PRODUCT CATALOG

AMETEK®

PRECISION MOTION CONTROL

BLOWERS

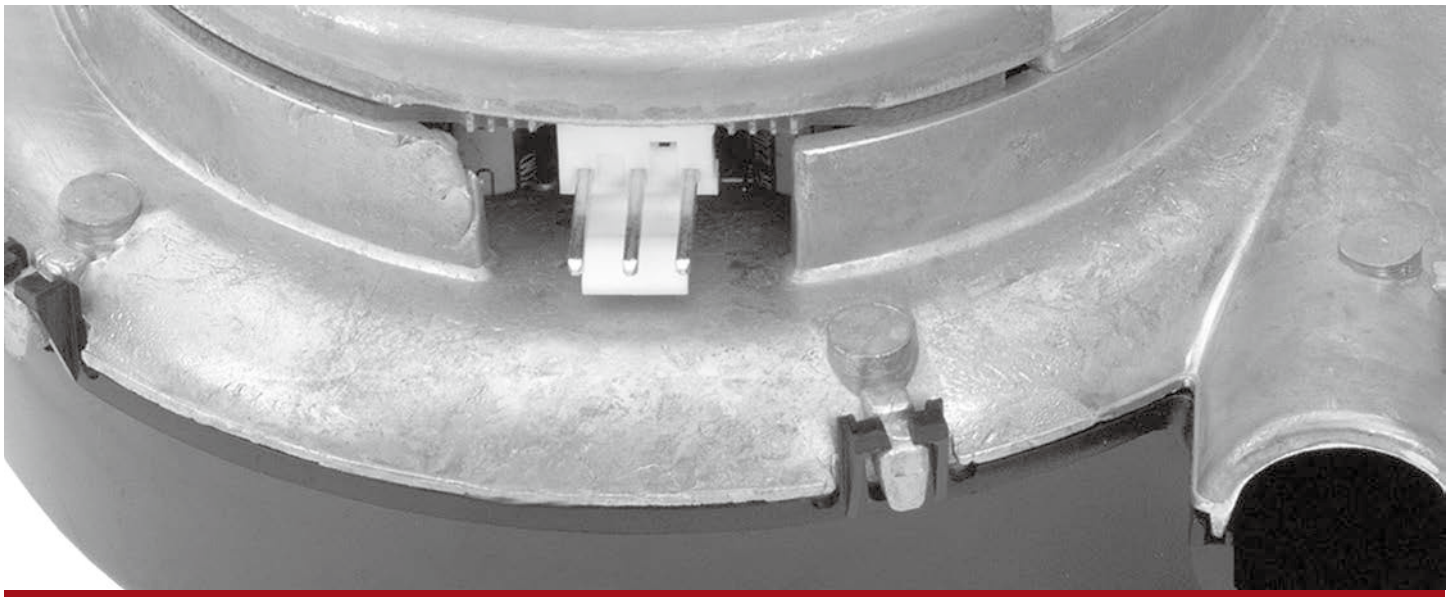
WE'RE BIG ON BRUSHLESS

WELCOME TO SOLUTION CITY®

Table of Contents

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL



Low Voltage Brushless DC Blowers

Low Voltage Brushless DC Blowers offer variable output for a wide range of vacuum or pressure applications. Standard blower designs offer brushless DC motor drives coupled to high efficiency fan systems in compact, cost effective packages. Standard models are available in a wide range of input voltages. AMETEK Brushless DC Blowers are not designed for, and should not be used in, life sustaining applications. AMETEK Brushless DC Blowers are not 100% sealed and therefore should not be used with flammable or hazardous gases.

Blower Selection

Blower Selection offers a wide variety of standard products available from AMETEK. Multiple blower families are available in standard configurations. These include low voltage and high voltage product lines. The low voltage products provide output pressure up to 97.7" H_2O and flows up to 160.3 CFM. The high voltage products provide outputs up to 169" H_2O/420 mbar (pressure) and flows up to 1100 CFM/1869 m^3/hr.

MICROjammer® BRUSHLESS DC BLOWERS

MINIjammer® BRUSHLESS DC BLOWERS

Windjammer® BRUSHLESS BLOWERS

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

AMETEK *Windjammer* Low Voltage Brushless DC blowers offer a wide range of performance for applications with power supplies of 72 VDC and less. The following pages detail each model family, including performance, size, and input voltage.

All brushless DC blowers require an electronic controller for operation. Most of the model families herein are offered with an onboard controller, and there are features and/or options available for customization.

Speed Control: Among the low voltage model families there are several methods for modulating blower speed.

Potentiometer Adjustment → the specified supply voltage is applied to power the blower and the speed is set by simply adjusting a potentiometer on the side of the blower.

Analog Speed Command Signal → blower speed is proportional to an analog command signal. Depending on the particular model, the range of the command signal is either 0-4V, 0-5V, or adjustable within 0-10V.

(i) For *5.0 inch Windjammer* models equipped with analog speed command, blowers operate on a 0-4V command signal. Maximum speed is reached at 4V or less depending on the blower's operating point. The speed command pin may by connected to the blower's 12V or 24V V_{in} pin to ensure full speed.

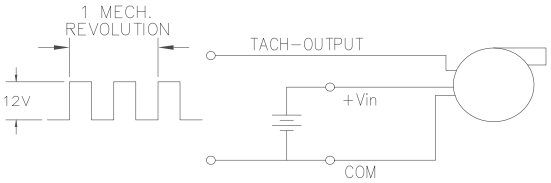
(ii) The *5.7 inch Windjammer* models have a calibration potentiometer that allows the user to set the range over which the speed command signal operates within a 0-10V range, or to precisely calibrate a group of blowers to the same speed for a given command voltage and operating condition.

(iii) Blowers designed for one of AMETEK's low voltage external controllers can be configured to modulate speed via either a 0-5V analog command signal or potentiometer adjustment as described above.

2-Wire Operation → The *3.0, 3.3, and 4.5 inch Windjammers* operate with a different type of controller than other model families. These blowers have a simple two-wire configuration. The blower speed is directly proportional to the supply voltage, and there is no separate speed command signal input. The supply voltage powers both the motor winding and the motor controller. Operating points below the minimum specified supply voltage can be achieved by providing a third wire to power the motor controller separately from the motor winding. This feature is available upon request. The specification pages for each of these blower models list the supply voltage range.

Note: None of the blowers herein are designed to maintain constant speed if the blower operating point changes. The speed will change with changing load (the amount of backpressure), even if the speed control remains fixed.

Tachometer Output: A square wave output that is proportional to blower speed comes as a standard feature in the 24VDC *5.7 inch Windjammer* models, and it's an option that is available in the *3.0, 3.3, and 4.5 inch Windjammers.* The output signal is a square wave whose signal is 2x the blowers rotational frequency:



External Controllers: All of the models herein can be configured to operate with a separate external controller, and AMETEK's product offering does include several stand-alone controller models. The *5.0 inch Windjammer* model family has standard blower models already configured for external control. The other models (*3.0, 3.3, 4.5, and 5.7 inch Windjammers*) can be custom ordered to operate with an external controller - please contact an Ametek sales representative to inquire. Note: the *5.1 inch Windjammer* must use an external controller - it is not available with internal controller at this time.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7 Bypass or Thru Flow: The *5.7 inch Windjammer* product family offers two flow path configurations: Bypass or Thru Flow. The Bypass configuration separates the motor and controller from the working air, whereas the working air passes over the motor and controller in a Thru Flow configuration. The Thru Flow configuration shortens the package size but has a narrower range of operation due to thermal limitations of the motor and controller.

Locked-Rotor and Thermal Protection:

5.7 inch Windjammers → All models include locked rotor and thermal protection

5.1 inch Windjammer → Locked rotor protection depends on the controller being used. If using Ametek 48140 controller, locked rotor protection is enabled. No thermal protection.

5.0 inch Windjammers → All models with on-board controllers include locked rotor protection. If using an external controller, locked rotor protection depends on the controller design. Thermal protection is not available for this model family.

3.0, 3.3, and 4.5 inch Windjammers → These models have neither locked rotor nor thermal protection. Users are advised to include a fuse for circuit protection. See performance sheets for individual blower models for fuse sizing.

Other Features and Miscellaneous Notes:

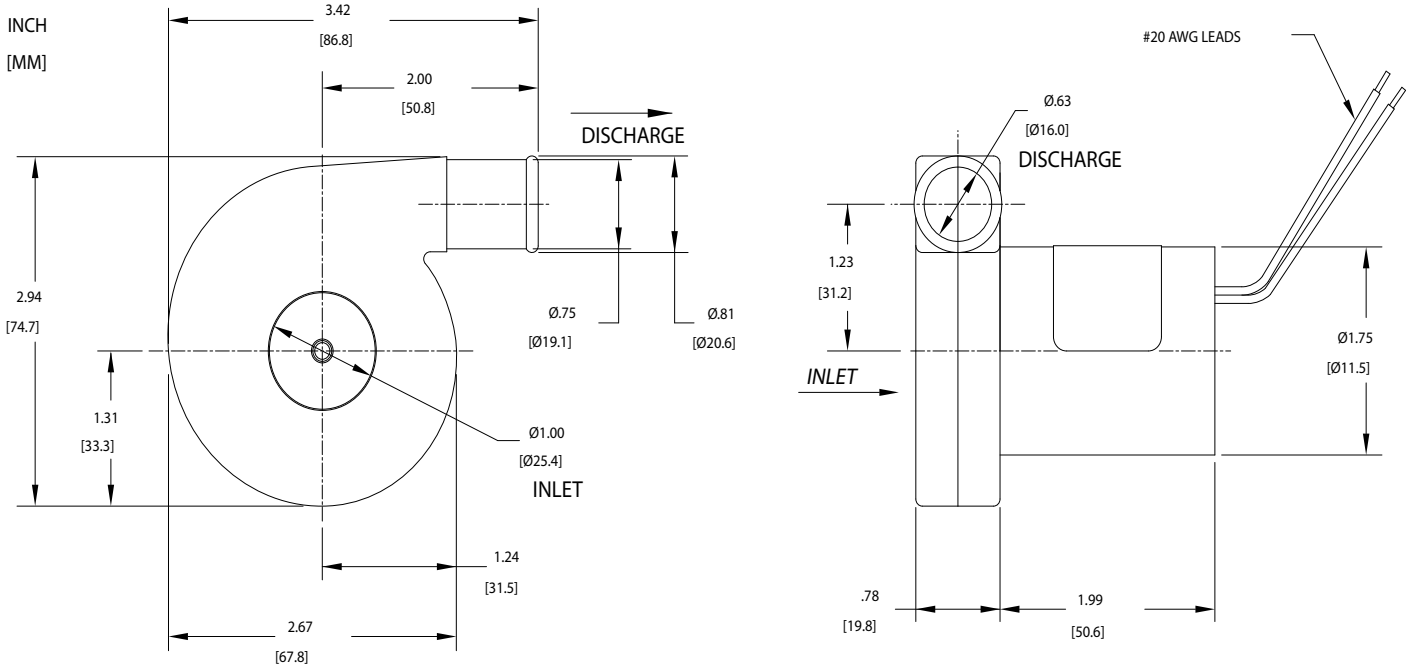
- *5.0 inch Windjammers* are available with inlet tube for connecting a hose to the blower inlet. See *5.0 inch Windjammer* pages herein for details.
- *5.0 inch Windjammers* can be equipped with an external balancing disk for applications with tight noise and vibration constraints. Contact AMETEK Sales for inquiries regarding this feature.
- *3.0, 3.3, and 4.5 inch Windjammers* can be configured to have separate V_{in} for the controller and the motor, as mentioned above. This allows very low input voltage on the motor (low speed) without shutting down the drive electronics. The controller V_{in} can be configured to accept a specific supply voltage depending on an application's needs.
- *5.7 Windjammers* designed for 48V and 72V input do not have an option for tachometer output at this time. 24V models have a tachometer output as a standard feature. Also, the analog speed command for 24V *5.7 Windjammer* shares a common with the 24V supply voltage. For the 48V and 72V 5.7 Windjammers, the analog speed command input is isolated from the power supply input. See pages herein for specifics about each model.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

3.0" (76mm) BLDC Low-Voltage Blower

12/24 VDC

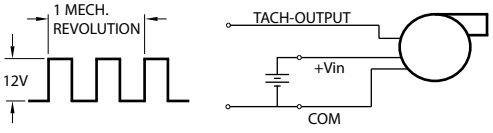


		Part/ Model Number	
Specification	Units	119349	119350
Voltage	VDC	6-14	16-28
Stages	-	1	1
Max Sealed Pressure	in. H2O	13.4	14.0
	mbar	33.4	34.9
Max Open Flow Rate	CFM	19.8	20.6
	m3/hr	33.7	35

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- Please observe proper polarity for power connections. Improper connections will damage the blower's electronics.
- **Optional** - Motor configuration available with connection to external controller.
- **Optional** - 2-Wire Operation: The 3.0, 3.3, 4.5 inch Windjammers operate with a simple two-wire configuration. The blower speed is directly proportional to the supply voltage, and there is no separate speed command signal input or speed setting via potentiometer. The supply voltage powers both the motor winding and the motor controller. Operating points below the minimum supply voltage stated in the chart above can be achieved by providing a third wire to power the motor controller separately from the motor winding. This feature is available upon request.
- **Weight** = 9 oz. / .3 Kg

Optional Tachometer Output: A square wave output whose signal is 2x the blower rotational frequency



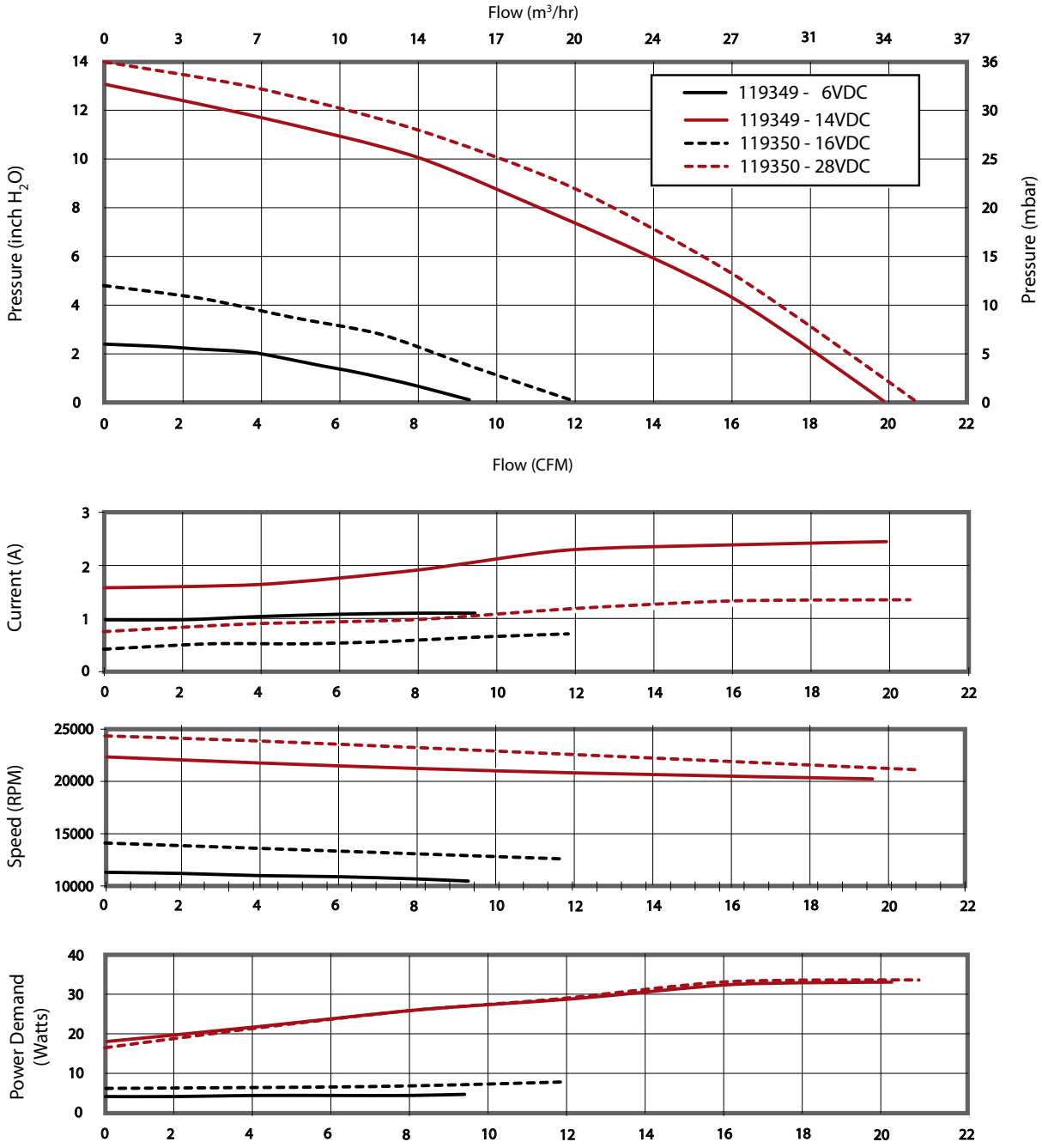
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

3.0" (76mm) BLDC Low-Voltage Blower

12/24 VDC

Typical Performance



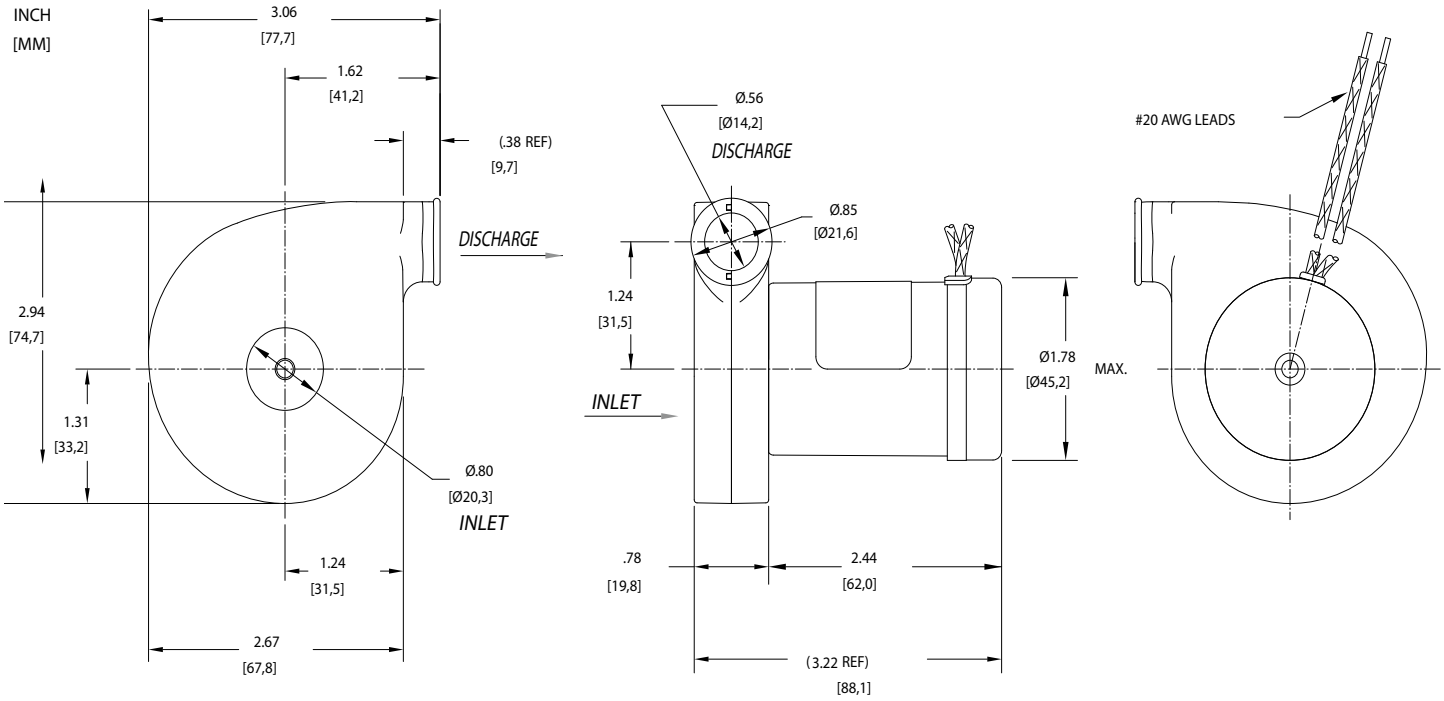
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

3.0 (76mm) BLDC Low-Voltage Blower

12/24 VDC Input, High Output

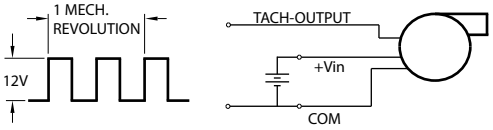


		Part/ Model Number	
Specification	Units	150908	150918
Voltage	VDC	16-28	5-14
Stages	-	1	1
Max Sealed Pressure	in. H2O	24.9	24.9
	mbar	62	62
Max Open Flow Rate	CFM	24.6	24.6
	m3/hr	41.8	41.8

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- Please observe proper polarity for power connections. Improper connections will damage the blower's electronics.
- **Optional** - Motor configuration available with connection to external controller.
- **Optional** - 2-Wire Operation: The 3.0, 3.3, 4.5 inch Windjammers operate with a simple two-wire configuration. The blower speed is directly proportional to the supply voltage, and there is no separate speed command signal input or speed setting via potentiometer. The supply voltage powers both the motor winding and the motor controller. Operating points below the minimum supply voltage stated in the chart above can be achieved by providing a third wire to power the motor controller separately from the motor winding. This feature is available upon request.
- **Weight** = 9 oz / .3 Kg

Optional Tachometer Output: A square wave output whose signal is 2x the blower rotational frequency.



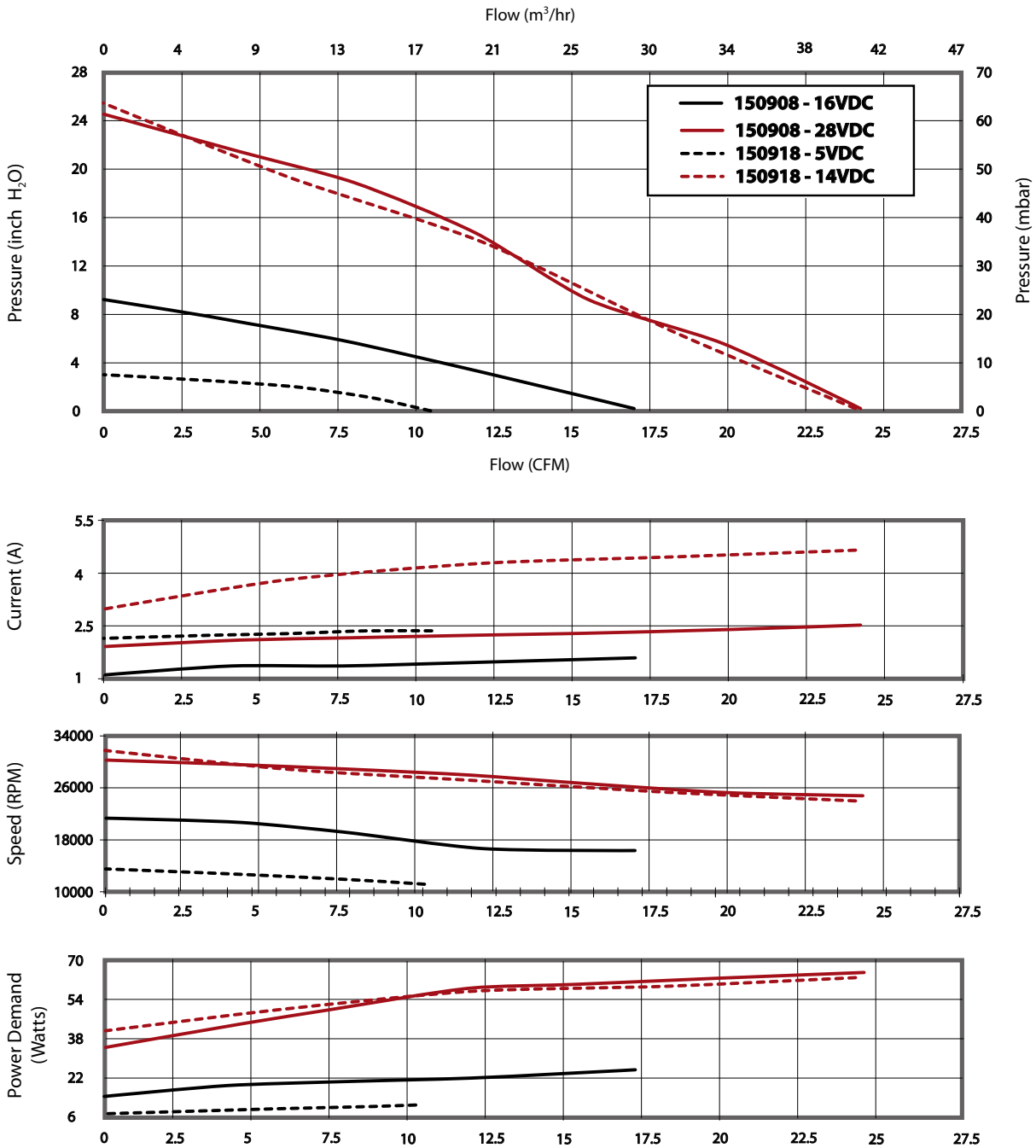
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

3.0 (76mm) BLDC Low-Voltage Blower

12/24 VDC Input, High Output

Typical Performance



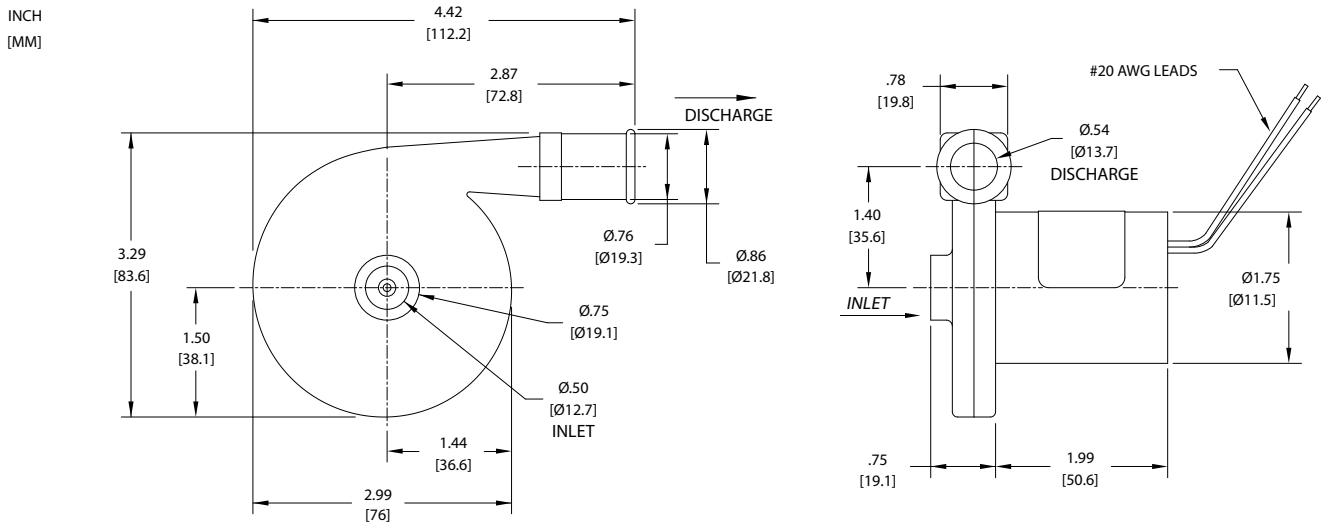
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

3.3" (84mm) BLDC Low-Voltage Blower

12/24 VDC

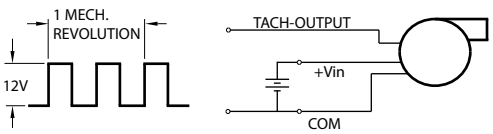


		Part/ Model Number	
Specification	Units	119497	119498
Voltage	VDC	6-13	16-26
Stages	-	1	1
Max Sealed Pressure	in. H2O	26.0	26.0
	mbar	64.8	64.8
Max Open Flow Rate	CFM	6.6	7.1
	m3/hr	11.2	12.1

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- Please observe proper polarity for power connections. Improper connections will damage the blower's electronics.
- **Optional** - Motor configuration available with connection to external controller.
- **Optional** - 2-Wire Operation: The 3.0, 3.3, 4.5 inch Windjammers operate with a simple two-wire configuration. The blower speed is directly proportional to the supply voltage, and there is no separate speed command signal input or speed setting via potentiometer. The supply voltage powers both the motor winding and the motor controller. Operating points below the minimum supply voltage stated in the chart above can be achieved by providing a third wire to power the motor controller separately from the motor winding. This feature is available upon request.
- **Weight** = 9 oz / .3 Kg

Optional Tachometer Output: A square wave output whose signal is 2x the blower rotational frequency.



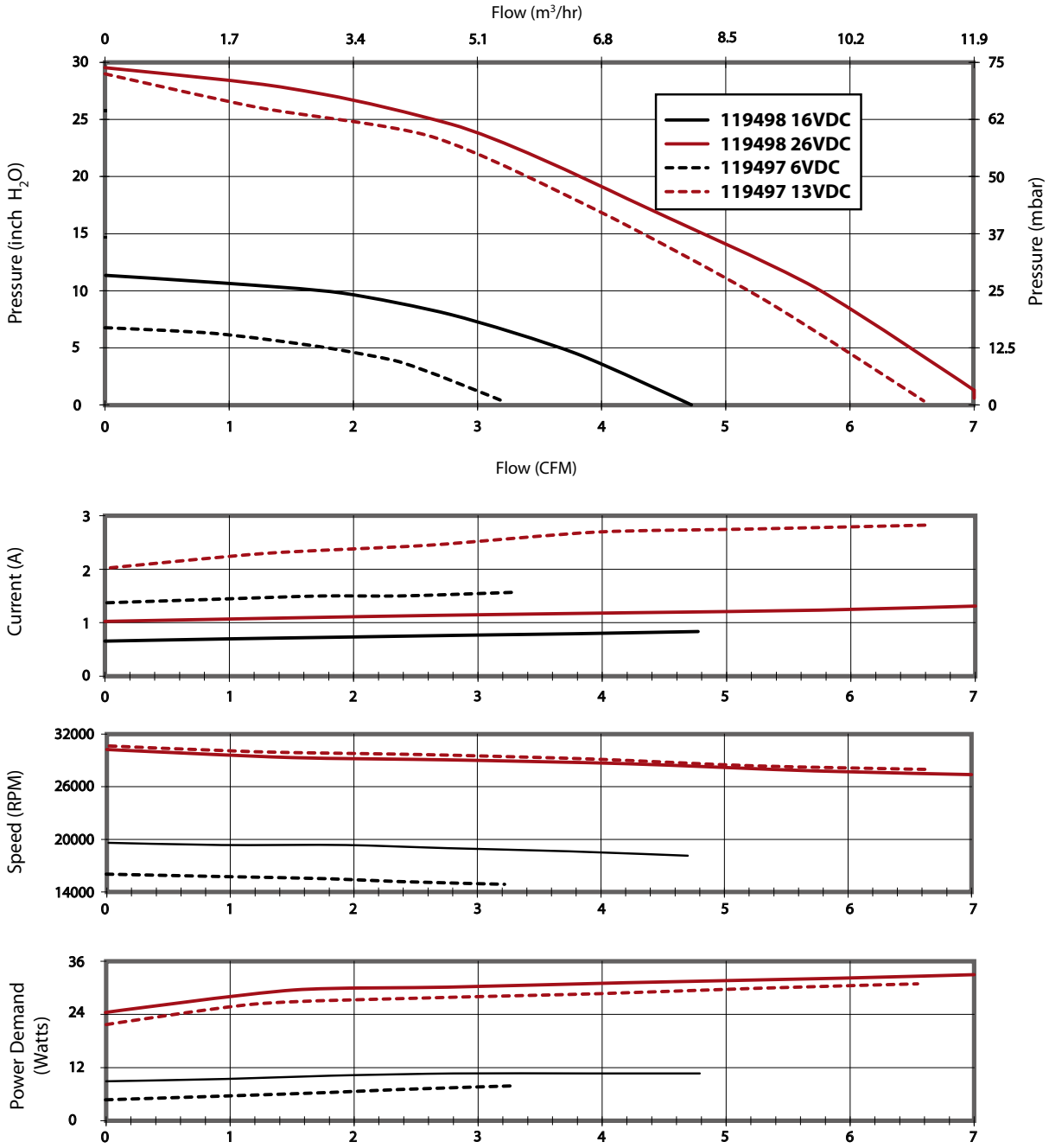
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

3.3" (84mm) BLDC Low-Voltage Blower

12/24 VDC

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

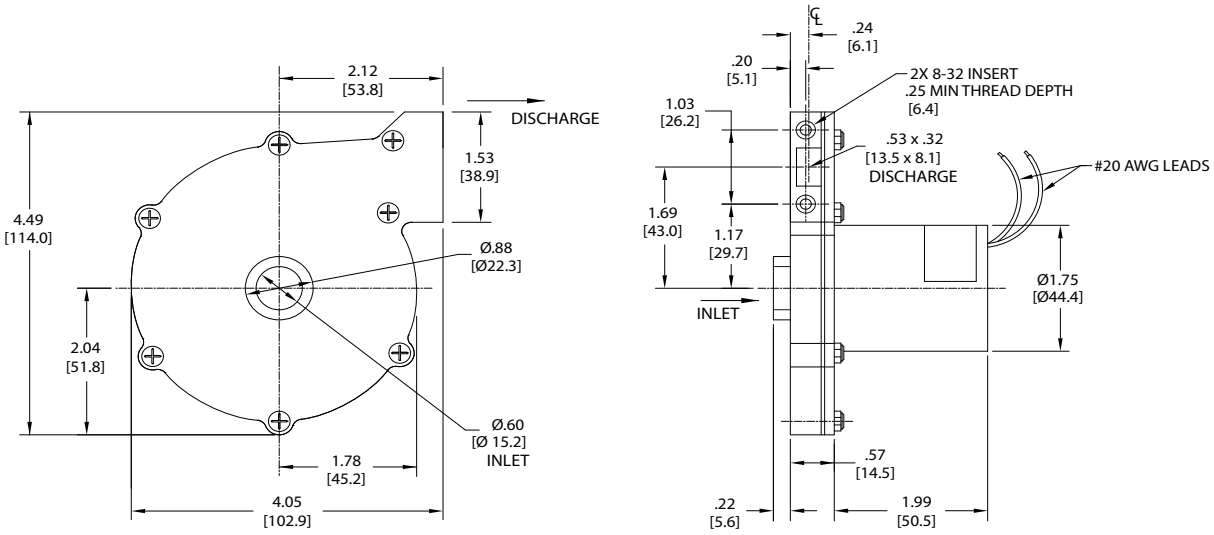
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

4.5" (114mm) BLDC Low-Voltage Blower

12/24 VDC

INCH
[MM]

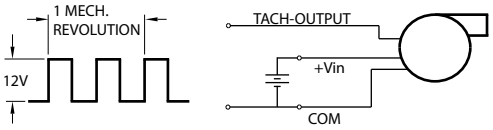


		Part/ Model Number	
Specification	Units	119494	119395
Voltage	VDC	6-14	16-28
Stages	-	1	1
Max Sealed Pressure	in. H2O	37.1	37.8
	mbar	92.4	94.2
Max Open Flow Rate	CFM	10.9	10.6
	m3/hr	18.5	18

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- Please observe proper polarity for power connections. Improper connections will damage the blower's electronics.
- **Optional** - Motor configuration available with connection to external controller.
- **Optional** - 2-Wire Operation: The 3.0, 3.3, 4.5 inch Windjammers operate with a simple two-wire configuration. The blower speed is directly proportional to the supply voltage, and there is no separate speed command signal input or speed setting via potentiometer. The supply voltage powers both the motor winding and the motor controller. Operating points below the minimum supply voltage stated in the chart above can be achieved by providing a third wire to power the motor controller separately from the motor winding. This feature is available upon request.
- **Weigh**t = 13 oz / .4 Kg

Optional Tachometer Output: A square wave output whose signal is 2x the blower rotational frequency.



