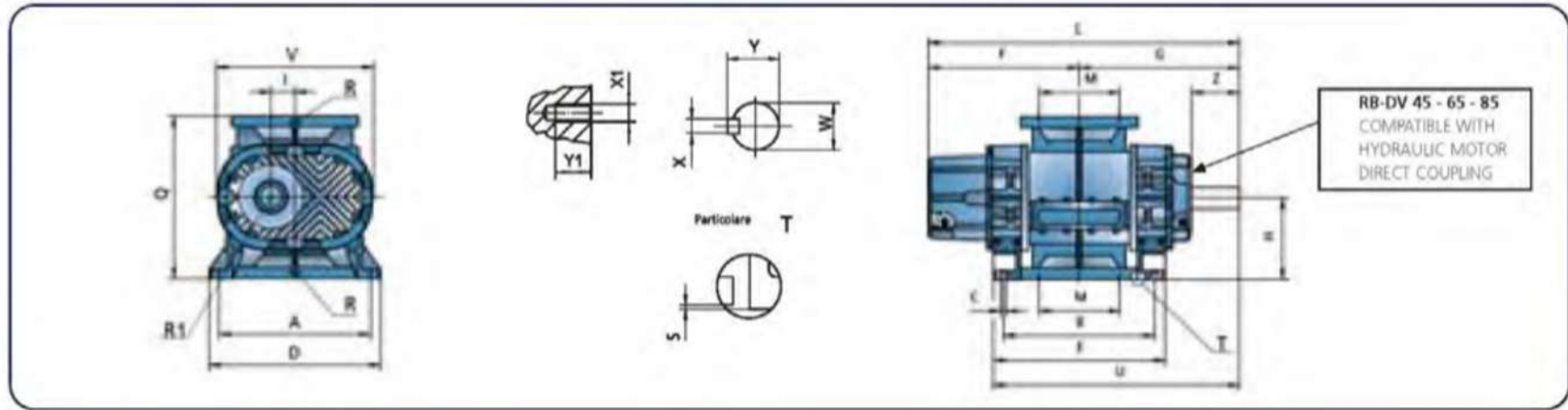
RB-DV 85 HIGH VACUUM BLOWER COMPONENTS



VACUUM PERFORMANCE

BLOWER	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			
		M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	M ³ /h	CFM	BHP	
RB-DV 85	1500	823	484	12.7	720	424	20.8	600	353	24.8	480	282	28.8	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	1183	696	17.7	1090	641	28.8	900	529	33.5	720	424	39.1	570	335	44.5	-	-	-	-	-	-	-	-	-	-
	2500	1543	908	23.2	1450	853	26.6	1320	776	43.3	1100	647	50.0	850	500	56.7	600	353	60.0	-	-	-	-	-	-	-
	3000	1903	1119	29.6	1800	1059	45.7	1620	953	53.6	1390	818	61.8	1150	676	69.8	900	529	73.8	415	244	80.4	-	-	-	-
	3500	2263	1331	36.7	2100	1235	55.5	2040	1200	64.3	1860	1094	74.2	1590	935	83.6	1350	794	88.3	690	406	93.0	-	-	-	-
	3800	2479	1458	41.5	2400	1412	61.6	2270	1335	71.7	2040	1200	82.3	1800	1059	92.5	1560	918	97.6	750	441	102.6	BO	BO	105.9	

