



## Authorized Hibon Distributor, Warranty, Service & Repair Facility

Visit us online: [www.fraserwoods.ca](http://www.fraserwoods.ca)

### VTB 810.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 810.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	1119
Maximum RPM	3800
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 <sup>4</sup> Pa, 75.75 Torr
Max Differential Pressure (inlet-outlet)	1100 mbar 1.0 x 10 <sup>5</sup> Pa, 750 Torr
Shaft Dia.	1.89" (48mm)
Drive End Lubrication	Hibon Lube
Opposite Drive End Lubrication	Hibon Lube
Drive End Cover – Horiz	1.50 Litres (0.40 US gal)
Drive End Cover – Vert	0.9 Litres (0.24 US gal)
Opp. Drive End Cover – Horiz	2.1 Litres (0.55 US gal)
Opp. Drive End Cover - Vert	1.3 Litres (0.34 US gal)
Bare Unit Weight	487 Lbs
Container	Wood Skid
Shipping Weight on Skid	537 lbs
Shipping Options	Ground Freight, Air or Sea



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

**VTB 810.XL Approximate Oil Fill Amounts**

Model No. / Drive Shaft Location	Drive End Cover		Opposite Drive End Cover	
	Liters	US Gal.	Liters	US Gal.
VTB 810.XL (Horizontal)	1.50	0.40	2.1	0.55
VTB 810.XL (Vertical)	0.9	0.24	1.3	0.34

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 810.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 <sup>-4</sup> m <sup>2</sup> s <sup>-1</sup> (809 cSt)	6.04 x 10 <sup>-4</sup> m <sup>2</sup> s <sup>-1</sup> (640 cSt)
At 40 °C (212 °F)	2.2 x 10 <sup>-4</sup> m <sup>2</sup> s <sup>-1</sup> (202 cSt)	2.18 x 10 <sup>-4</sup> m <sup>2</sup> s <sup>-1</sup> (218 cSt)
At 100 °C (212 °F)	1.8 x 10 <sup>-5</sup> m <sup>2</sup> s <sup>-1</sup> (18 cSt)	2.7 x 10 <sup>-5</sup> m <sup>2</sup> s <sup>-1</sup> (27 cSt)
Mean viscosity index	93	149
Recommended Oil	Hibon Lube	Contact Fraserwoods