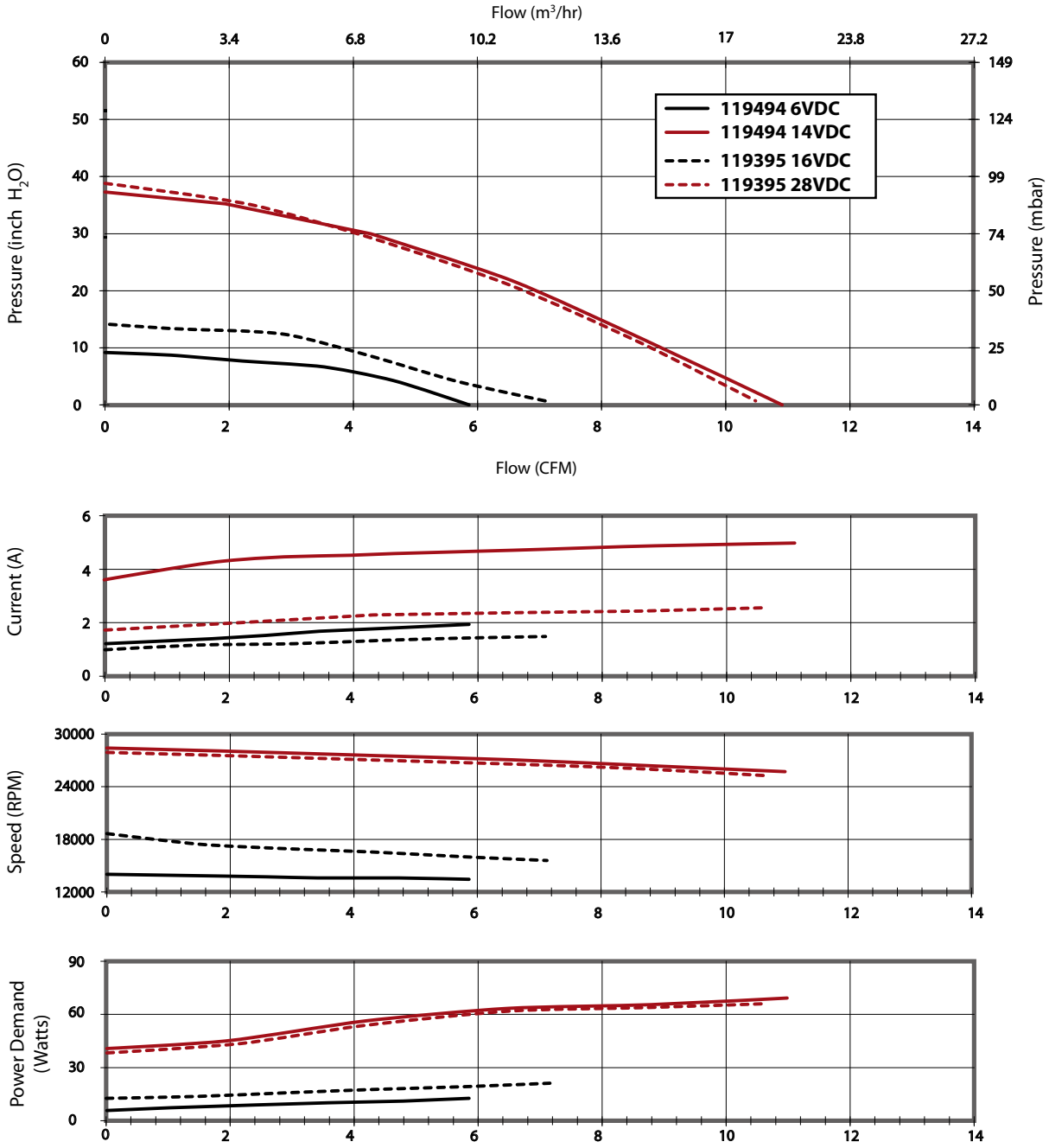
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

4.5" (114mm) BLDC Low-Voltage Blower

12/24 VDC

Typical Performance



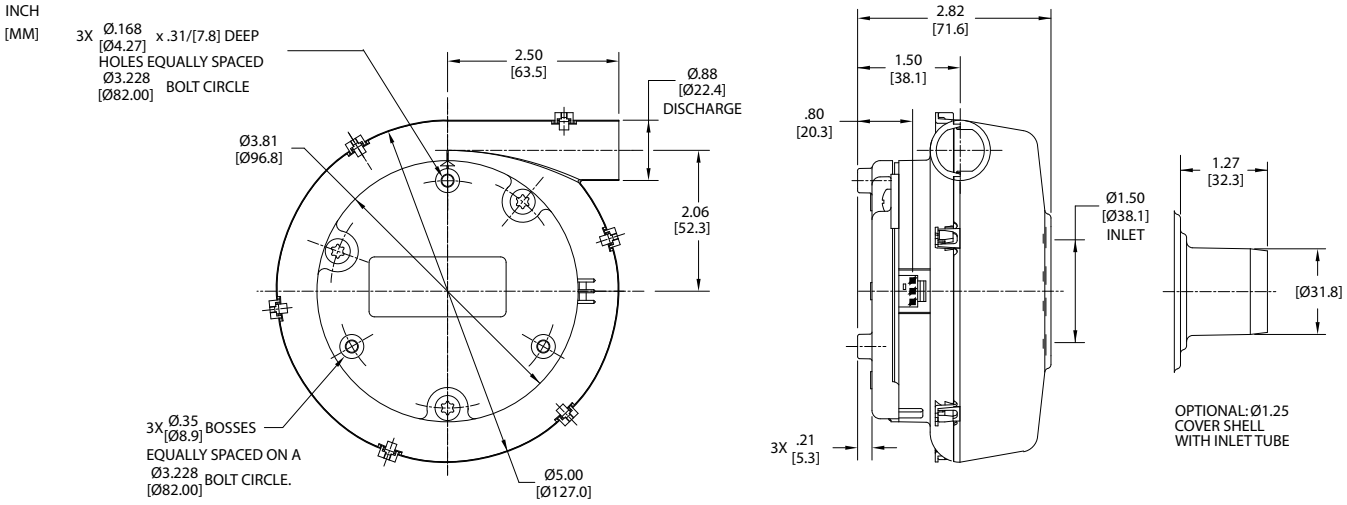
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.0" (127mm) BLDC Low-Voltage Blower

12/24 VDC, Standard Flow System



		Part/ Model Number					
Specification	Units	119380	119381	119382	119383	119384	119385
Voltage	VDC	12	12	12	24	24	24
Stages	-	1	1	1	1	1	1
Max. Sealed Pressure	in. H2O	13.5	13.5	13.5	12.5	12.5	12.5
	mbar	33.6	33.6	33.6	31.1	31.1	31.1
Max Open Flow Rate	CFM	32.3	32.3	32.3	35.3	35.3	35.3
	m3/hr	54.9	54.9	54.9	60	60	60
Speed Control	-	External	Potent. Adjust.	0-4V Spd. Cmd.	External	Potent. Adjust.	0-4V Spd. Cmd.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- Models 119380 thru 119385 can be configured and modified for two (2) plane balance option.
- **Optional** - cover shell with air inlet tube.
- **Weight** = 1.2 lb / .54 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied to power the blower and the speed is set by adjusting a potentiometer on the side of the blower.

0-4V Speed Command (0-4V Spd. Cmd.)- Blower speed is proportional to a 0-4V command signal. Maximum speed is reached at 4V or less depending on the blower's operating point. The speed command pin may be connected to the blower's 12V or 24V pin to ensure full speed.

External Control - Designed to operate with an external controller such as AMETEK's model 48133.

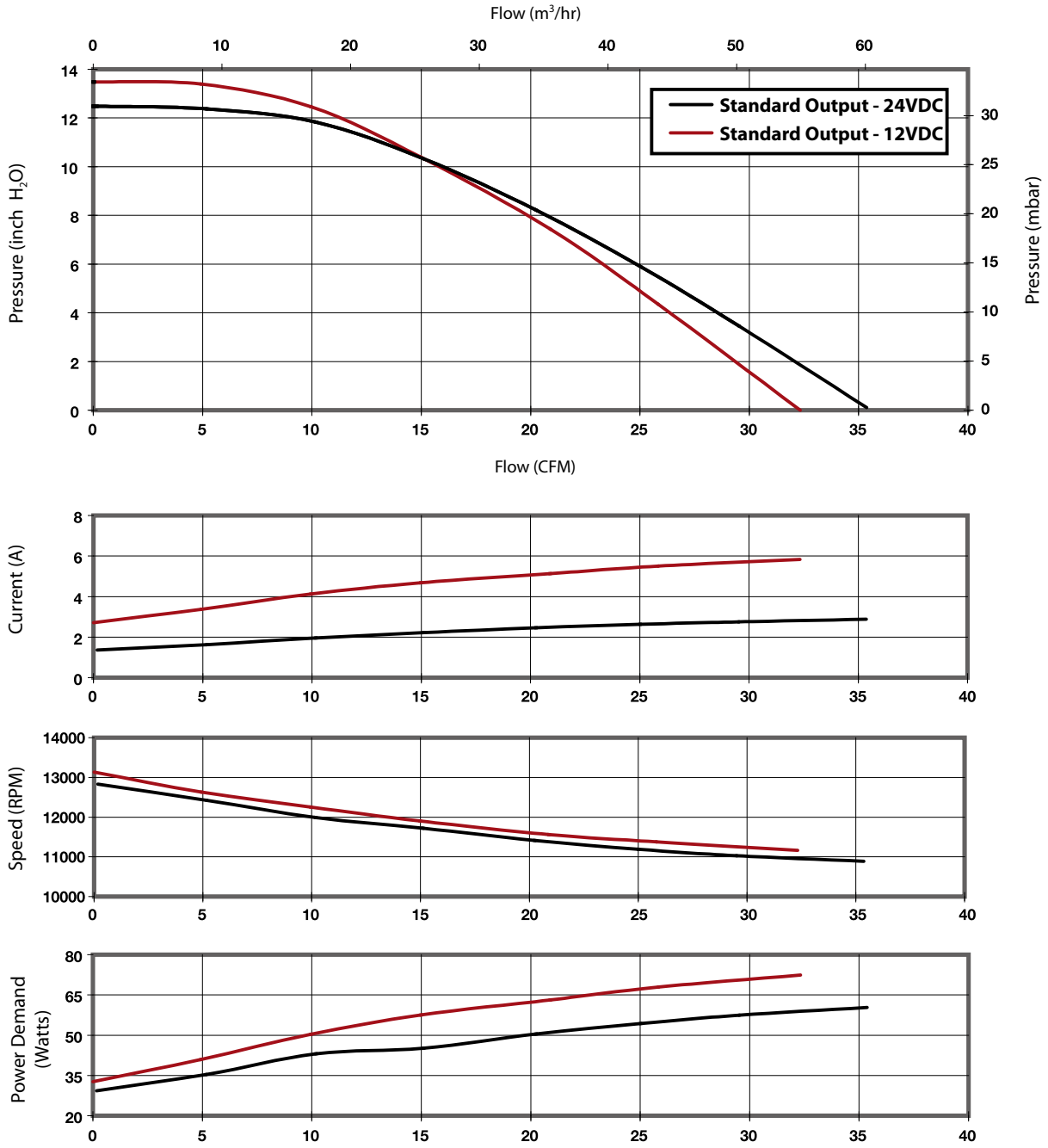
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

5.0" (127mm) BLDC Low-Voltage Blower

12/24 VDC, Standard Flow System

Typical Performance



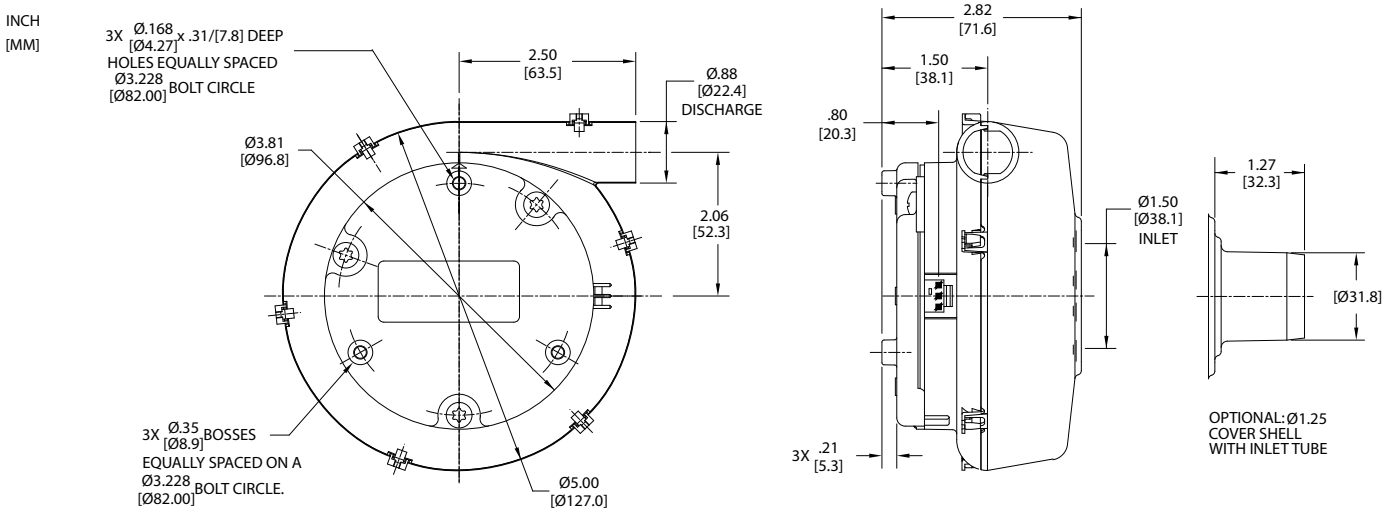
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92″ Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.0" (127mm) BLDC Low-Voltage Blower

12/24 VDC, High Flow System



		Part/ Model Number			
Specification	Units	150166	119375	119378	119379
Voltage	VDC	12	24	24	24
Stages	-	1	1	1	1
Max. Sealed Pressure	in. H2O	20.1	24.9	24.9	24.9
	mbar	50.1	62	62	62
Max Open Flow Rate	CFM	37.7	44.6	44.6	44.6
	m3/hr	64.1	75.8	75.8	75.8
Speed Control	-	0-4V Spd. Cmd.	External	Potent. Adjust.	0-4V Spd. Cmd.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- Models 119380 through 119385 can be configured and modified for two (2) plane balance option.
- **Optional** - cover shell with air inlet tube.
- **Weight** = 1.2 lb / .54 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied to power the blower and the speed is set by adjusting a potentiometer on the side of the blower.

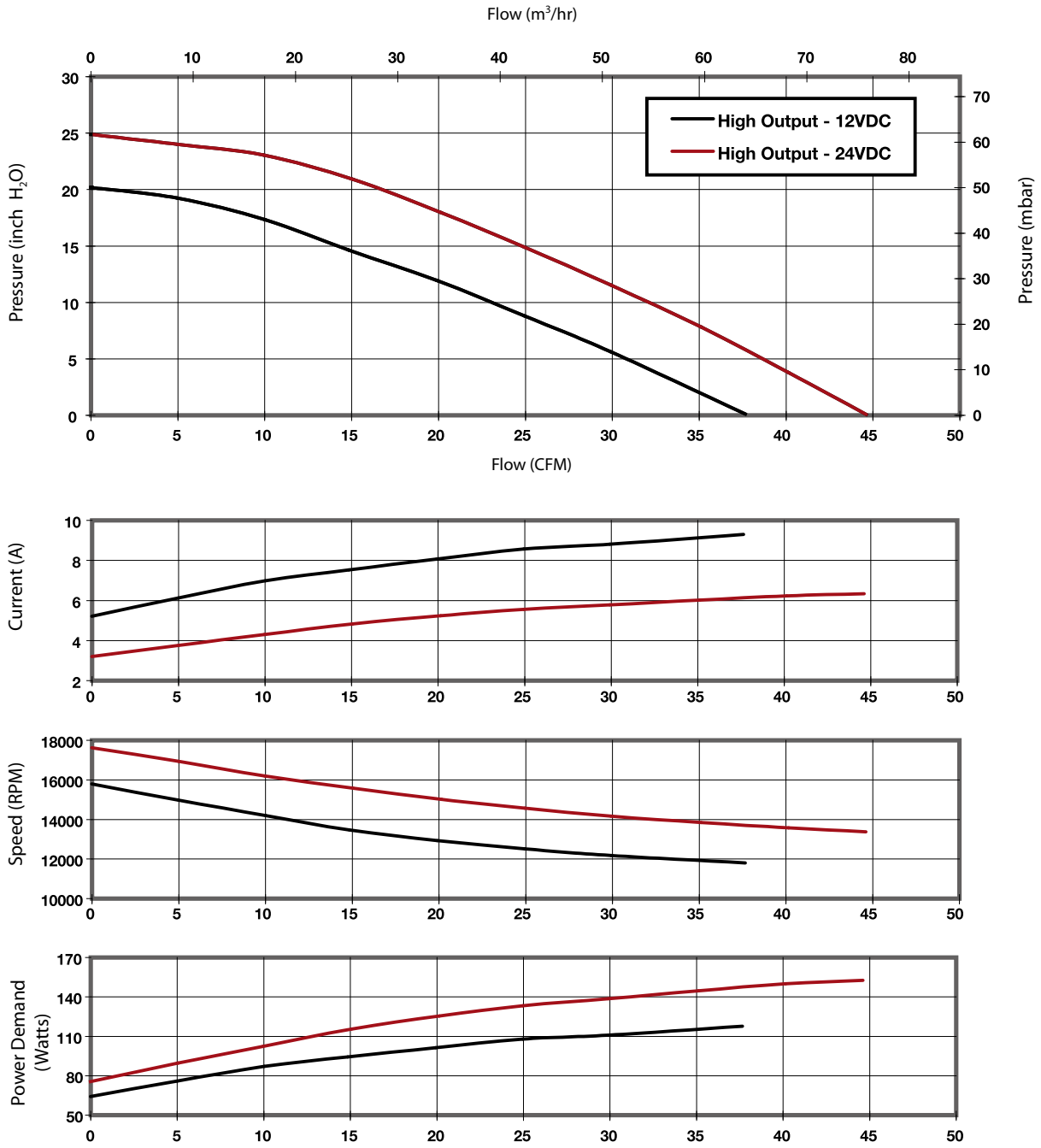
0-4V Speed Command (0-4V Spd. Cmd.)- Blower speed is proportional to a 0-4V command signal. Maximum speed is reached at 4V or less depending on the blower's operating point. The speed command pin may be connected to the blower's 12V or 24V pin to ensure full speed.

External Control - Designed to operate with an external controller such as AMETEK's model 48133.

5.0" (127mm) BLDC Low-Voltage Blower

12/24 VDC, High Flow System

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

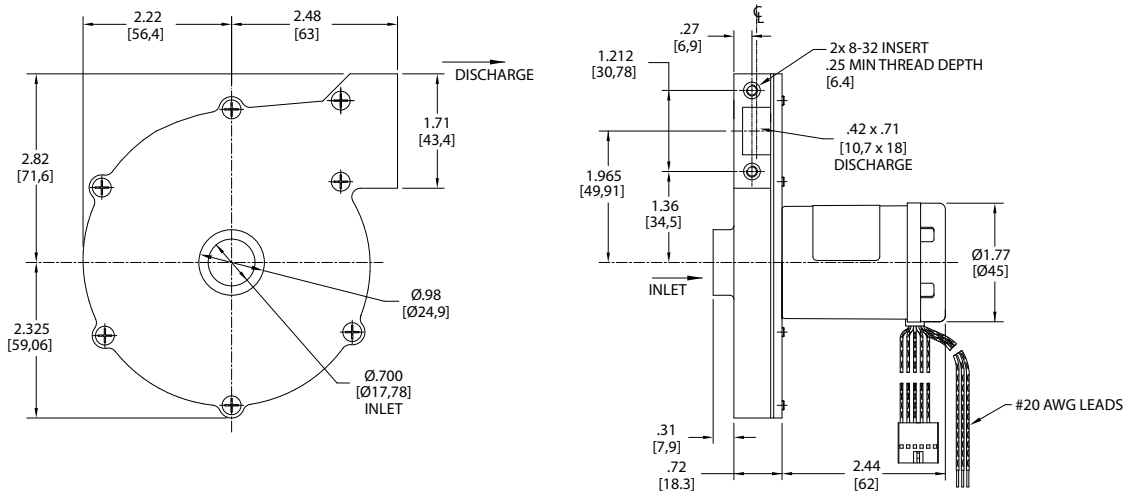
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.1" (130mm) BLDC Low-Voltage Blower

MICROjammer BRUSHLESS DC BLOWERS

24 VDC

INCH
[MM]



		Part/ Model Number
Specification	Units	150193
Voltage	VDC	24
Stages	-	1
Max Sealed Pressure	in. H2O	50.9
	mbar	126.8
Max Open Flow Rate	CFM	26.3
	m3/hr	44.7

Notes:

• This blower is designed to operate with an external 3-phase controller such as AMETEK's model 48140. Speed control method is a function of the controller that drives the blower. If using AMETEK's 48140, the controller can be set to control speed by potentiometer adjustment or by 0-5V analog speed command. Customized controller functions are available - contact AMETEK sales to inquire.

• **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.

• Customized performance available upon request. Please contact AMETEK Technical & Industrial Products' Marketing and Sales Department.

• When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.

• Product includes a two (2) plane balancing option for reduced vibration.

• **Weight** = 16 oz / .5 kg

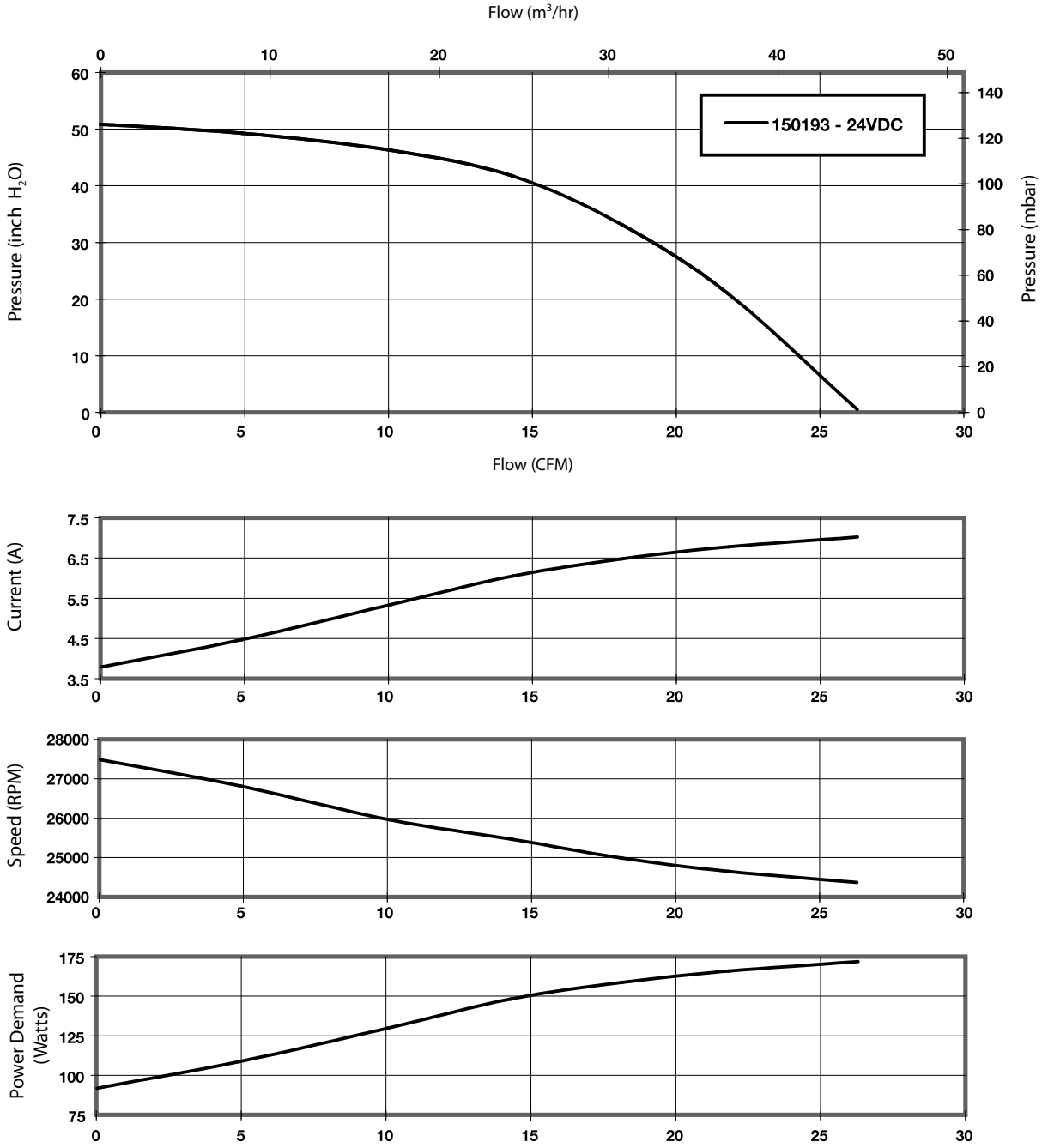
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

5.1" (130mm) BLDC Low-Voltage Blower

24 VDC

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

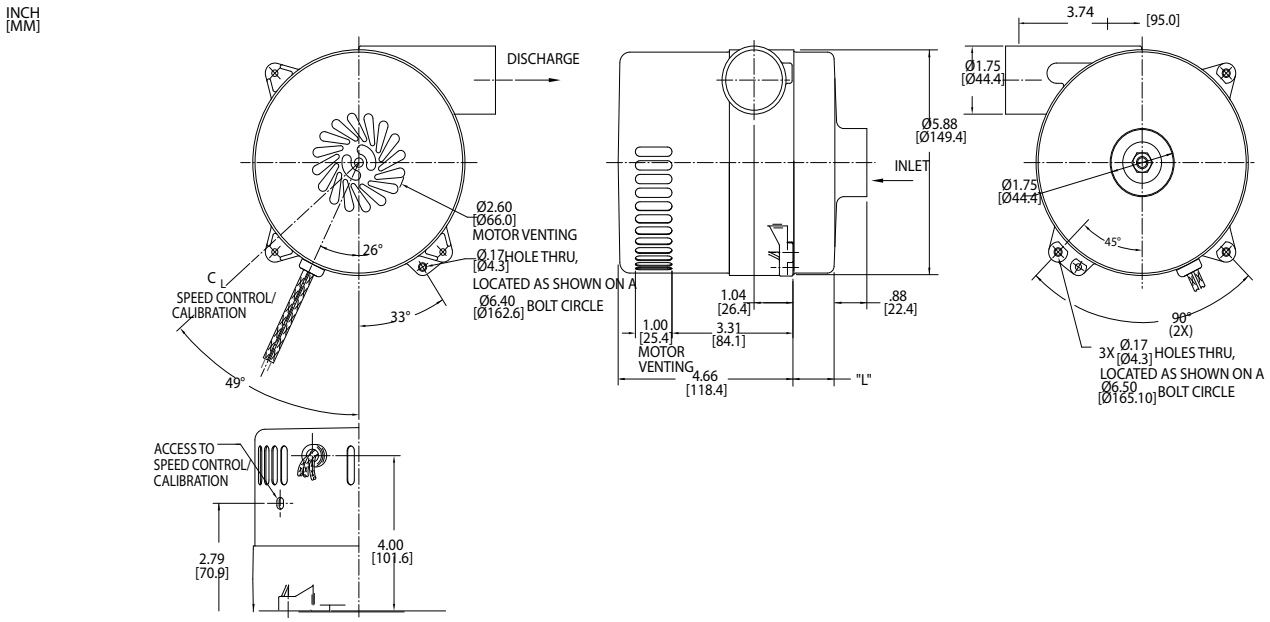
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

24 VDC Input, High Flow System



		Part/ Model Number					
Specification	Units	150400	150431	150401	150432	150402	150433
Stages	-	1	1	2	2	3	3
Input Voltage	VDC	24	24	24	24	24	24
Max Sealed Pressure	in. H2O	30	30	56	56	83.4	83.4
	mbar	74.7	74.7	139.5	139.5	207.7	207.7
Max Airflow	CFM	73	73	65	65	66	66
	m3/hr	124.1	124.1	110.5	110.5	112.2	112.2
Length (L)	Inches	0.50	0.50	1.15	1.15	1.84	1.84
	mm	12.7	12.7	29.2	29.2	46.7	46.7
Speed Control	-	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Adjust.	Potent. Adjust.

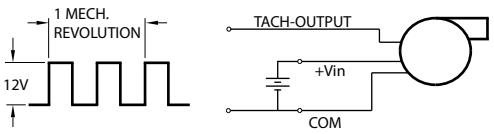
Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

Tachometer Output - All of the models listed above come equipped with a tachometer output: a square wave output that is proportional to blower speed. The frequency of the tachometer output signal is 2x the blower's rotational frequency.



AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

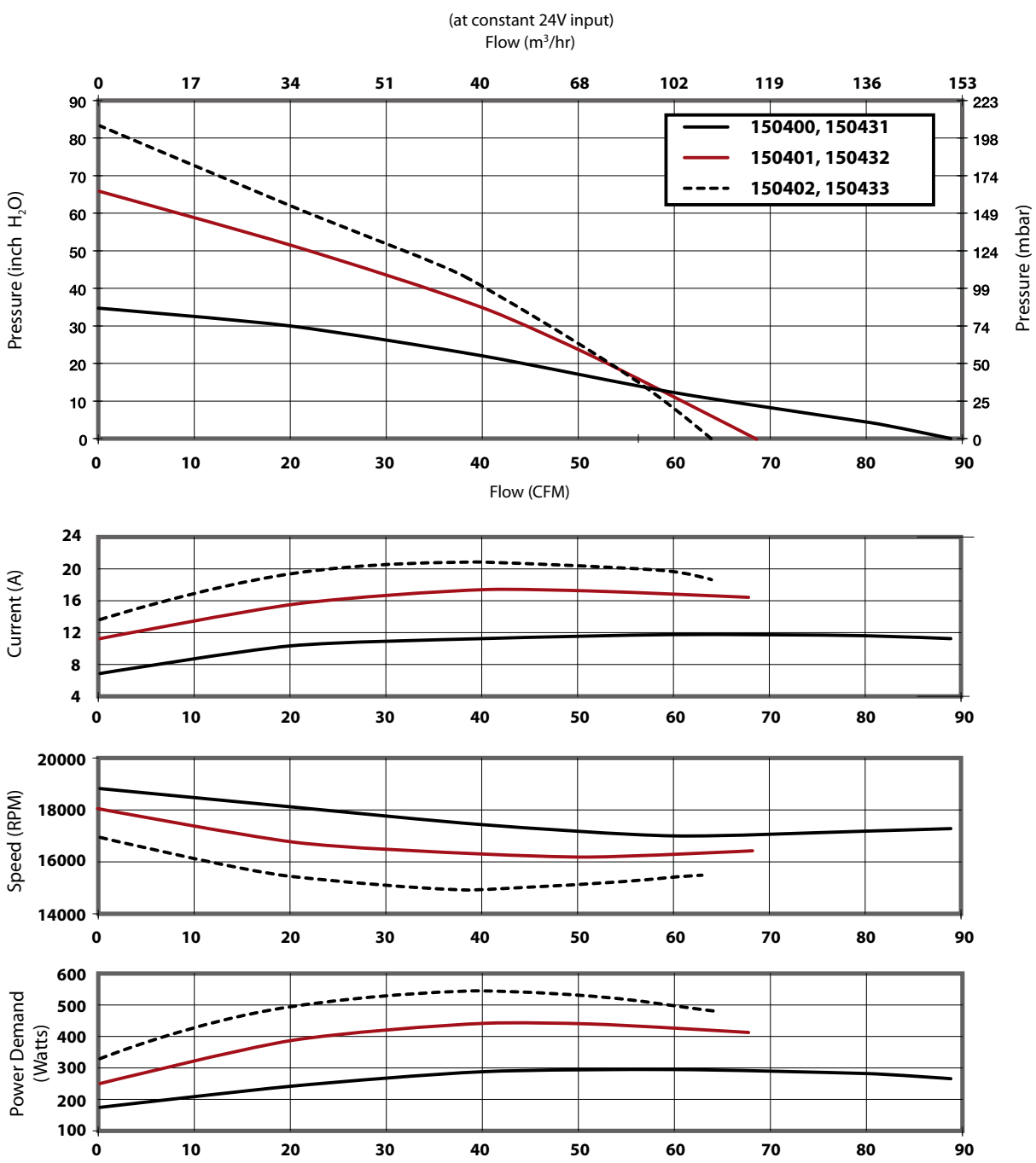
5.7" (145mm) BLDC Bypass Blower

24 VDC Input, High Flow System

Windjammer® BRUSHLESS BLOWERS

Typical Performance

(at constant 24V input)



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

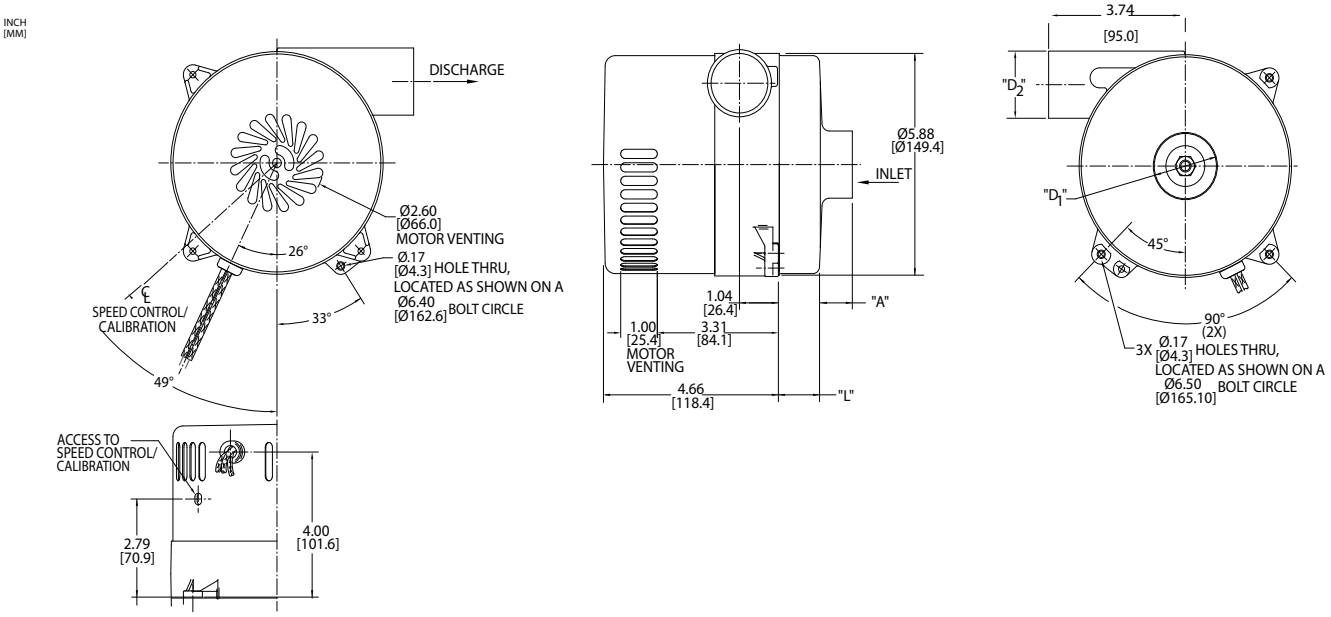
AMETEK® PRECISION MOTION CONTROL

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

24 VDC Input, High Flow System



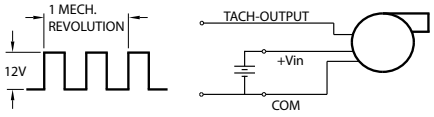
		Part/ Model Number					
Specification	Units	150403	150434	150404	150435	150405	150436
Flow	-	High Flow	High Flow	High Flow	High Flow	Ultra High Flow	Ultra High Flow
Stages	-	1	1	2	2	1	1
Input Voltage	VDC	24	24	24	24	24	24
Max Sealed Pressure	in. H2O	34	34	57	57	22	22
	mbar	84.7	84.7	142	142	54.8	54.8
Max Open Flow Rate	CFM	126	126	101	101	190	190
	m3/hr	214.2	214.2	171.7	171.7	323	323
Inlet Diameter D1	Inches	1.75	1.75	1.75	1.75	2.75	2.75
	mm	44.5	44.5	44.5	44.5	69.9	69.9
Discharge Diameter D2	Inches	1.75	1.75	1.75	1.75	2.5	2.5
	mm	44.5	44.5	44.5	44.5	63.5	63.5
Length (L)	Inches	0.50	0.50	1.50	1.50	0.75	0.75
	mm	12.7	12.7	38.1	38.1	19.1	19.1
Speed Control	-	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.

Notes:
- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

Tachometer Output - All of the models listed above come equipped with a tachometer output: a square wave output that is proportional to blower speed. The frequency of the tachometer output signal is 2x the blower's rotational frequency.

