



Authorized Hibon Distributor, Warranty, Service & Repair Facility

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VTB 822.XL Air Injection Blower

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

Hibon Ingersoll Rand presents new state-of-the-art technology in three-lobe, positive displacement blowers. The VTB 822.XL offers a wide range of design features and incorporates energy efficiency improvements, complying with the strictest operational requirements of a variety of applications. The VTB XL series air-injected, high-vacuum blowers are ideally suited for the rigorous demand of the vacuum truck and industrial vacuum markets. Hibon is a worldwide leader in three-lobe positive displacement blower technology with thousands of units installed around the globe.

- Three-lobe impeller construction
- Unique air injection system
- Increased efficiency
- Clearances adjusted automatically during assembly
- Larger oil capacity
- Higher volume oil thrower
- High performance sealing arrangement using 4 piston rings
- Quieter operation than two-lobe impeller construction
- Allows high vacuum including "dead end" operation without overheating
- No oil or water cooling system (100% oil free air)
- Requires less horsepower for the same performance
- Easier maintenance
- Runs cooler
- Better lubrication of bearings
- Less frequent oil changes

Specifications

Max Vacuum	27" Hg
CFM	2729
Maximum RPM	3000
Minimum RPM	1000
Max Outlet (discharge) Pressure	Atmospheric Pressure + Max Differential Pressure
Max Inlet Pressure	Atmospheric Pressure
Max Outlet Vacuum	Atmospheric Pressure
Max Inlet Vacuum	100 mbar, 1.01 x 10 ⁴ Pa, 75.75 Torr
Max Differential Pressure (inlet-outlet)	1100 mbar 1.0 x 10 ⁵ Pa, 750 Torr
Shaft Dia.	2.56" (65mm)
Drive End Lubrication	Hibon Lube
Opposite Drive End Lubrication	Hibon Lube
Drive End Cover – Horiz	2.41 Litres (0.66 US gal)
Drive End Cover – Vert	1.45 Litres (0.38 US gal)
Opp. Drive End Cover – Horiz	3.84 Litres (1.0 US gal)
Opp. Drive End Cover - Vert	2.30 Litres (0.61 US gal)
Bare Unit Weight	1190 Lbs
Container	Wood Skid
Shipping Weight on Skid	1240lbs
Shipping Options	Ground Freight, Air or Sea



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VTB 822.XL Approximate Oil Fill Amounts

Model No. / Drive Shaft Location	Drive End Cover		Opposite Drive End Cover	
	Liters	US Gal.	Liters	US Gal.
VTB 822.XL (Horizontal)	2.41	0.66	3.84	1.0
VTB 822.XL (Vertical)	1.45	0.38	2.3	0.61

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.

VTB 822.XL Lubrication Data

Parameter	Standard Use	Special Use
Density (at 15 °C, 59 °F)	0.89	0.86
Mean pour point	21 °C (70 °F)	45 °C (113 °F)
Mean flash point	224 °C (435 °F)	260 °C (500 °F)
Viscosity: At 20 °C (68 °F)	8.09 x 10 ⁻⁴ m ² s ⁻¹ (809 cSt)	6.04 x 10 ⁻⁴ m ² s ⁻¹ (640 cSt)
At 40 °C (212 °F)	2.2 x 10 ⁻⁴ m ² s ⁻¹ (202 cSt)	2.18 x 10 ⁻⁴ m ² s ⁻¹ (218 cSt)
At 100 °C (212 °F)	1.8 x 10 ⁻⁵ m ² s ⁻¹ (18 cSt)	2.7 x 10 ⁻⁵ m ² s ⁻¹ (27 cSt)
Mean viscosity index	93	149
Recommended Oil	Hibon Lube	Contact Fraserwoods