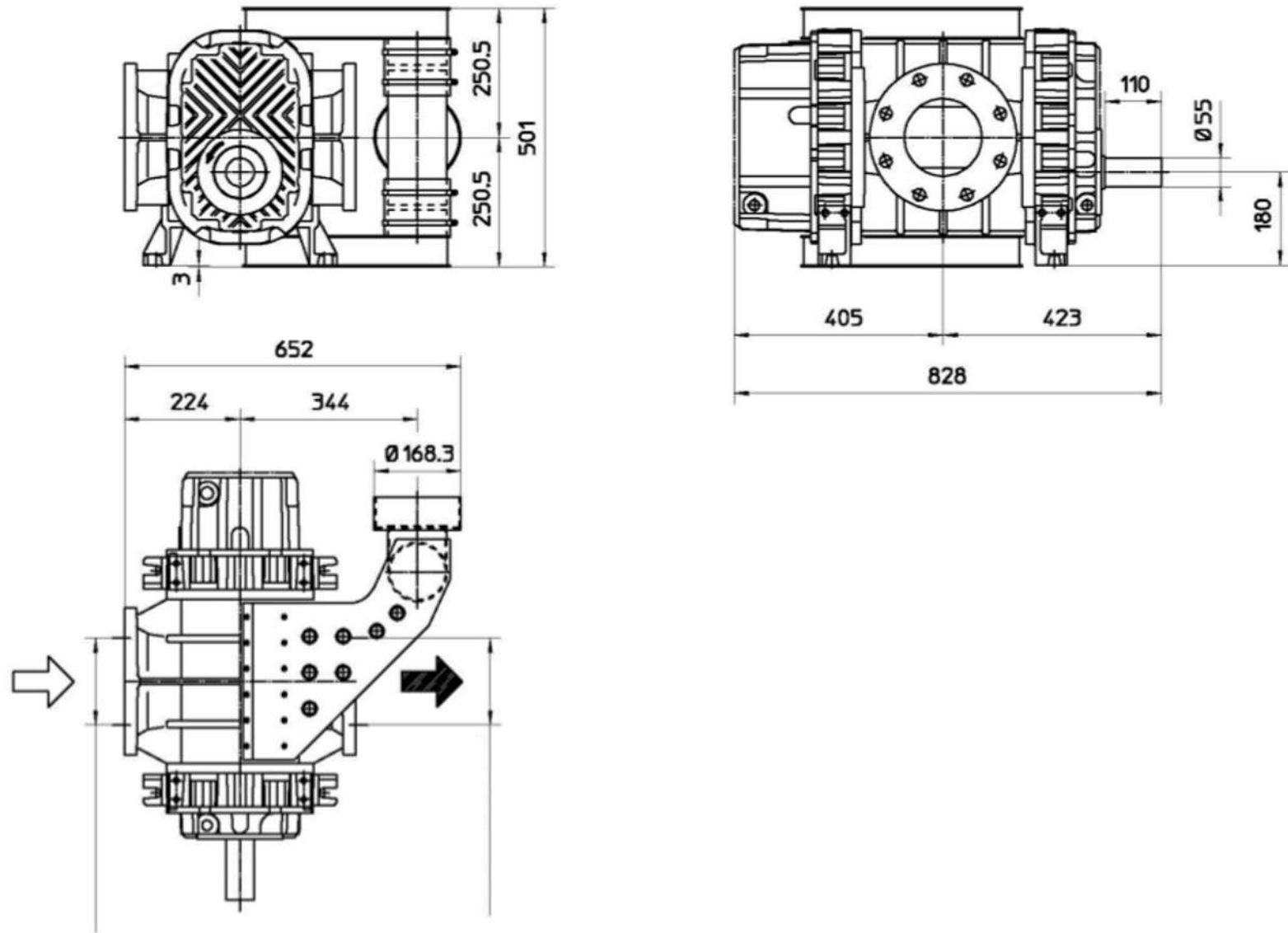
RB-DV 85 VERTICAL DIMENSIONS*



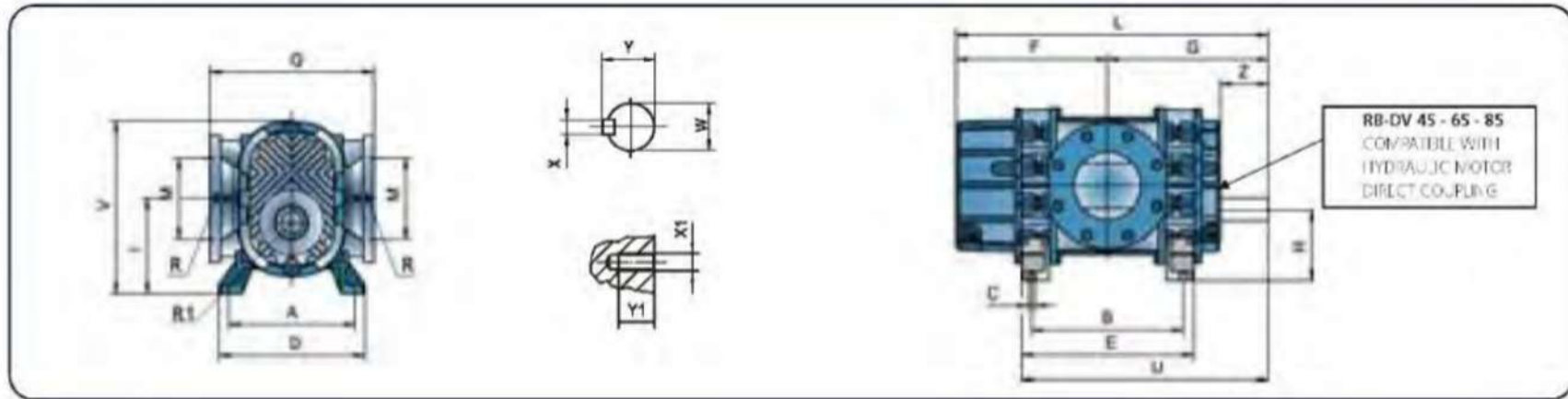
RB-DV 85 Vertical Dimensions *Robuschi defines horizontal and vertical blower orientation following airflow direction **Gear diameter

Ø**	A	B	C	D	E	F	G	H	I	L	M
5.32	14.57	16.97	0.71	16.54	18.98	15.94	16.655	8.86	2.66	32.60	6
Q	S	U	V	W	Z	X	Y	R1	X1	Y1	
17.68	0.04	26.18	16.34	2.165	4.331	0.63	2.323	2.756	4 x M10	0.591	

ROBUSCHI DRAWING REFLECTS HORIZONTAL BLOWER ORIENTATION BASED ON AIRFLOW DIRECTION



RB-DV 85 HORIZONTAL DIMENSIONS*



RB-DV 85 Horizontal Dimensions *Robuschi defines horizontal and vertical blower orientation following airflow direction **Gear diameter

\varnothing^{**}	A	B	C	D	E	F	G	H	I	L	M
19.44	12.80	16.97	0.71	14.76	18.98	15.94	16.65	7.09	9.72	32.60	6
Q	S	U	V	W	Z	X	Y	R1	X1	Y1	
17.64	-	26.18	17.91	2.165	4.331	0.63	2.323	2.756	4 x M10	0.591	

