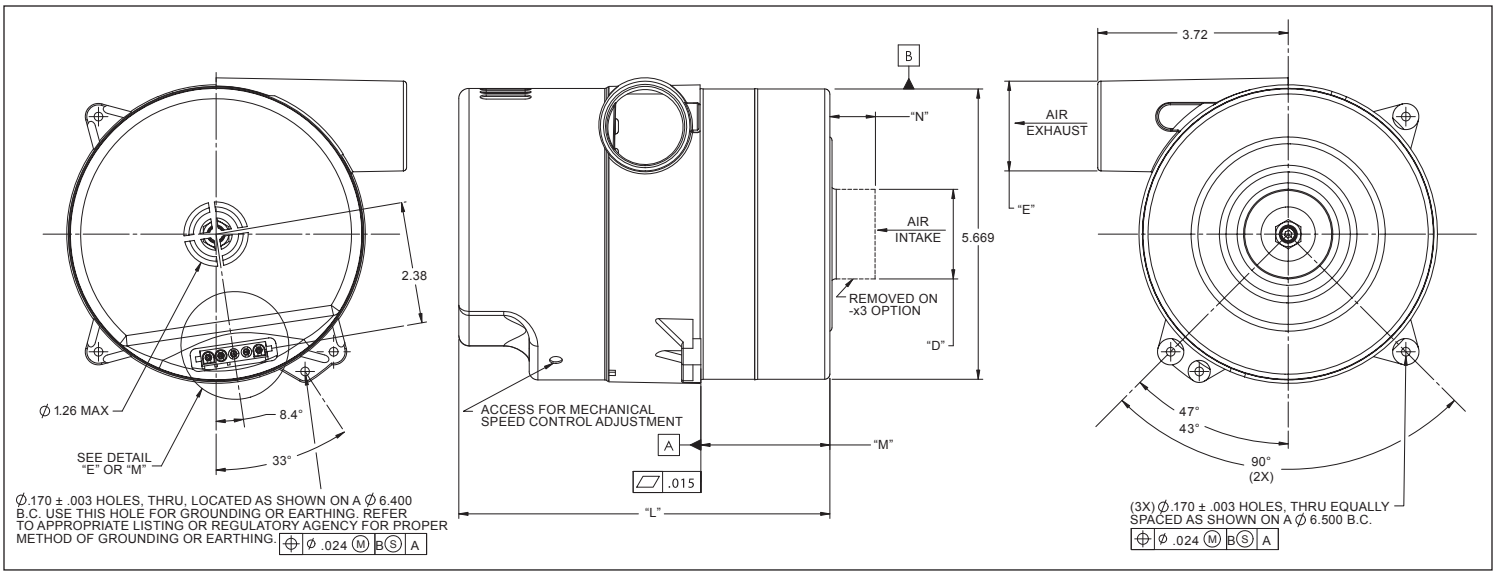
BBA14-11 Series - Brushless DC Blower
120 Volt AC Input, Multistage Bypass



MODEL	AIR INLET AND OUTLET DIAMETER mm / inches	LENGTH (L) mm / inches	LENGTH (M) mm / inches	LENGTH (N) mm / inches	VACUUM (MAX) in H_2O	PRESSURE (MAX) in H_2O	FLOW (MAX) sCFM	PERFORMANCE CONTROL TYPE
BBA14-111SMB	31.8 / 1.25	127 / 5.0	7.1 / 0.28	19.1 / 0.75	27.7	29.5	64.3	Built in Potentiometer
BBA14-111SEB	31.8 / 1.25	127 / 5.0	7.1 / 0.28	19.1 / 0.75	27.7	29.5	64.3	1.5-10VDC signal
BBA14-112SMB	31.8 / 1.25	150 / 5.9	29.5 / 1.16	19.1 / 0.75	44.8	50.6	63.8	Built in Potentiometer
BBA14-112SEB	31.8 / 1.25	150 / 5.9	29.5 / 1.16	19.1 / 0.75	44.8	50.6	63.8	1.5-10VDC signal
BBA14-113SMB	31.8 / 1.25	173 / 6.8	52.6 / 2.07	19.1 / 0.75	64.6	71.7	47.3	Built in Potentiometer
BBA14-113SEB	31.8 / 1.25	173 / 6.8	52.6 / 2.07	19.1 / 0.75	64.6	71.7	47.3	1.5-10VDC signal
BBA14-111HMB	44.5 / 1.75	130 / 5.1	10.4 / 0.41	22.6 / 0.89	24.3	26.3	105.5	Built in Potentiometer
BBA14-111HEB	44.5 / 1.75	130 / 5.1	10.4 / 0.41	22.6 / 0.89	24.3	26.3	105.5	1.5-10VDC signal
BBA14-112HMB	44.5 / 1.75	158 / 6.1	37.1 / 1.46	22.6 / 0.89	44.6	50.8	86.5	Built in Potentiometer
BBA14-112HEB	44.5 / 1.75	158 / 6.1	37.1 / 1.46	22.6 / 0.89	44.6	50.8	86.5	1.5-10VDC signal
BBA14-113HMB	44.5 / 1.75	185 / 7.3	64.0/2.52	22.6 / 0.89	62.9	73.0	81.5	Built in Potentiometer
BBA14-113HEB	44.5 / 1.75	185 / 7.3	64.0/2.52	22.6 / 0.89	62.9	73.0	81.5	1.5-10VDC signal