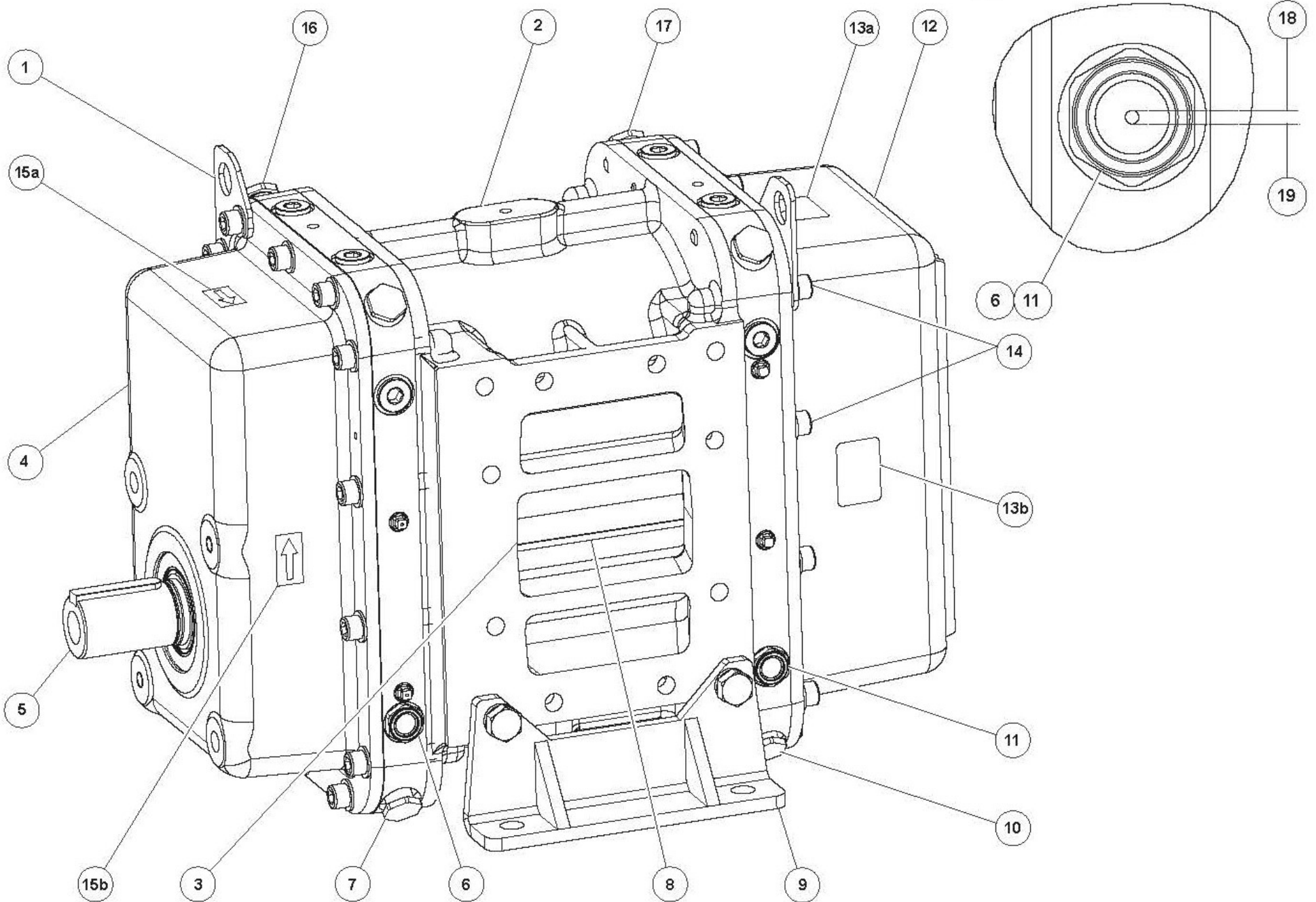
VTB 822.XL Noise and Vibration Data

Noise Level - dB(A)	Vibration Level
129	7 mm.s ⁻¹ (0.28 inch s ⁻¹)