Drilling for flat flanges UNI 2236 NP10 or ANSI 125 FF

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

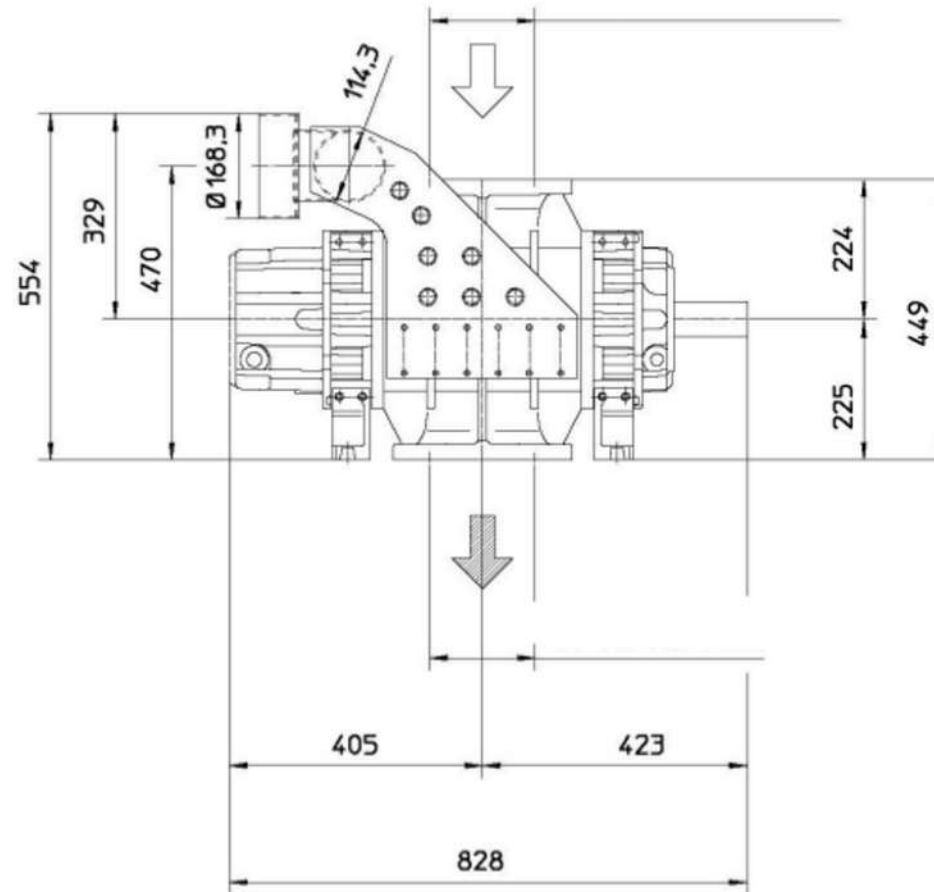
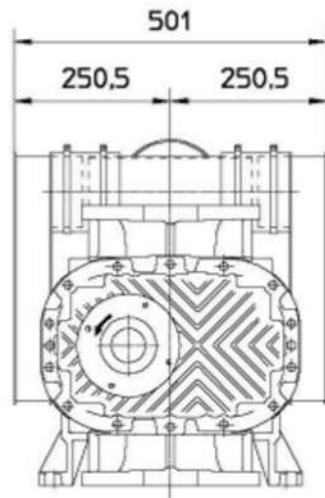
PN10 UNI 2236

M DN	N	O	P	HOLES
80 mm inches	160 6,30	200 7,87	18 0,71	4
150 mm inches	240,2 9,46	285 11,22	23 0,91	8
200 mm inches	296 11,65	340 13,39	23 0,91	8
250 mm inches	350 13,78	405 15,94	24 0,94	12
300 mm inches	400 15,75	475 18,70	24 0,94	12