SPECIFICATIONS

1. Input Voltage: 120 Volts AC ± 10%
2. Working Environment: 0°C to 50°C, clean working air.
3. Storage Temperature: -40°C to 80°C
4. Refer to Northland Terms and Conditions for our standard conditions of sales

OPTIONS (model suffix)

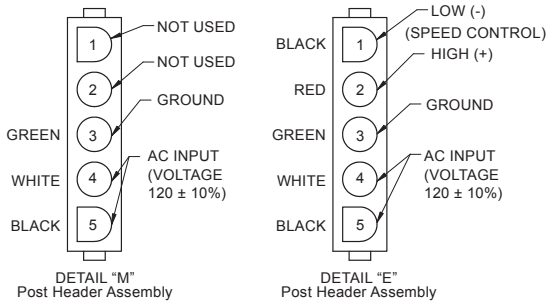
x0 Standard product (with working air inlet tube)
x1 Without working air inlet tube
x2 With working air inlet tube, with inlet tube for cooling air
x3 Without working air inlet tube, with inlet tube for cooling air
0x Standard control type (1.5 - 10 VDC signal)
1x 1.5 - 5 VDC signal
2x 4 - 20 mA signal

ACCESSORIES

BBA14-F125:
Air inlet filter for use with 1.25" inlet pipes
BBA14-F175:
Air inlet filter for use with 1.75" inlet pipes

WIRING DETAILS

Blower connector mates with AMP connector housing PN 1-480763 populated with pins AMP PN 35055-1.