VTB 822.XL Components

Item Number	Part Name
1	Lifting lugs
2	Inlet (behind blower)
3	Discharge (outlet)/injection ports
4	Drive end cover
5	Drive shaft
6	Oil level sight glass (drive head plate)
7	Drive end oil drain plug
8	Rotors
9	Mounting feet
10	Non drive end oil drain plug
11	Oil-level sight glass (non-drive head plate)
12	Non-drive end cover
13a	Identification and rating plate (vertical position)
13b	Identification and rating plate (horizontal position)
14	Head plate bolts
15a	Direction of rotation arrow (vertical position)
15b	Direction of rotation arrow (horizontal position)
16	Oil filler plug (drive head plate)
17	Oil filler plug (non-drive head plate)
18	Maximum oil level
19	Minimum oil level

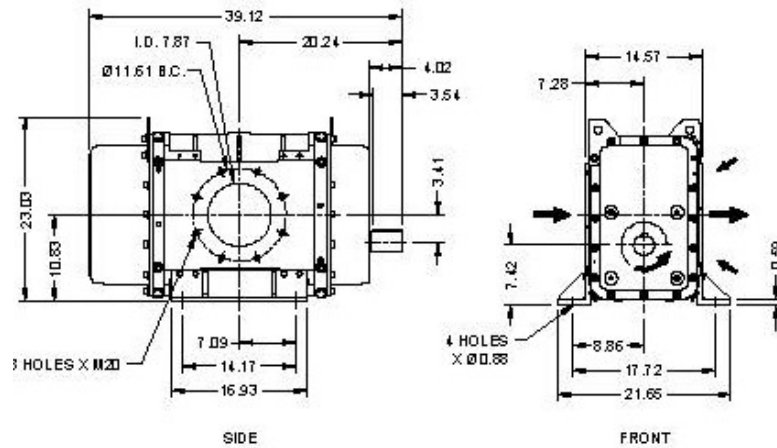
VTB 822.XL Blower



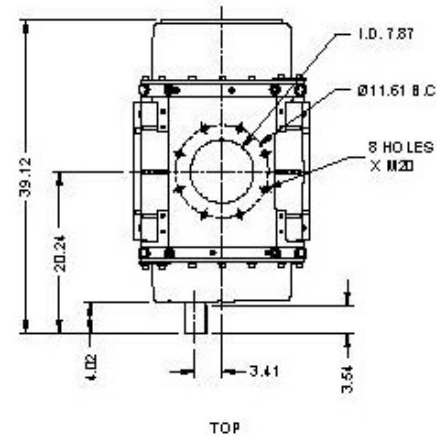
BLOWER	SPEED RPM	VACUUM PERFORMANCE													
		9" Hg		12" Hg		15" Hg		18" Hg		21" Hg		24" Hg		27" Hg	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
VTB 822.XL (2729 CFM*) *Volume Displacement at Maximum Speed	1600	1241	30	1178	38	1136	48	1050	58	907	67	691	77	452	86
	1800	1426	34	1363	43	1316	54	1231	65	1090	75	856	86	582	97
	2000	1610	37	1548	48	1496	60	1412	72	1273	84	1021	96	711	108
	2200	1795	41	1733	53	1676	66	1593	79	1456	92	1186	105	841	119
	2400	1979	45	1918	58	1855	72	1773	86	1639	101	1351	115	970	129
	2600	2164	59	2103	62	2035	78	1954	93	1822	109	1515	125	1100	140
	2800	2348	52	2288	67	2215	84	2135	101	2005	117	1680	134	1229**	151**
	3000	2533	56	2473	72	2395	90	2316	108	2188	126	1845**	144**	1358**	162**

