

ROBUSCHI



Western Canada's Premier PD Blower Service & Repair Facility

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RB-DV 45 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

Specifications

Max Vacuum	28" Hg
CFM	494
Free Air Delivery (MAX)	840 m ³ /h
Maximum RPM	5000
Minimum RPM	1000
Shaft Dia.	1.496" (38mm)
Gear Side Oil Quantity (Horiz*)	0.75 Liters
Gear Side Oil Quantity (Vert*)	0.45 Liters
Drive Side Oil Quantity (Horiz*)	0.40 Liters
Drive Side Oil Quantity (Vert*)	0.25 Liters
Bare Unit Weight	214 lb
Shipping Weight on Skid	254 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 45 Approximate Oil Fill Amounts

Model No. / Drive Shaft Location	Gear Side	Drive Side	Total Liters
	Liters	Liters	
Horizontal Orientation*	0.75	0.40	1.15
Vertical Orientation*	0.45	0.25	0.70

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 45 Lubrication Data

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

Recommended Mineral Oils

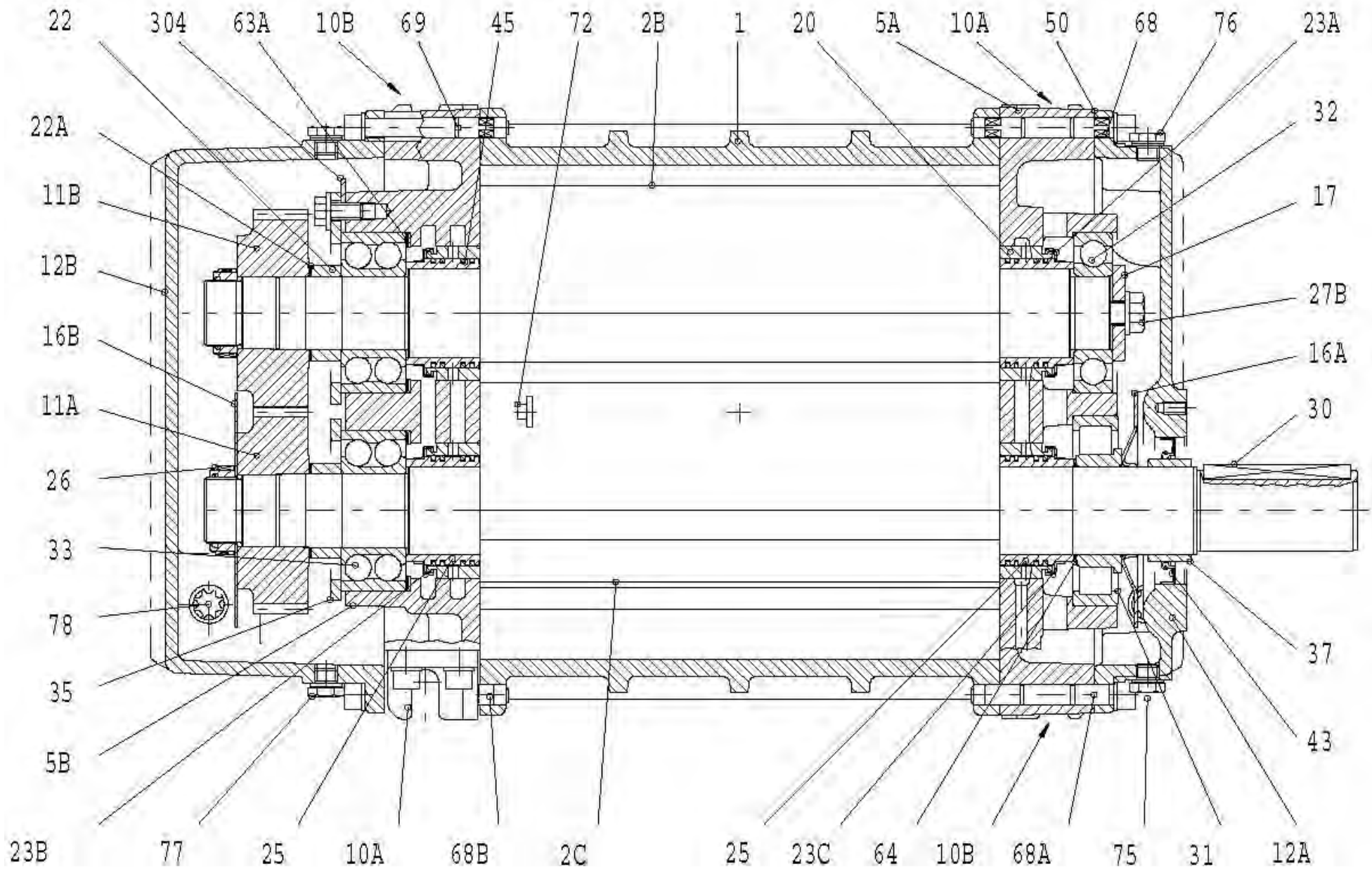
MAKE	AGIP	BP	ESSO	MOBIL	SHELL
TYPE	RADULA	ENERGOL	NUTO	D.T.E.	TELLUS
ISO VG - 150	150	CS 150	150	EXTRAHEAVY	C 150
Poor Point	-20	-12	-18	-9	-18
ISO VG - 220	220	CD 220	220	BB	C 220
Poor Point	-18	-12	-18	-7	-15