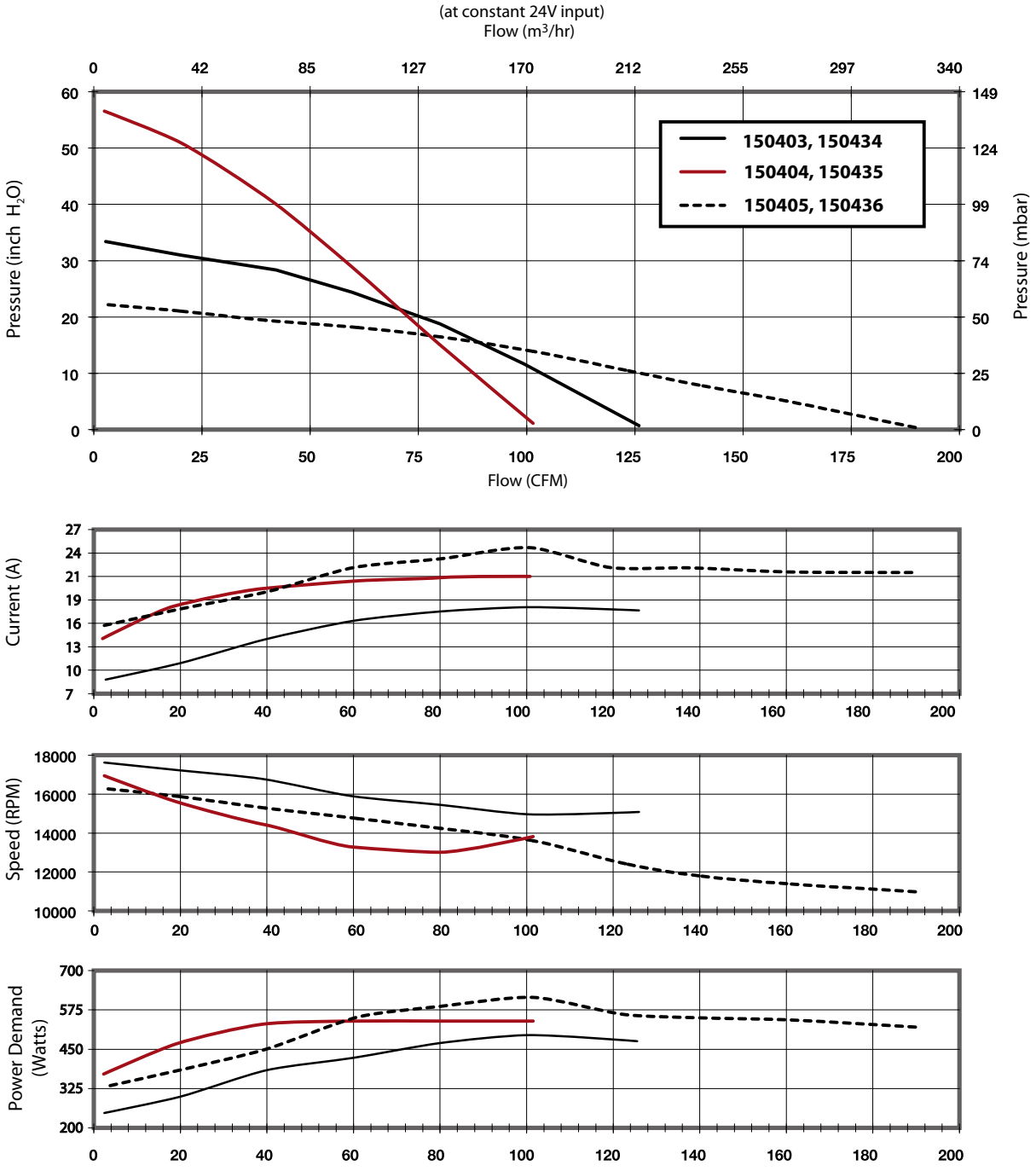


5.7" (145mm) BLDC Bypass Blower

24 VDC Input, High Flow System

Windjammer® BRUSHLESS BLOWERS

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

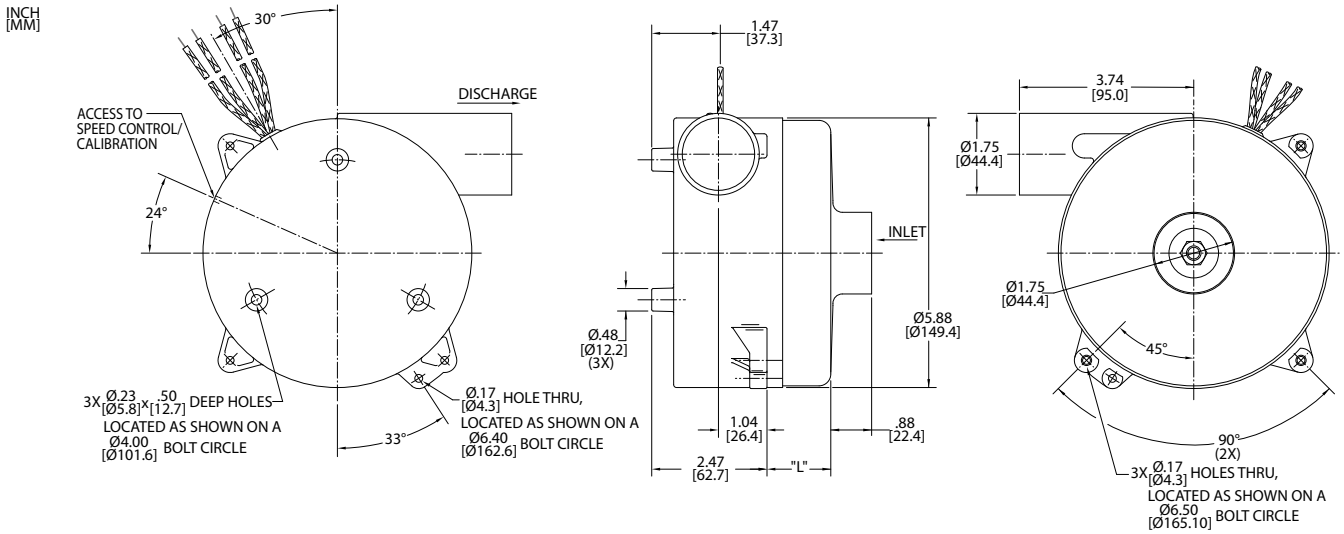
AMETEK® PRECISION MOTION CONTROL

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

Windjammer® BRUSHLESS BLOWERS

24 VDC Input, Standard Flow System



		Part/ Model Number			
Specification	Units	150406	150437	150407	150438
Stages	-	1	1	2	2
Input Voltage	VDC	24	24	24	24
Max Sealed Pressure	in. H2O	37	37	62	62
	mbar	92.2	92.2	154.4	154.4
Max Open Flow Rate	CFM	79	79	72	72
	m3/hr	134.3	134.3	122.4	122.4
Length (L)	Inches	.81	.81	1.50	1.50
	mm	20.6	20.6	38.1	38.1
Speed Control	-	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.

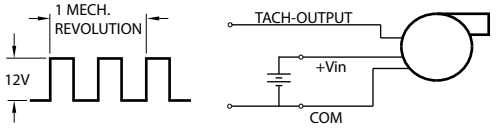
Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

Tachometer Output - All of the models listed above come equipped with a tachometer output: a square wave output that is proportional to blower speed. The frequency of the tachometer output signal is 2x the blower's rotational frequency.

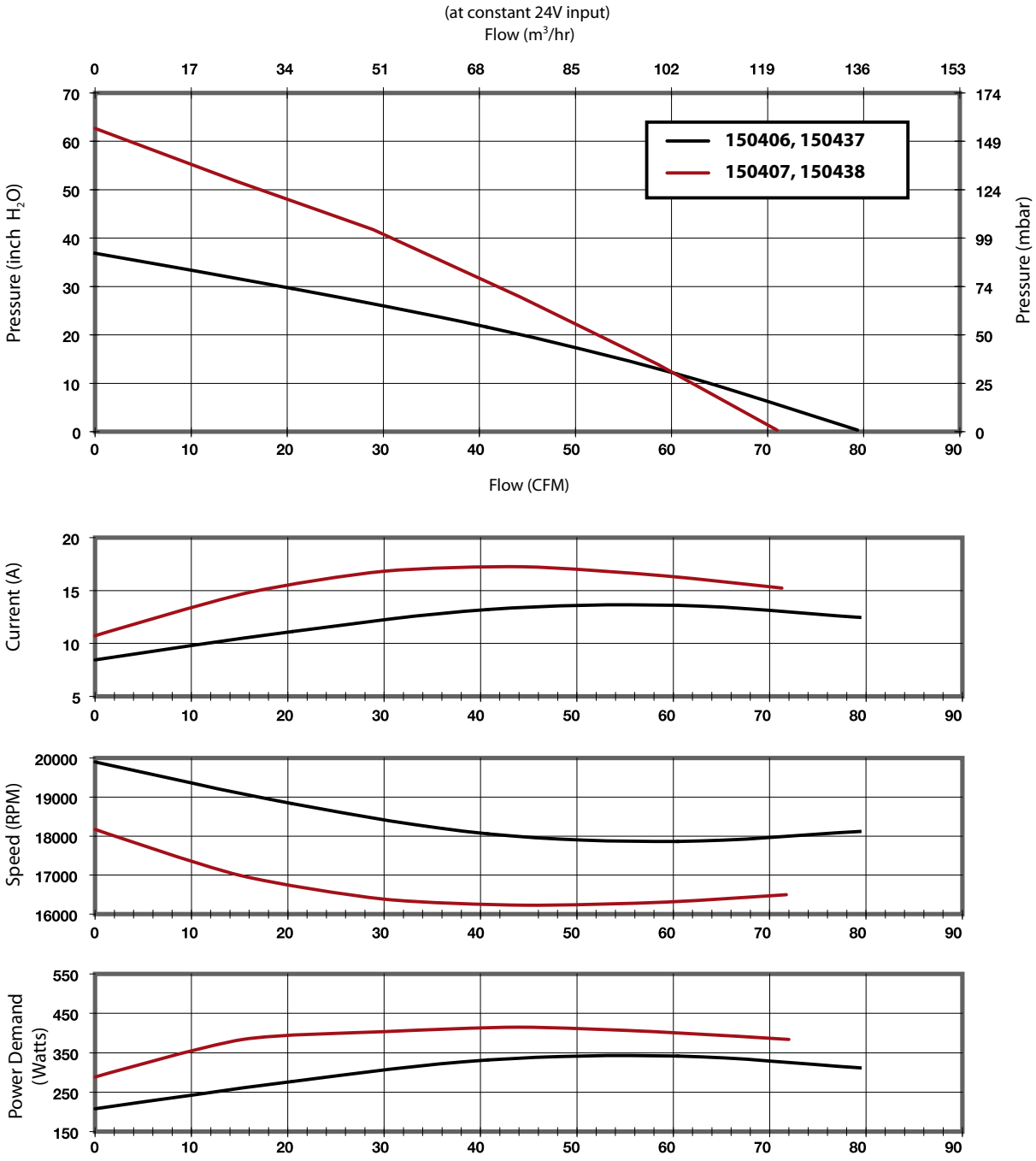


5.7" (145mm) BLDC Thru Flow Blower

24 VDC Input, Standard Flow System

Windjammer® BRUSHLESS BLOWERS

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

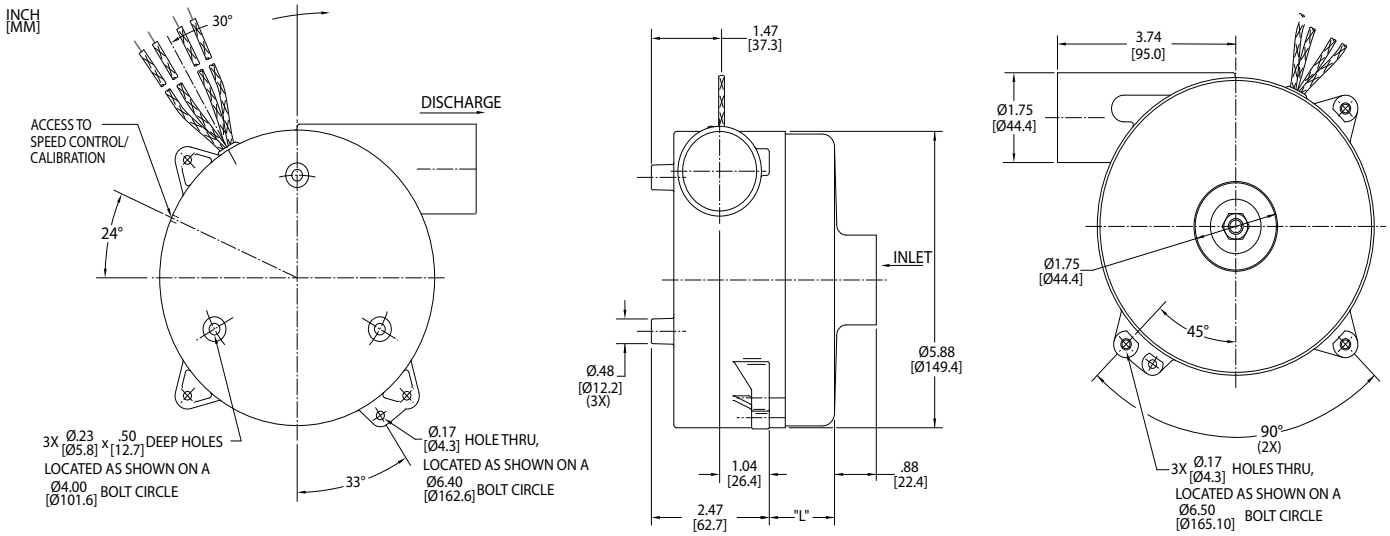
AMETEK® PRECISION MOTION CONTROL

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

Windjammer® BRUSHLESS BLOWERS

24 VDC Input, High Flow System



		Part/ Model Number			
Specification	Units	150409	150439	150410	150440
Stages	-	1	1	2	2
Input Voltage	VDC	24	24	24	24
Max Sealed Pressure	in. H2O	33	33	55	55
	mbar	82.2	82.2	137	137
Max Open Flow Rate	CFM	123	123	95	95
	m3/hr	209.1	209.1	161.5	161.5
Length (L)	Inches	0.81	0.81	1.81	1.81
	mm	20.6	20.6	46	46
Speed Control	-	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.

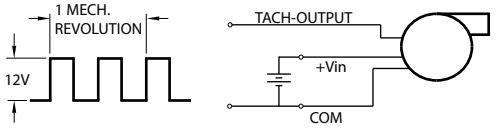
Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

Tachometer Output - All of the models listed above come equipped with a tachometer output: a square wave output that is proportional to blower speed. The frequency of the tachometer output sigal is 2x the blower's rotational frequency.



AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

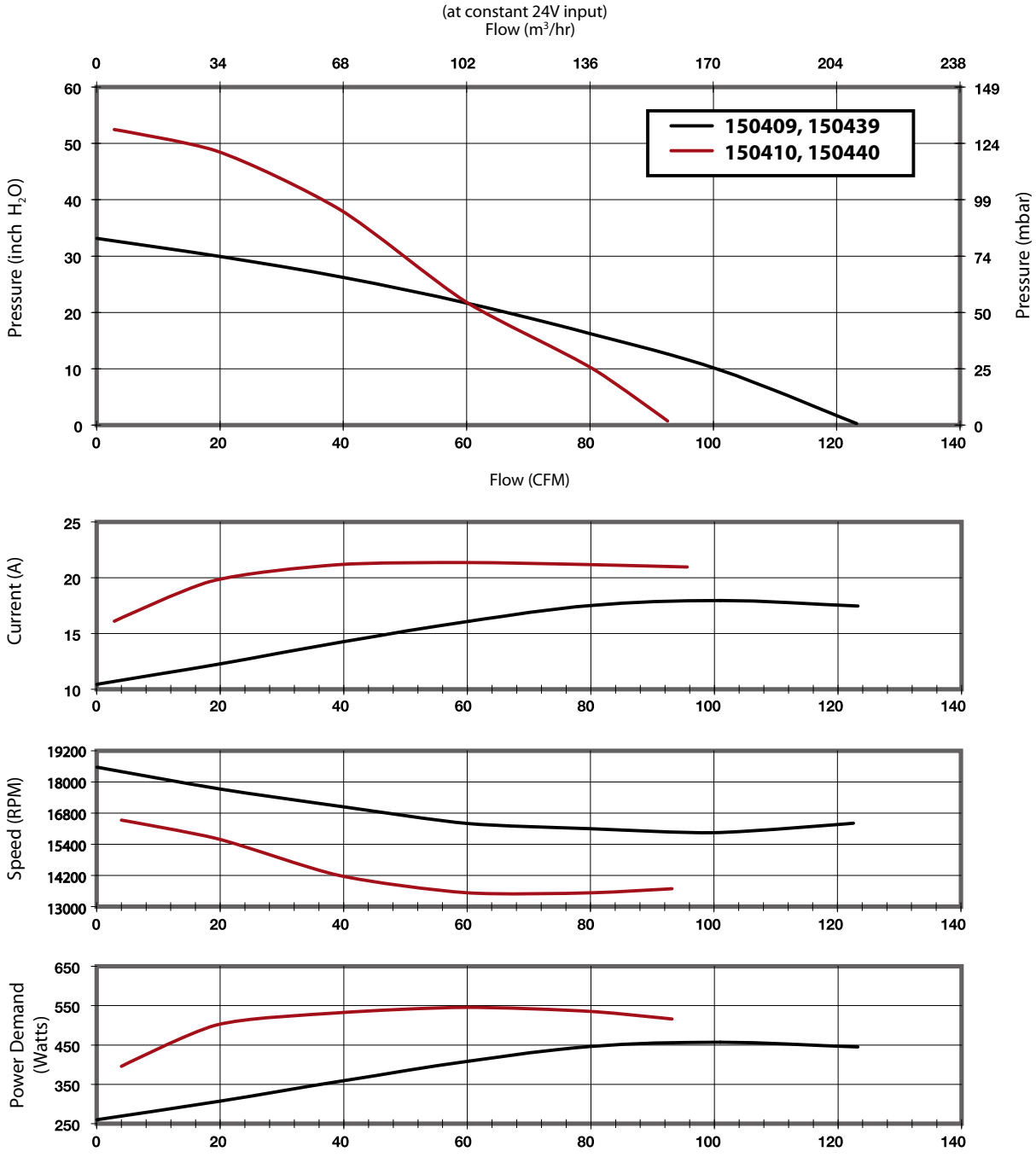
AMETEK® PRECISION MOTION CONTROL

5.7" (145mm) BLDC Thru Flow Blower

24 VDC Input, High Flow System

Windjammer® BRUSHLESS BLOWERS

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92″ Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

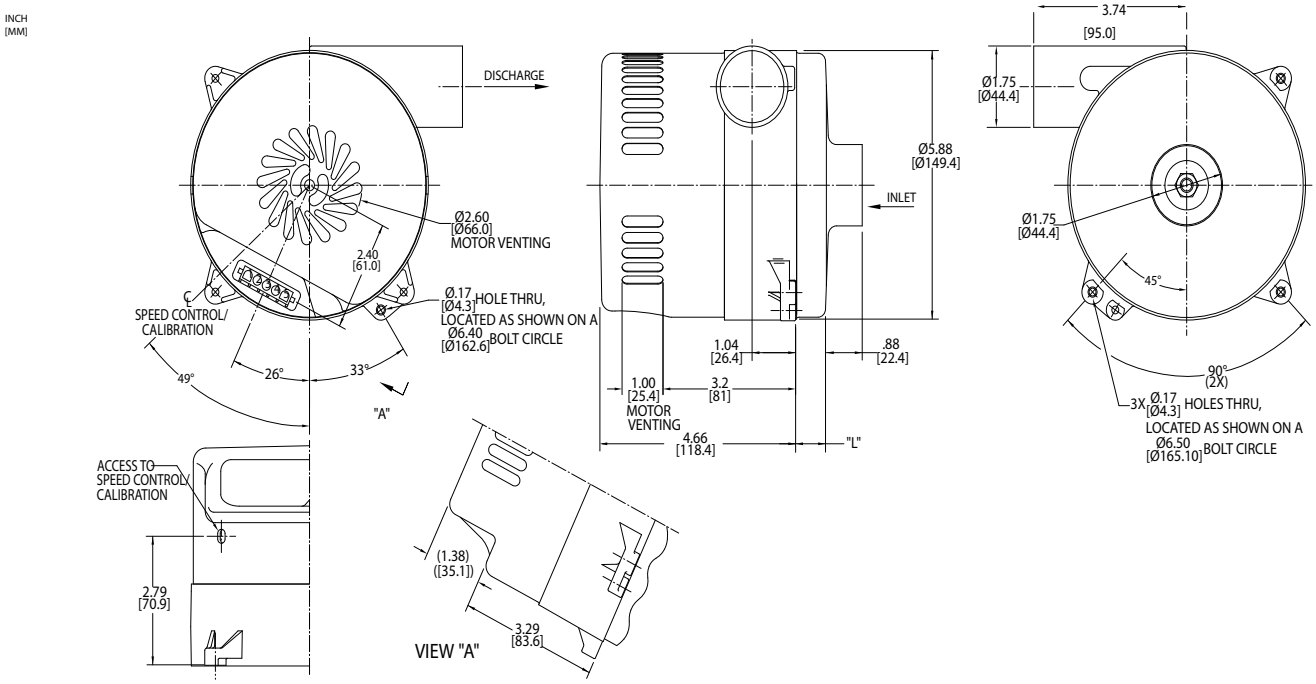
AMETEK® PRECISION MOTION CONTROL

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

48 VDC Input, High Flow System



		Part/ Model Number					
Specification	Units	150411	150441	150412	150442	150413	150443
Stages	-	1	1	2	2	3	3
Input Voltage	VDC	43-53	43-53	43-53	43-53	43-53	43-53
Max Sealed Pressure	in. H2O	28.1	28.1	52.7	52.7	79	79
	mbar	70	70	131.3	131.3	196.8	196.8
Max Flow Rate	CFM	71	71	59	59	64	64
	m3/hr	120.7	120.7	100.3	100.3	108.8	108.8
Length (L)	Inches	0.50	0.50	1.15	1.15	1.84	1.84
	mm	12.7	12.7	29.2	29.2	46.7	46.7
Speed Control	-	Analog	Potent. Adjust.	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

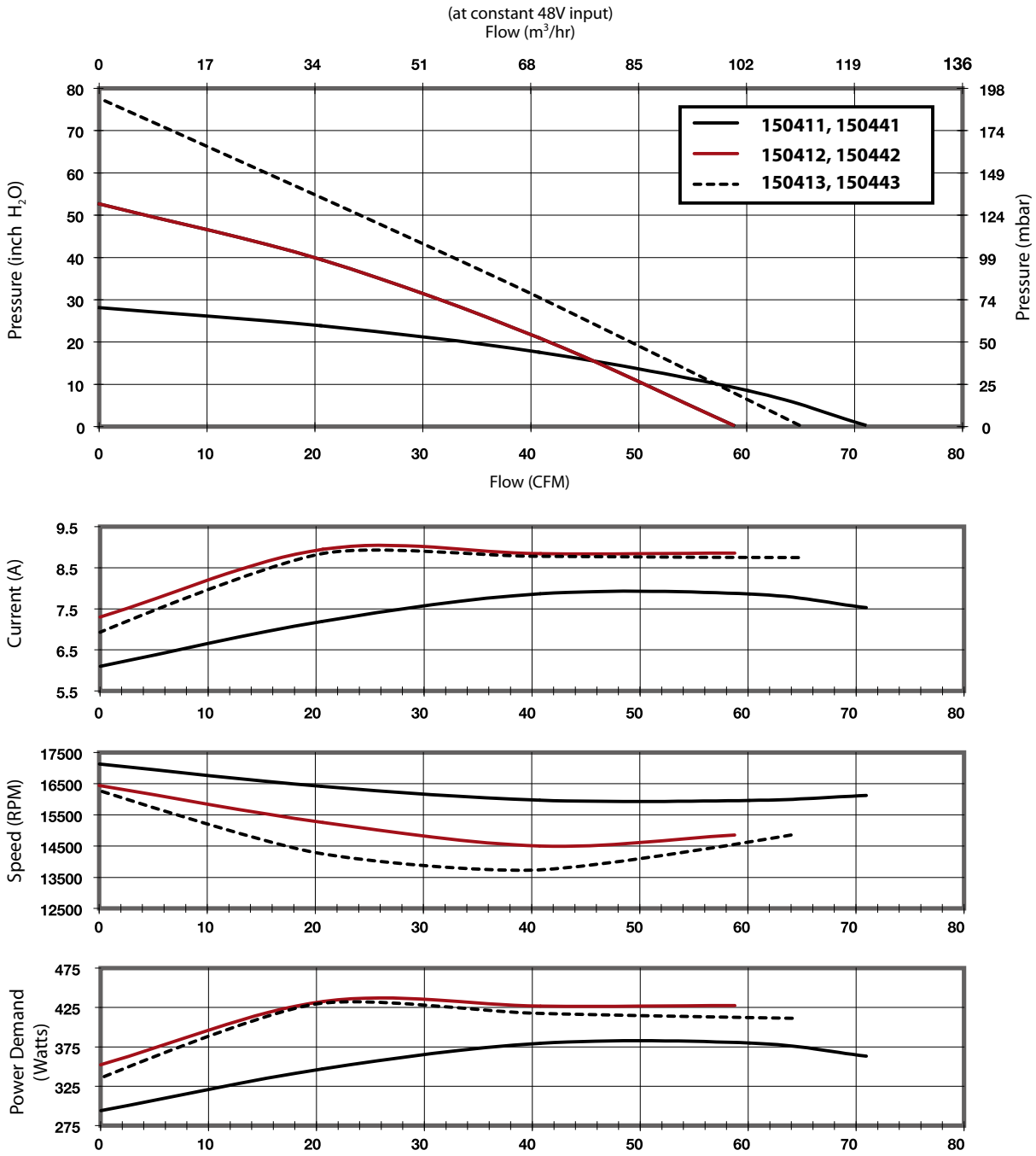
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

48 VDC Input, High Flow System

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

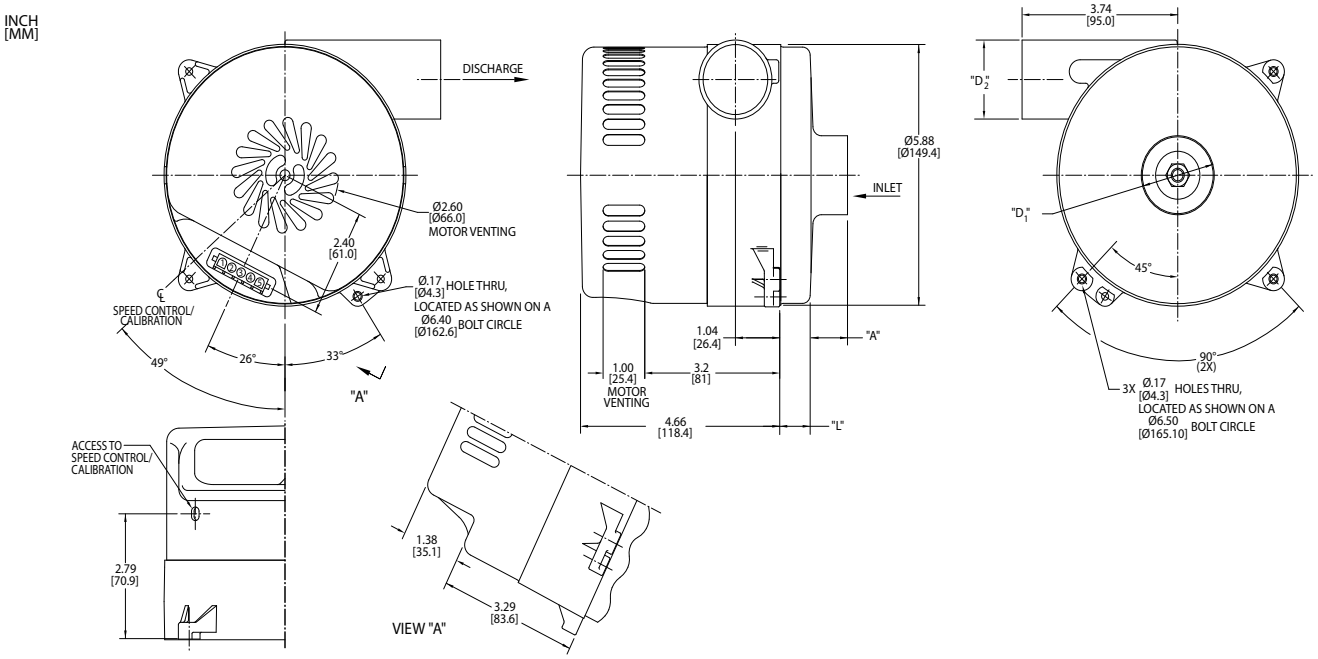
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

48 VDC Input, High Flow System



		Part/ Model Number					
Specification	Units	150414	150444	150415	150445	150416	150446
Fan System	-	High Airflow	High Airflow	High Airflow	High Airflow	Ultra High Flow	Ultra High Flow
Stages	-	1	1	2	2	1	1
Input Voltage	VDC	43-53	43-53	43-53	43-53	43-53	43-53
Max Sealed Pressure	in. H2O	29.5	29.5	51.5	51.5	21.1	21.1
	mbar	73.5	73.5	128.3	128.3	52.6	52.6
Max Airflow	CFM	115.7	115.7	91.3	91.3	160.3	160.3
	m3/hr	196.7	196.7	155.2	155.2	272.5	272.5
Inlet Diameter D1	Inches	1.75	1.75	1.75	1.75	2.75	2.75
	mm	44.5	44.5	44.5	44.5	69.9	69.9
Discharge Diameter D2	Inches	1.75	1.75	1.75	1.75	2.50	2.50
	mm	44.5	44.5	44.5	44.5	63.5	63.5
Length (L)	Inches	0.50	0.50	1.50	1.50	0.75	0.75
	mm	12.7	12.7	38.1	38.1	19.1	19.1
Speed Control	-	Analog Spd. Cmd.	Potent. Adjust.	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

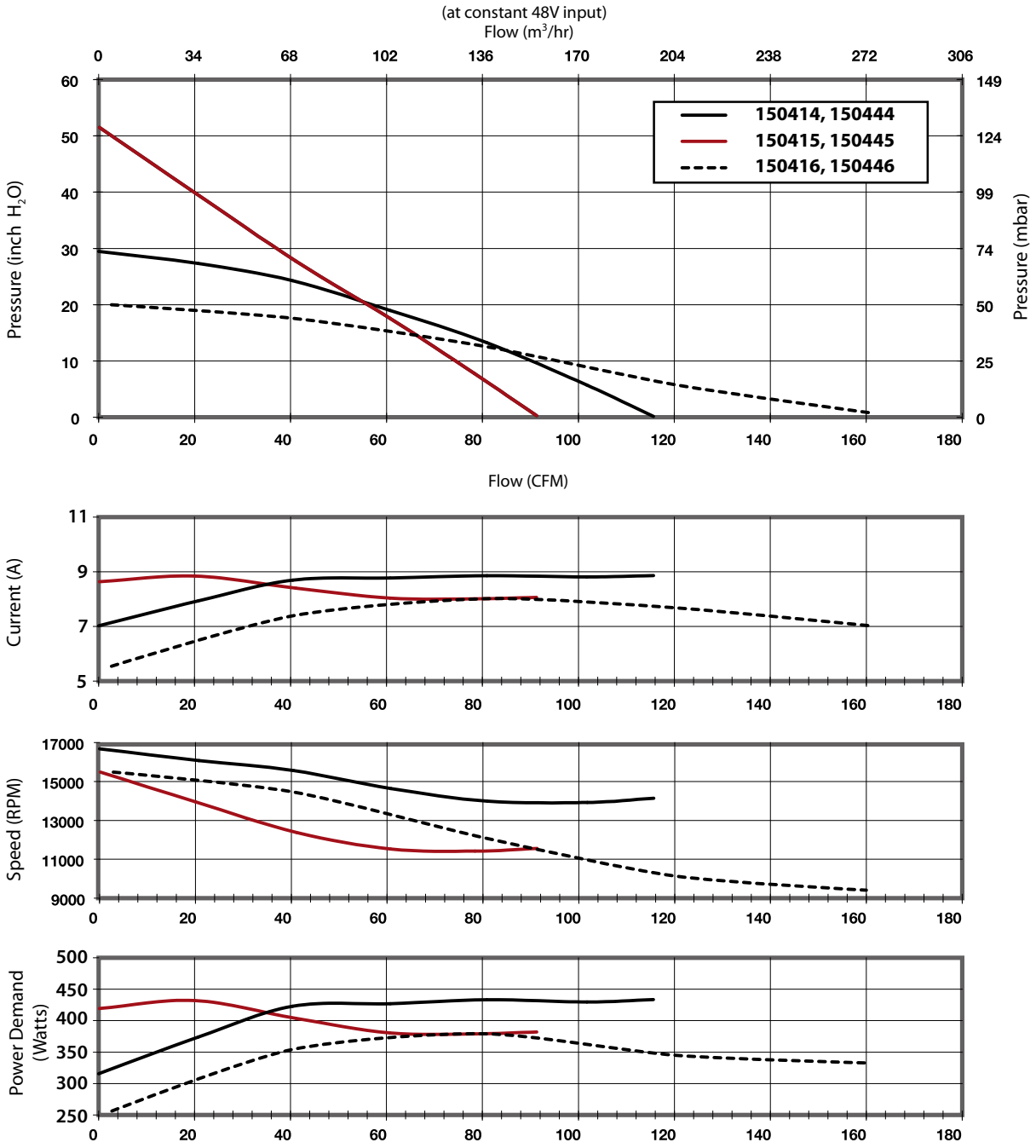
Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

5.7" (145mm) BLDC Bypass Blower

48 VDC Input, High Flow System

Typical Performance



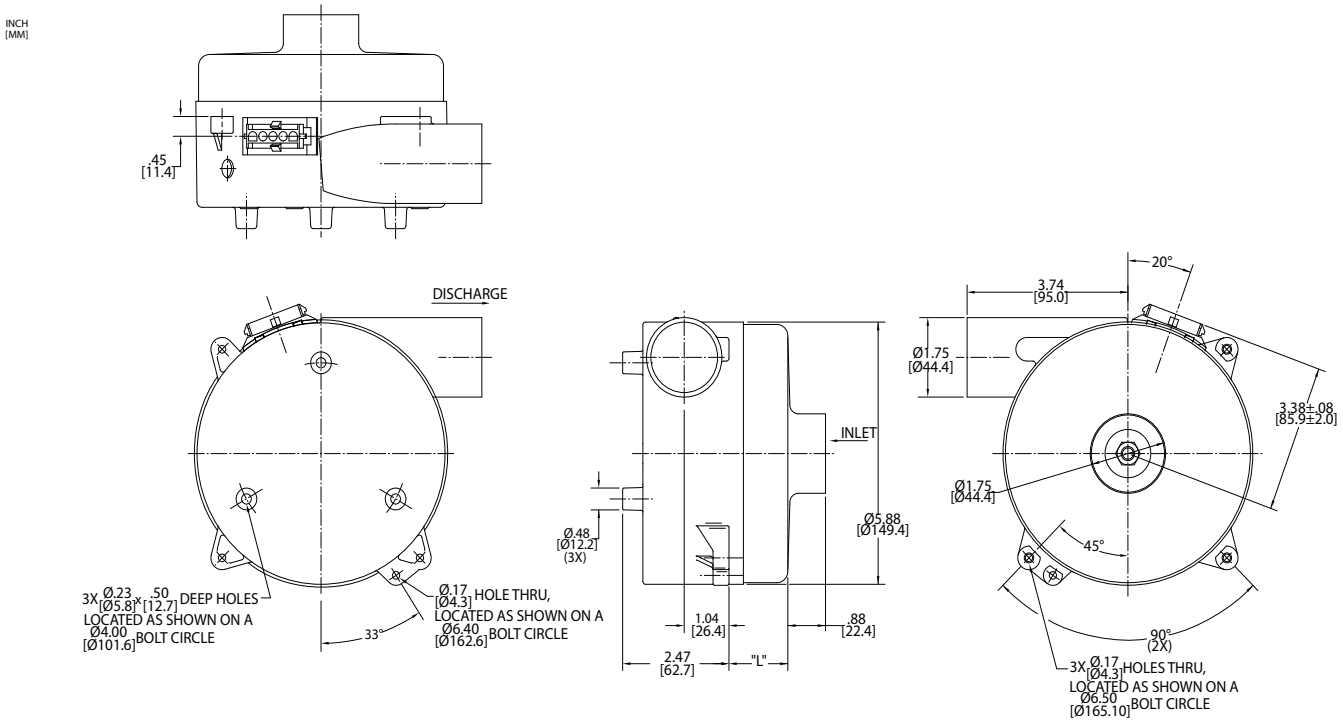
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

48 VDC Input, High Flow System



		Part/ Model Number					
Specification	Units	150417	150447	150129	150462	150418	150448
Stages	-	1	1	2	2	3	3
Input Voltage	VDC	43-53	43-53	43-53	43-53	43-53	43-53
Max Sealed Pressure	in. H2O	41.5	41.5	71.8	71.8	80	80
	mbar	103.4	103.4	178.9	178.9	199.3	199.3
Max Flow Rate	CFM	80.5	80.5	65.9	65.9	63	63
	m3/hr	136.9	136.9	112	112	107.1	107.1
Length (L)	Inches	0.81	0.81	1.50	1.50	2.17	2.17
	mm	20.6	20.6	38.1	38.1	55.1	55.1
Speed Control	-	Analog	Potent. Adjust.	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