** For intermittent use only (15 min/hour)

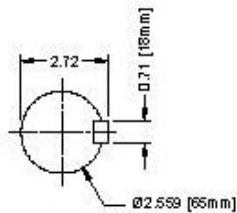
VERTICAL GEARS



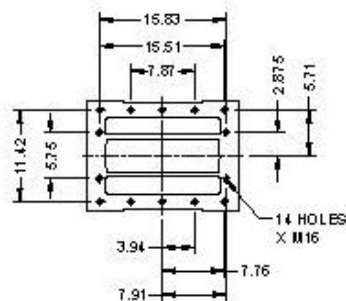
HORIZONTAL GEARS



SHAFT DETAILS

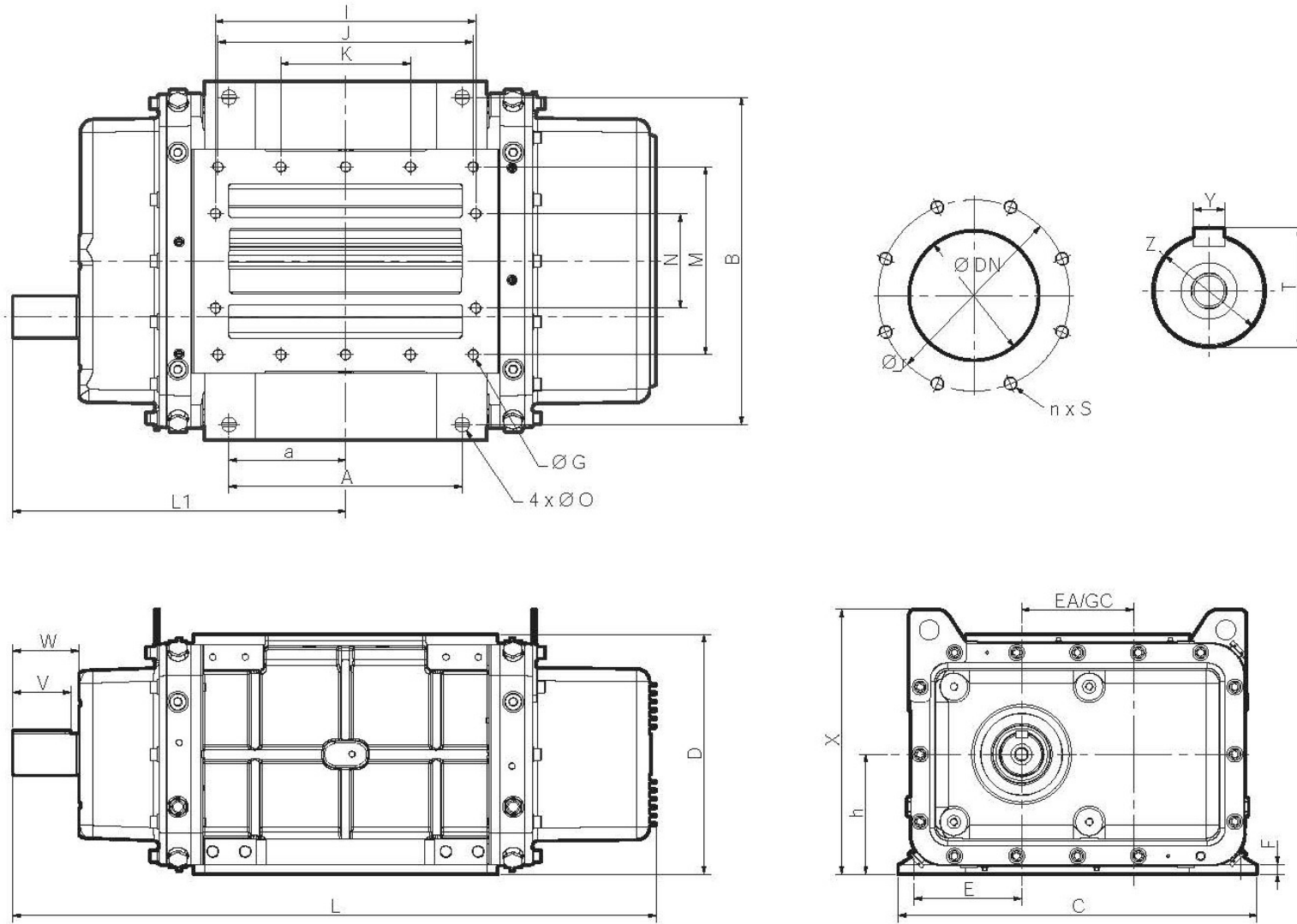


DISCHARGE FLANGE



- NOTES:**
1. ENGLISH UNITS (INCH) UNLESS OTHERWISE NOTED.
 2. WEIGHT: 344 lbs.
 3. C.W. SHAFT ROTATION ALSO AVAILABLE ON REQUEST.
 4. DO NOT USE FOR CONSTRUCTION.