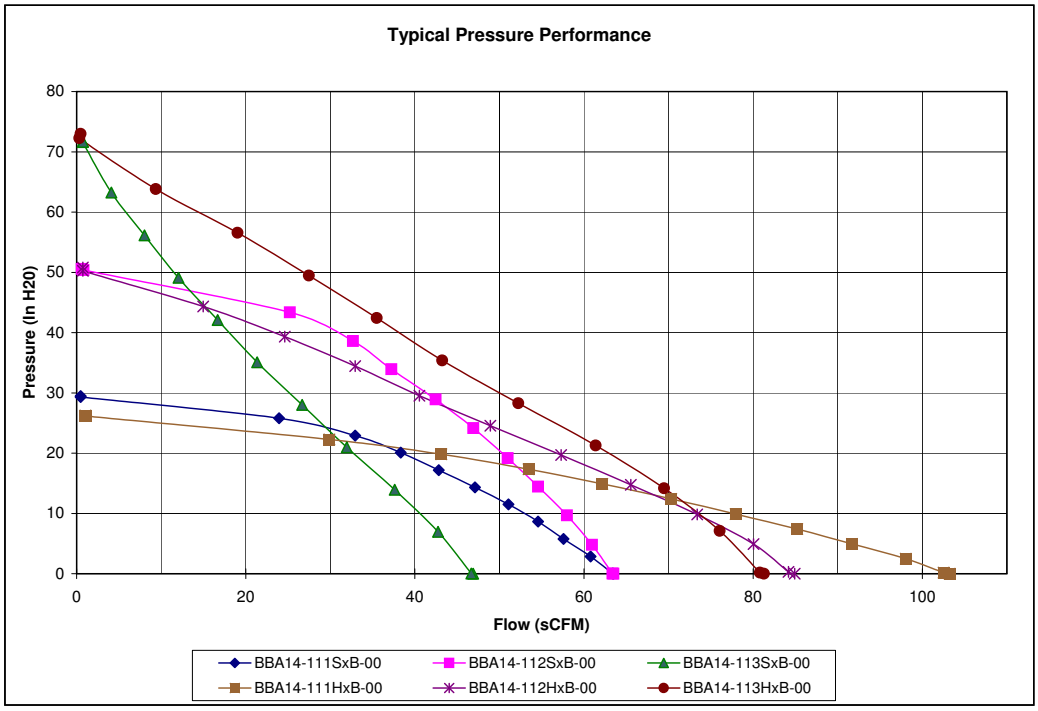
NOTICES AND CAUTIONS

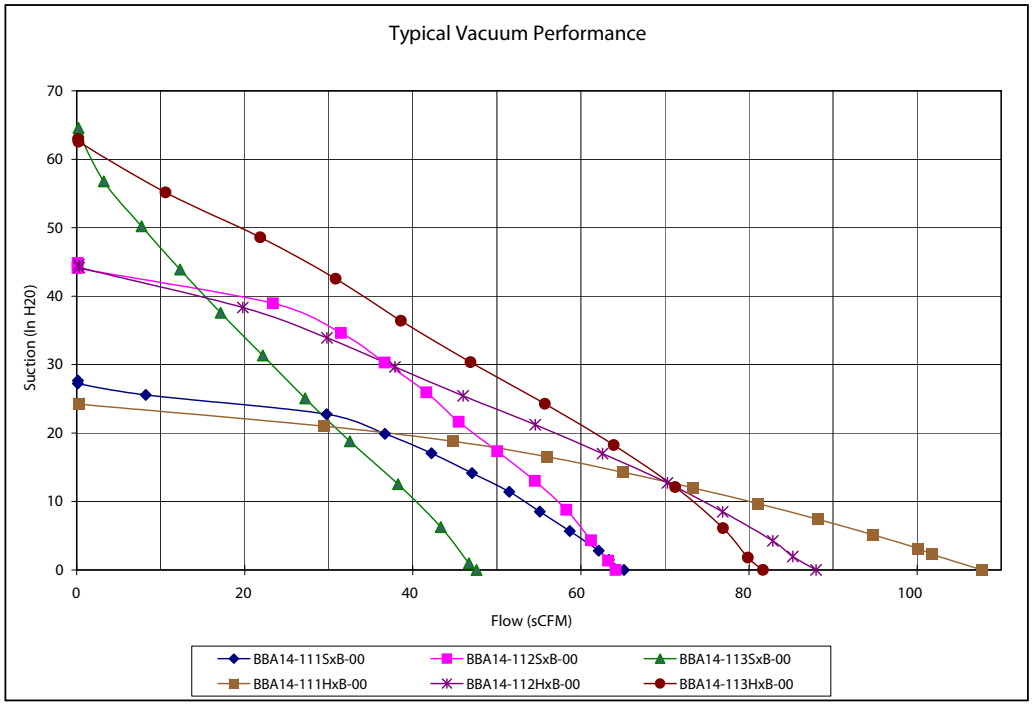
- This document is for informational purposes only. Northland, a Scott Fetzer Company accepts no liability for the accuracy of the information contained in this document. Northland reserves the right to modify, revise or discontinue products without prior notice.
- All test data was obtained in laboratory conditions, using a laminar flow element. Performance will vary depending on environment conditions and by application.
- The Improper application of voltage will damage this product. Refer to wiring diagram above.
- Refer to Mercury User Guide (NMT part no. 25377) for proper installation, and use.

Northland MOTOR TECHNOLOGIES
Putting concepts in motion

November 5, 2013

BBA14-11 Series - Brushless DC Blower
120 Volt AC Input, Multistage Bypass





NOTES

- Product selection should be based on a performance curve that will supply at least 10% greater pressure (or suction) at the flow point for the application.
- Please contact your local factory Sales Representative for additional models and features.
- Refer to Mercury User Guide (NMT part no. 25377) for proper installation, and use.
- For pressure applications NMT recommends that blower should be installed in a manner that clamps the fan shell cover to the blower casting.
- NMT recommends that customer wiring to the blower as a minimum be 18AWG.

EMISSIONS

- This product may require a line filter or power factor correction module to meet specific emissions requirements. Please consult your local factory Sales Representative with the specific requirements for guidance and selection of the proper filter.

TEST METHODOLOGY

- CFM = SCFM.
- Standard air = clean, dry air.
- Density is corrected to 0.075 pounds mass per cubic foot.
- Barometric pressure is corrected to sea level of 29.92 inches of mercury.
- Temperature = 68°F.
- Measurement Device – Laminar Flow Element.