RB-DV 45 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

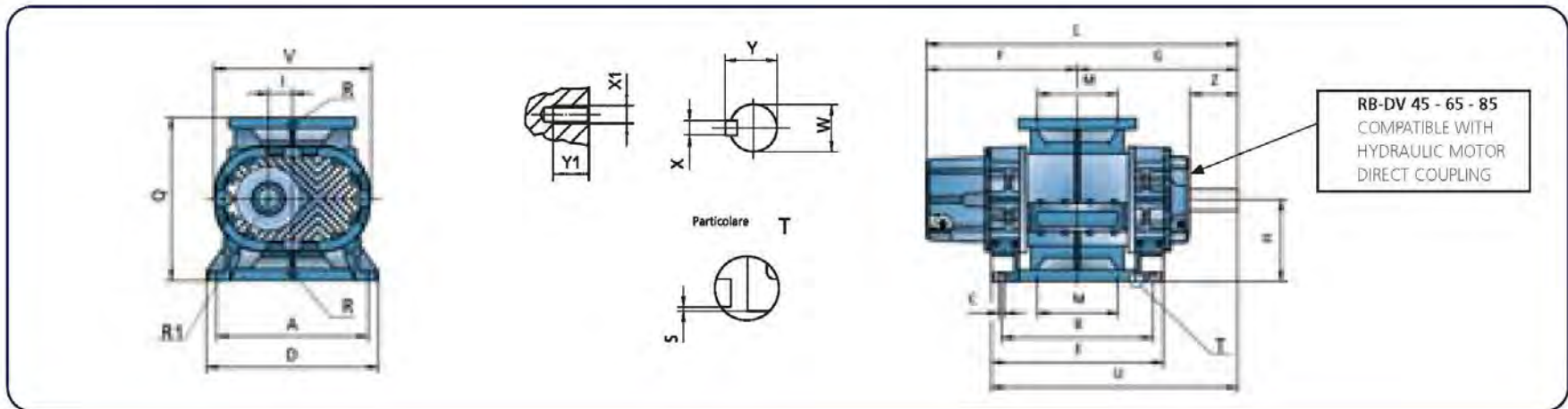
RB-DV 45 HIGH VACUUM BLOWER COMPONENTS



VACUUM PERFORMANCE

BLOWER	RPM	30% - 9" Hg			50% - 5" Hg			60% - 18" Hg			70% - 21" Hg			80% - 24" Hg			85% - 24" 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 45	2000	236	139	4.7	182	107	7.2	144	85	8.4	83	49	9.6	-	-	-	-	-	-	-	-	-	-	-	-	-
	2500	320	188	5.9	266	156	9.0	228	134	10.6	167	98	12.1	44	26	13.7	-	-	-	-	-	-	-	-	-	-
	3000	404	238	7.1	350	206	10.9	312	184	12.7	251	148	14.6	128	75	16.5	-	-	-	-	-	-	-	-	-	-
	3500	488	287	8.2	434	255	12.6	396	233	14.7	335	197	17.0	212	125	19.2	77	45	20.2	-	-	-	-	-	-	-
	4000	572	336	9.4	518	305	14.3	480	282	16.9	419	246	19.4	296	174	21.8	161	95	23.2	-	-	-	-	-	-	-
	4500	656	386	10.6	602	354	16.2	564	332	19.0	503	296	21.8	380	224	24.7	245	144	26.0	-	-	-	-	-	-	-
	5000	740	435	11.8	680	400	18.0	648	381	21.2	587	345	24.3	464	273	27.3	330	154	28.9	24	14	30.6	BO	-	31.5	