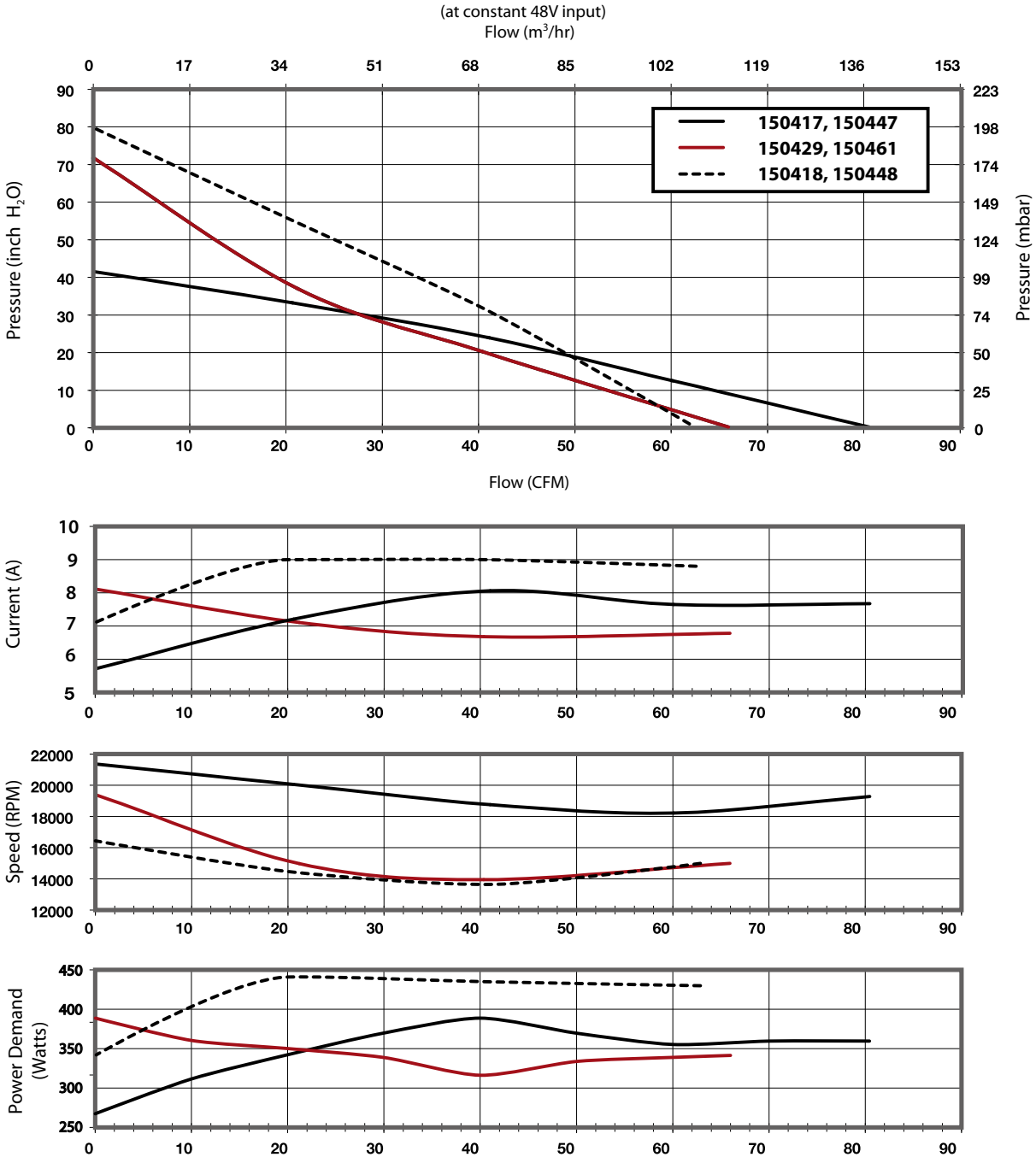
Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Thru Flow Blower

48 VDC Input, Standard Flow System

Typical Performance

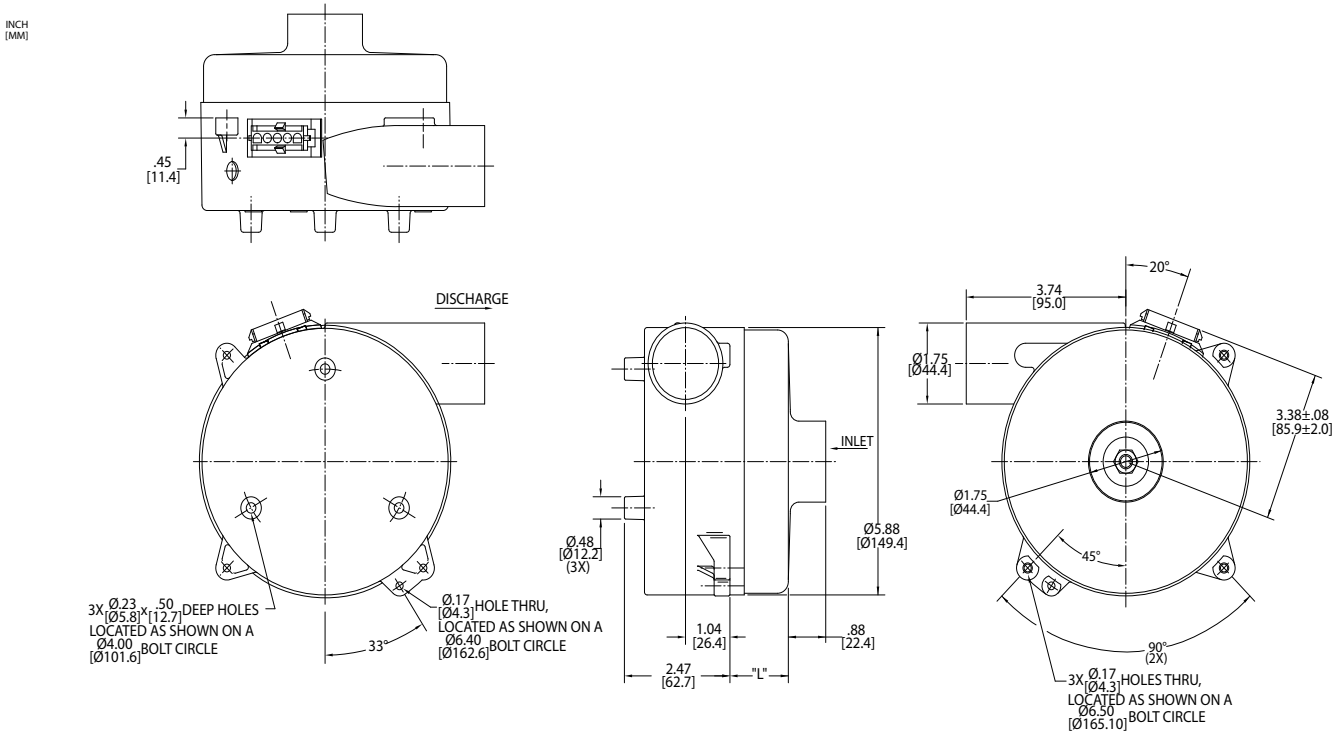


Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

48 VDC Input, High Flow System



		Part/ Model Number			
Specification	Units	150419	150449	150420	150450
Stages	-	1	1	2	2
Input Voltage	VDC	43-53	43-53	43-53	43-53
Max Sealed Pressure	in. H2O	26.0	26.0	53	53
	mbar	64.8	64.8	132	132
Max Flow Rate	CFM	111.0	111.0	85.9	85.9
	m3/hr	188.7	188.7	146	146
Length (L)	Inches	.81	.81	1.81	1.81
	mm	20.6	20.6	46	46
Speed Control	-	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

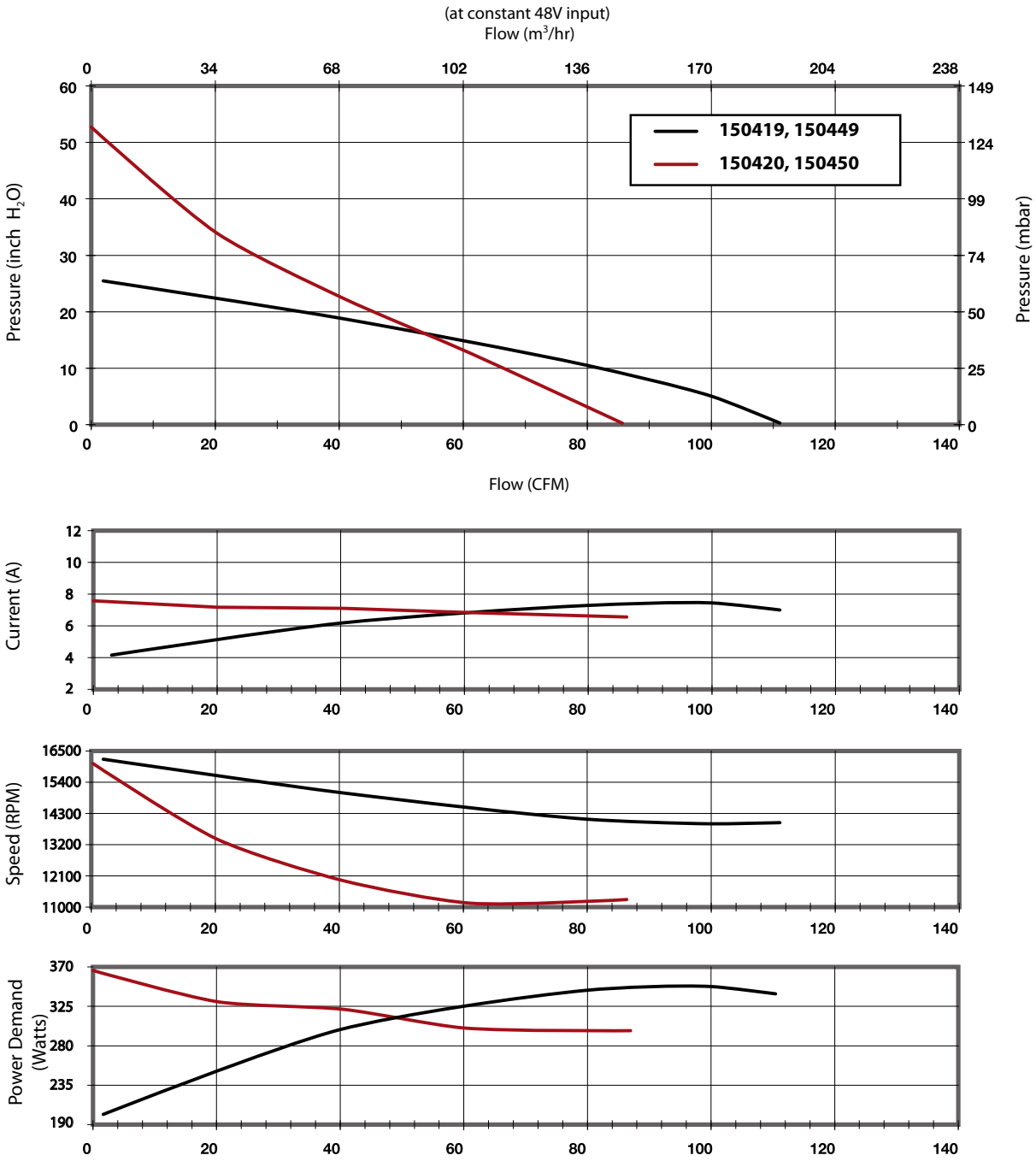
Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

5.7" (145mm) BLDC Thru Flow Blower

48 VDC Input, High Flow System

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

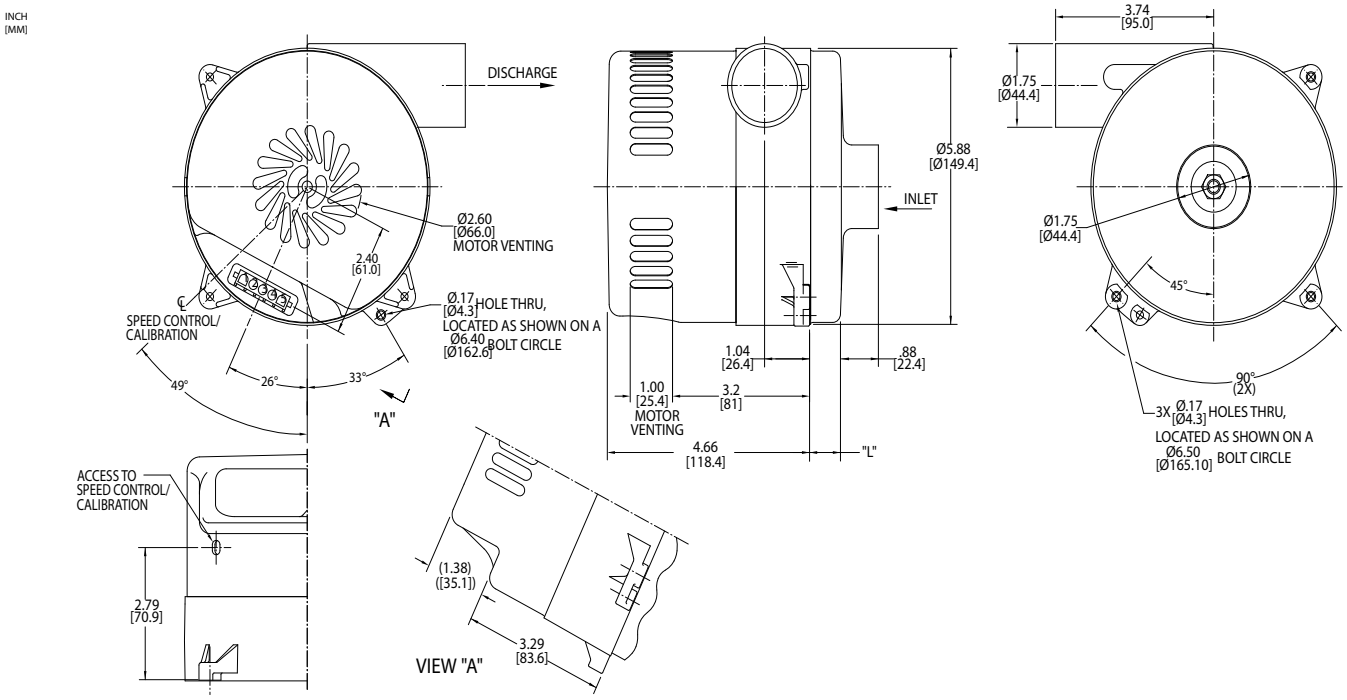
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

72 VDC Input, Standard Flow System



		Part/ Model Number					
Specification	Units	150421	150451	150422	150454	150423	150453
Stages	-	1	1	2	2	3	3
Input Voltage	VDC	64-79	64-79	64-79	64-79	64-79	64-79
Max Sealed Pressure	in. H2O	39.3	39.3	83.6	83.6	88.3	88.3
	mbar	97.9	97.9	208.2	208.2	220	220
Max Flow Rate	CFM	82	82	65.2	65.2	56.4	56.4
	m3/hr	139.4	139.4	110.8	110.8	95.9	95.9
Length (L)	Inches	0.50	0.50	1.15	1.15	1.84	1.84
	mm	12.7	12.7	29.2	29.2	46.7	46.7
Speed Control	-	Analog	Potent. Adjust.	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

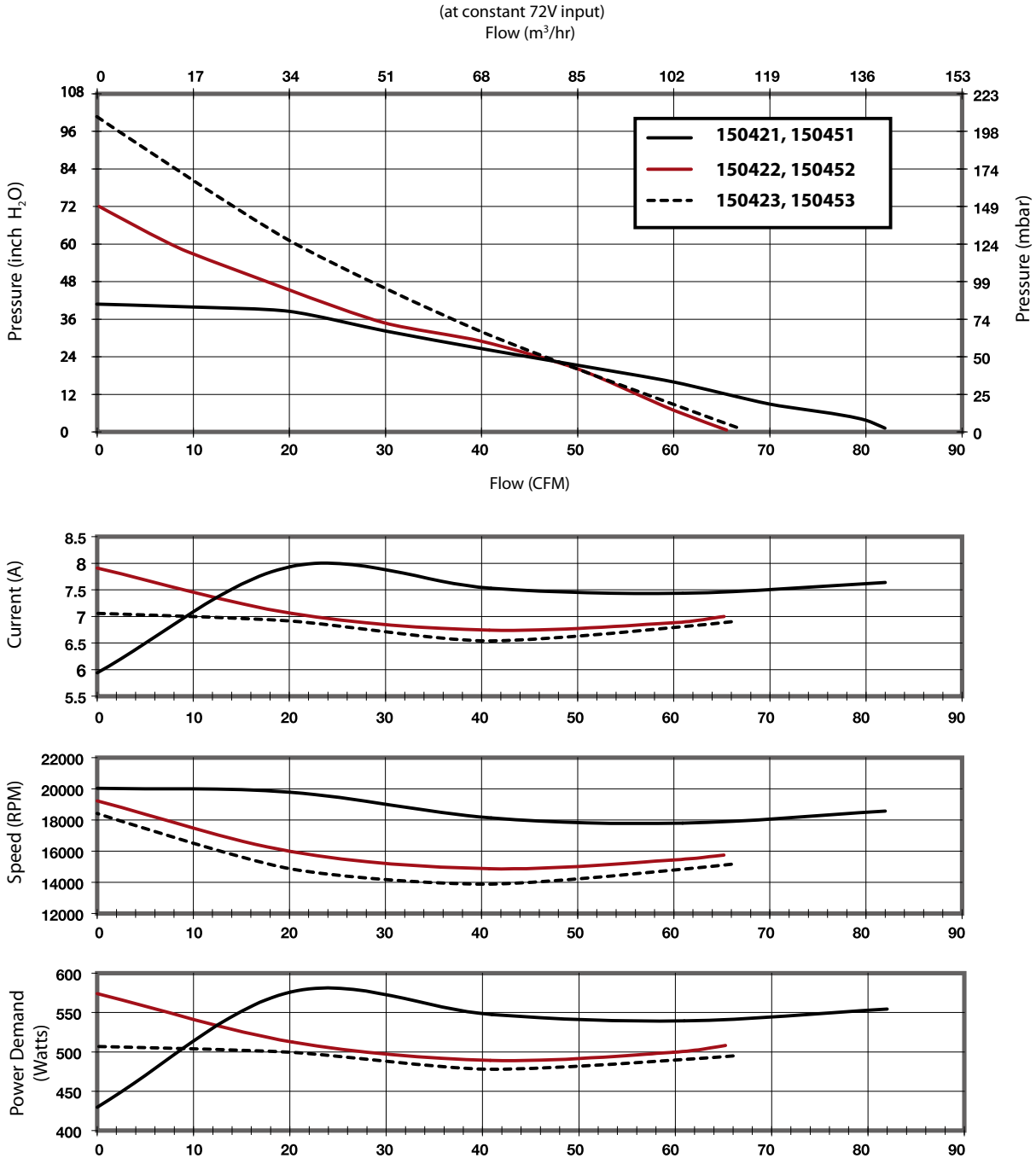
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

72 VDC Input, Standard Flow System

Typical Performance



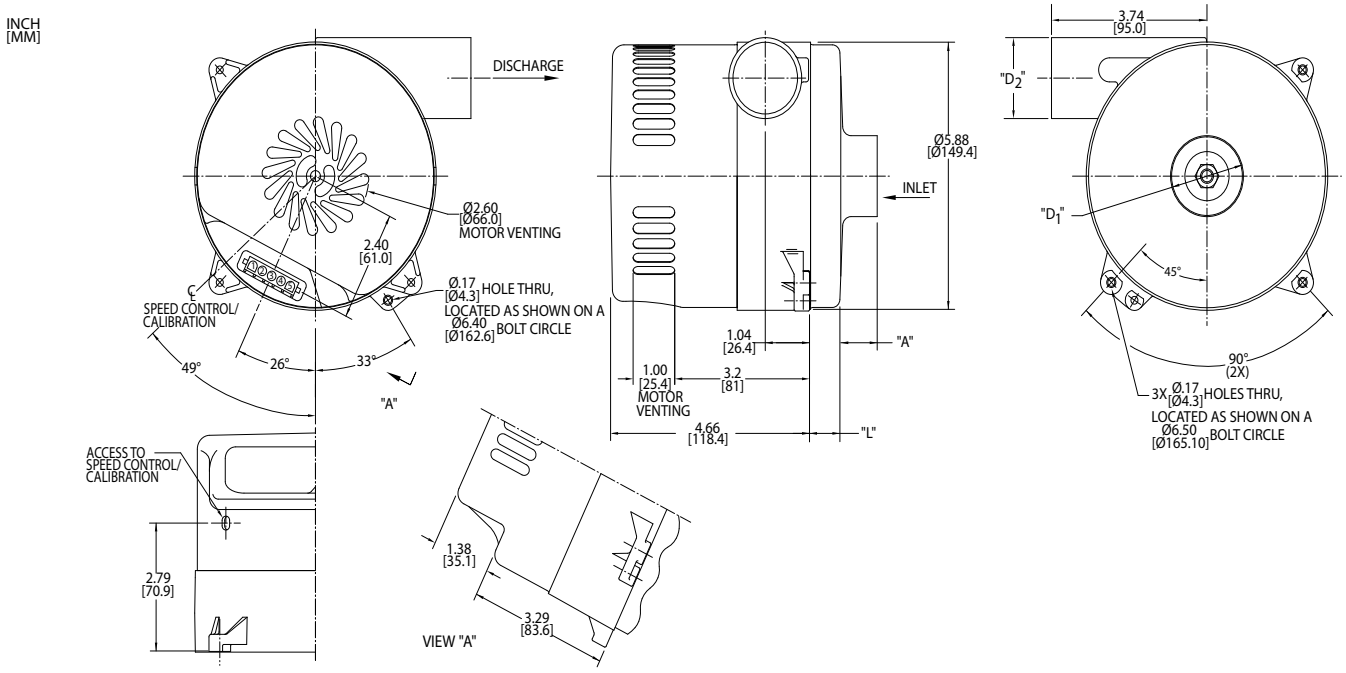
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

72 VDC Input, High Flow System



		Part/ Model Number					
Specification	Units	150424	150454	150425	150455	150426	150456
Fan System	-	High Flow	High Flow	High Flow	High Flow	Ultra High Flow	Ultra High Flow
Stages	-	1	1	2	2	1	1
Input Voltage	VDC	64-79	64-79	64-79	64-79	64-79	64-79
Max Sealed Pressure	in. H2O	42.7	42.7	59.1	59.1	25	25
	mbar	106.4	106.4	147.2	147.2	62.3	62.3
Max Flow Rate	CFM	123.6	123.6	93.6	93.6	159.3	159.3
	m3/hr	210.1	210.1	159.1	159.1	270.8	270.8
Inlet Diameter D1	Inches	1.75	1.75	1.75	1.75	2.75	2.75
	mm	44.5	44.5	44.5	44.5	69.9	69.9
Discharge Diameter D2	Inches	1.75	1.75	1.75	1.75	2.50	2.50
	mm	44.5	44.5	44.5	44.5	63.5	63.5
Length (L)	Inches	0.50	0.50	1.50	1.50	0.75	0.75
	mm	12.7	12.7	38.1	38.1	19.1	19.1
Speed Control	-	Analog Spd. Cmd.	Potent. Adjust.	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

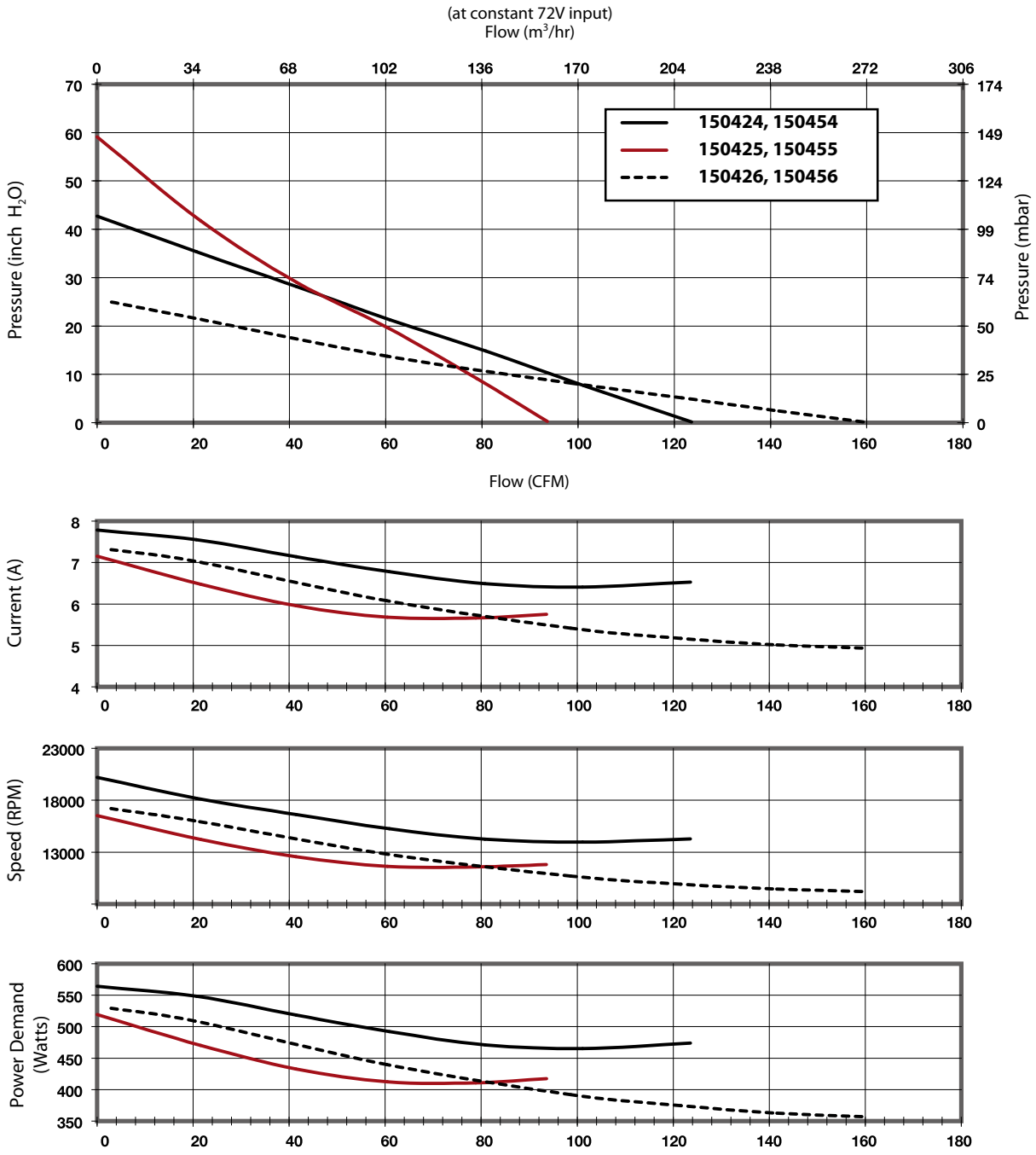
Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity pontentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Bypass Blower

72 VDC Input, High Flow System

Typical Performance



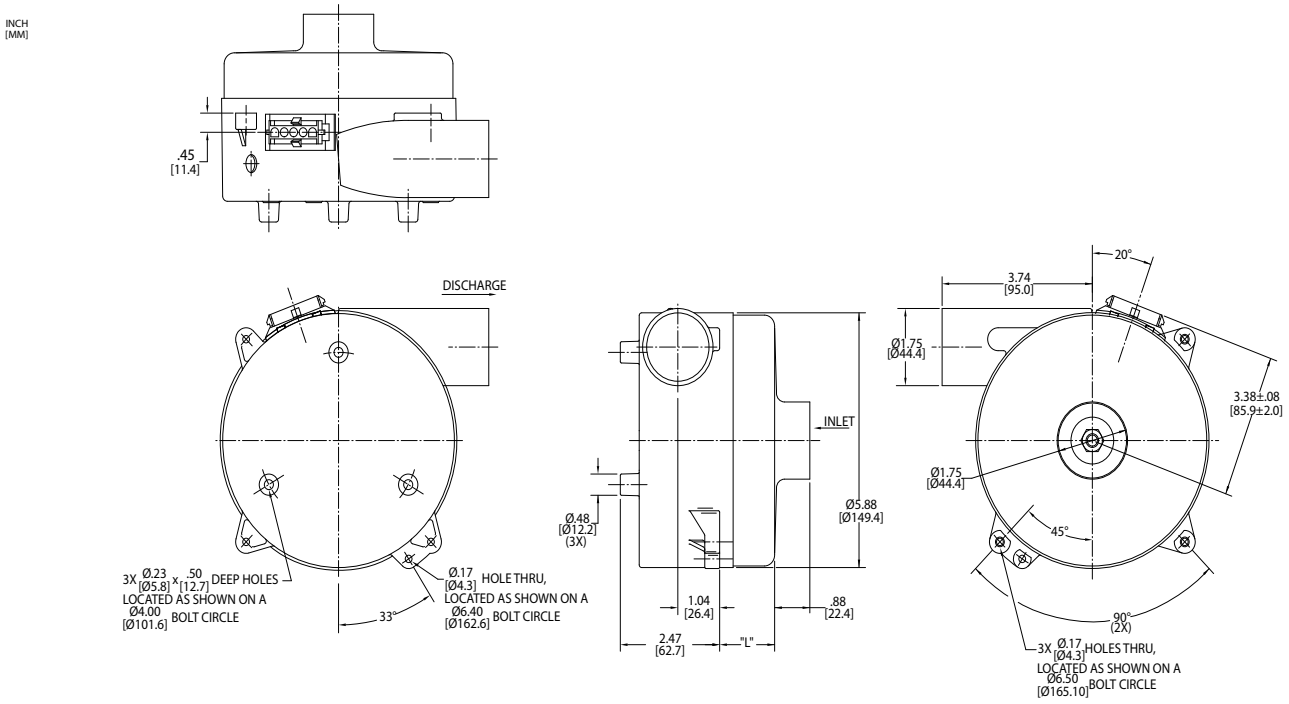
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

72 VDC Input, Standard Flow System



		Part/ Model Number					
Specification	Units	150427	150457	150128	150462	150428	150458
Stages	-	1	1	2	2	3	3
Input Voltage	VDC	64-79	64-79	64-79	64-79	64-79	64-79
Max Sealed Pressure	in. H2O	35.8	35.8	72.1	72.1	97.7	97.7
	mbar	89.2	89.2	179.6	179.6	243.4	243.4
Max Flow Rate	CFM	85.5	85.5	74.7	74.7	63.5	63.5
	m3/hr	145.4	145.4	127	127	108	108
Length (L)	Inches	0.81	0.81	1.50	1.5	2.17	2.17
	mm	20.6	20.6	38.1	38.1	55.1	55.1
Speed Control	-	Analog	Potent. Adjust.	Analog	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

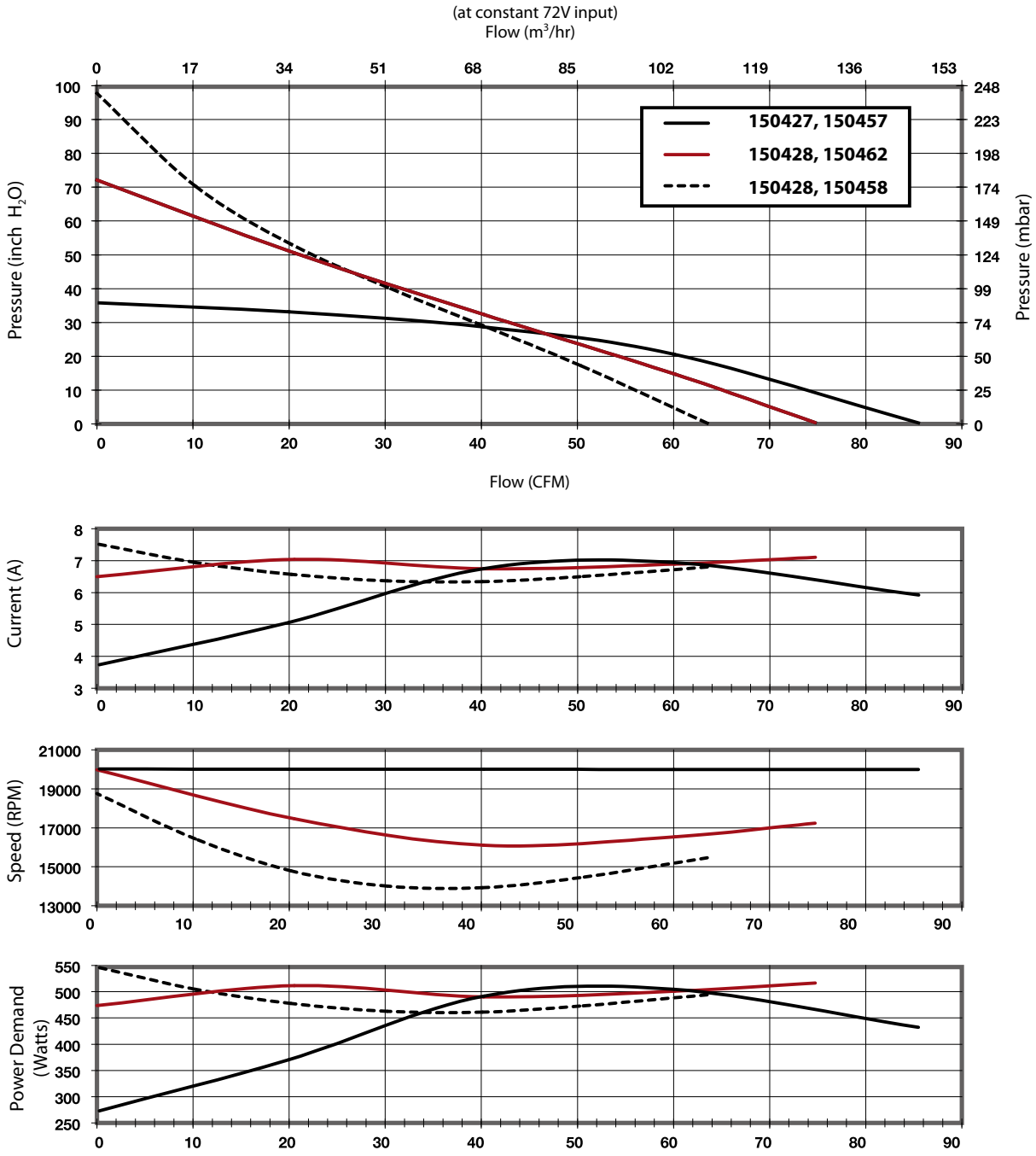
Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Thru Flow Blower

72 VDC Input, Standard Flow System

Typical Performance



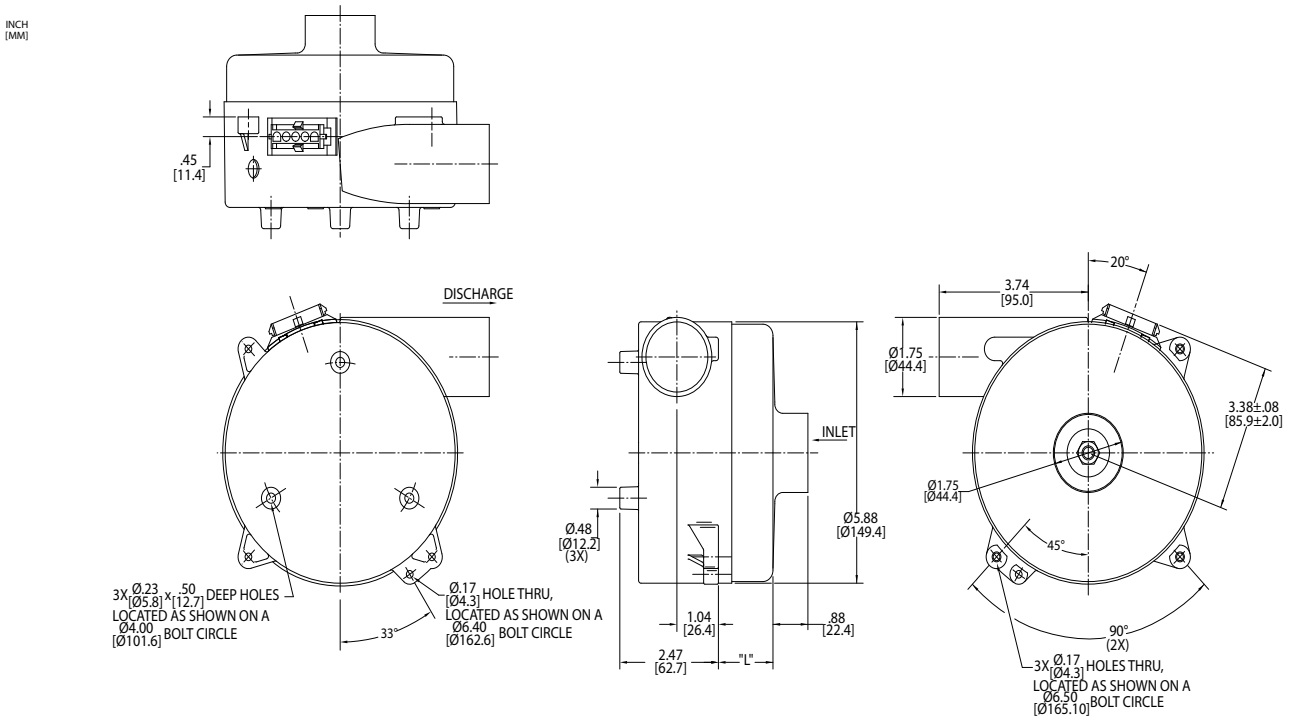
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

72 VDC Input, High Flow System



		Part/ Model Number			
Specification	Units	150429	150459	150430	150460
Stages	-	1	1	2	2
Input Voltage	VDC	64-79	64-79	64-79	64-79
Max Sealed Pressure	in. H2O	37.9	37.9	65.8	65.8
	mbar	94.4	94.4	163.9	163.9
Max Flow Rate	CFM	118.9	118.9	95.2	95.2
	m3/hr	202.1	202.1	161.8	161.8
Length (L)	Inches	0.81	0.81	1.81	1.81
	mm	20.6	20.6	46	46
Speed Control	-	Analog Spd. Cmd.	Potent. Adjust.	Analog	Potent. Adjust.