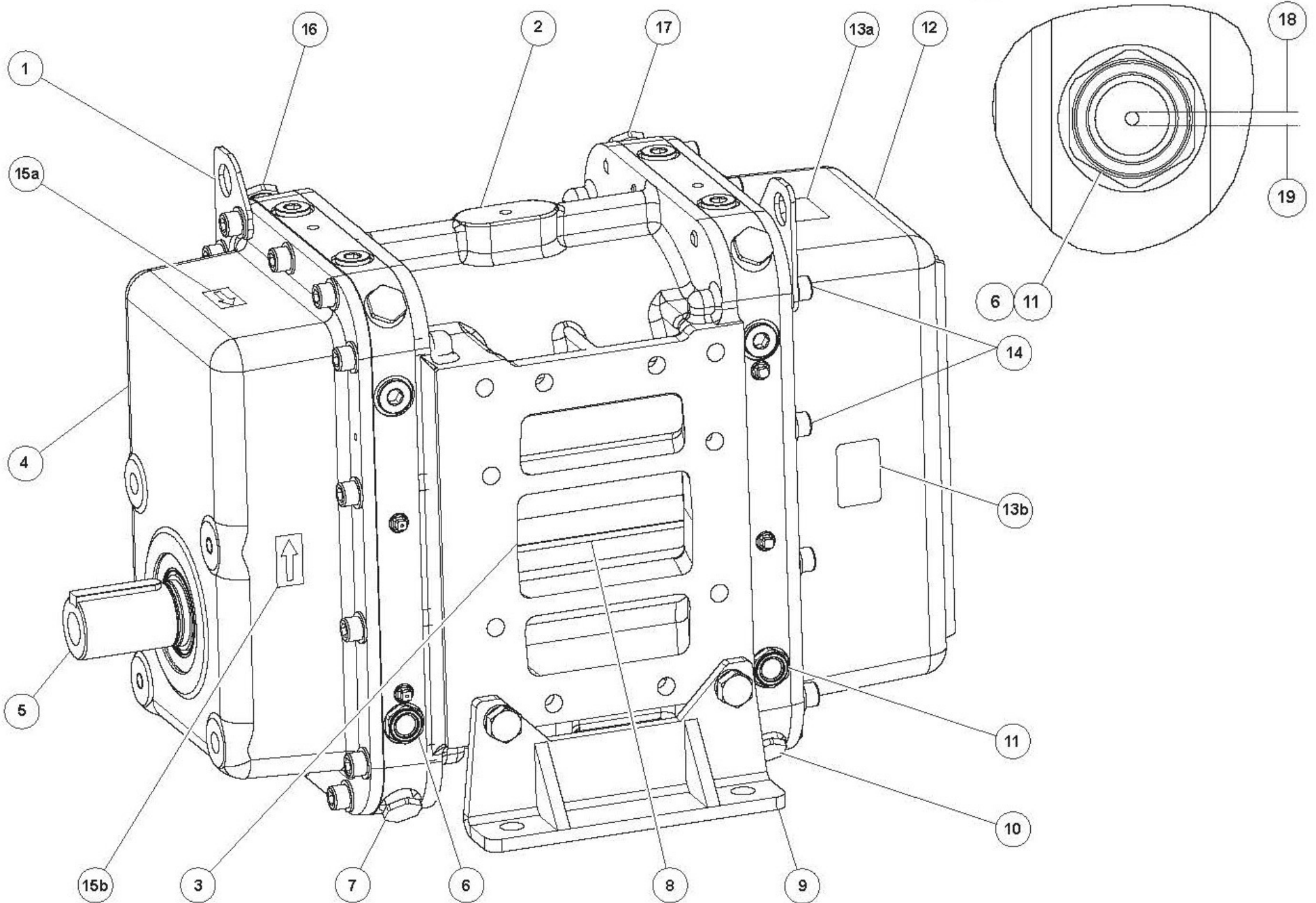
**VTB 810.XL Noise and Vibration Data**

Noise Level - dB(A)	Vibration Level
121	5.5 mm.s <sup>-1</sup> (0.22 inch s <sup>-1</sup> )

**VTB 810.XL Components**

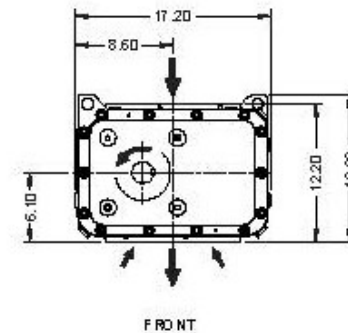
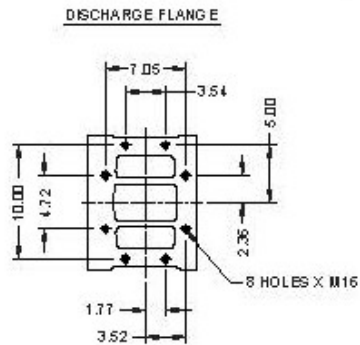
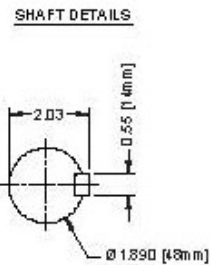
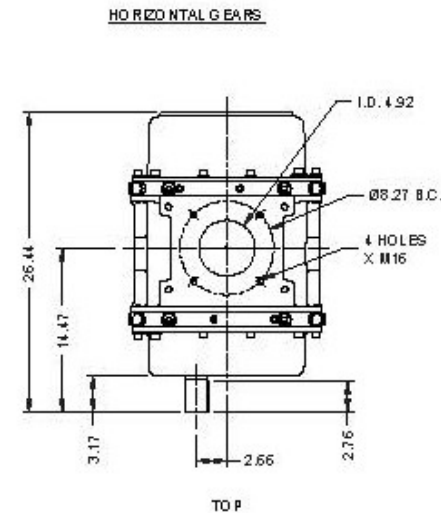
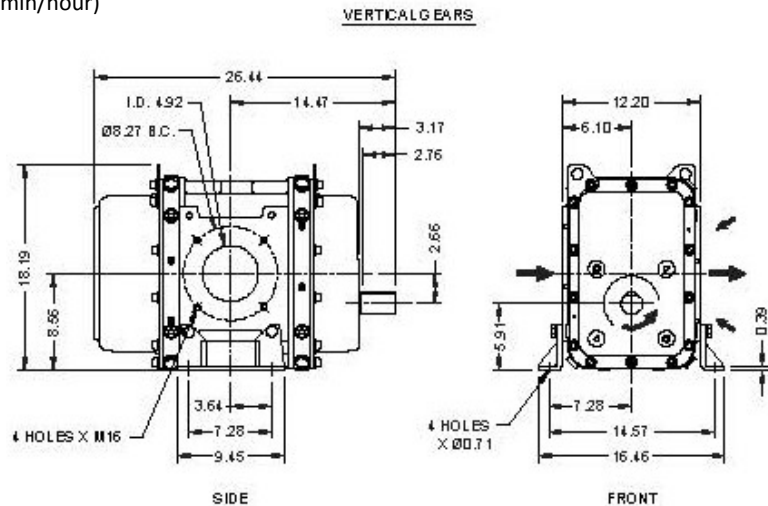
Item Number	Part Name
1	Lifting lugs
2	Inlet (behind blower)
3	Discharge (outlet)/injection ports
4	Drive end cover
5	Drive shaft
6	Oil level sight glass (drive head plate)
7	Drive end oil drain plug
8	Rotors
9	Mounting feet
10	Non drive end oil drain plug
11	Oil-level sight glass (non-drive head plate)
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 810.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
<b>VTB 810.XL</b> (1119 CFM*) *Volume Displacement at Maximum Speed	2200	573	15	558	18	535	21	503	25	458	29	336	33	97	37
	2600	700	18	686	22	665	26	634	31	593	35	478	39	231	44
	2800	764	19	750	24	731	28	699	33	661	38	548	42	298	48
	3000	827	21	814	26	796	30	765	36	729	41	619	46	365	52
	3200	891	22	878	28	861	32	830	39	797	44	690	49	432	56
	3400	955	24	942	30	927	35	896	42	864	47	760	53	499	60
	3600	1019	26	1007	32	992	38	961	45	932	51	831	56	566**	63**
	3800	1082	28	1071	35	1057	40	1027	49	1000	54	902**	60**	-	-