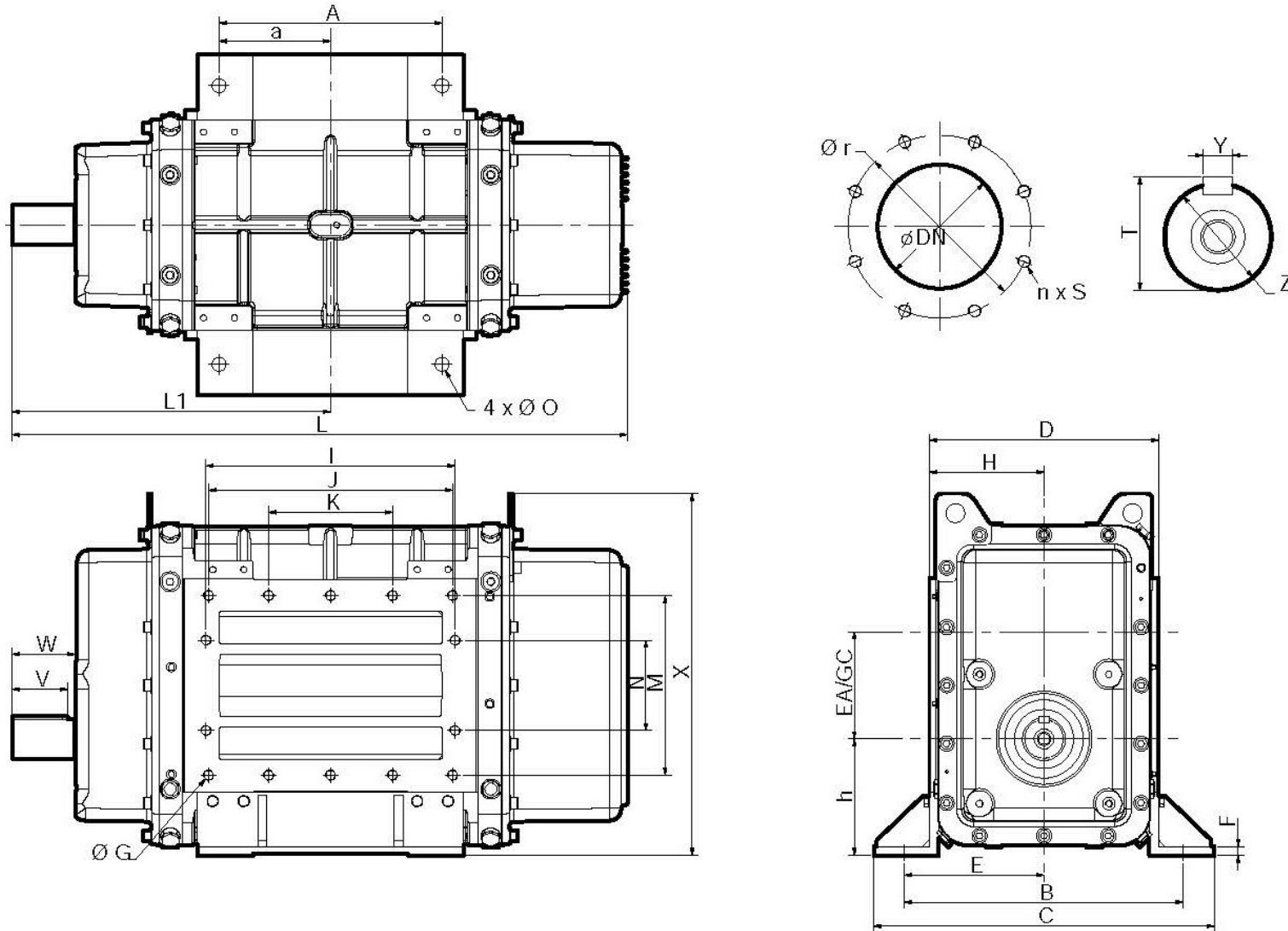
VTB 822.XL Blower Dimensions: Horizontal Orientation