Notes:

- **Temperature**: Working Air: 0°C to 45°C , Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less then shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

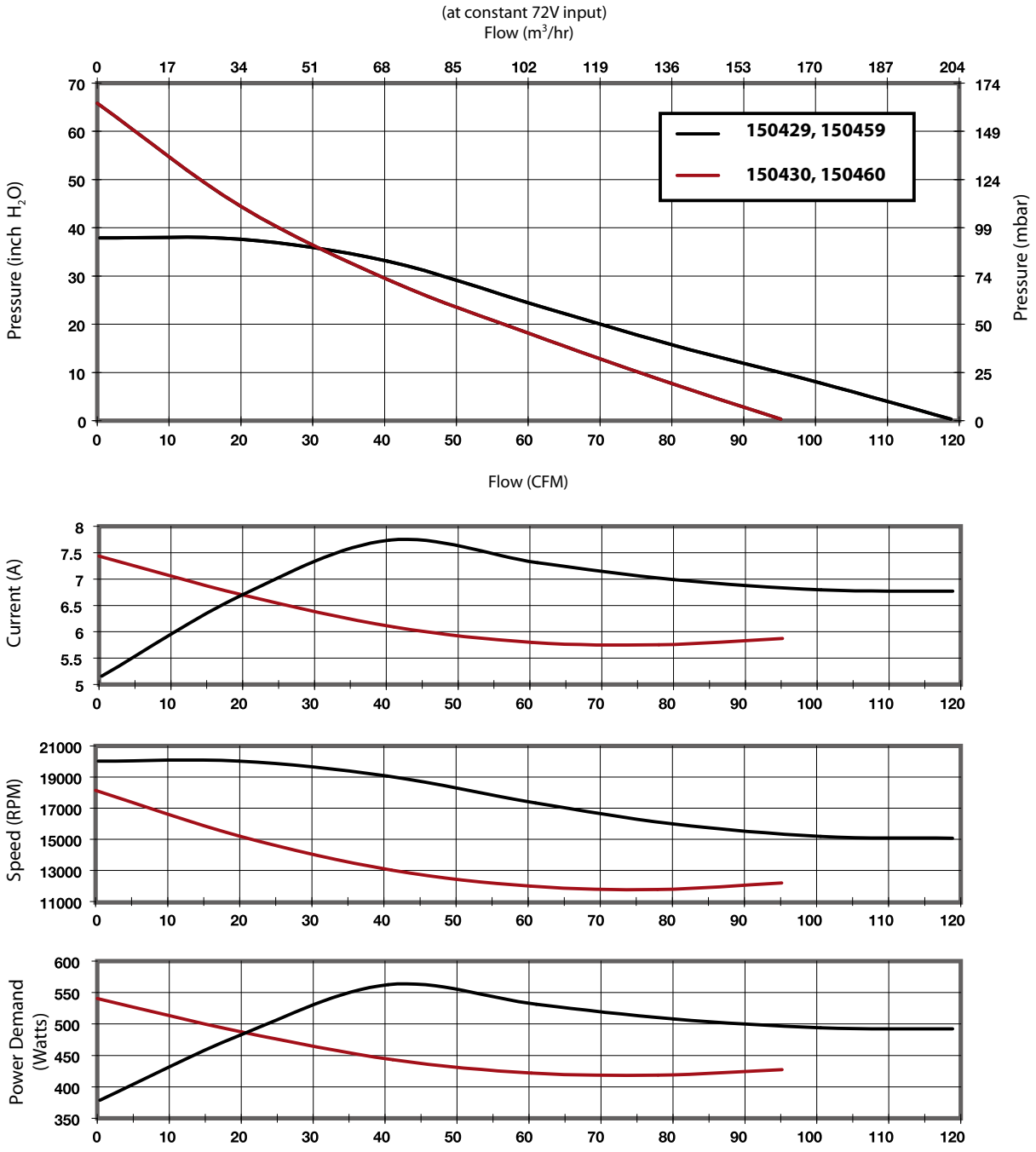
Analog Speed Command (Anlg. Spd. Cmd.) - Blower speed is proportional to an analog speed command signal. The range over which the speed command signal operates can be calibrated within 0-10V by adjusting the sensitivity potentiometer accessed through the side of the blower. The sensitivity adjustment is also useful for precisely calibrating a group of blowers to the same speed for a given operating point and command signal voltage.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Thru Flow Blower

72 VDC Input, High Flow System

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

High Voltage Brushless DC Blowers offer variable output for a wide range of vacuum or pressure applications. Standard blower designs offer brushless DC motor drives coupled to high efficiency fan systems in compact, cost effective packages. Standard models are available in a wide range of input voltages. AMETEK Brushless DC Blowers are not designed for, and should not be used in, life sustaining applications. AMETEK Brushless DC Blowers are not 100% sealed and therefore should not be used with flammable or hazardous gases.

Blower Selection

Blower Selection offers a wide variety of standard products available from AMETEK. Nine different blower families are available in standard configurations. These include low voltage and high voltage product lines. The low voltage products provide output pressure up to 97.7" H_2O and flows up to 160.3 CFM. The high voltage products provide outputs up to 169" H_2O/420 mbar (pressure) and flows up to 1100 CFM/1869 m^3/hr.

Windjammer® BRUSHLESS BLOWERS Nautilair

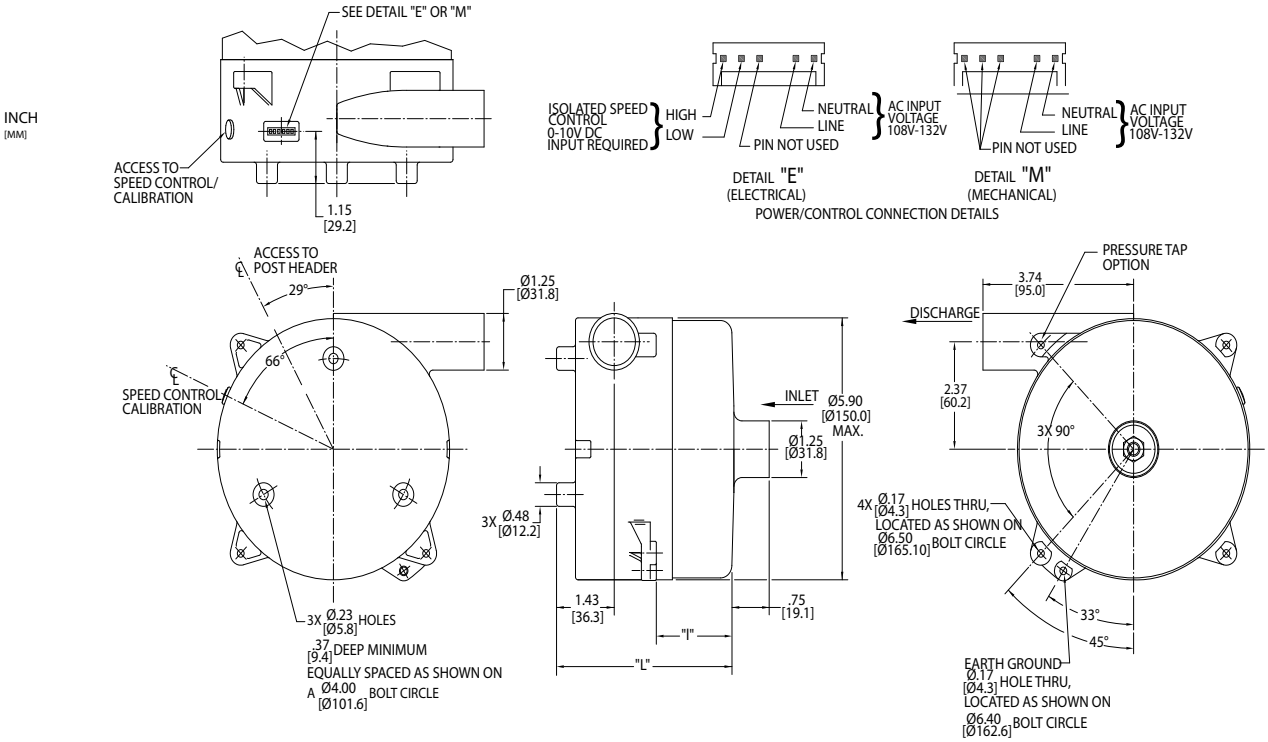
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

250 Watt, 120 Volt Standard Flow



		Part/ Model Number			
Specification	Units	116626	116629	116627	116630
Stages	-	1	1	2	2
Max Sealed Vacuum	in. H2O	28.4	28.4	50.0	50.0
	mbar	70.7	70.7	124.6	124.6
Max Sealed Pressure	in. H2O	29.3	29.3	50.6	50.6
	mbar	73	73	126	126
Max Flow Rate	CFM	64.5	64.5	66	66
	m3/hr	109.7	109.7	112.2	112.2
Length (I)	Inches	0.69	0.69	1.60	1.60
	mm	17.5	17.5	40.6	40.6
Length (L)	Inches	3.16	3.16	4.07	4.07
	mm	80.3	80.3	103.4	103.4
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical

Notes:

- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC,10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 640250-6 w/SL-156 contacts (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including: tachometer output card; Universal AC input (100V-240V).

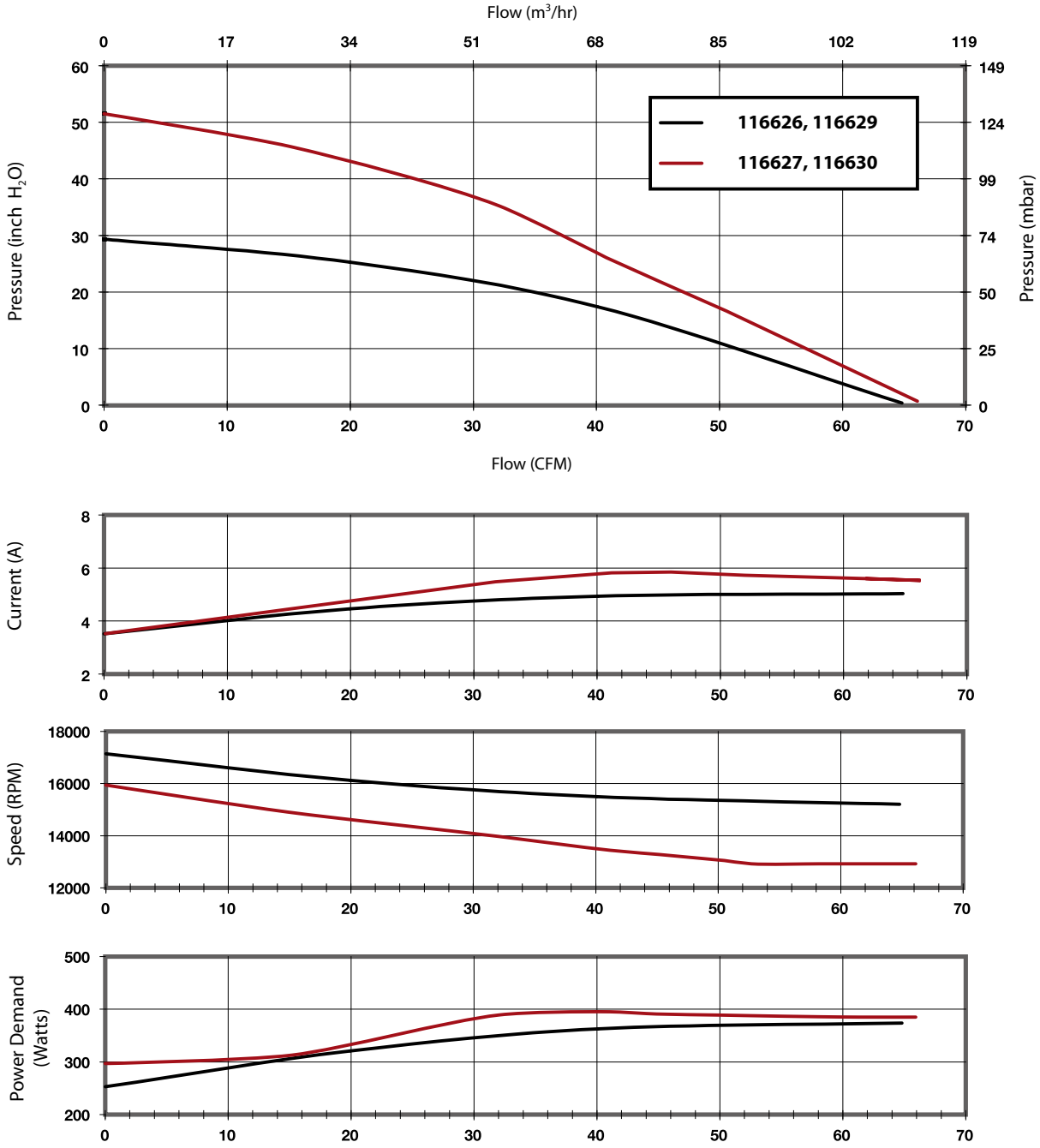
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK PRECISION MOTION CONTROL

5.7" (145mm) BLDC Thru Flow Blower

250 Watt, 120 Volt Standard Flow

Typical Performance



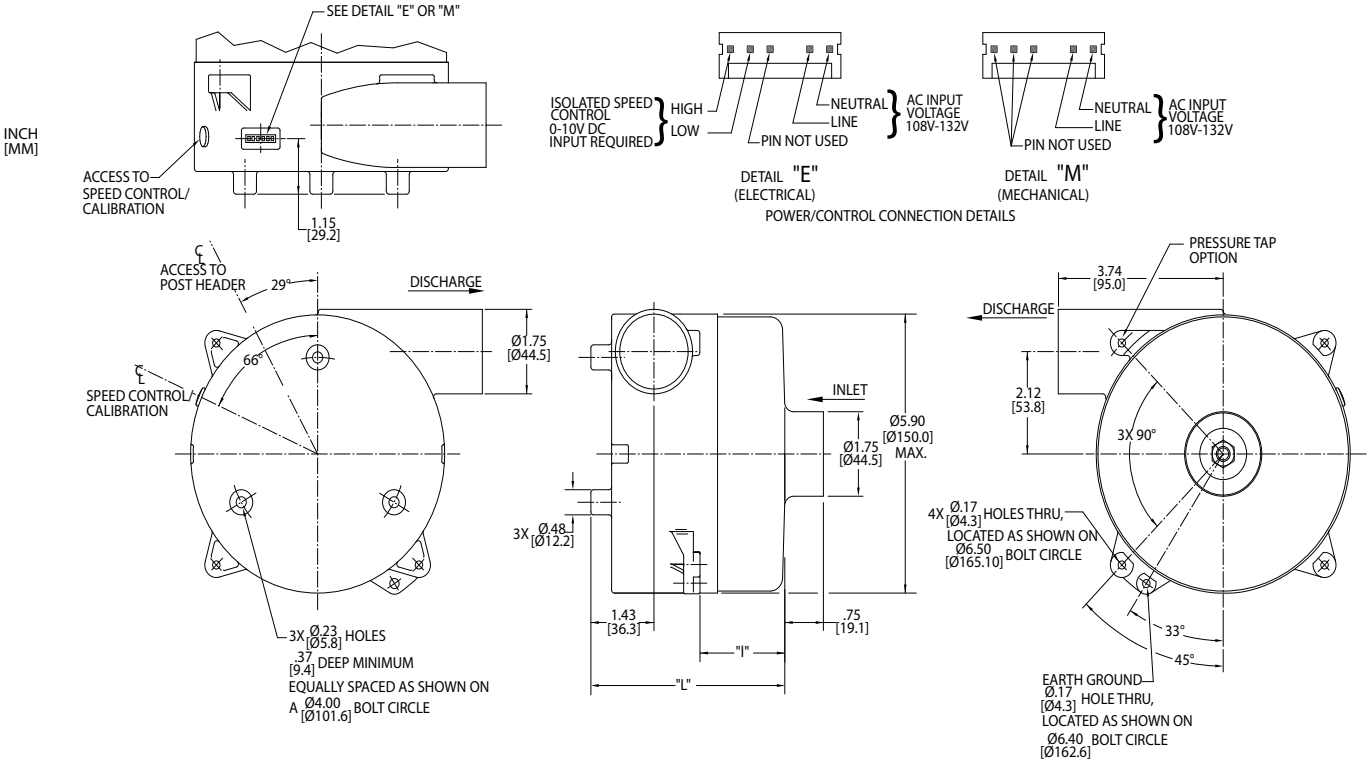
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

250 Watt, 120 Volt High Flow



		Part/ Model Number			
Specification	Units	116644 M	116647 E	116645 M	116648 E
Stages	-	1	1	2	2
Max Sealed Vacuum	in. H2O	26.5	26.5	46.7	46.7
	mbar	66	66	116.3	116.3
Max Sealed Pressure	in. H2O	27.3	27.3	48.1	48.1
	mbar	68	68	119.8	119.8
Max Flow Rate	CFM	130.5	130.5	98.2	98.2
	m3/hr	221.9	221.9	166.9	166.9
Length (l)	Inches	0.76	0.76	1.81	1.81
	mm	19.3	19.3	46	46
Length (L)	Inches	3.23	3.23	4.28	4.28
	mm	82	82	108.7	108.7
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical

Notes:

- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC,10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 640250-6 w/SL-156 contacts (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including: tachometer output card; Universal AC input (100V-240V).

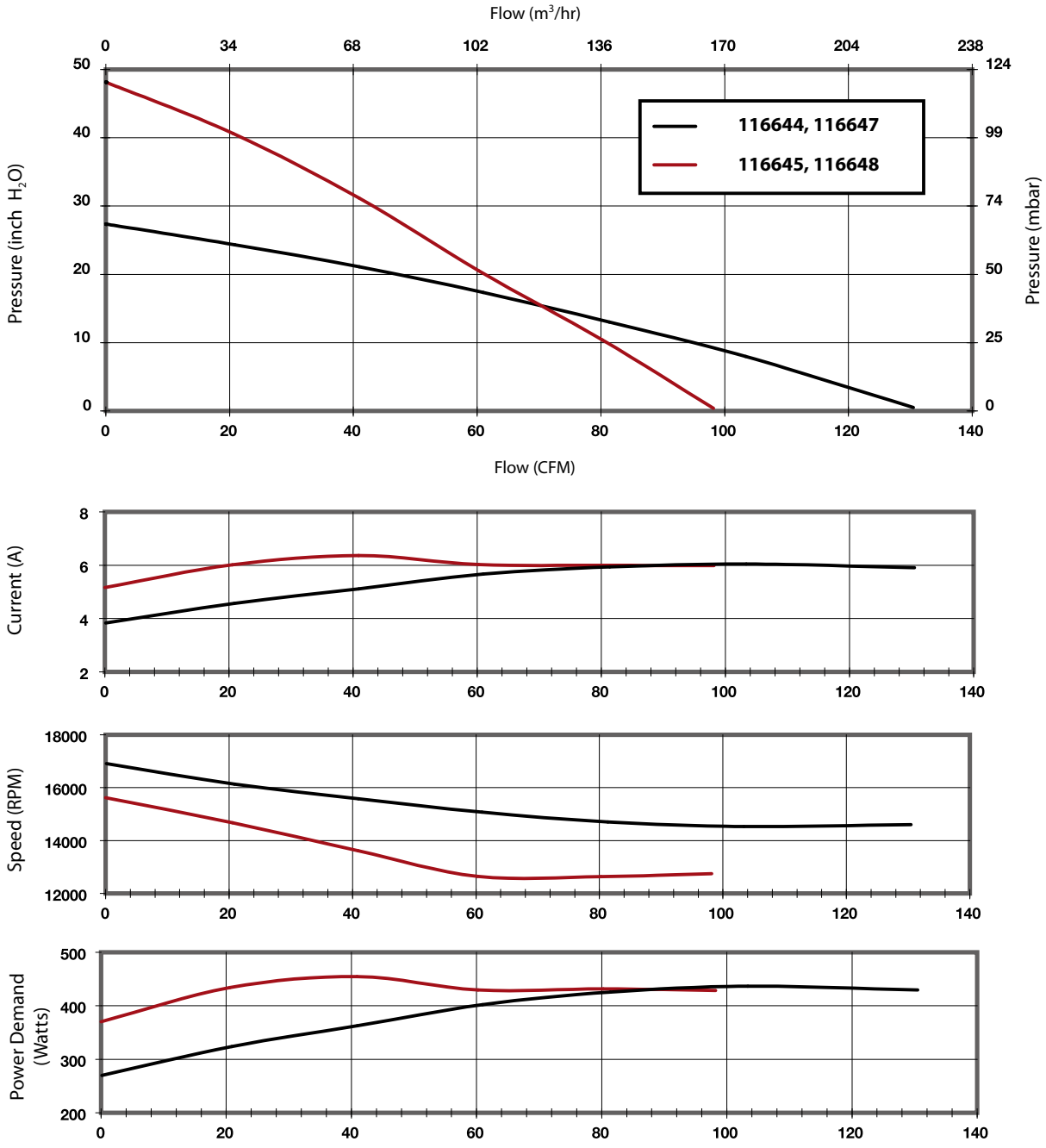
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK
PRECISION MOTION CONTROL

5.7" (145mm) BLDC Thru Flow Blower

250 Watt, 120 Volt High Flow

Typical Performance



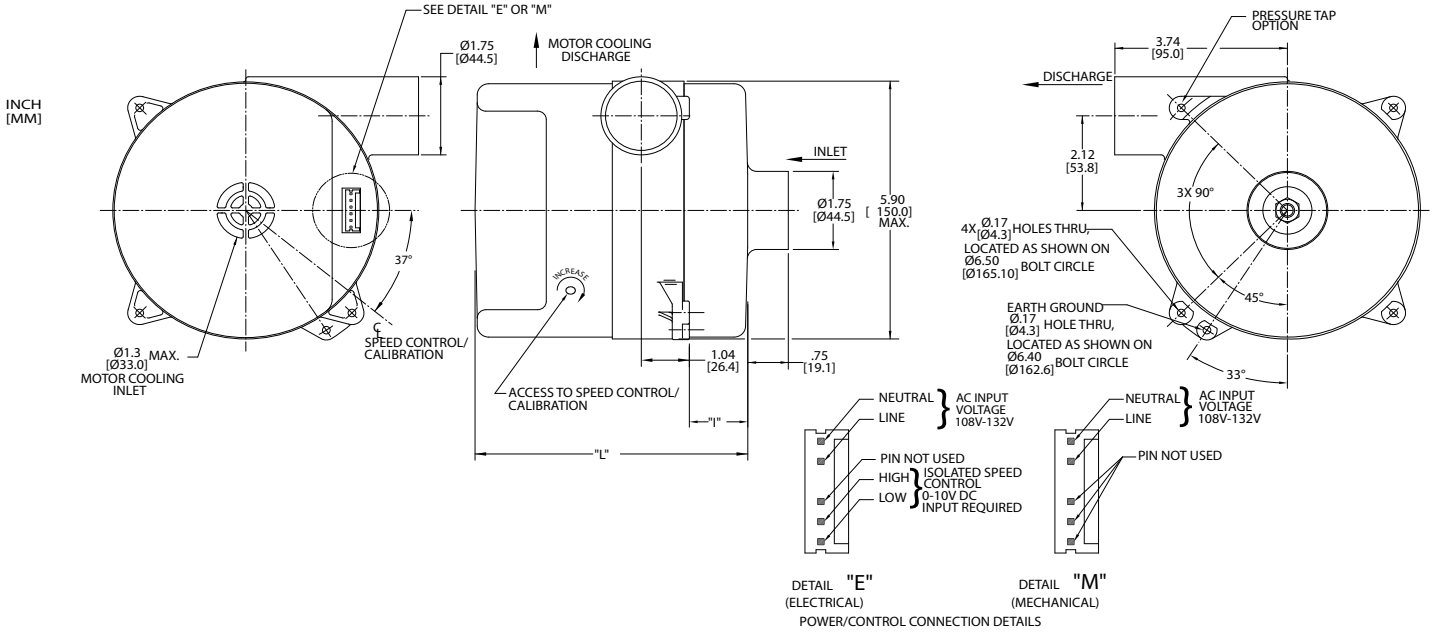
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

250 Watt, 120 Volt High Flow



		Part/ Model Number					
Specification	Units	116637	116643	116636	116642	116635	116641
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	25.2	25.2	49.7	49.7	67.2	67.2
	mbar	62.8	62.8	123.8	123.8	167.4	167.4
Max Sealed Pressure	in. H2O	26.0	26.0	51.2	51.2	69.3	69.3
	mbar	64.8	64.8	127.5	127.5	172.6	172.6
Max Flow Rate	CFM	130.5	130.5	103.9	103.9	82.3	82.3
	m3/hr	221.9	221.9	176.6	176.6	139.9	139.9
Length (I)	Inches	0.47	0.47	1.53	1.53	2.53	2.53
	mm	11.9	11.9	38.9	38.9	64.3	64.3
Length (L)	Inches	5.22	5.22	6.27	6.27	7.28	7.28
	mm	132.6	132.6	159.3	159.3	184.9	184.9
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical	Mechanical	Electrical

Notes:

- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC,10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 640250-6 w/SL-156 contacts (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including: tachometer output card; Universal AC input (100V-240V).

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

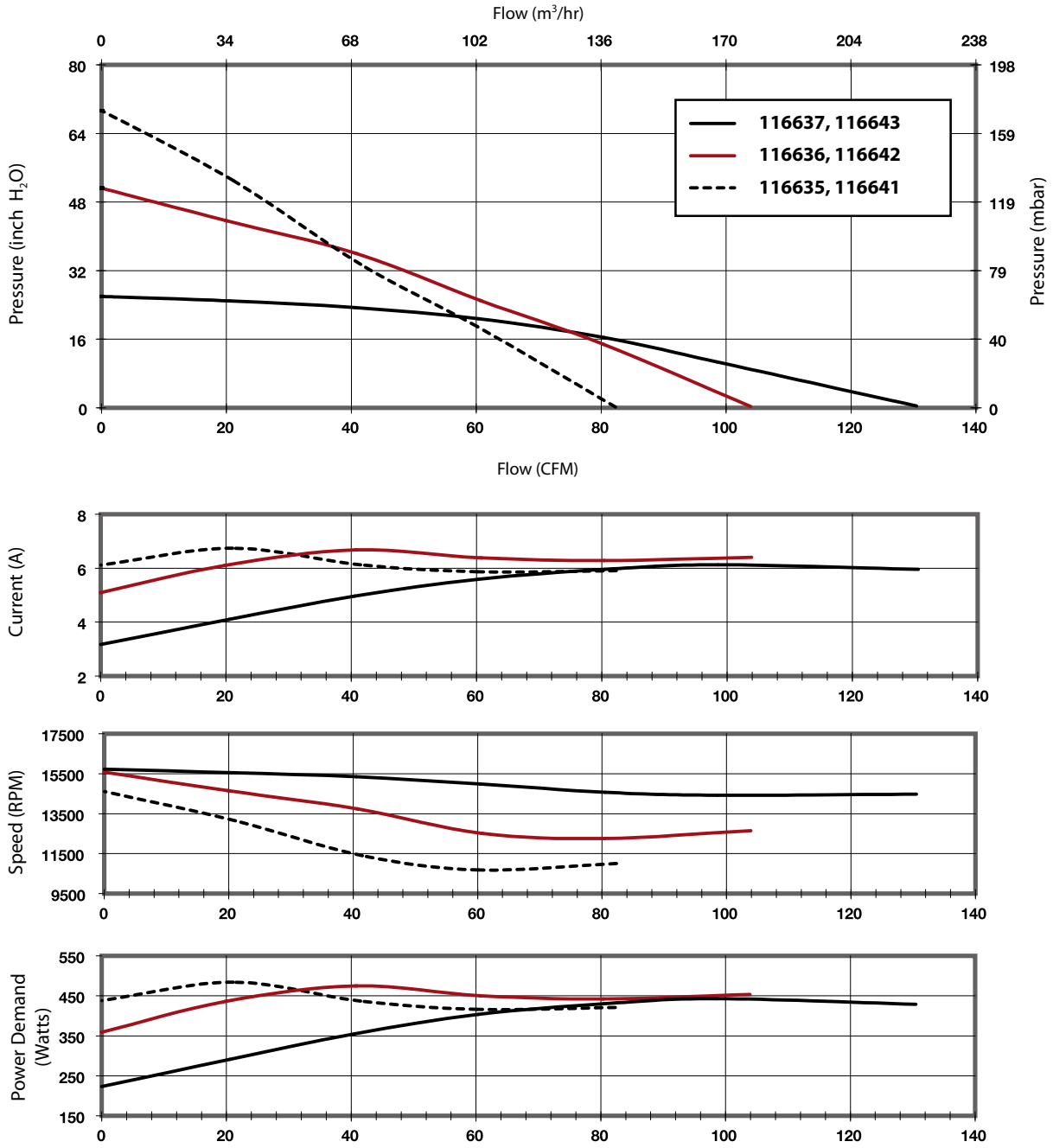
AMETEK PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

250 Watt, 120 Volt High Flow

Windjammer® BRUSHLESS BLOWERS

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

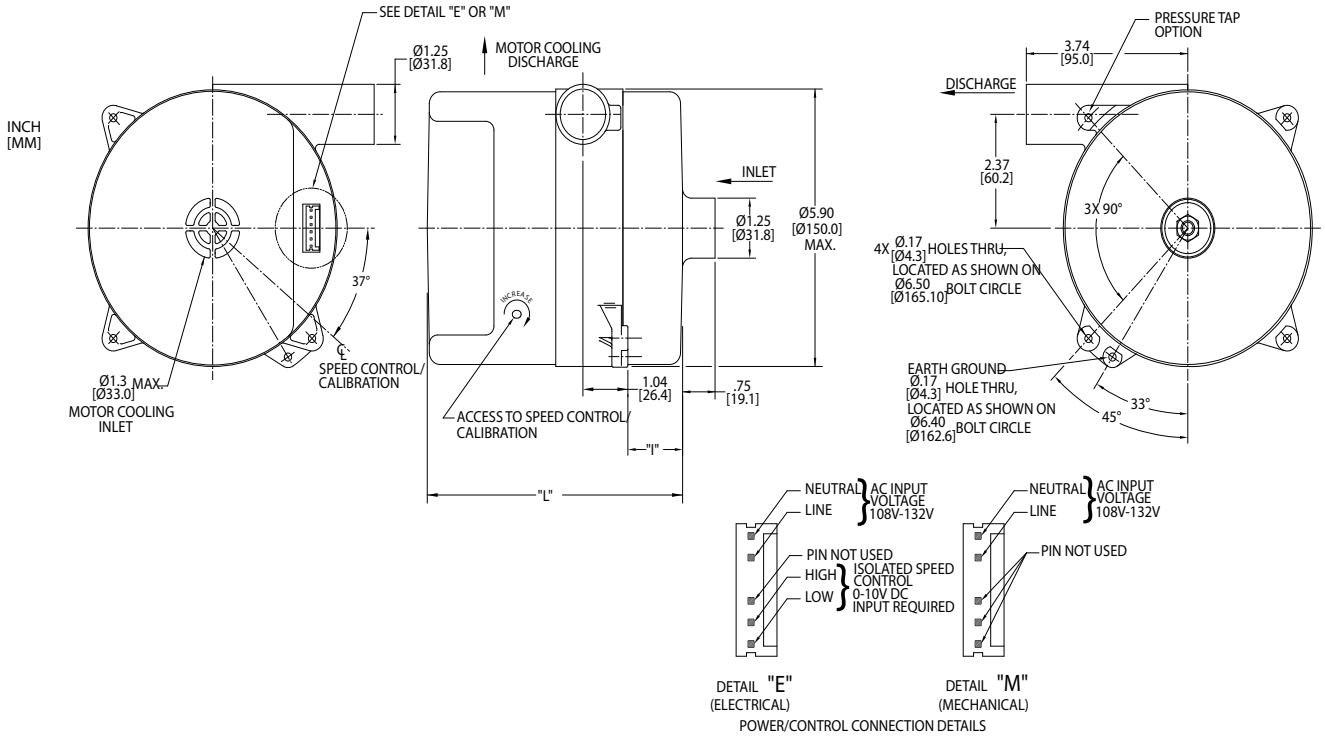
AMETEK® PRECISION MOTION CONTROL

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

250 Watt, 120 Volt Standard Flow



		Part/ Model Number					
Specification	Units	116634	116640	116633	116639	116632	116638
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	29.5	29.5	40.1	40.1	78.4	78.4
	mbar	73.5	73.5	99.9	99.9	195.3	195.3
Max Sealed Pressure	in. H2O	30.4	30.4	41.3	41.3	80.5	80.5
	mbar	75.7	75.7	102.9	102.9	200.5	200.5
Max Flow Rate	CFM	75.9	75.9	65.6	65.6	56.4	56.4
	m3/hr	129	129	111.5	111.5	95.9	95.9
Length (I)	Inches	0.33	0.33	1.25	1.25	2.14	2.14
	mm	8.4	8.4	31.8	31.8	54.4	54.4
Length (L)	Inches	5.08	5.08	6.35	6.35	6.89	6.89
	mm	129	129	161.3	161.3	175	175
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical	Mechanical	Electrical

Notes:

- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC,10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 640250-6 w/SL-156 contacts (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including: tachometer output card; Universal AC input (100V-240V).