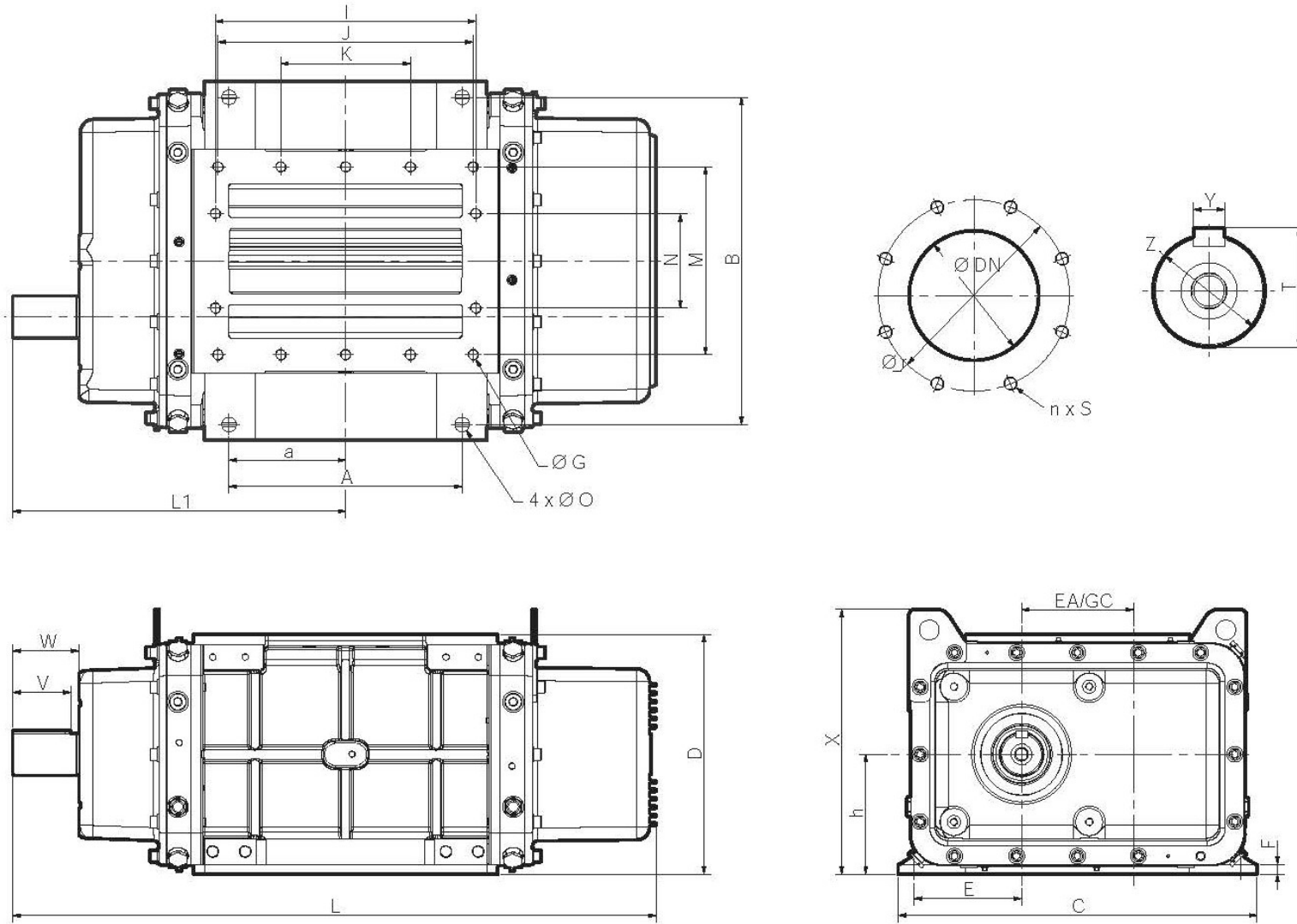
\*\* For intermittent use only (15 min/hour)