AGENCY

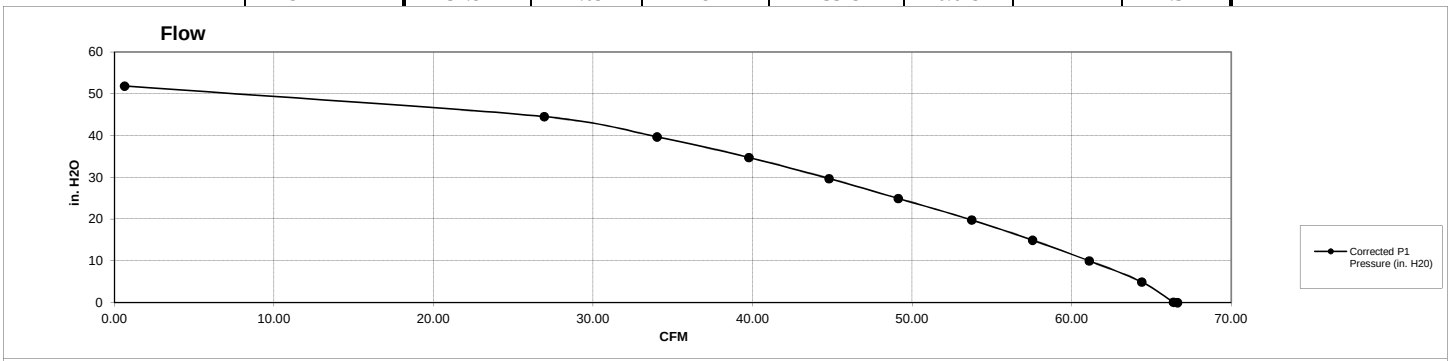
- UL 507 RECOGNIZED COMPONENT – ELECTRONICALLY CONTROLLED MOTORS (XDNW2, XDNW8)
- UL Standard for Overheating Protection for Motors UL 2111, First Edition, revised January 27, 2006 and UL Standard for Electric Motors, UL 1004, Fifth Edition, revised March 10, 2006.
- Canadian Standard for Motors and Generators, C22.2 NO. 100-04 and Canadian Standard for Motors with Inherent Overheating Protection, C22.2 77-95
- These motors were tested with controllers evaluated to the applicable requirements of UL 60730-1A and CAN/CSA-E60730-1:02
- Northland continuously submits products to various agencies for certification. For a complete list of agency certifications, or for specific requirements for your application, please contact your local factory Sales Representative.