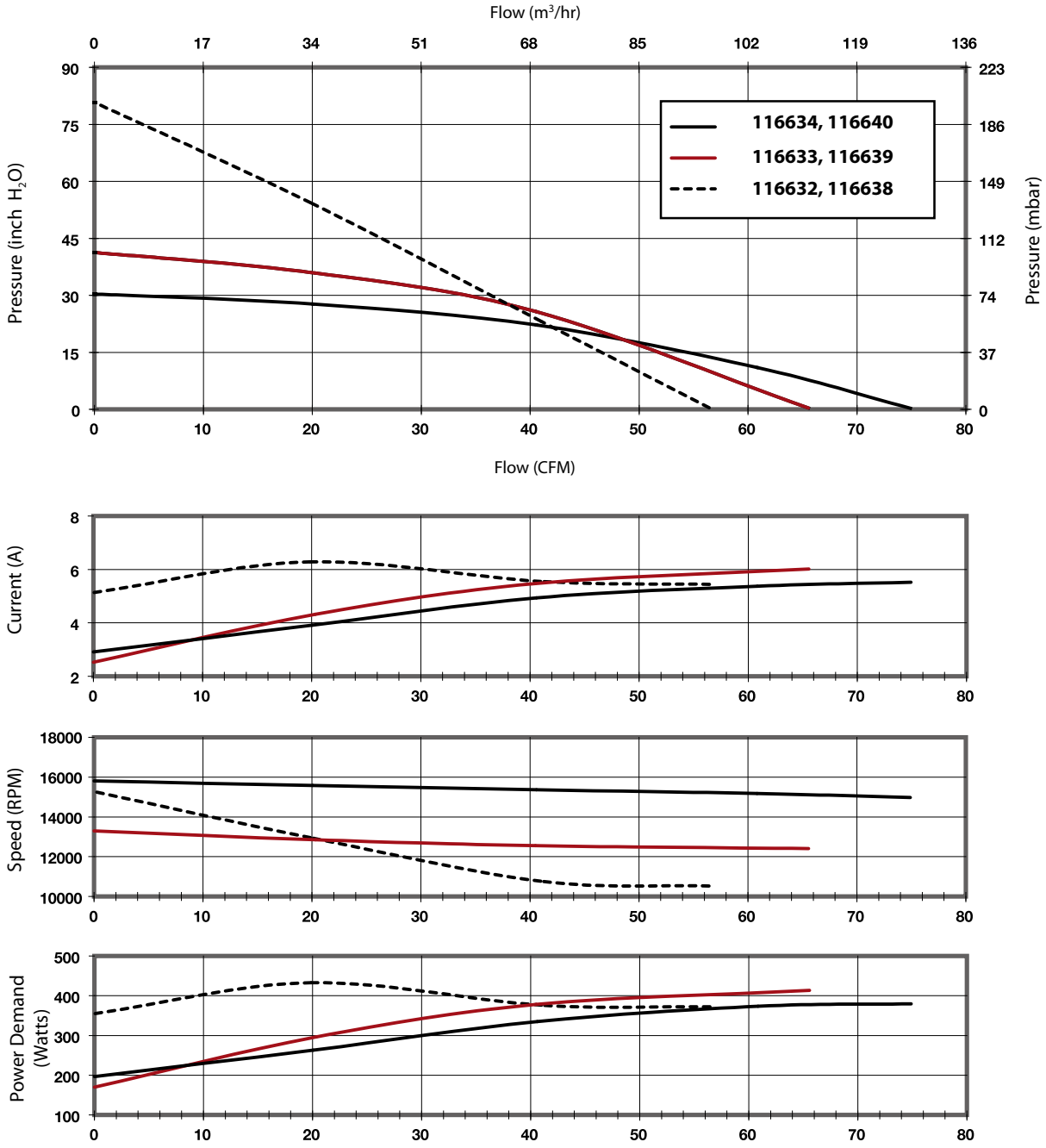
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

250 Watt, 120 Volt Standard Flow

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

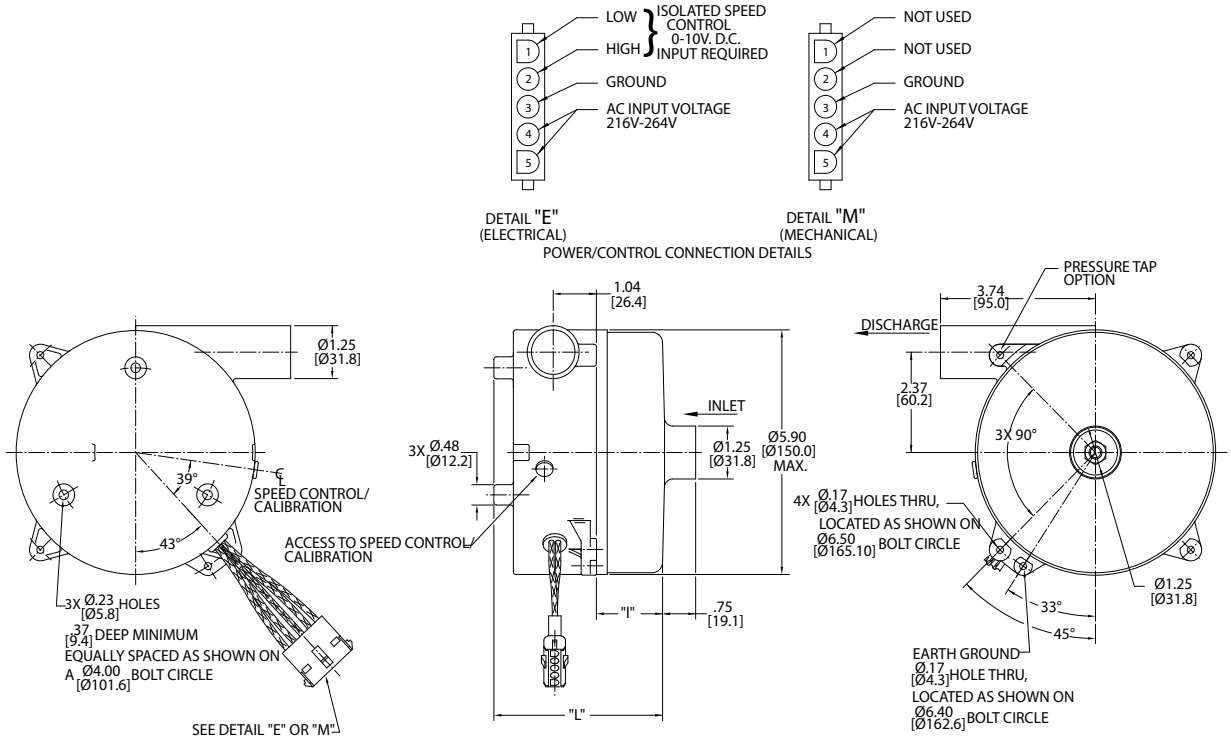
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Thru Flow Blower

400 Watt, 240 Volt Standard Flow

INCH
[MM]



		Part/ Model Number	
Specification	Units	117629	117630
Stages	-	1	2
Max Sealed Vacuum	in. H2O	28	47
	mbar	69.7	117.1
Max Sealed Pressure	in. H2O	31	50
	mbar	77.2	124.6
Max Airflow	CFM	67	65
	m3/hr	113.9	110.5
Length (I)	Inches	.69	1.6
	mm	17.5	40.6
Length (L)	Inches	3.21	4.12
	mm	81.5	104.6
Speed Control	-	Electrical	Electrical

Notes:

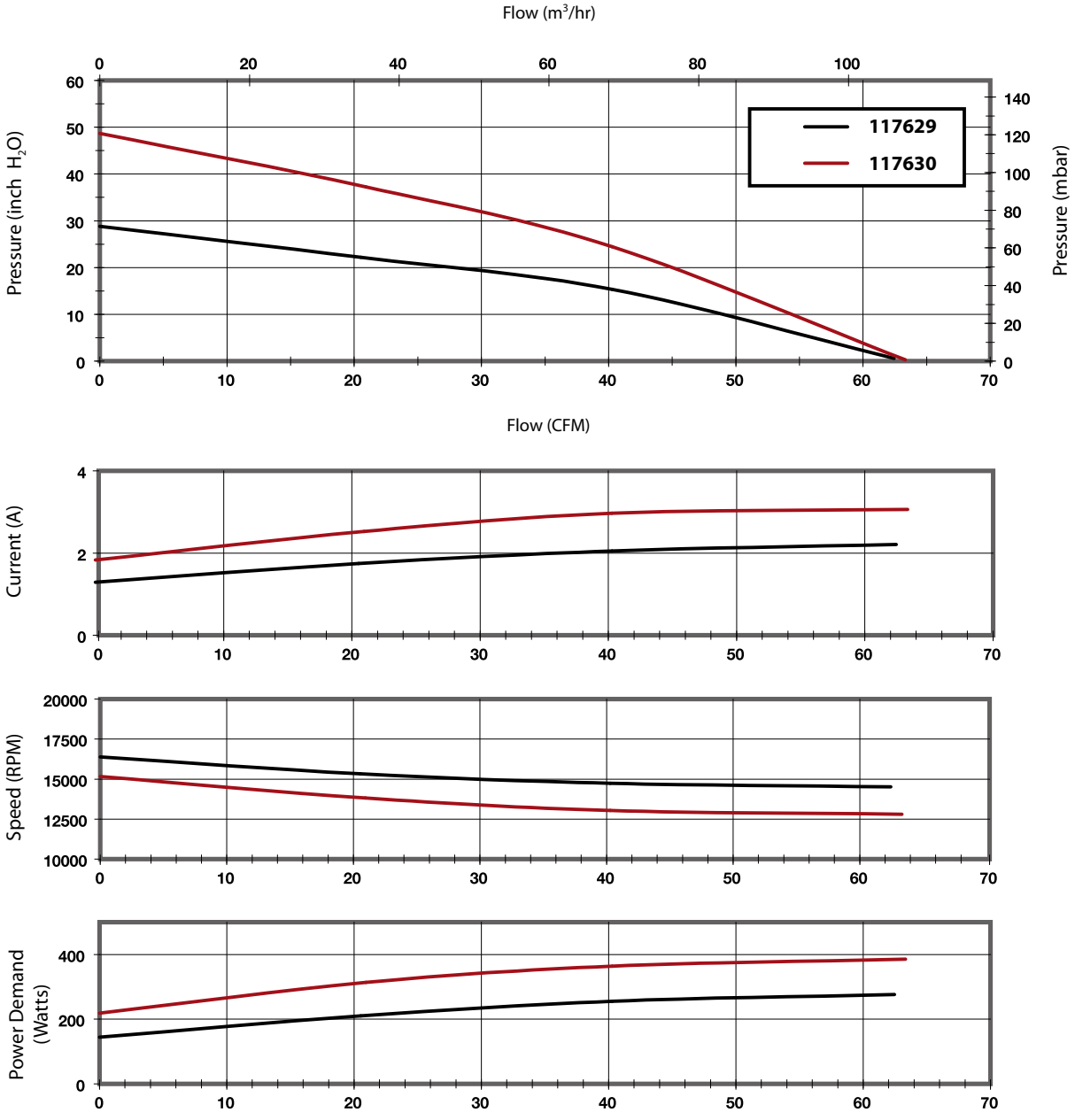
- **Input Voltage Range:** 216-264 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC, 10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with sockets for 18 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including; tachometer output card; Universal AC input (100V-240V).

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Thru Flow Blower

400 Watt, 240 Volt Standard Flow

Typical Performance



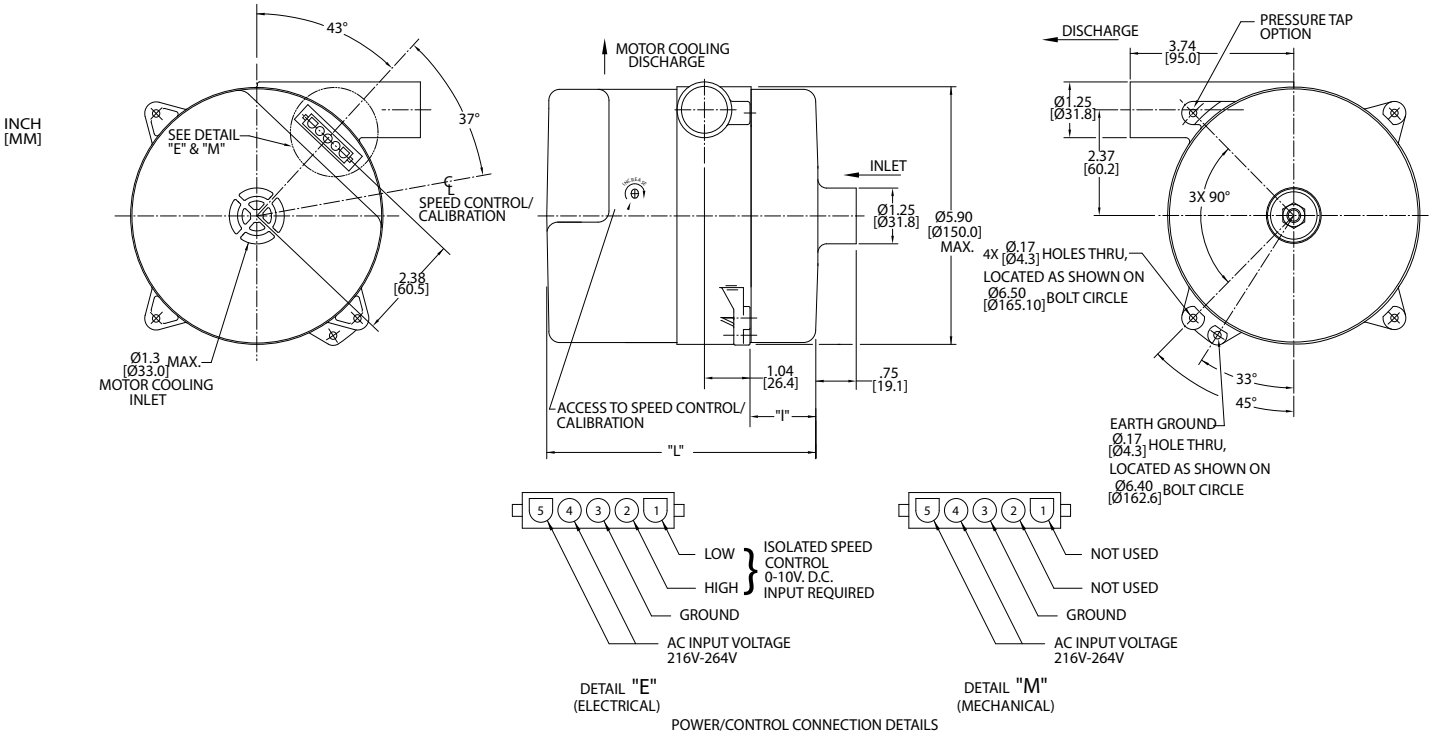
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

400 Watt, 240 Volt Standard Flow



		Part/ Model Number					
Specification	Units	117634	117640	117633	117639	117632	117638
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	28	28	45	45	60	60
	mbar	69.7	69.7	112.1	112.1	149.5	149.5
Max Sealed Pressure	in. H2O	30	30	51	51	72	72
	mbar	74.7	74.7	127	127	179.4	179.4
Max Flow Rate	CFM	70	70	67	67	65	65
	m3/hr	119	119	113.9	113.9	110.5	110.5
Length (I)	Inches	2.53	2.53	1.25	1.25	2.14	2.14
	mm	64.3	64.3	31.8	31.8	54.4	54.4
Length (L)	Inches	5.08	5.08	5.99	5.99	6.89	6.89
	mm	129	129	152.1	152.1	175	175
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical	Mechanical	Electrical
Windjammer Express			✓			✓	✓

Notes:

- **Input Voltage Range:** 216-264 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC, 10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with sockets for 18 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including; tachometer output card; Universal AC input (100V-240V).

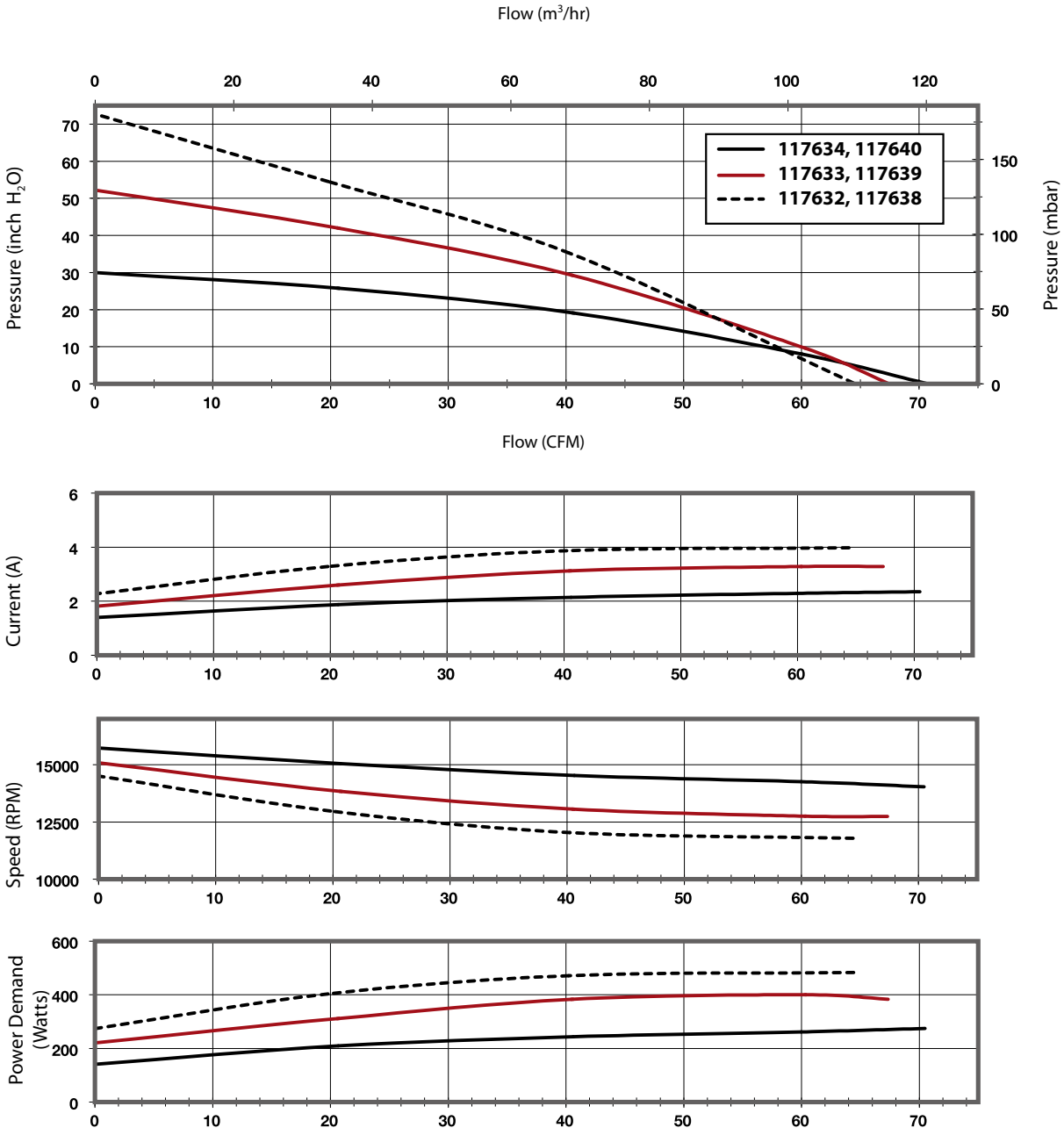
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

400 Watt, 240 Volt Standard Flow

Typical Performance



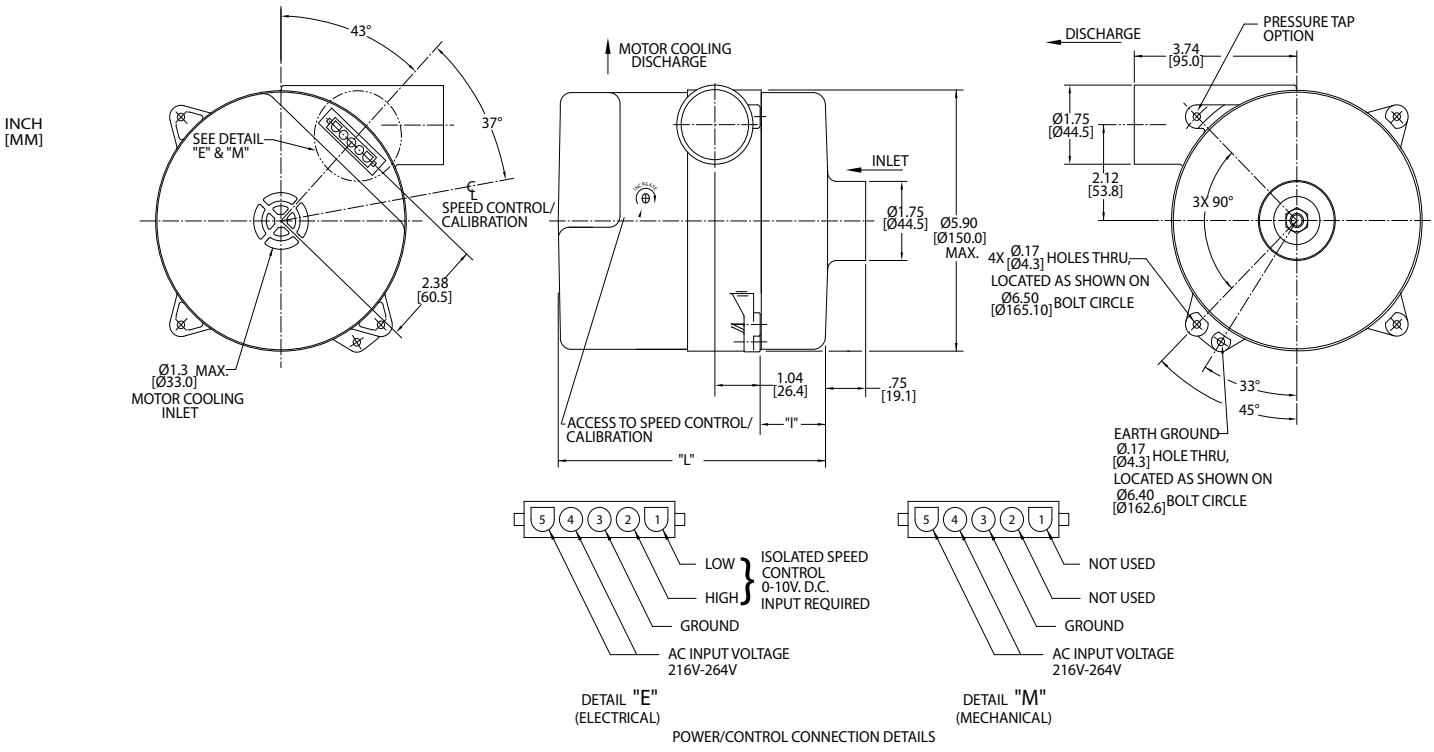
Data presented represents blower performance at STANDARD AIR DENSITY, WHICH IS: .075 lb./ft^3 (29.92" Hg, Sea Level, 68° F). Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

400 Watt, 240 Volt High Flow



		Part/ Model Number					
Specification	Units	117637	117643	117636	117642	117635	117641
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	22	22	39	39	53	53
	mbar	54.8	54.8	97.1	97.1	132	132
Max Sealed Pressure	in. H2O	24	24	45	45	61	61
	mbar	59.8	59.8	112.1	112.1	152	152
Max Flow Rate	CFM	106	106	95	95	90	90
	m3/hr	180.2	180.2	161.5	161.5	153	153
Length (I)	Inches	.47	.47	1.53	1.53	2.53	2.53
	mm	11.9	11.9	38.9	38.9	64.3	64.3
Length (L)	Inches	5.22	5.22	6.27	6.27	7.28	7.28
	mm	132.6	132.6	159.3	159.3	184.9	184.9
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical	Mechanical	Electrical
Windjammer Express		✓	✓	✓	✓		✓

Notes:

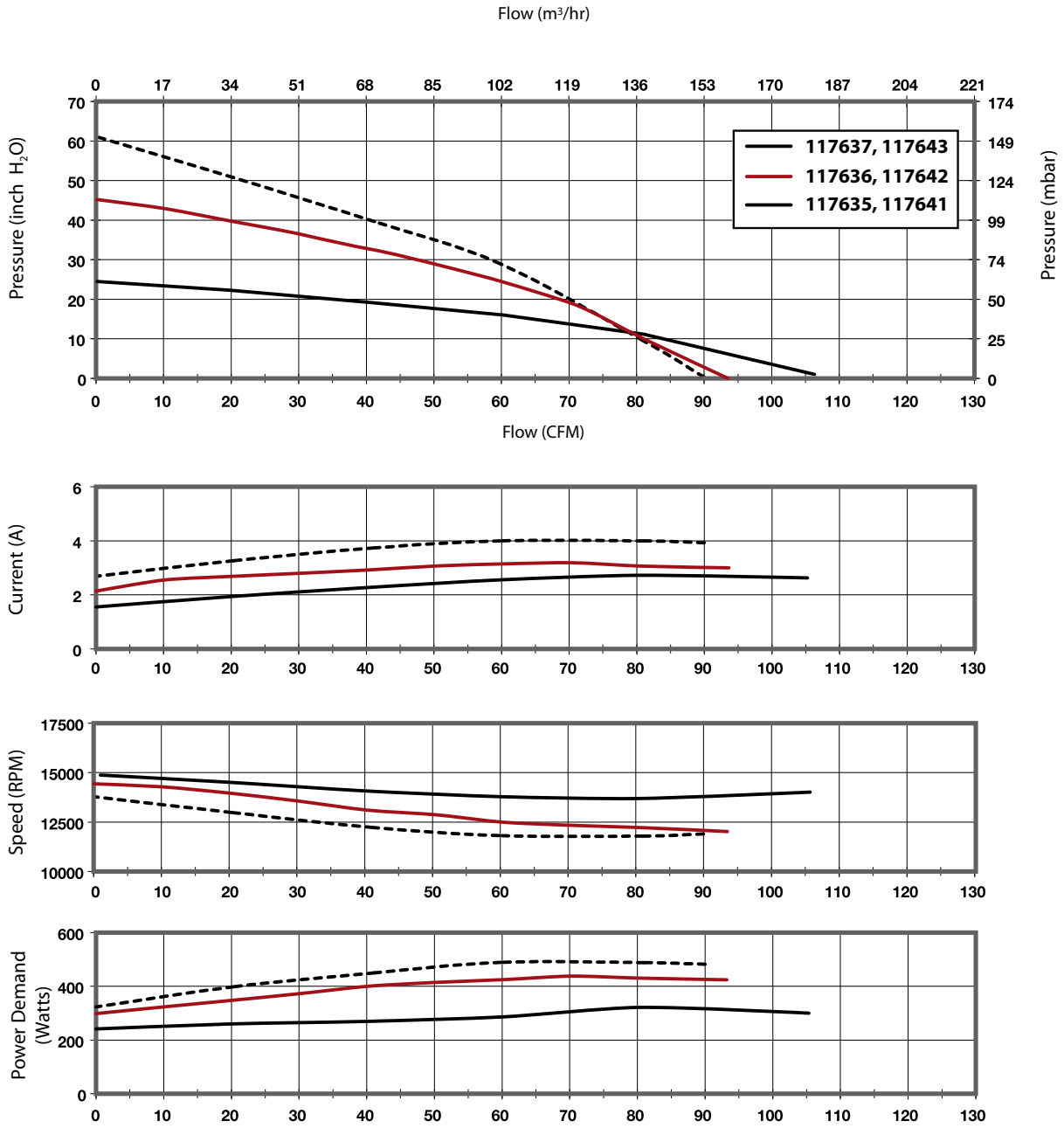
- **Input Voltage Range:** 216-264 Volts AC RMS, 50/60 Hz., Single Phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** E (Electrical) Pulse Width Modification or Analog input voltage (user supplied), 0 to 10 Volts DC, 10mA maximum, 3 to 15 Volts DC. Access to sensitivity adjustment for 0 to 10 VDC speed control. (Ref. pin connection).
  M (Mechanical): A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in blower housing.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with sockets for 18 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.
  Optional IntelliGen™ controller available for customized performance and features including; tachometer output card; Universal AC input (100V-240V).

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Bypass Blower

400 Watt, 240 Volt High Flow

Typical Performance



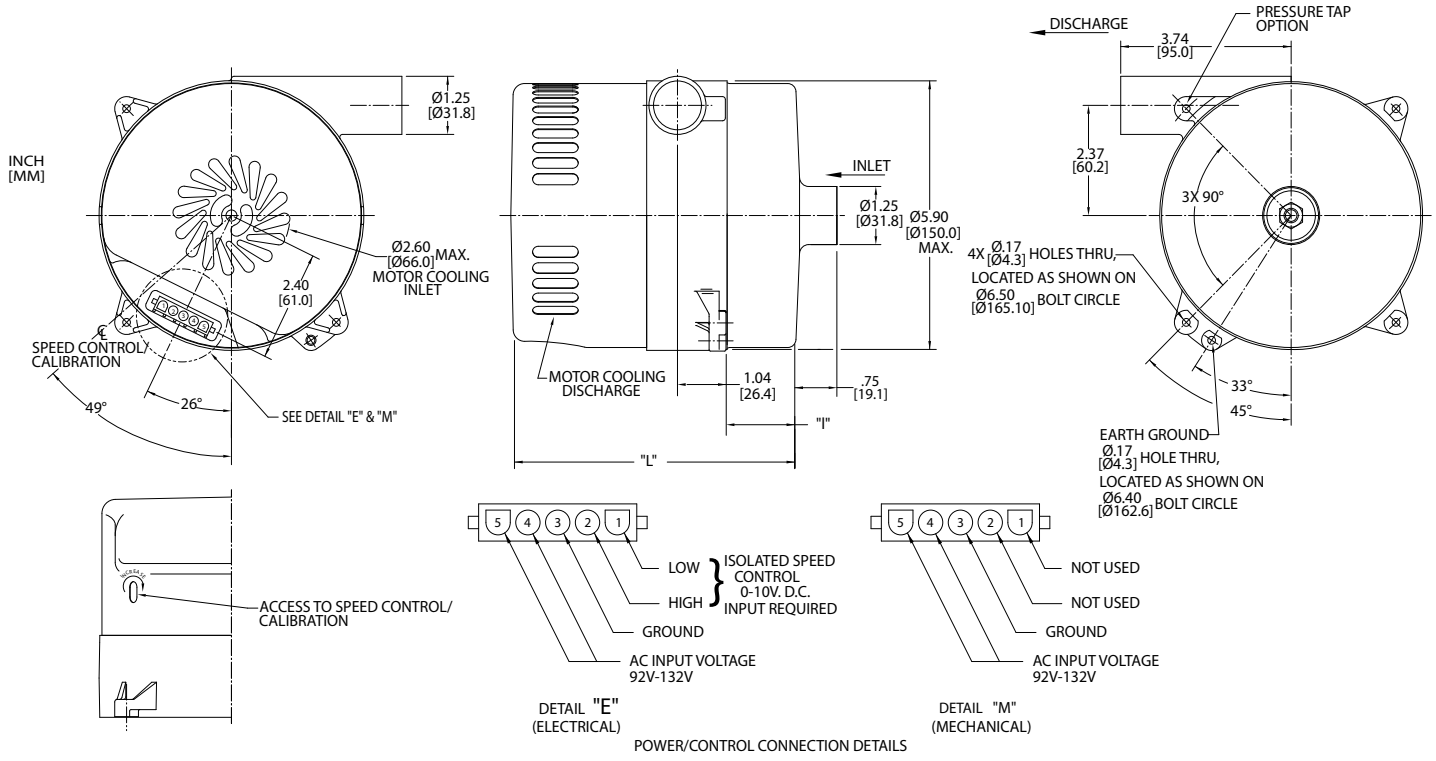
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

800 Watt,120 Volt Standard Flow - IntelliGen(TM)



Specification	Units	Part/ Model Number 117418	117417
Stages	-	3	3
Max Sealed Vacuum	in. H2O	102	102
	mbar	254.1	254.1
Max Sealed Pressure	in. H2O	122	122
	mbar	303.9	303.9
Max Flow Rate	CFM	76	76
	m3/hr	129.2	129.2
Length (I)	Inches	2.12	2.12
	mm	53.8	53.8
Length (L)	Inches	6.87	6.87
	mm	174.5	174.5
Speed Control	-	Mechanical	Electrical
Windjammer Express		✓	✓

Notes:

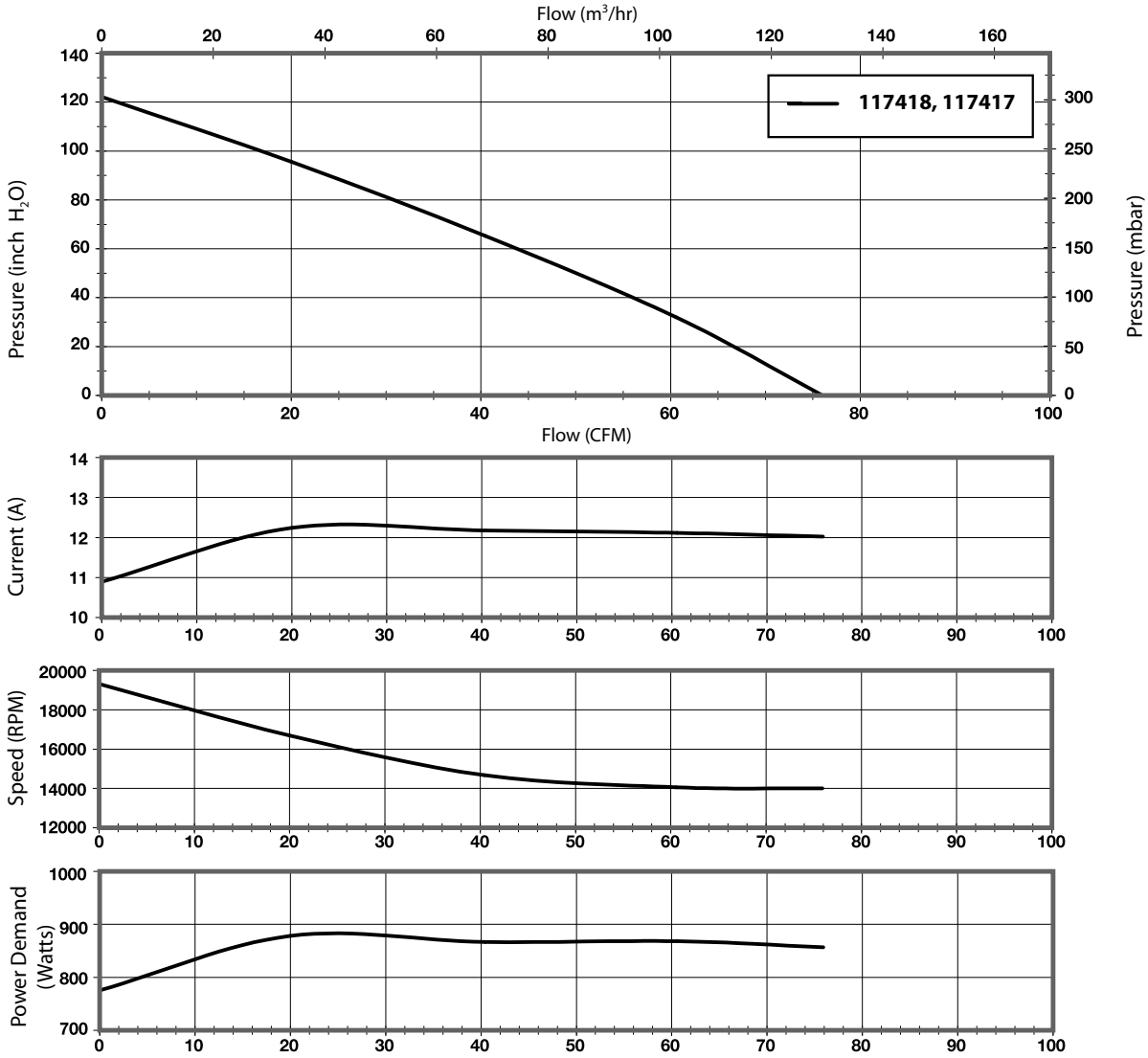
- **Input Voltage Range:** 92-132 Volts AC RMS, 50/60 Hz., Single Phase, maximum running current 10 Amps RMS.
  Note: Although this unit contains a lock-out feature that detects low voltage conditions, the electronics should not be operated continuously below the input voltage range listed above.
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C (Internal electronic controller is thermally protected).
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Isolated Speed Control:**
  Analog input voltage range: 2 to +10 VDC nominal (+13.5 VDC maximum).
  Digital Pulse Input: 400 Hz to 20 KHz, 0 to +10 volt pulse nominal, minimum duty cycle 10%, 0 to +13.5 volt maximum.
  Note: Setting of onboard potentiometer can effect control voltage range and maximum speed can be attained before reaching 10 VDC
- **Speed Control Input Current:** 5 mA to 20mA at 10 Volts input with multi-turn potentiometer set to minimum resistance (fully clockwise).
- **Speed Control Drift with Temperature:**
  Analog Mode: Typ. +-4% from nominal speed at +23 C.
  Digital or Direct Mode: Typ. +-4% from nominal speed at 23 C.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with male pins on 16 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

5.7" (145mm) BLDC Bypass Blower

800 Watt,120 Volt Standard Flow - IntelliGen(TM)

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

INSTALLATION:

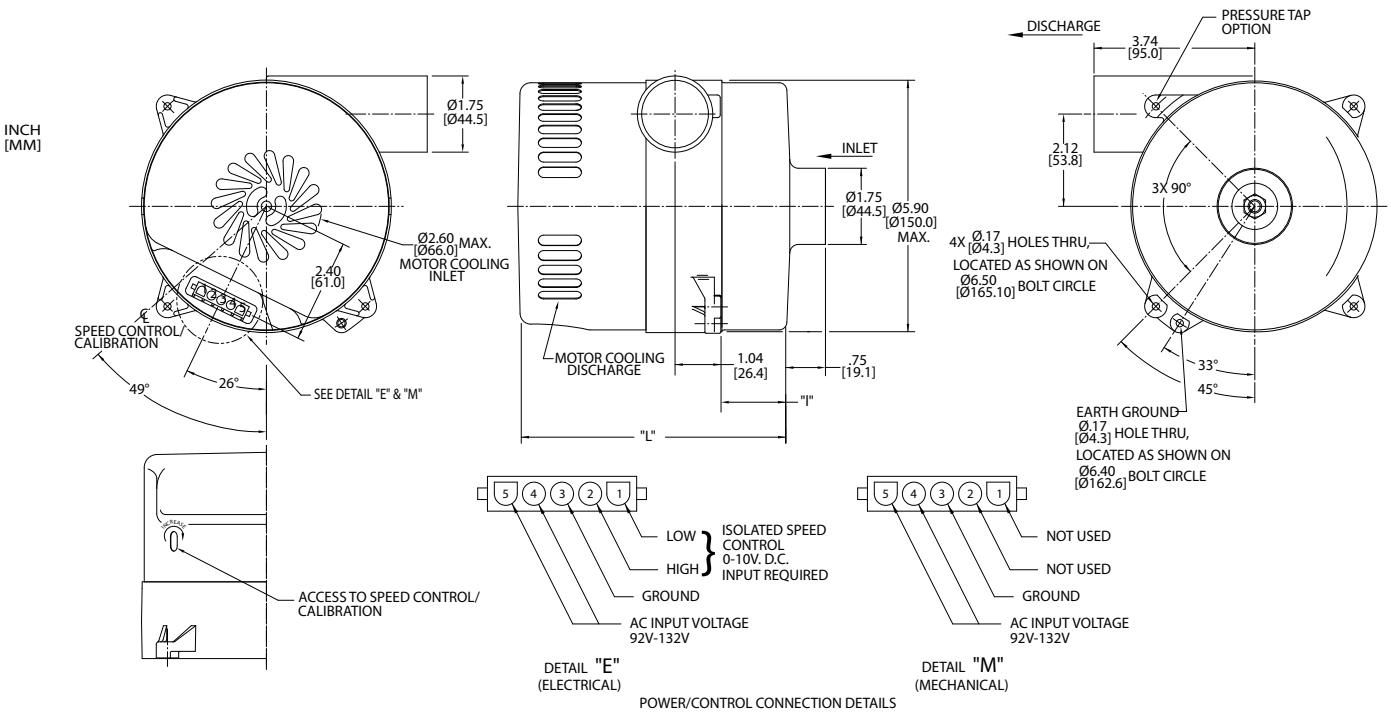
- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
- Connections:
  All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
  A mating connector with leads is supplied with single pack units only.
  Negative pressure applications will exhibit reduced performance.
  Exhaust air must be prohibited from being recycled to inlet air.
  If blower is to be cycled frequently, the DC speed command should be used.
  For use in industrial applications, use AMETEK Technical & Industrial Products cooling air filters.
- Note: Utilize AMETEK external EMC filter accessory to meet EN61000-4-6 requirement.
  Option Circuit Connections: Pleaase consult with AMETEK for connection details for all optional and custom circuitry.
- Utilizes AMETEK's IntelliGen™ control electronics.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

800 Watt, 120 Volt High Flow - IntelliGen (TM)



		Part/ Model Number				
Specification	Units	119102	119101	119104	119103	119105
Stages	-	1	1	2	2	1
Max Sealed Vacuum	in. H2O	31	31	67	67	24
	mbar	77.2	77.2	166.9	166.9	59.8
Max Sealed Pressure	in. H2O	39	39	78	78	30
	mbar	97.1	97.1	194.3	194.3	74.7
Max Flow Rate	CFM	140	140	131	131	210
	m3/hr	238	238	222.7	222.7	357
Inlet/Outlet Diameter	Inches	1.75	1.75	1.75	1.75	2.75/2.50
	mm	44.5	44.5	44.5	44.5	69.9/63.5
Length (I)	Inches	.47	.47	1.53	1.53	.71
	mm	11.9	11.9	38.9	38.9	18
Length (L)	Inches	5.30	5.30	6.19	6.19	5.46
	mm	134.6	134.6	157.2	157.2	138.7
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical	Electrical
Windjammer Express		✓		✓		✓

Notes:

- **Input Voltage Range:** 92-132 Volts AC RMS, 50/60 Hz., Single Phase, maximum running current 10 Amps RMS.
  Note: Although this unit contains a lock-out feature that detects low voltage conditions, the electronics should not be operated continuously below the input voltage range listed above.
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C (Internal electronic controller is thermally protected).
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Isolated Speed Control:**
  Analog input voltage range: 2 to +10 VDC nominal (+13.5 VDC maximum).
  Digital Pulse Input: 400 Hz to 20 KHz, 0 to +10 volt pulse nominal, minimum duty cycle 10%, 0 to +13.5 volt maximum.
  Note: Setting of onboard potentiometer can effect control voltage range and maximum speed can be attained before reaching 10 VDC
- **Speed Control Input Current:** 5 mA to 20mA at 10 Volts input with multi-turn potentiometer set to minimum resistance (fully clockwise).
- **Speed Control Drift with Temperature:**
  Analog Mode: Typ. +-4% from nominal speed at +23 C.
  Digital or Direct Mode: Typ. +-4% from nominal speed at 23 C.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with male pins on 16 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.