- 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.



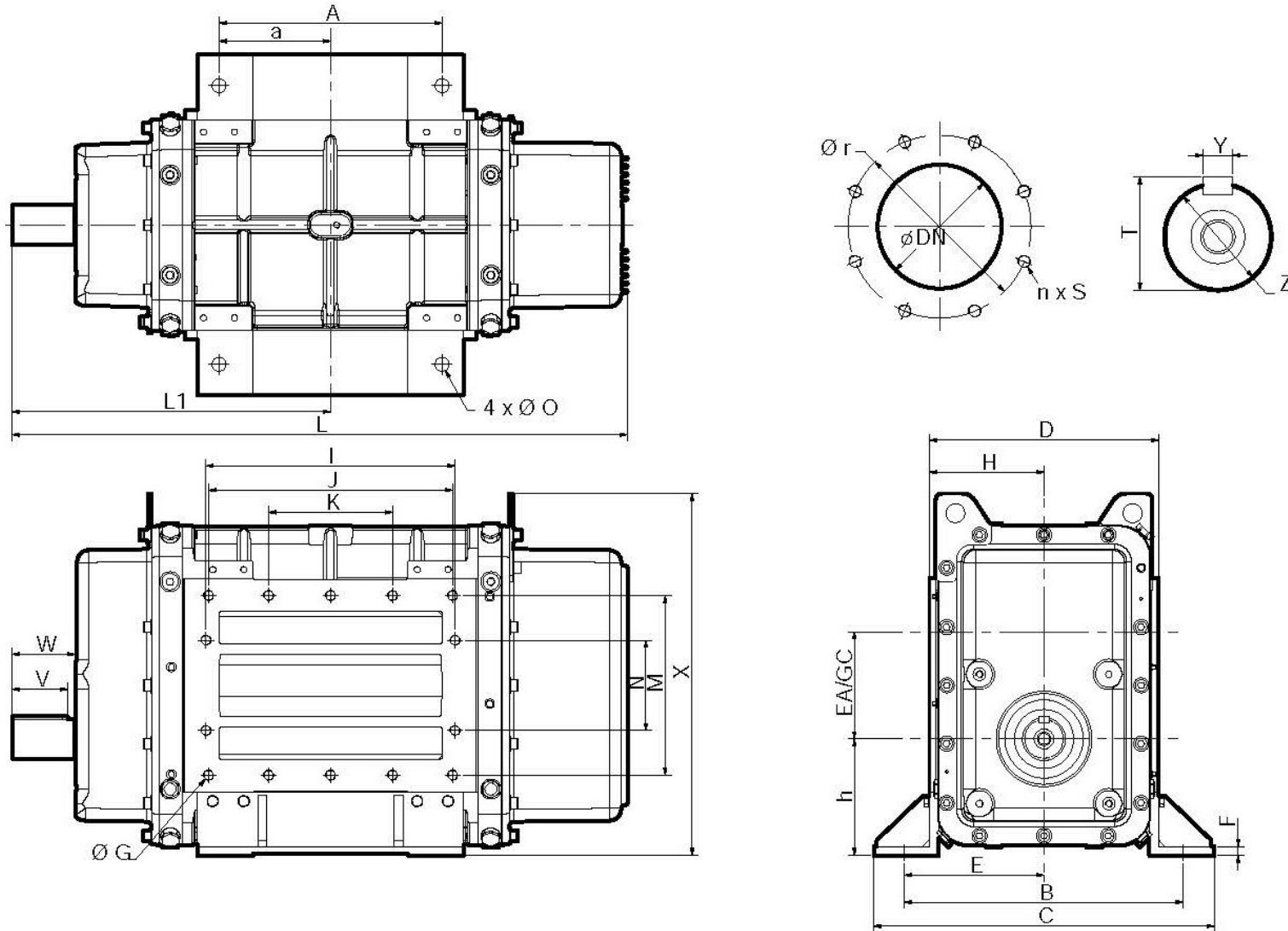
## VTB 810.XL Blower Dimensions: Horizontal Orientation