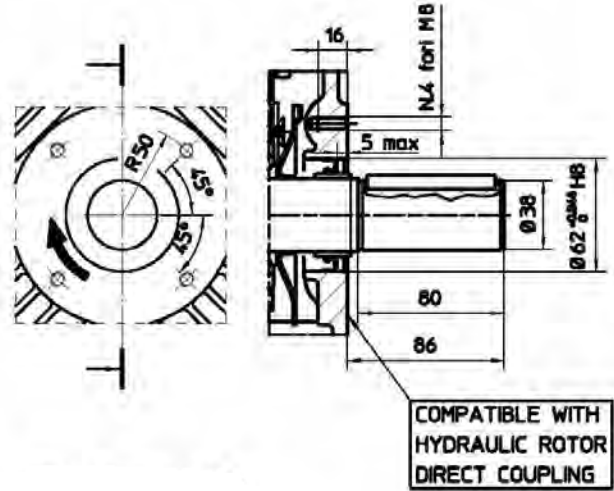
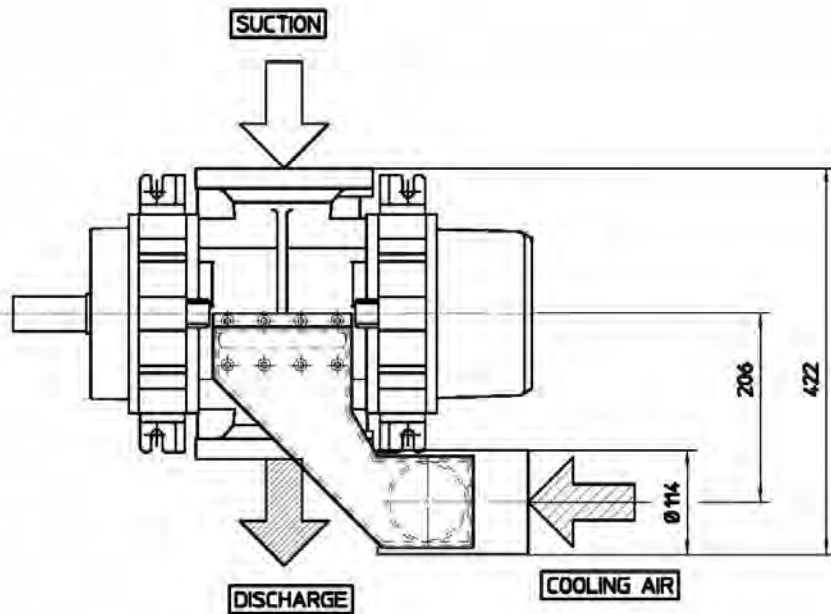
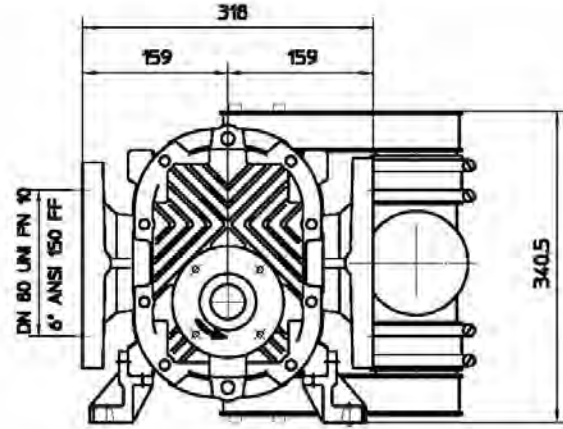
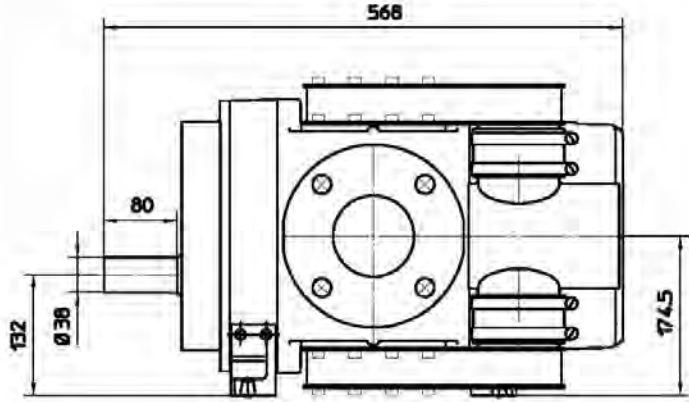
RB-DV 45 VERTICAL DIMENSIONS*