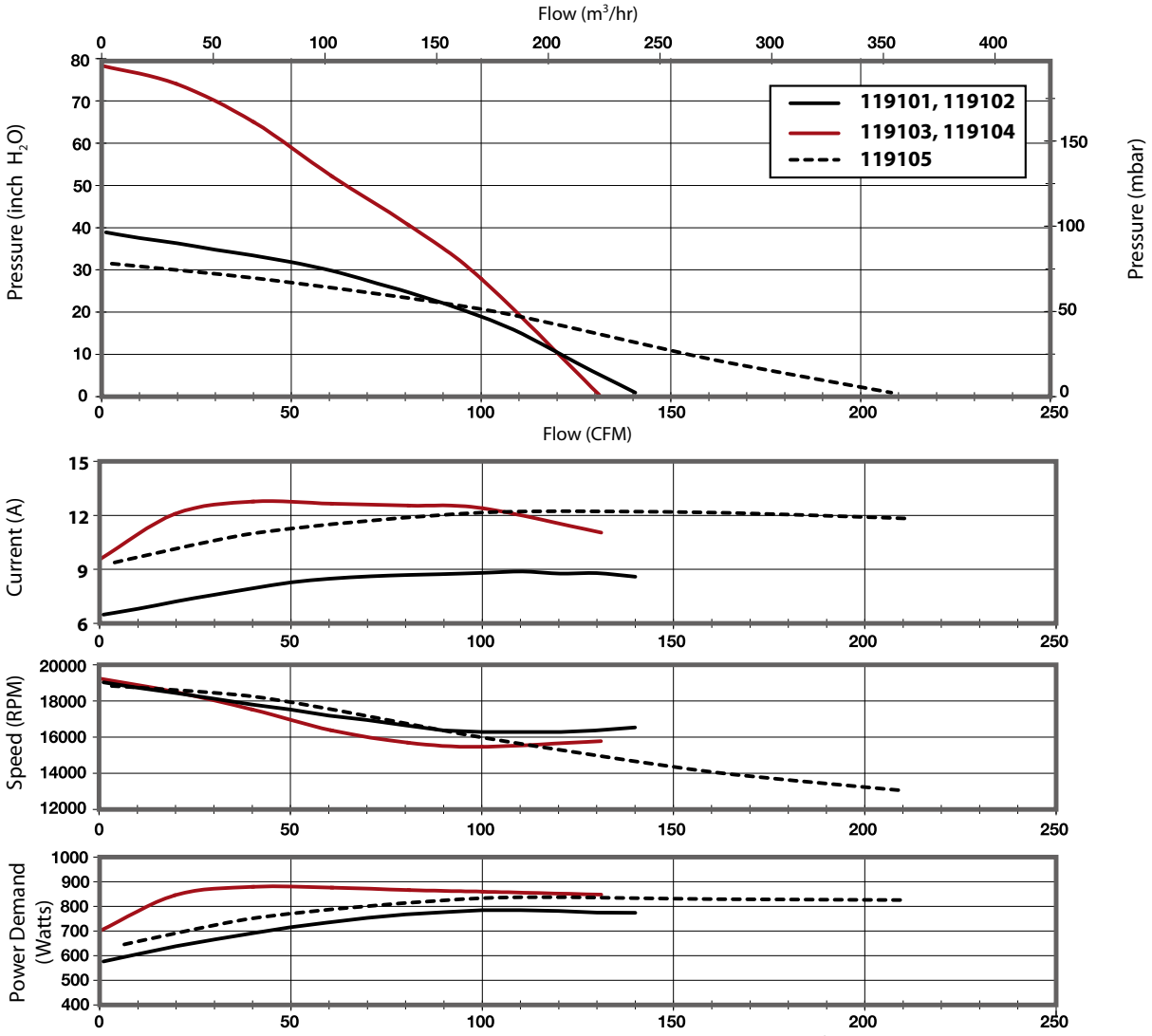
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

800 Watt, 120 Volt High Flow - IntelliGen (TM)

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

INSTALLATION:

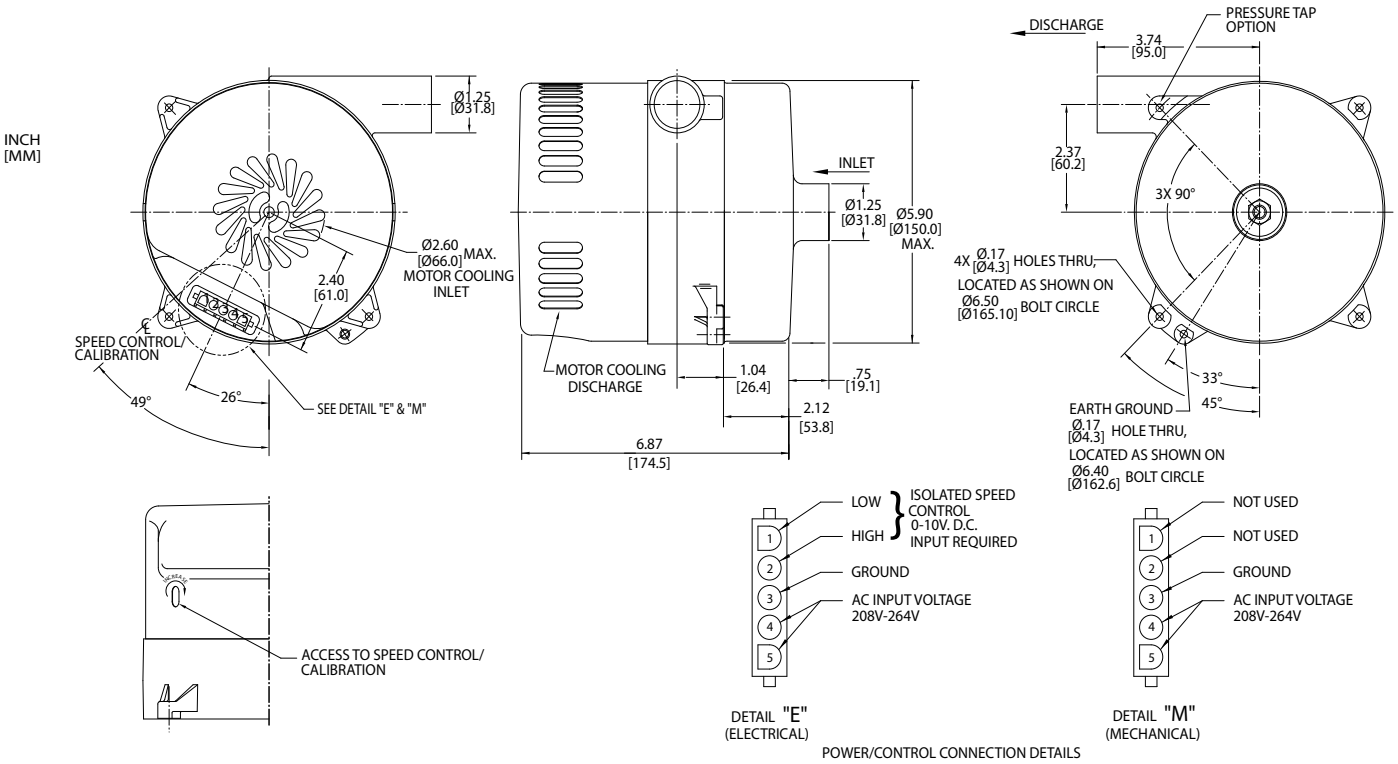
- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
- Connections:
  All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
  A mating connector with leads is supplied with single pack units only.
  Negative pressure applications will exhibit reduced performance.
  Exhaust air must be prohibited from being recycled to inlet air.
  If blower is to be cycled frequently, the DC speed command should be used.
  For use in industrial applications, use AMETEK Technical & I ndustrial Products cooling air filters.
- Note: Utilize AMETEK external EMC filter accessory to meet EN61000-4-6 requirement.
  Option Circuit Connections: Please consult with AMETEK for connection details for all options and custom circuitry.
- Utilizes AMETEK's IntelliGen™ control electronics.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

1200 Watt, 240 Volt Standard Flow - IntelliGen (TM)



		Part/ Model Number	
Specification	Units	117416	117415
Stages	-	3	3
Max Sealed Vacuum	in. H2O	154	154
	mbar	383.6	383.6
Max Sealed Pressure	in. H2O	169	169
	mbar	421	421
Max Flow Rate	CFM	87	87
	m3/hr	147.9	147.9
Speed Control	-	Mechanical	Electrical
Windjammer Express™		✓	✓

Notes:

- **Input Voltage Range:** 208-264 Volts AC RMS, 50/60 Hz., Single Phase, maximum running current 10 Amps RMS.
  Note: Although this unit contains a lock-out feature that detects low voltage conditions, the electronics should not be operated continuously below the input voltage range listed above.
- **Operating Temperature (Ambient Air and Working Air):** 0˚ C to 50˚ C
- **Storage Temperature:** -40˚ C to 85˚ C (Internal electronic controller is thermally protected).
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Isolated Speed Control:**
  Analog Input Voltage Range: 2 to +10 VDC nominal (+13.5 VDC maximum).
  Digital Pulse Input: 400 Hz to 20 KHz, 0 to +10 volt pulse nominal, minimum duty cycle 10%, 0 to +13.5 volt maximum.
  Note: Setting of onboard potentiometer can effect control voltage range and maximum speed can be attained before reaching 10 VDC
- **Speed Control Input Current:** 5 mA to 20mA at 10 Volts input with multi-turn potentiometer set to minimum resistance (fully clockwise).
- **Speed Control Drift with Temperature:**
  Analog Mode: Typ. +-4% from nominal speed at +23 C.
  Digital or Direct Mode: Typ. +-4% from nominal speed at 23 C.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standard Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with male pins on 16 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.

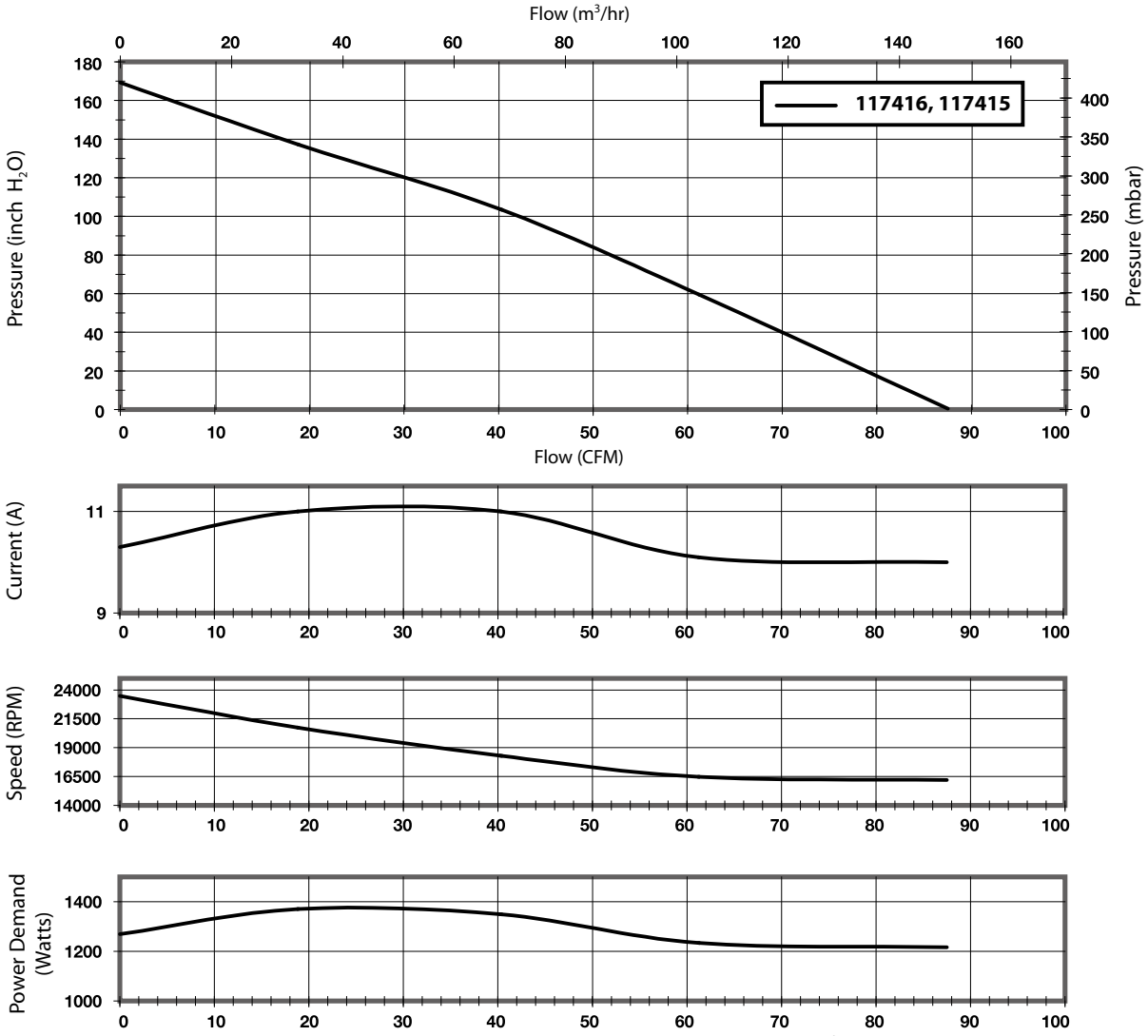
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK
PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

1200 Watt, 240 Volt Standard Flow - IntelliGen (TM)

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

INSTALLATION:

- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
- Connections:
  All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
  A mating connector with leads is supplied with single pack units only.
  Negative pressure applications will exhibit reduced performance.
  Exhaust air must be prohibited from being recycled to inlet air.
  If blower is to be cycled frequently, the DC speed command should be used.
  For use in industrial applications, use AMETEK Technical & Industrial Products cooling air filters.
  Note: Utilize AMETEK external EMC filter accessory to meet EN61000-4-6 requirement.
- Option Circuit Connections: Please consult with AMETEK for connection details for all options and custom circuitry.
- Utilizes AMETEK's IntelliGen™ control electronics.

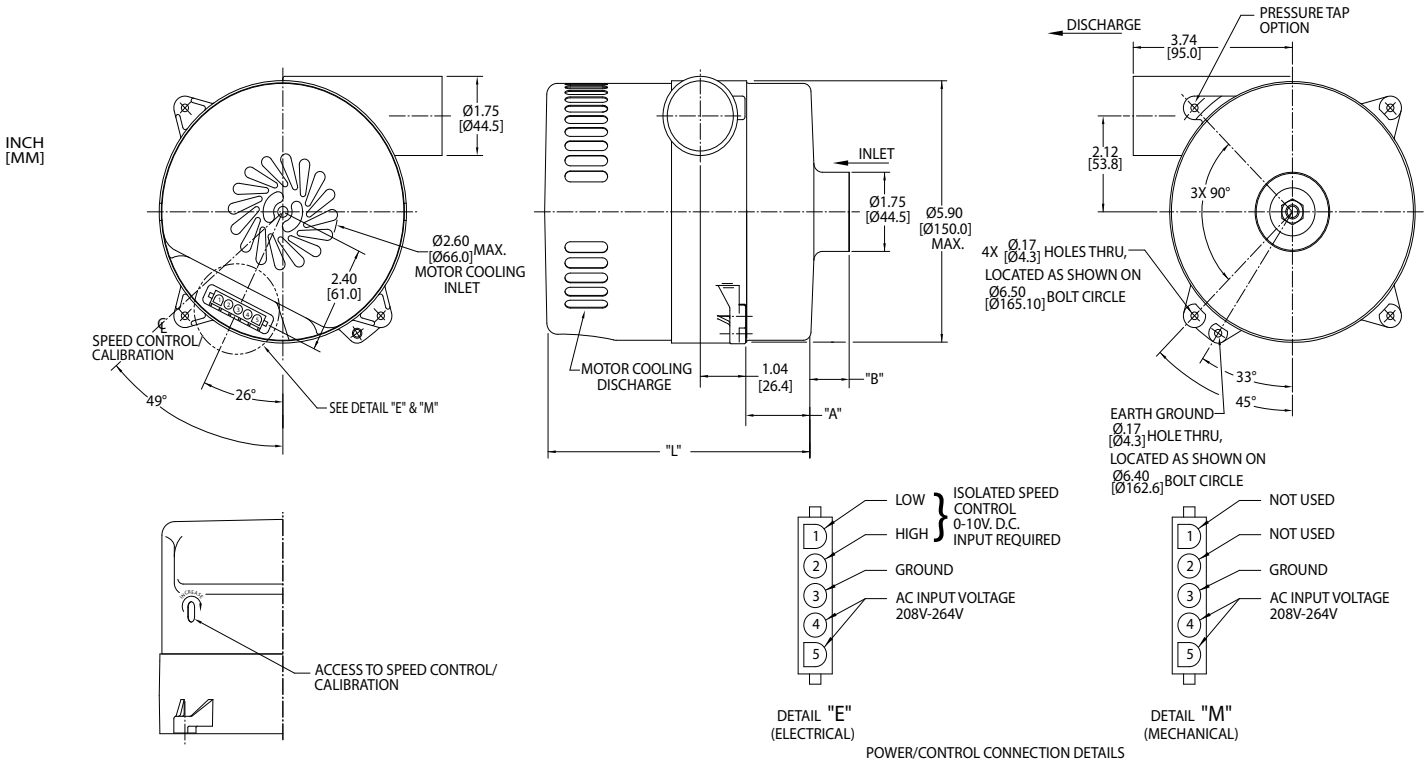
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

Windjammer® BRUSHLESS BLOWERS

1200 Watt, 240 Volt High Flow - IntelliGen (TM)



		Part/ Model Number					
Specification	Units	119152	119151	119154	119153	119156	119155
Flow	-	High Flow	High Flow	High Flow	High Flow	High Flow	Ultra High Flow
Stages	-	1	1	2	2	3	1
Max Sealed Vacuum	in. H2O	46	46	80	80	119	42
	mbar	114.6	114.6	199.3	199.3	296.4	104.6
Max Sealed Pressure	in. H2O	56	56	111	111	130	45
	mbar	139.5	139.5	276.5	276.5	323.8	112.1
Max Flow Rate	CFM	180	180	140	140	113	268
	m3/hr	306	306	238	238	192.1	455.6
Inlet/Outlet Diameter	Inches	1.75	1.75	1.75	1.75	1.75	2.75/2.50
	mm	44.5	44.5	44.5	44.5	44.5	69.9/63.5
Length (I)	Inches	.47	.47	1.58	1.58	1.19	0.71
	mm	11.9	11.9	40.1	40.1	30.2	18
Length (L)	Inches	5.13	5.13	6.19	6.19	7.17	5.37
	mm	130.3	130.3	157.2	157.2	182.1	136.4
Speed Control	-	Mechanical	Electrical	Mechanical	Electrical	Electrical	Electrical

Notes:

- **Input Voltage Range:** 216-264 Volts AC RMS, 50/60 Hz., Single Phase, maximum running current 10 Amps RMS.
  Note: Although this unit contains a lock-out feature that detects low voltage conditions, the electronics should not be operated continuously below the input voltage range listed above.
- **Operating Temperature (Ambient Air and Working Air):** 0° C to 50° C
- **Storage Temperature:** -40° C to 85° C (Internal electronic controller is thermally protected).
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Isolated Speed Control:**
  Analog Input Voltage Range: 2 to +10 VDC nominal (+13.5 VDC maximum).
  Digital Pulse Input: 400 Hz to 20 KHz, 0 to +10 volt pulse nominal, minimum duty cycle 10%, 0 to +13.5 volt maximum.
  Note: Setting of onboard potentiometer can effect control voltage range and maximum speed can be attained before reaching 10 VDC
- **Speed Control Input Current:** 5 mA to 20mA at 10 Volts input with multi-turn potentiometer set to minimum resistance (fully clockwise).
- **Speed Control Drift with Temperature:**
  Analog Mode: Typ. +-4% from nominal speed at +23 C.
  Digital or Direct Mode: Typ. +-4% from nominal speed at 23 C.
- **Approximate Weight:** 6 Lbs. / 2.2 Kg.
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standard Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exhaust must be free of grease, oil and foreign particles. Amp housing 350809-1 with male pins on 16 awg lead wire (suppied by customer) mates with post header assembly.
  Mating harness available upon request.

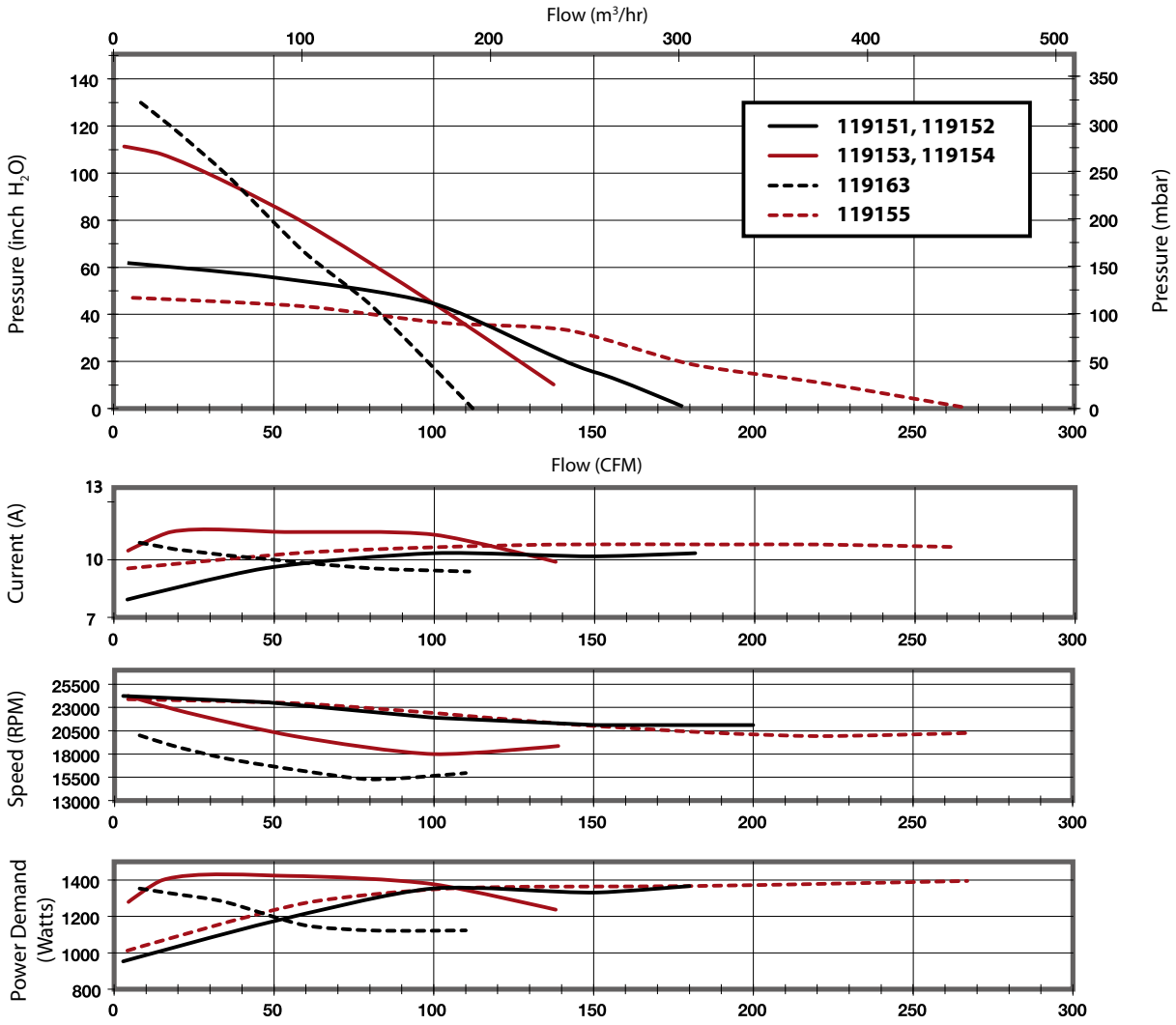
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

5.7" (145mm) BLDC Bypass Blower

1200 Watt, 240 Volt High Flow - IntelliGen (TM)

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

INSTALLATION:

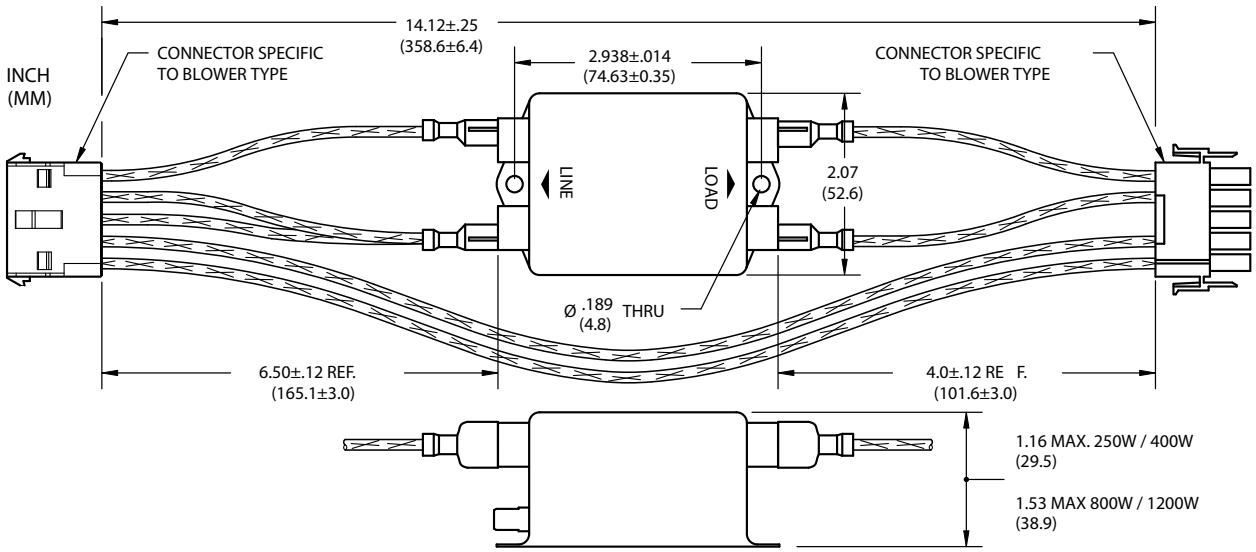
- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
  Connections:
  . All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
  A mating connector with leads is supplied with single pack units only.
  Negative pressure applications will exhibit reduced performance.
  Exhaust air must be prohibited from being recycled to inlet air.
  If blower is to be cycled frequently, the DC speed command should be used.
  For use in industrial applications, use AMETEK Technical & Industrial Products cooling air filters.
  Note: Utilize AMETEK external EMC filter accessory to meet EN61000-4-6 requirement.
- Option Circuit Connections: Please consult with AMETEK for connection details for all options and custom circuitry.
- Utilizes AMETEK's IntelliGen™ control electronics.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

EMI Filter

120/240 Volt AC



		Part/ Model Number			
Specification	**Units**	5-90238-1	5-90239-1	5-90238-2	5-90239-2
Description	-	250 W Windjammer	400 W Windjammer	800 W Windjammer	1200 W Windjammer

Part Number	5-90238-1	5-90239-1	5-90238-2	5-90239-2
Description	Mates with 250 W Series Windjammer	Mates with 400 W Series Windjammer	Mates with 800 W Series Windjammer	Mates with 1200 W Series Windjammer
Length ("L" above) inches	2.938	2.938	2.938	2.938
Length ("L" above) mm	74.63	74.63	74.63	74.63

Line Side: Connector Termination	
Description	Wire Color
Ground	GREEN / YELLOW
AC Hot	BROWN
AC Hot	BLUE

Load Side: Connector Termination	
Description	Wire Color
Speed (LO)	BLUE
Speed (HI)	RED
Ground	GREEN / YELLOW
AC Hot	BROWN
AC Hot	BLUE

Emissions Testing	
CISPR 11, I EN 55011, I	ISM (Group I) No intentional emissions Industrial, Scientific, and Medical
CISPR 11, II EN 55011, II	ISM (Group II) intentional ISM emissions Industrial, Scientific, and Medical
CISPR 14 EN 55014	HHA Household appliances and similar apparatus
CISPR 14 EN 55014	Clicks (Discontinuous Noise) Impulsive noise due to transients; Required for all impulsive
CISPR 22 EN 55022	ITE Information Technology Equipment; Emissions testing for

Immunity Testing	
IEC 801-2 IEC 1000-4-2 EN 61000-4-2	ESD Electrostatic discharge Static from humans
IEC 801-3 IEC 1000-4-3 EN 61000-4-3	Radiated RF RF electromagnetic field Walkie talkies, transmitters, etc.
IEC 801-4 IEC 1000-4-4 EN 61000-4-4	EFT Electrical fast transient Relays and motors on and off
IEC 801-5 IEC 1000-4-5 EN 61000-4-5	Lightning on power line Surge voltage Lightning
IEC 801-6 IEC 1000-4-6 EN 61000-4-6	Conducted CW Conducted induced RF energy Power and signal lines near transmitters
IEC 1000-4-8 EN 61000-4-8	Radiated magnetic Power frequency magnetic field; Magnetic flux from power lines
IEC 1000-4-11 EN 61000-4-11	Voltage dips Drop in voltage for a short period
IEC 1000-4-11 EN 61000-4-11	Voltage interrupts Loss of power for a short period
IEC 1000-4-11 EN 61000-4-11	Voltage variations Power line voltage variations

- Primarily used with the Windjammer product line
- Excellent for meeting European application requirements
- Hard-mount option available

NOTES:
Contact your AMETEK Sales Engineer for updates and more information on this product.

This document is for informational purposes only and should not be considered as a binding description of the products and their performance in all applications. Specific dimensions may change based on wattage.

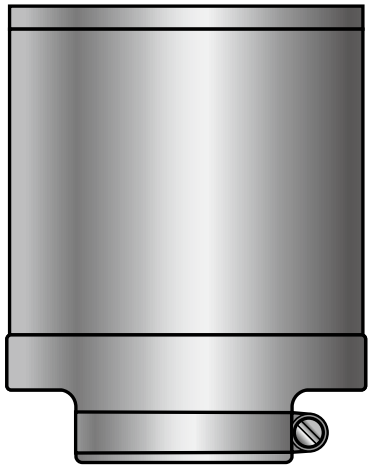
High Voltage Brushless DC Blowers

Variable Flow Filters

For use with AMETEK Windjammer and Nautilair Blowers

Filter Design Features

AMETEK Technical & Industrial Product's inlet filter is designed to protect the blower and the air distribution system from dust and other air borne particles and contaminants. The compact design, with slip fit connection; fits within the blower's diameter. Minimal pressure drop through filter. This is an ideal filter for electronic cooling, material handling, and other pressure systems. The AMETEK Windjammer blower has two models, one for each inlet diameter; the AMETEK Nautilair blower has one model, designed to fit on all five of the blowers.