VTB 822.XL Dimensions – Horizontal Orientation

A	a	B	C	D	E	F	GC/EA	G	h	I	J	K	L	L1
14.17	7.09	19.88	21.81	14.57	6.54	0.59	6.81	14 x M16	7.28	15.83	15.51	7.87	39.13	20.24
M	N	ØO	Ør	n x S	T	ØDN	V	W	X	Y	ØZ*	Fitting tolerance range: m6		
11.42	5.75	0.87	11.61	8 x M20	2.72	7.87	3.54	4.02	16.10	0.71	2.56			

VTB 822.XL Blower Dimensions: Vertical Orientation



VTB 822.XL Dimensions – Vertical Orientation

A	a	B	C	D	E	F	GC/EA	G	H	h	I	J	K	L
14.17	7.09	17.72	21.65	14.57	8.86	0.59	6.81	14 x M16	7.28	7.42	15.83	15.51	7.87	39.13
L1	M	N	ØO	Ør	n x S	T	ØDN	V	W	X	Y	ØZ	Fitting tolerance range: m6	
20.24	11.42	5.75	0.87	11.61	8 x M20	2.72	7.87	3.54	4.02	23.03	0.71	2.56		



HIBON BLOWERS, VTB SERIES – HIGH VACUUM

TECHNICAL DATA SHEET – VTB 822.XL

Performance Data:

Refer to performance curves, available upon request.

- Vacuum performance, metric (ISO) units
- Vacuum performance, imperial units
- Pressure performance, metric (ISO) units
- Pressure performance, imperial units

Dimensional Data:

Refer to general arrangement drawings, available upon request.

- Bare shaft blower dimensions, metric and imperial units –
- Bare shaft dimensions, 2D & 3D drawings, metric and imperial units
- Blower with manifold, 2D drawings, metric and imperial units
- Blower inlet flange is 8" (200 mm) diameter, PN 10 metric drilling
- Manifold flanges are 8" (200 mm) diameter, ANSI 125 Lbs drilling

Note: Manifold type and flange positions must be shown on order

Gasket Data:

- Inlet flange: Standard, 8" (200 mm) PN 10 metric drilling, Part # GKTR-0822
Asbestos free, glass fiber reinforced compressed gasket, 1/8" thick, equivalent to Permanite AF2100 or Mevco N748B
- Discharge flange: Special drilling, Part # GKTS-0822

Weight Data:

- Blower, without manifold: 1190 Lbs (540 Kg)
- Manifold only: ~ 227 Lbs (103 Kg)
Manifold weight varies with configuration.

Blower Configurations:

Blower is available in several configurations to suit your installation and type of drive:

- Air flow: Vertical or horizontal
- Rotation: Clockwise or Counter-Clockwise
- Shaft position: Top, bottom, left, right

A typical arrangement drawing is available to help you select the proper configuration at time of order.

Oil Capacity, Vertical Gears, Horizontal Flow Arrangement:

- Drive end: 0.38 US Gal (1.45 Liters)
- Gear end: 0.61 US Gal (2.30 Liters)

Oil Capacity, Horizontal Gears, Vertical Flow Arrangement:

- Drive end: 0.66 US Gal (2.41 Liters)
- Gear end: 1.0 US Gal (3.84 Liters)

Note: Oil quantities are approximate. Please follow instruction of the maintenance manual to read proper oil level.

Type of Oil:

- Hibon® Lube is recommended for optimum performance.
- Extreme Pressure (EP) Synthetic Gear Oil, ISO 220 grade.
- For truck service, a synthetic type of oil is preferred for summer and winter operation.
- Make sure that the synthetic oil incorporates the EP (Extreme Pressure) gear additive.