RB-DV 45 Vertical Dimensions *Robuschi defines horizontal and vertical blower orientation following airflow direction **Gear Diameter

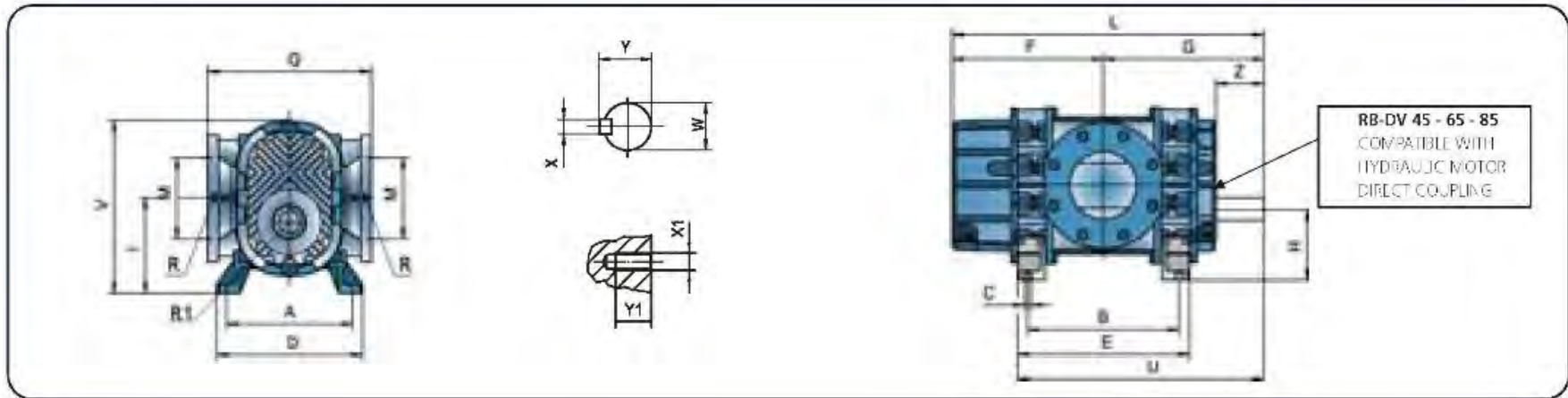
Ø**	A	B	C	D	E	F	G	H	I	L	M
3.34	11.61	10.83	0.47	13.03	12.24	10.75	11.61	6.30	1.67	22.36	3
Q	S	U	V	W	Z	X	Y	R1	X1	Y1	
12.56	0.04	17.80	11.61	1.496	3.15	0.394	1.614	1.969	4 X M8	0.591	

ROBUSCHI DRAWAING REFLECTS HORIZONTAL BLOWER ORIENTATION BASED ON AIRFLOW DIRECTION



ROBUSCHI RB-DV 45/H

RB-DV 45 HORIZONTAL DIMENSIONS*



RB-DV 45 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
13.78	10.47	10.83	0.47	11.89	12.24	10.75	11.61	5.20	6.89	22.36	6
Q	S	U	V	W	Z	X	Y	R1	X1	Y1	
12.52	-	17.80	12.60	1.496	3.15	0.394	1.614	1.969	4 x M8	0.591	