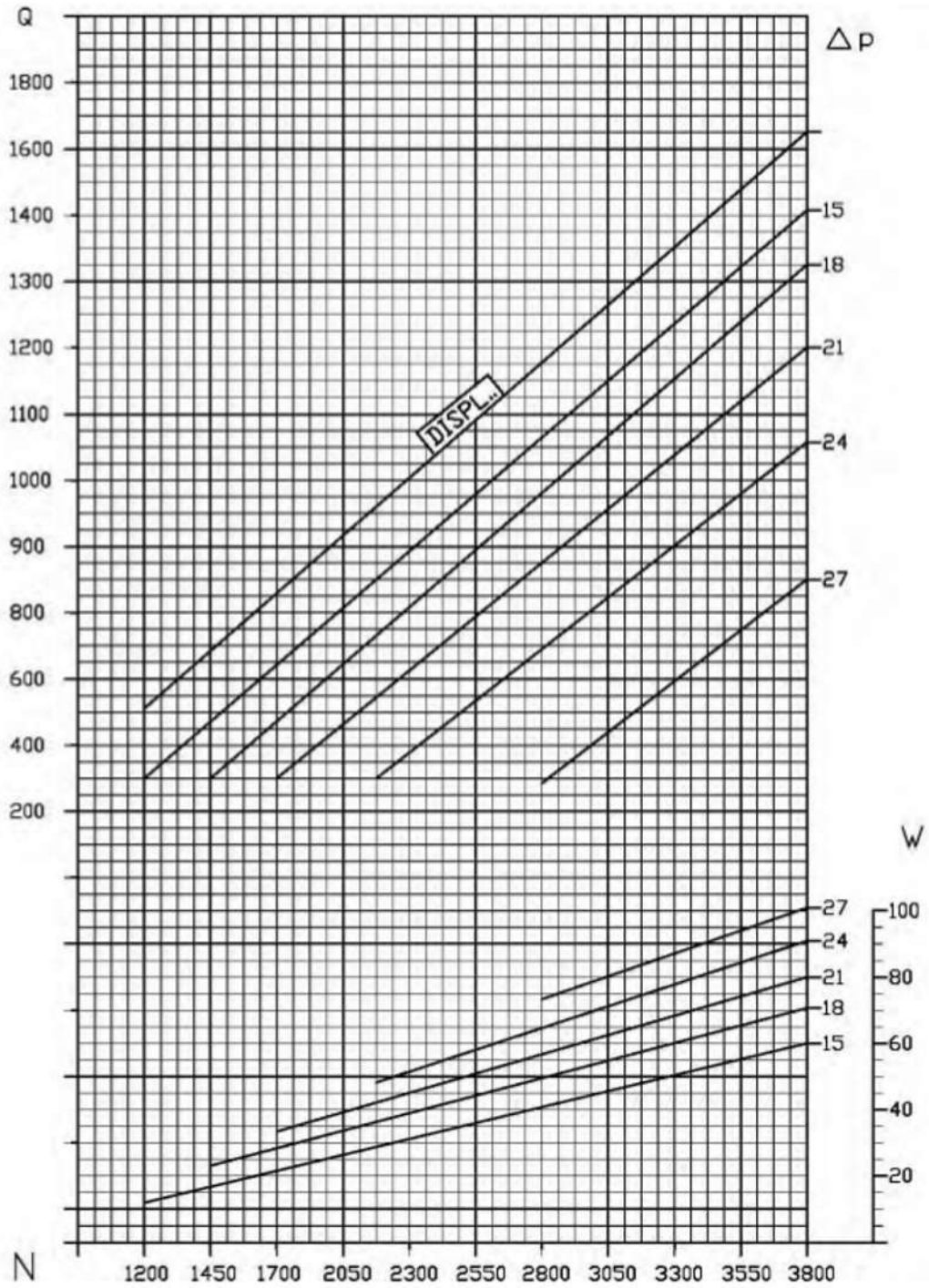
ANSI 125 FF

M DN	N	O	P	HOLES
3 mm inches	152,4 6,00	200 7,87	18 0,71	4
6 mm inches	240,2 9,46	285 11,22	23 0,91	8
8 mm inches	296 11,65	340 13,39	23 0,91	8
10 mm inches	367 14,25	405 15,94	24 0,94	12
12 mm inches	431,8 17,00	475 18,70	24 0,94	12

ROBUSCHI DRAWING REFLECTS VERTICAL BLOWER ORIENTATION BASED ON AIRFLOW DIRECTION



ROBUSCHI RB-DV 85 VACUUM PERFORMANCE CURVES



INLET CONDITIONS - AIR

R.H. - 36%
 Density - .075 lbs/Ft³
 Maximum vacuum - 27"Hg
 Minimum speed - 700 RPM
 Maximum speed - 3800 RPM
 Barometric p. abs. - 29.92"Hg
 Temperature - 68°F

Q = Inlet volume CFM
 W = Absorbed power BHP
 DISPL = Volume displacement
 Δp = Differential pressure Hg'
 N = Blower speed RPM