Power Transmission Data:

- Maximum input torque: 347 lbf-ft (471 N·m) (1 second start-up)
- Start-up inertia: 29.44 lb-ft² (1.24 Kg·m²)
- Minimum blower pulley size: See manual
- Minimum rotation speed: 1,000 RPM
- Maximum rotational speed: 3,000 RPM

Other Operating Data:

- Maximum blower tilt angle: 12° (for proper lubrication, any direction)
 - Maximum temperature: 285°F (140°C) at blower discharge
 - Temperature switch set at: 265°F (130°C)
 - Maximum size of particles entering blower: 0.00098" (25 µm)
 - Maximum dust load through blower: 0.25 oz/ft³ (200 mg/m³)
- Temperature probe must be located close to manifold discharge flange.*

Silencer Data:

- Maximum Pressure Loss:
 - Air injection silencer and associated piping: 8" WC (200 mm H₂O)
 - Discharge silencer and associated piping: 8" WC (200 mm H₂O)
- Design air flow: 2,729 SCFM (4,636 m³/hr)
- Design Temperature:
 - Air injection silencer: 100°F (38°C)
 - Discharge silencer: 250°F (120°C)

Note: Air injection and discharge silencers have atmospheric inlet / discharge





VTB.XL Series Air injection Vacuum Blower

Better by design

With over 100 years of experience, Hibon is a market leader with a world-class range of air blowers and vacuum equipment used to provide air/gas volumes for pressure and vacuum applications.

Continuous research and development of the **hibon** Product range has led to the introduction of the new **VTB.XL** Series Air Injection blowers.

Their new design incorporates the benefits of improved assembly, lifetime reliability, better performance and interchangeability with the previous range, as well as smaller blower units.

Range


Blowers	Free air delivery* maxi
VTB 805.XL	1 007 m ³ /h
VTB 807.XL	1 570 m ³ /h
VTB 810.XL	1 901 m ³ /h
VTB 820.XL	2 822 m ³ /h
VTB 822.XL	4 635 m ³ /h
VTB 840.XL	6 492 m ³ /h
VTB 8602.XL	7 800 m ³ /h
VTB 8702.XL	9 690 m ³ /h
VTB 8902.XL	11 400 m ³ /h

* At maximum speed.

Vacuum up to 95%

Pressure up to 1 bar g. ; To 1.2 bar g. from VTB 840.XL

Features

Rotors: Three-Lobe Rotors with a one-piece, integral lobe and shaft design for improved quality and reliability. Available in **ATEX** on request.  II 2/2 G/D c, II BT3, 160° C X

Gears: Helical gears located on the opposite drive side.

Bearings: Four sized bearings for lifetime reliability.

Oil reservoir: Large oil reservoir for improved bearing lubrication.

Oil thrower: Oil thrower and oil passages for good bearing lubrication and long life.

Seals: For air : An innovative and unique design that includes 4 piston rings and a shield. **For an oil free operation :** Dynamic shaft seals arrangement with deflector.

Shaft seals: Innovative dynamic shaft seals arrangement.