Drilling for flat flanges UNI 2236 NP10 or ANSI 125 FF

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

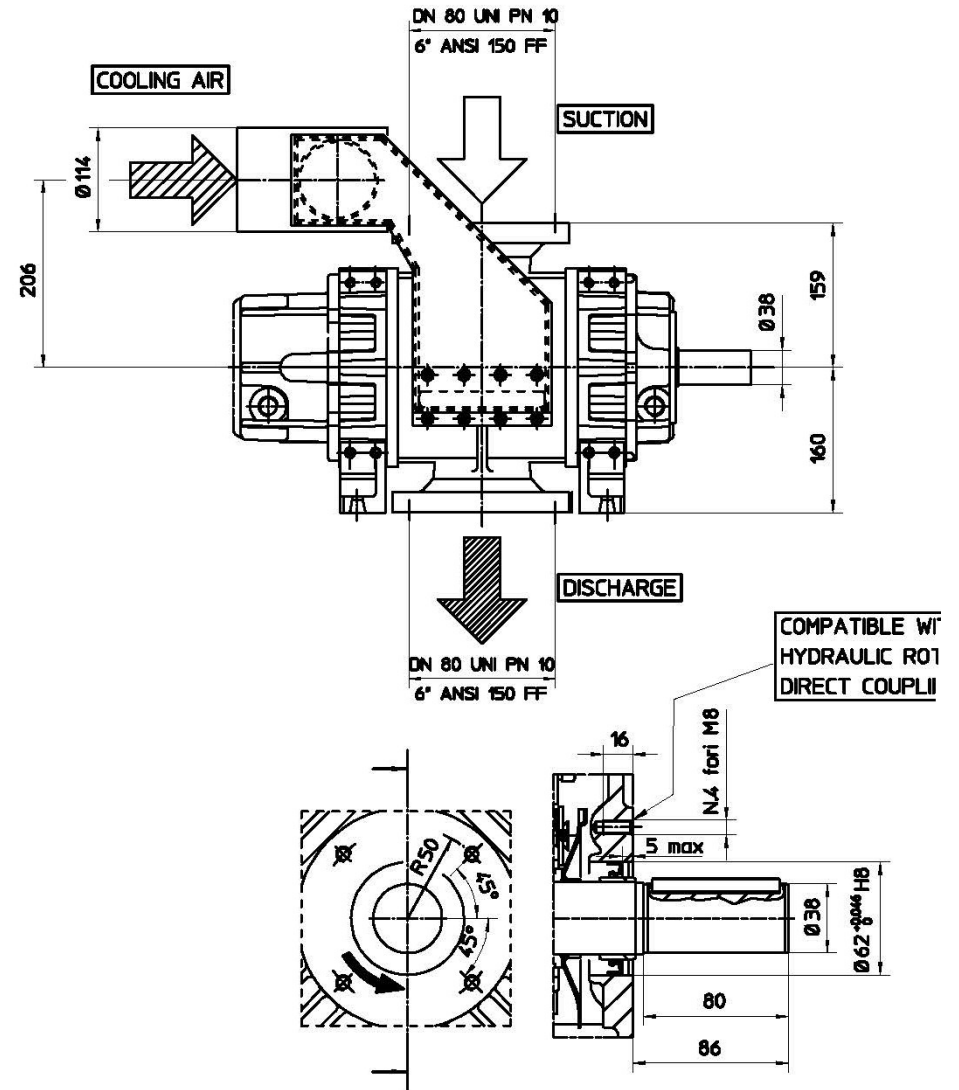
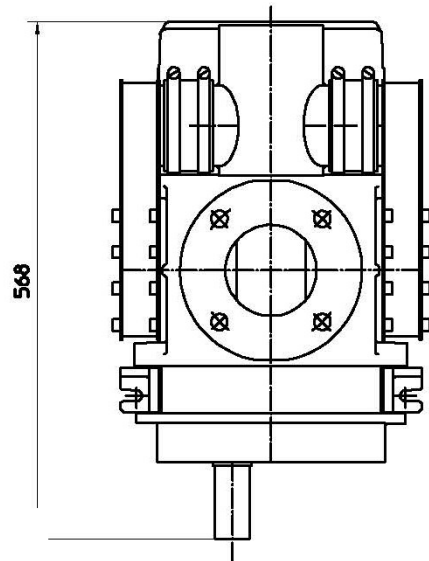
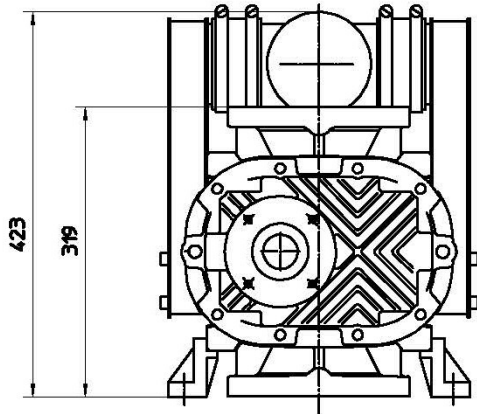
PN10 UNI 2236