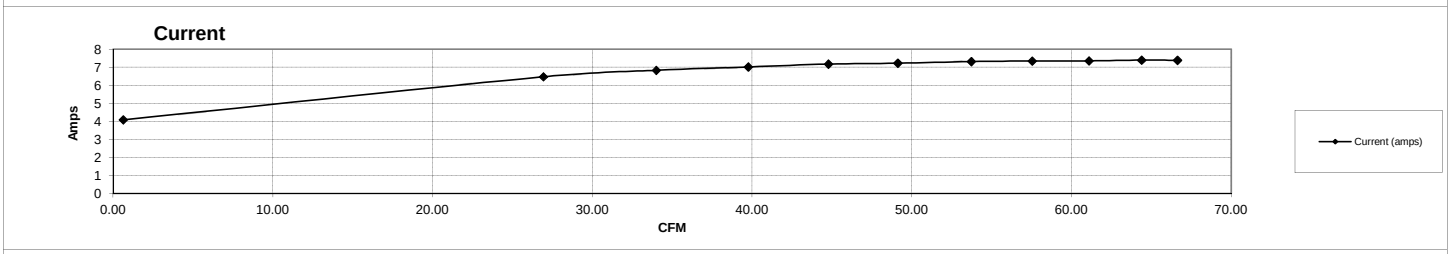
NORTHLAND 4" LAMINAR FLOW ELEMENT PRESSURE PERFORMANCE

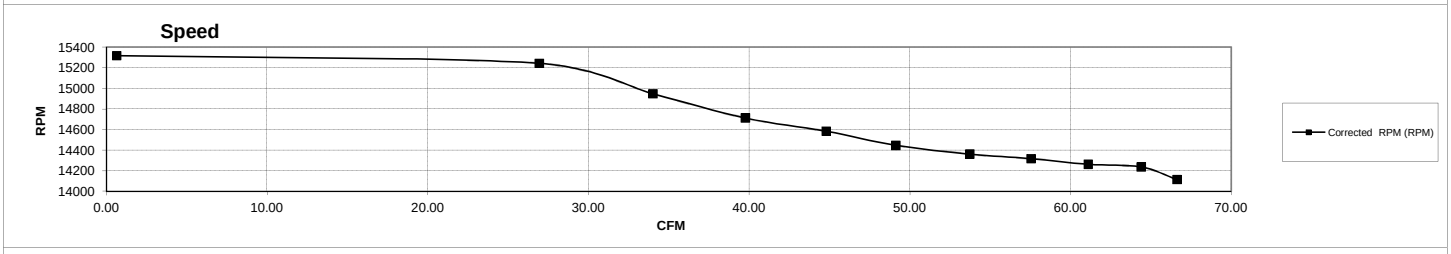
Barometric pressure	**29.81**
Relative Humidity	**31**
Dry Bulb Temp.	**75**
Wet Bulb Temp.	**57**
Test Voltage	**119**
Test HZ	**60**

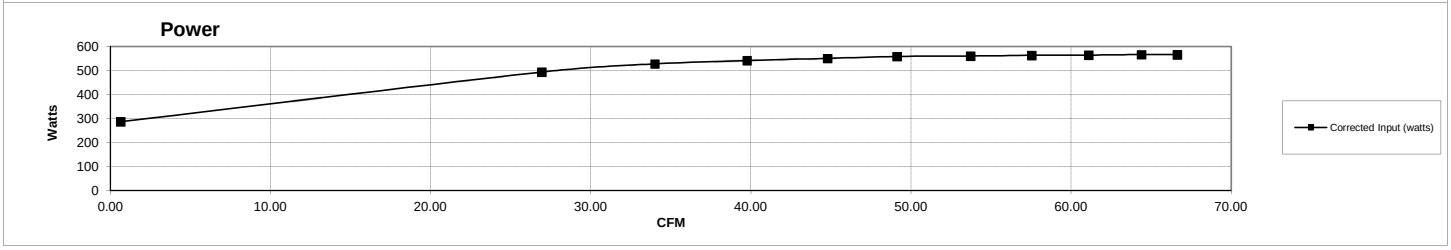
Model # **BBA14-112SxB-00**

	Calculated Values						
Valve Position	Corrected P1 Pressure (in. H_20)	Corrected Current (A)	Corrected Input *(watts)*	Corrected RPM *(RPM)*	Flow *(cfm)*	Air Power *(watts)*	Efficiency *(percent)*
CALCULATED	0	7.39	565	14116	66.625	0	0.00
OPEN	0.10	7.38	564	14090	66.368	1	0.14
	4.95	7.40	565	14238	64.383	37	6.62
	9.99	7.36	563	14264	61.091	72	12.74
	14.94	7.35	562	14318	57.537	101	17.97
	19.79	7.32	559	14363	53.721	125	22.34
	24.93	7.23	557	14448	49.120	144	25.83
	29.68	7.18	550	14586	44.780	156	28.44
	34.72	7.02	541	14714	39.758	162	30.03
	39.67	6.83	527	14949	34.001	159	30.11
	44.52	6.48	493	15245	26.934	141	28.60
	51.84	3.82	281	15314	0.524	3	1.14
SEALED	51.84	4.09	287	15319	0.629	4	1.34









NORTHLAND 4" LAMINAR FLOW ELEMENT VACUUM PERFORMANCE

Barometric pressure	**30.46**
Relative Humidity	**32**
Dry Bulb Temp.	**73**
Wet Bulb Temp.	**56**
Test Voltage	**123**
Test HZ	**60**

Model # **BBA14-112SxB-00**

	Calculated Values						
Valve Position	Corrected P1 Suction (in. H_20)	Corrected Current (A)	Corrected Input *(watts)*	Corrected RPM *(RPM)*	Flow *(cfm)*	Air Power *(watts)*	Efficiency *(percent)*
CALCULATED	0	7.24	583	14023	65.308	0	0.00
OPEN	1.31	7.23	582	14049	64.443	10	1.70
	4.52	7.19	573	14152	63.307	34	5.88
	9.15	7.15	569	14264	60.467	65	11.43
	13.67	7.12	570	14281	57.061	92	16.09
	18.00	7.08	565	14330	51.956	110	19.45
	22.72	7.03	558	14439	47.421	127	22.70
	27.05	6.88	550	14554	42.889	136	24.79
	31.77	6.80	542	14672	38.361	143	26.43
	36.20	6.67	524	14895	33.836	144	27.48
	40.82	6.14	485	15129	25.925	124	25.66
	47.26	3.72	265	15217	0.000	0	0.00
SEALED	47.96	3.87	285	15189	0.000	0	0.00