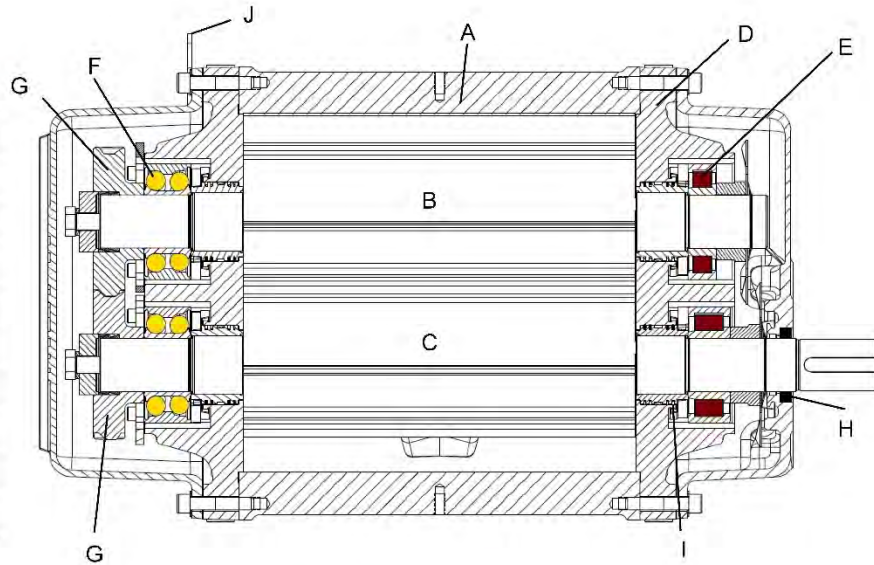


Cleaner
Lower running costs
Maintenance free



Part Description

A	Housing
B	Driven Rotor
C	Drive Rotor
D	Head Plate
E	Roller bearings
F	Boll bearings
G	Gears
H	SCP ring
I	Piston ring seals
J	Lifting lugs



Benefits

- No oil or water cooling system
- High mechanical and volumetric efficiency
- Lifetime reliability
- 100% oil free air
- Blowers without maintenance for 40,000 hours (except oil each year).
- Interchangeability with the previous range (except VTB822.XL)
- Lifting lugs
- Option: Mounting feet

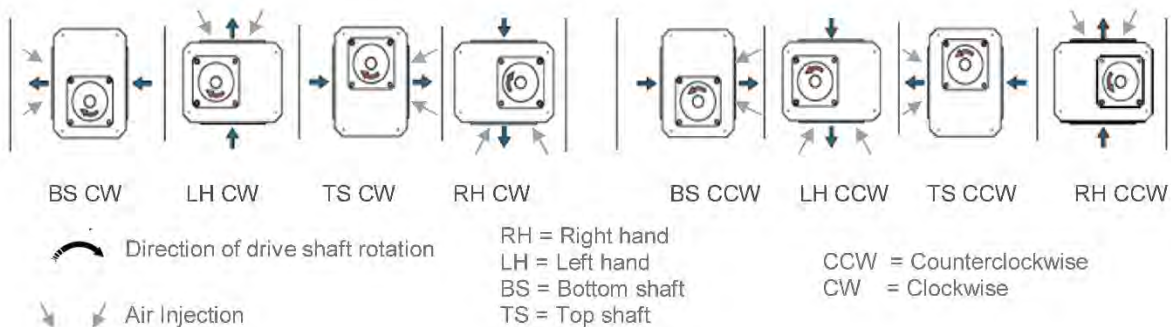
Applications

Hibon® VTB.XL series are the only dry positive displacement blowers able to reach 95% vacuum. The special design of this «Environmentally green pump» eliminates water cooling, heat exchangers, oil consumption and effluent.

Typical applications are :

- Mobile waste handling units, industrial, municipal wet and dry.
- Pneumatic conveying (fly ash, chemicals pharmaceuticals product...).
- Central vacuum systems (packaging, envelope manufacturing...)

Configurations



Performances

** For intermittent use only. (15 min / hour)

VTB 822.XL

RPM	Volume displacement	50% Vacuum		60% Vacuum		70% Vacuum		80% Vacuum		90% Vacuum	
	m ³ /h	m ³ /h	kW	m ³ /h	kW	m ³ /h	kW	m ³ /h	kW	m ³ /h	kW
1600	2472	1930	36	1784	43	1541	50	1175	57	768	64
1800	2781	2235	40	2091	48	1852	56	1455	64	955	72
2000	3090	2541	45	2398	54	2163	63	1735	71	1208	80
2200	3399	2847	49	2706	59	2474	69	2015	79	1428	88
2400	3708	3152	54	3013	64	2785	75	2295	86	1648	96
2600	4017	3458	58	3320	70	3095	81	2575	93	1868	105
2800	4326	3764	63	3628	75	3406	88	2855	100	2088	113
3000	4635	4070	67	3935	80	3717	94	3135	107	2308	121



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