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

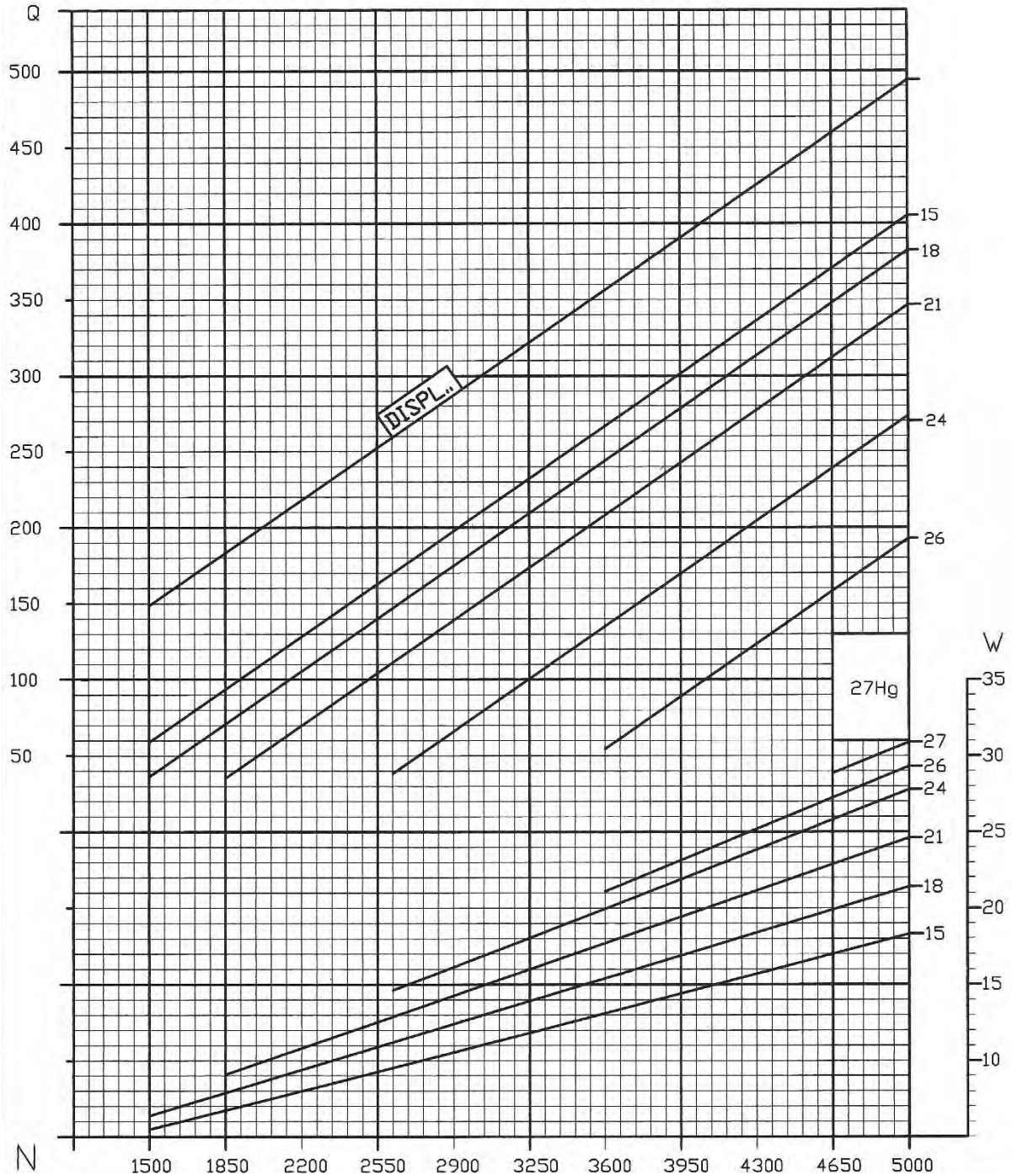
M DN	N	O	P	HOLES	
3	mm inches	152,4 6,00	200 7,87	18 0,71	4
6	mm inches	240,2 9,46	285 11,22	23 0,91	8
8	mm inches	296 11,65	340 13,39	23 0,91	8
10	mm inches	362 14,25	405 15,94	24 0,94	12
12	mm inches	431,8 17,00	475 18,70	24 0,94	12

ROBUSCHI DRAWAING REFLECTS VERTICAL BLOWER ORIENTATION BASED ON AIRFLOW DIRECTION



ROBUSCHI RB-DV 45/V

ROBUSCHI RB-DV 145 VACUUM PERFORMANCE CURVES



INLET CONDITIONS - AIR
 R.H. - 36%
 Density - .075 lbs/Ft³
 Maximum vacuum - 27"Hg
 Minimum speed - 1000 RPM
 Maximum speed - 5000 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

GEAR SIZE: 3.35"
85 mm