**VTB 810.XL Dimensions – Horizontal Orientation**

A	a	B	C	D	E	F	GC/EA	G	h	I	J	K	L	L1
-	-	-16.73	16.73	12.20	-	-	5.31	8 x M16	6.10	7.05	3.54	-	26.46	14.49
M	N	ØO	Ør	n x S	T	ØDN	V	W	X	Y	ØZ*	Fitting tolerance range: m6		
10.00	4.72	-	8.27	4 c M16	2.03	4.92	2.76	3.19	12.99	0.55	1.89			

### VTB 810.XL Blower Dimensions: Vertical Orientation



VTB 810.XL Dimensions – Vertical Orientation

A	a	B	C	D	E	F	GC/EA	G	H	h	I	J	K	L
7.28	3.64	14.57	16.46	12.20	7.28	0.39	5.31	8 x M16	6.10	5.91	7.05	3.54	-	26.46
L1	M	N	ØO	Ør	n x S	T	ØDN	V	W	X	Y	ØZ	Fitting tolerance range: m6	
14.49	10.00	4.72	0.71	8.27	4 x M16	2.03	4.92	2.76	3.19	18.19	0.55	1.89		



## HIBON BLOWERS, VTB SERIES – HIGH VACUUM

### TECHNICAL DATA SHEET – VTB 810.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 5" (125 mm) diameter, PN 10 metric drilling
- Manifold flanges are 6" (150 mm) diameter, ANSI 125 Lbs drilling

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

#### Gasket Data:

- Inlet flange: Standard, 5" (125 mm) PN 10 metric drilling, Part # GKTR-0810  
Asbestos free, glass fiber reinforced compressed gasket, 1/8" thick, equivalent to Permanite AF2100 or Mevco N748B
- Discharge flange: Special drilling, Part # GKTS-0810

#### Weight Data:

- Blower, without manifold: 487.2 Lbs (221 Kg)
- Manifold only: ~ 112 Lbs (51 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: 0.24 US Gal (0.90 liters)
- Gear end: 0.34 US Gal (1.30 liters)

#### Oil Capacity, Horizontal Gears, Vertical Flow Arrangement:

- Drive end: 0.40 US Gal (1.50 liters)
- Gear end: 0.55 US Gal (2.10 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: 170 lbf-ft (230 N-m) (1 second start-up)
- Start-up inertia: 5.65 lb-ft<sup>2</sup> (0.238 Kg-m<sup>2</sup>)
- Minimum blower pulley size: See manual
- Minimum rotation speed: 1,000 RPM
- Maximum rotational speed: 3,800 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: 0.003" (0.07 mm)
  - Maximum dust load through blower: 0.006 oz/ft<sup>3</sup> (6 gr/m<sup>3</sup>)
- 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 H<sub>2</sub>O)
  - Discharge silencer and associated piping: 8" WC (200 mm H<sub>2</sub>O)
- Design air flow: 1,400 SCFM (2,380 m<sup>3</sup>/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 <sup>3</sup> /h
VTB 807.XL	1 570 m <sup>3</sup> /h
VTB 810.XL	1 901 m <sup>3</sup> /h
VTB 820.XL	2 822 m <sup>3</sup> /h
VTB 822.XL	4 635 m <sup>3</sup> /h
VTB 840.XL	6 492 m <sup>3</sup> /h
VTB 8602.XL	7 800 m <sup>3</sup> /h
VTB 8702.XL	9 690 m <sup>3</sup> /h
VTB 8902.XL	11 400 m <sup>3</sup> /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.



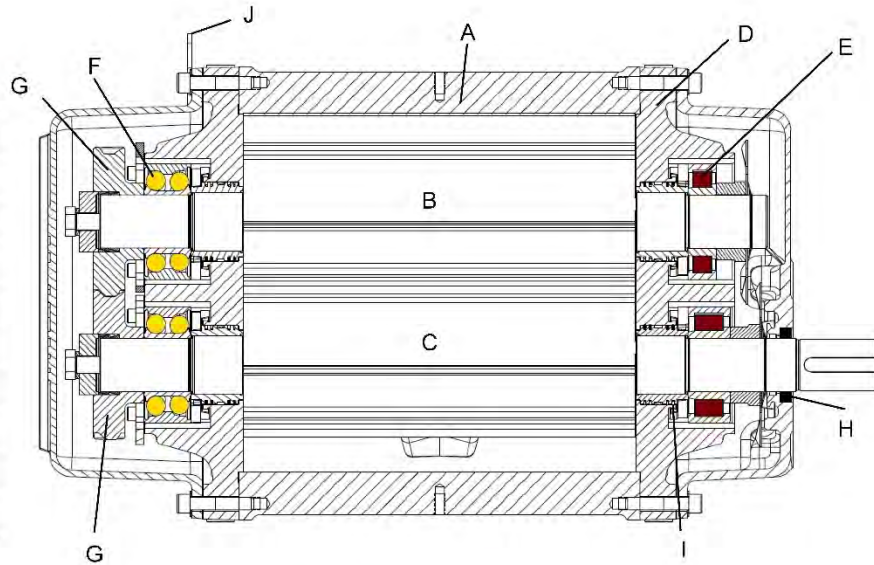
**Cleaner**  
**Lower running costs**  
**Maintenance free**





## 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

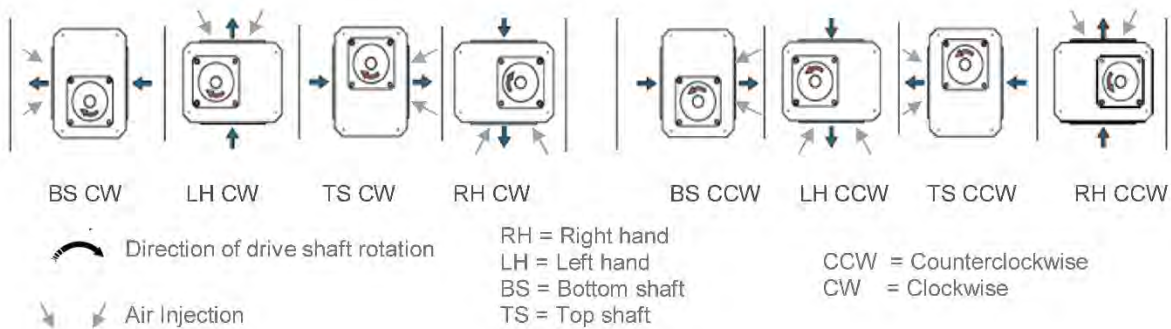
## Applications

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 810.XL

RPM	Volume displacement	50% Vacuum		60% Vacuum		70% Vacuum		80% Vacuum		90% Vacuum		Max. Vacuum (%)
	m <sup>3</sup> /h	m <sup>3</sup> /h	kW	m <sup>3</sup> /h	kW	m <sup>3</sup> /h	kW	m <sup>3</sup> /h	kW	m <sup>3</sup> /h	kW	
2200	1101	908	16	855	19	778	22	571	24	164	28	92
2600	1301	1130	19	1077	23	1008	26	812	29	392	33	93.5
2800	1401	1241	21	1188	25	1123	28	932	32	506	36	94
3000	1502	1352	22	1300	27	1238	31	1052	34	620	39	94.5
3200	1602	1463	24	1411	29	1353	33	1172	37	734	42	94.8
3400	1702	1574	26	1522	31	1468	35	1292	39	848	44	95.2
3600	1802	1685	28	1633	34	1583	38	1412	42	962**	47**	
3800	1901	1796	30	1744	36	1698	41	1532**	45**	-	-	



**Authorized Hibon Distributor, Service & Repair Facility**

120 – 10293 276 ST, Acheson, Alberta, Canada T7X 6A5

T: 780.962.1827 F: 780.962.1830 E: sales@fraserwoods.ca

[www.fraserwoods.ca](http://www.fraserwoods.ca)