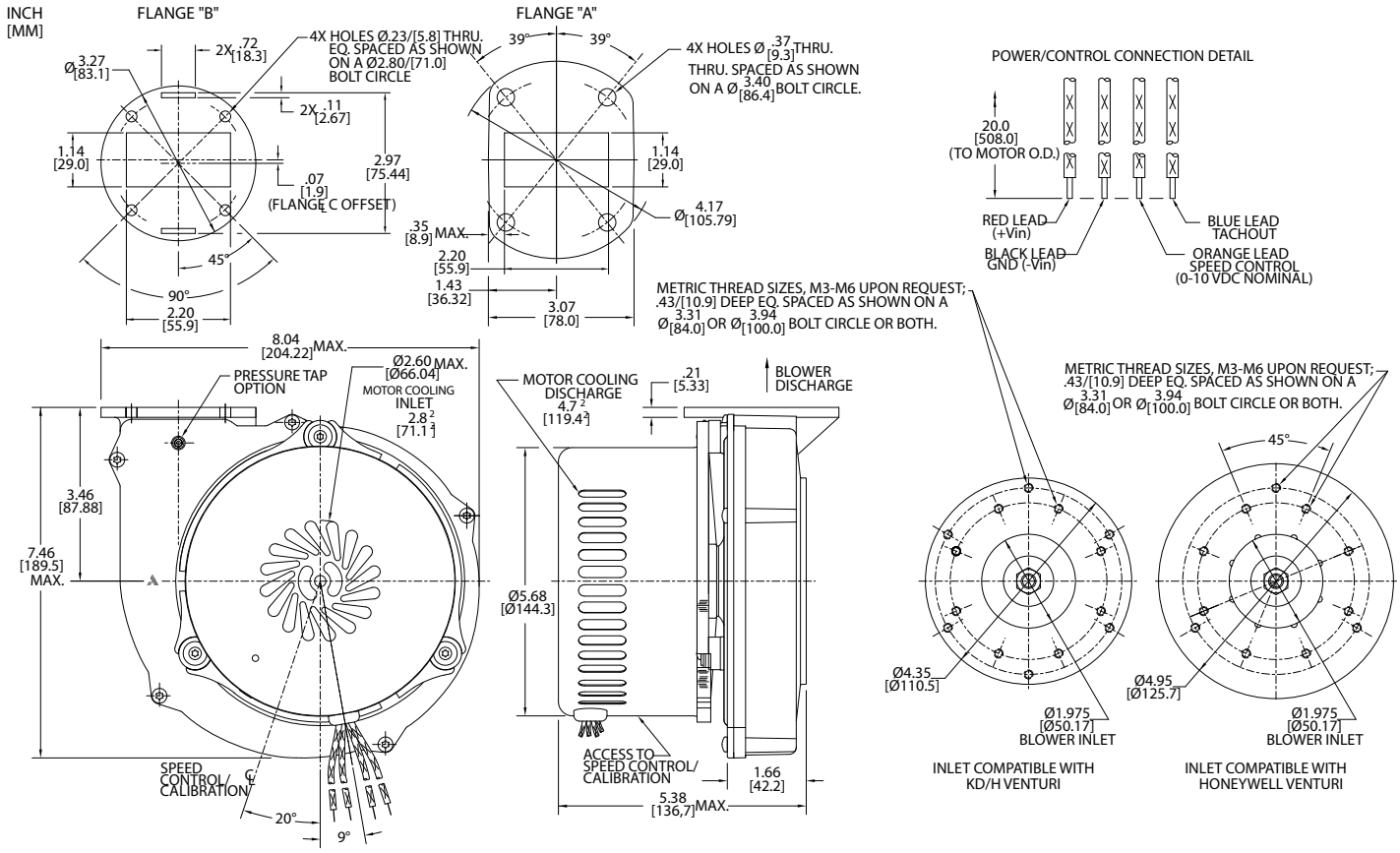
		Part/ Model Number		
Specification	**Units**	551733	551692	551782
Pressure Drop	in. H2O	4.8	3.6	0.25
	mbar	12	9	0.6
Inlet Diameter D1	Inches	1.25	1.75	6
	mm	31.8	44.5	152.4
Flow Rate	CFM	100	180	500
	m3/hr	170	306	850
Efficiency	-	99+% @ 10 Microns	99+% @ 10 microns	97+% @ 2 microns, 99+% @ 5 microns
Description	-	Slip Fit with Pleated Polyester Media	Slip Fit with Pleated Polyester Media	Slip Fit with Pleated Polyester Media
Diameter	Inches	4.75	4.375	9.75
	mm	120.7	111.1	247.7
Height	Inches	5.75	5.75	10
	mm	146.1	146.1	254
Series	-	Windjammer	Windjammer	Nautilair

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

12/24 VDC Input, Standard Output



		Part/ Model Number				
Specification	Units	150186	150180	150181	150184	150185
Voltage	VDC	12	24	24	24	24
Flange Type	-	Large "A"	Large "A"	Large "A"	Small "B"	Small "B"
Speed Control	-	Mechanical	Mechanical	Electronic	Mechanical	Electronic

Notes:

- **Input Voltage Range:** 12 or 24 Volts DC
- **Operating Temperature (Ambient Air and Working Air):** -25°C to 50°C
- **Storage Tempurature:** -40°C to 85°C
- **Dielectric Testing:** 500 Volts AC RMS 50/60 Hz applied for one second between input pins and ground, 1mA leakage maximum.
- **Speed Control Methods:** 0 to 10 VDC speed control.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed.
  Access for speed adjustment located in motor housing.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constucted of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Micellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower to be mounted so ventilation air cannot be re-circulated.
  POWER/CONTROL CONNECTION: Stripped wire leads.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

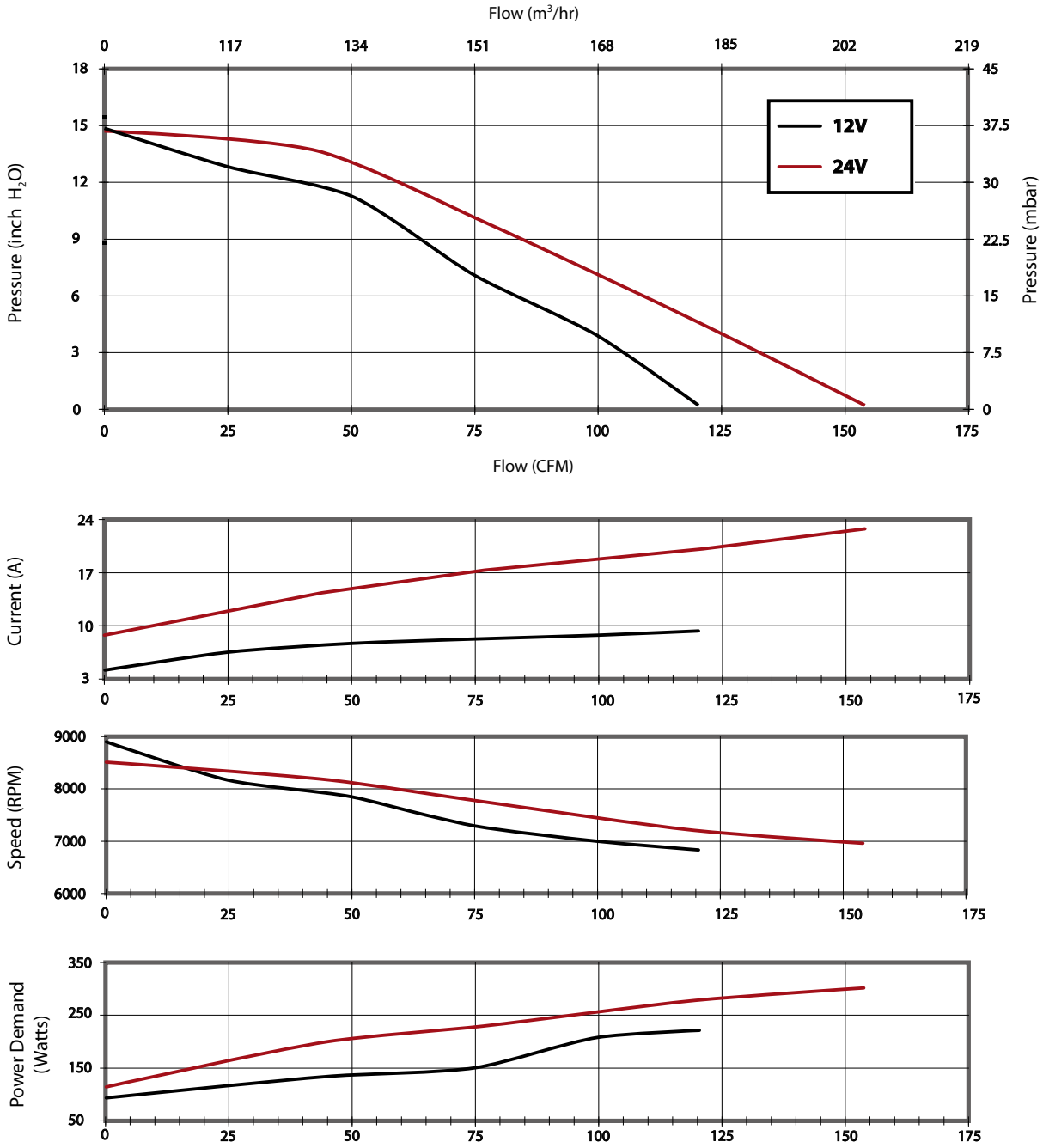
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

12/24 VDC Input, Standard Output

Nautilair

Typical Performance



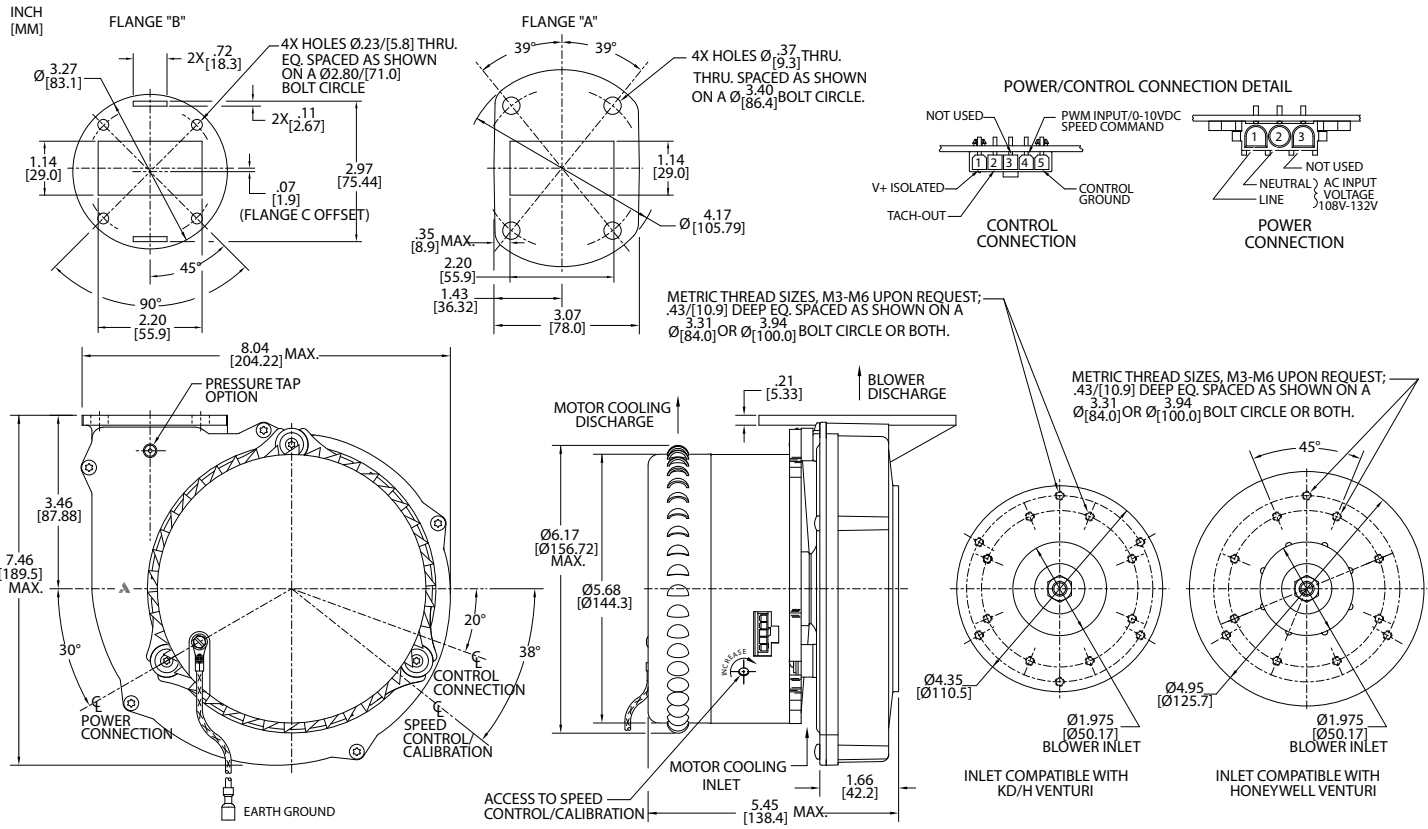
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output



		Part/ Model Number					
Specification	Units	150500	150501	150502	150503	150504	150505
Flange Type	-	Large "A"	Large "A"	Large "A"	Small "B"	Small "B"	Small "B"
Speed Control	-	PWM	0-10 VDC	Mechanical	PWM	0-10VDC	Mechanical

Notes:

- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz, single phase.
- **input Current:** 3 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation) (1kHz to 10 kHz)
  0 to 10 VDC speed control.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under FIle E94403 and compliant under the CE Low Voltage Directive 2006/95/EC.
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower constuction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gaket for combustion applications. Customer is responsible to check for any leakage once th blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstucted. Motor ventilation air to be free of oils and other foreign particles (i.e. breathing quality air). Blower to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION: Blower connector, AMP Universal MATE-N-LOK, part no. 1-350943-0.
  CONTROL CONNECTION: Blower connector, Molex Mini-Fit Jr., part no. 39-30-3056.
  Mating harnessess available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

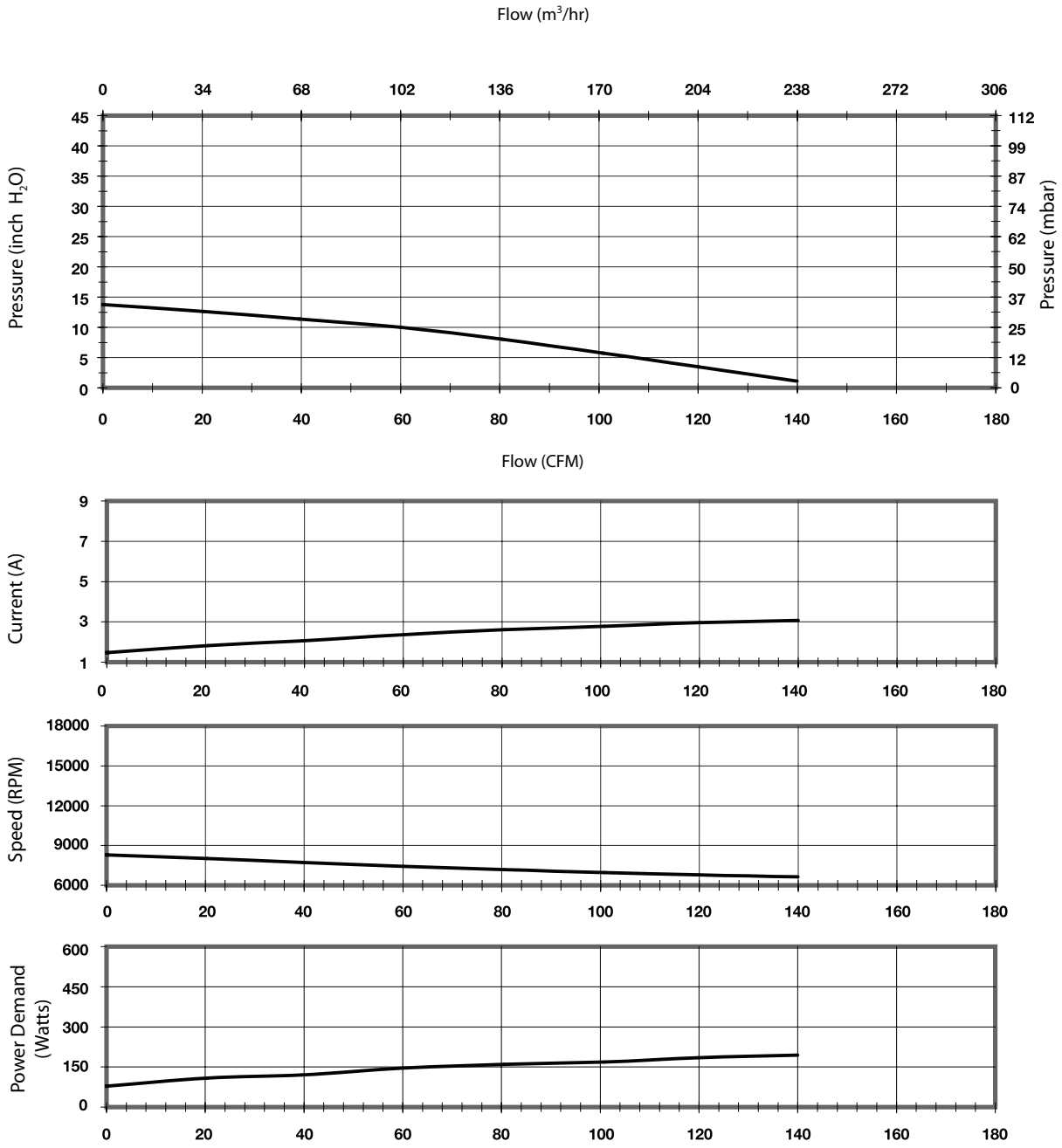
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

Nautilair

120 Volt AC Input, Single Phase, Standard Output

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

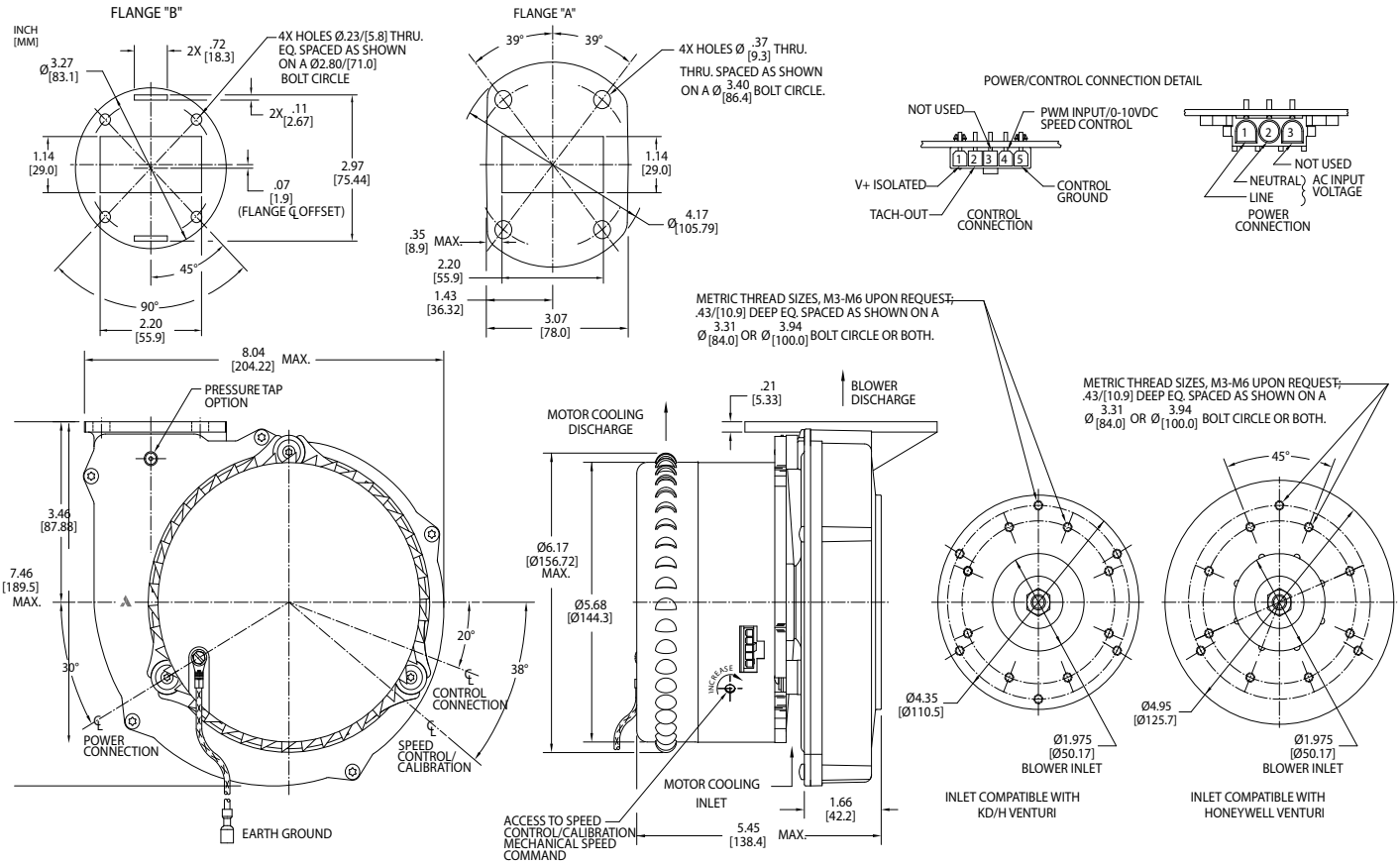
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output



Specification	Units	Part/ Model Number					
		150520-00	150521-00	150522-00	150523-00	150524-00	150525-00
Flange Type	-	Large "A"	Large "A"	Large "A"	Small "B"	Small "B"	Small "B"
Speed Control	-	PWM	0-10 VDC	Mechanical	PWM	0-10 VDC	Mechanical

Notes:

- **Input Voltage Range:** 216-264 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 2 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation) (1 kHz to 10 kHz)
  0 to 10 VDC speed control.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under FIle E94403 and compliant under the CE Low Voltage Directive 2006/95/EC.
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constucted from hardened aluminum. Rubber isolation mounts built into blower constuction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION: Blower connector, AMP Universal MATE-N-LOK, part no. 1-350943-0.
  CONTROL CONNECTION: Blower connector, Molex Mini-Fit Jr., part no. 39-30-3056.
  Mating harnesses available upon request.

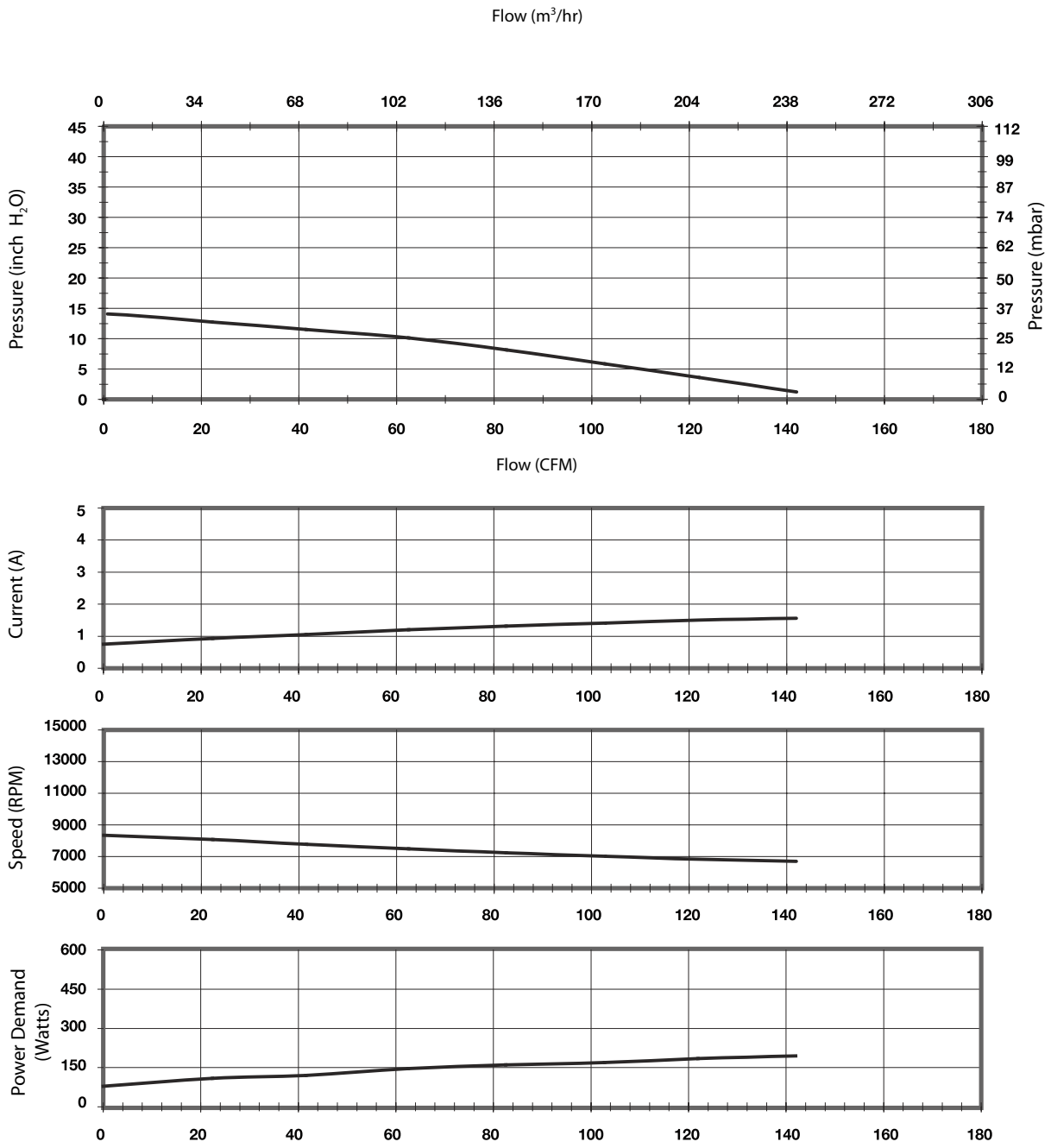
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output

Nautilair

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb./ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

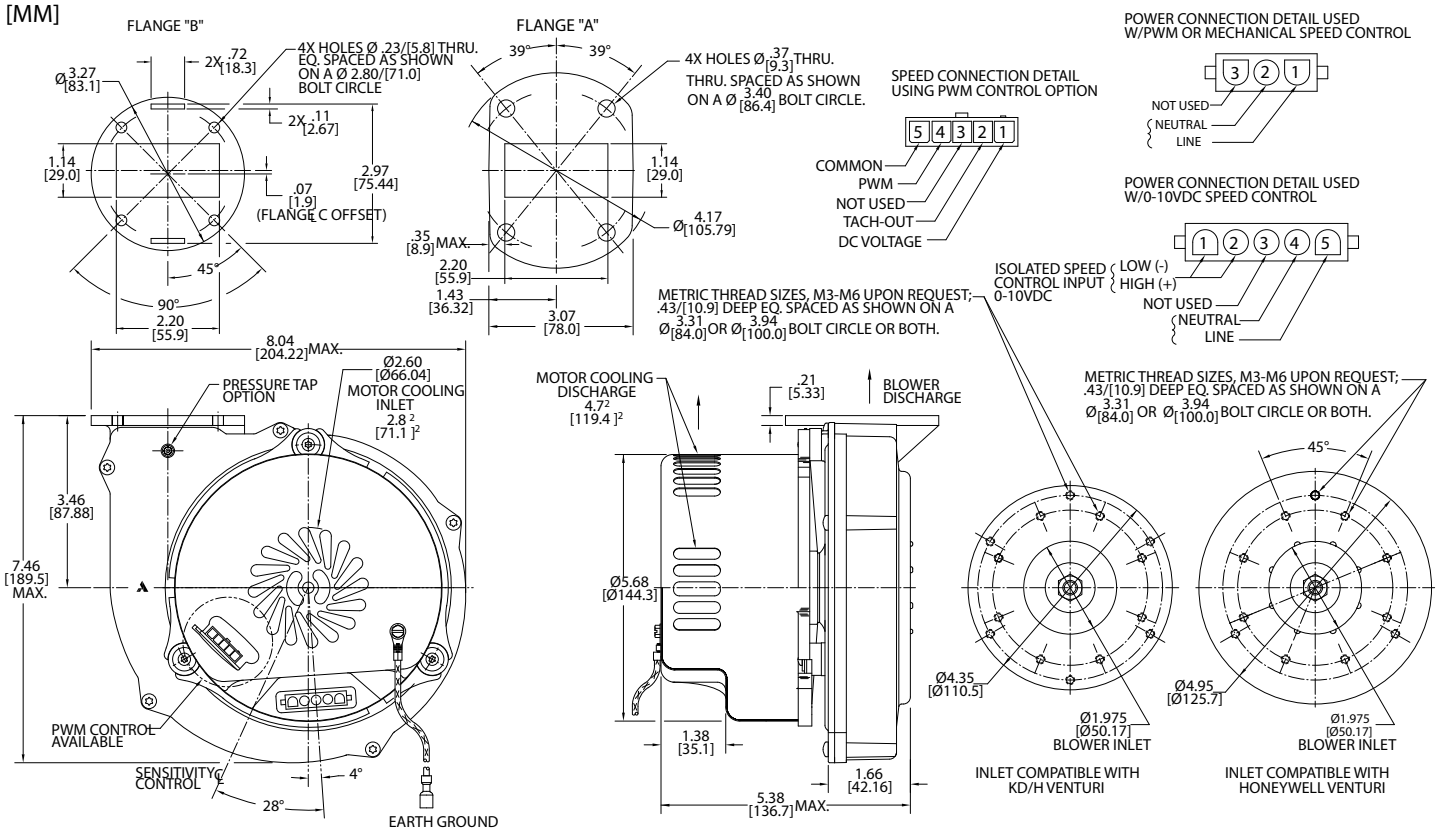
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

240 Volt AC Input, Single Phase, High Output

INCH
[MM]



		Part/ Model Number				
Specification	Units	150940	150941	150942	150944	150945
Flange Type	-	Small "B"	Small "B"	Small "B"	Large "A"	Large "A"
Speed Control	-	PWM	0-10 VDC	Mechanical	PWM	0-10 VDC

Notes:

- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 3 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation) (1 kHz to 10 kHz)
  0 to 10 VDC speed control.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
  4-20mA speed control available upon request.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg
- **Option Card available for Customization**
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350789-1.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 640900-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-30-3055.
  Mating harnesses available upon request.

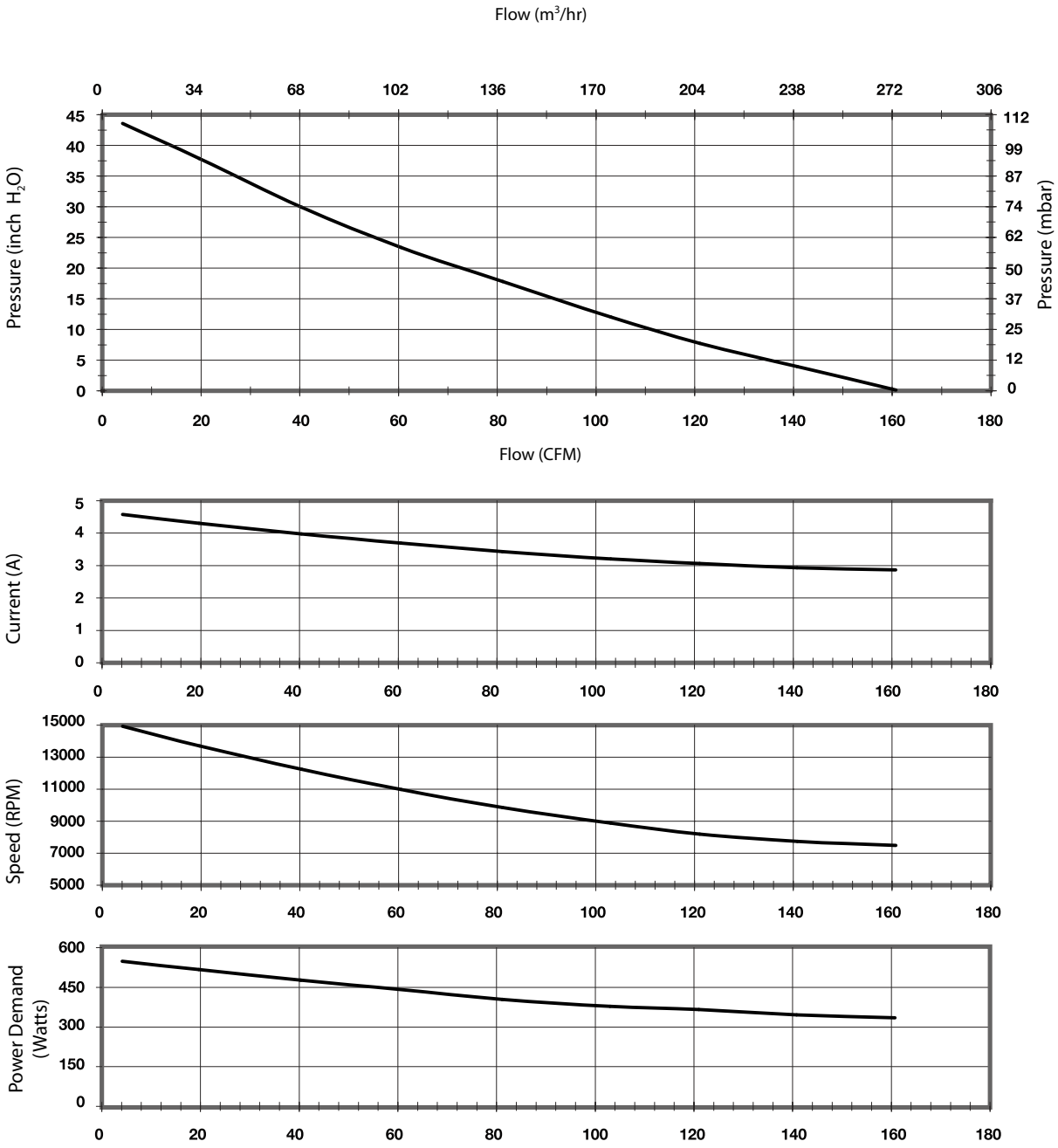
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

240 Volt AC Input, Single Phase, High Output

Nautilair

Typical Performance



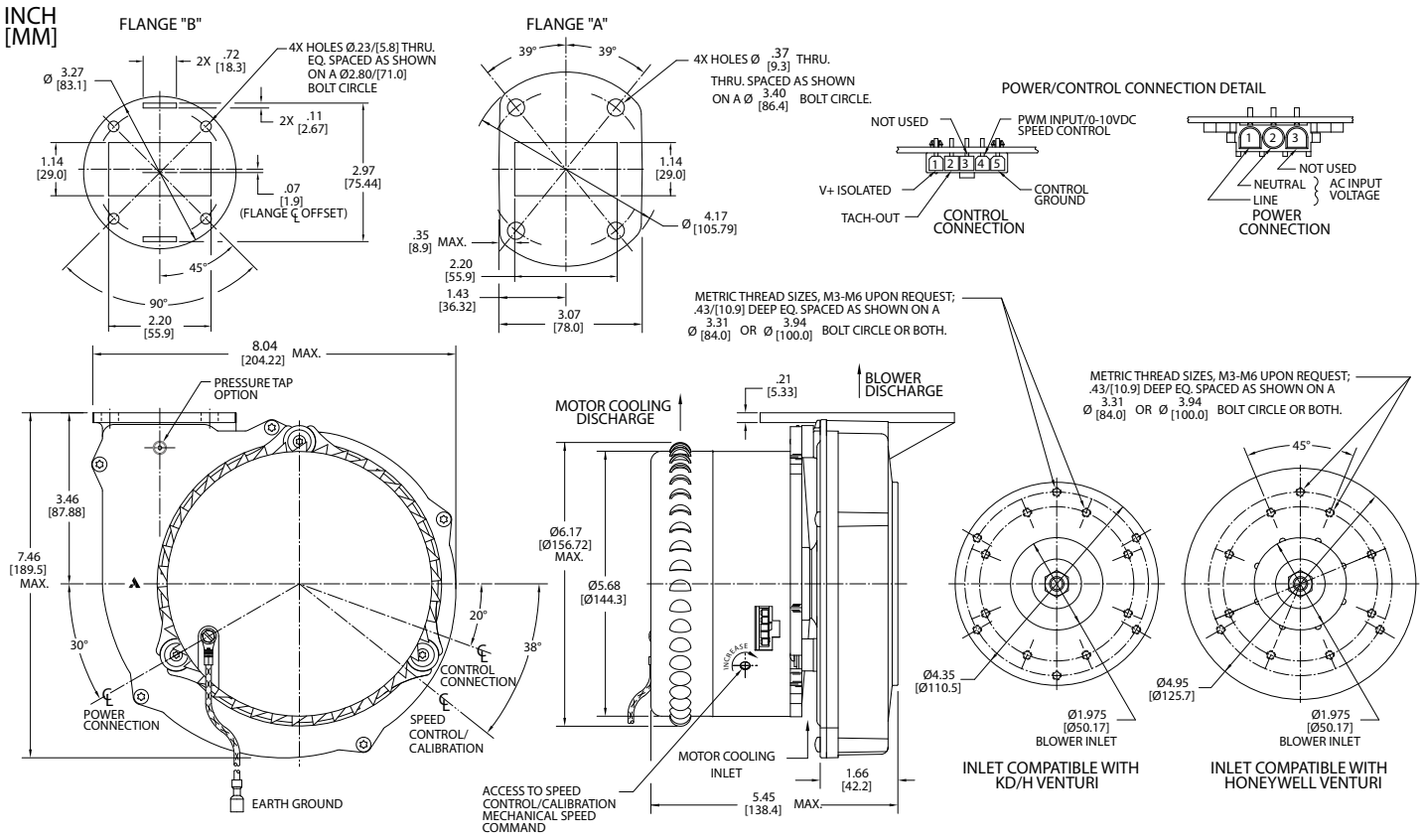
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output Enhanced



		Part/ Model Number					
Specification	Units	150560	150561	150562	150563	150564	150565
Flange Type	-	Large "A"	Large "A"	Large "A"	Small "B"	Small "B"	Small "B"
Speed Control	-	PWM	0-10 VDC	Mechanical	PWM	0-10 VDC	Mechanical

Notes:

- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 6 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation) (1 kHz to 10 kHz)
  0 to 10 VDC speed control.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and compliant under the CE Low Voltage Directive 2006/95/EC.
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION: Blower connector, AMP Universal MATE-N-LOK, part no. 1-350943-0.
  SPEED CONNECTION: Blower connector, Molex Mini-Fit Jr., part no. 39-30-3056.
  Mating harnesses available upon request.

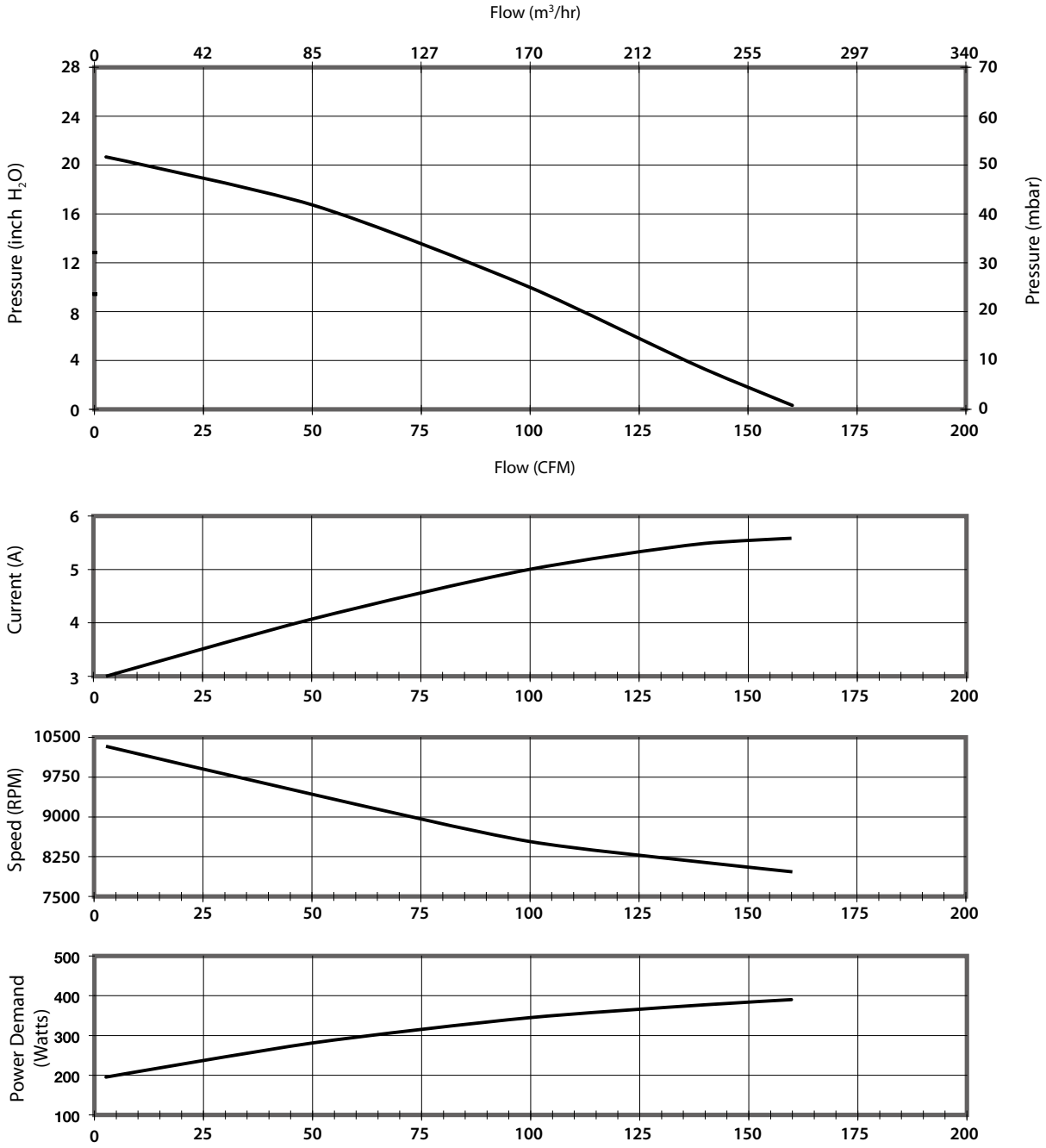
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output Enhanced

Nautilair

Typical Performance



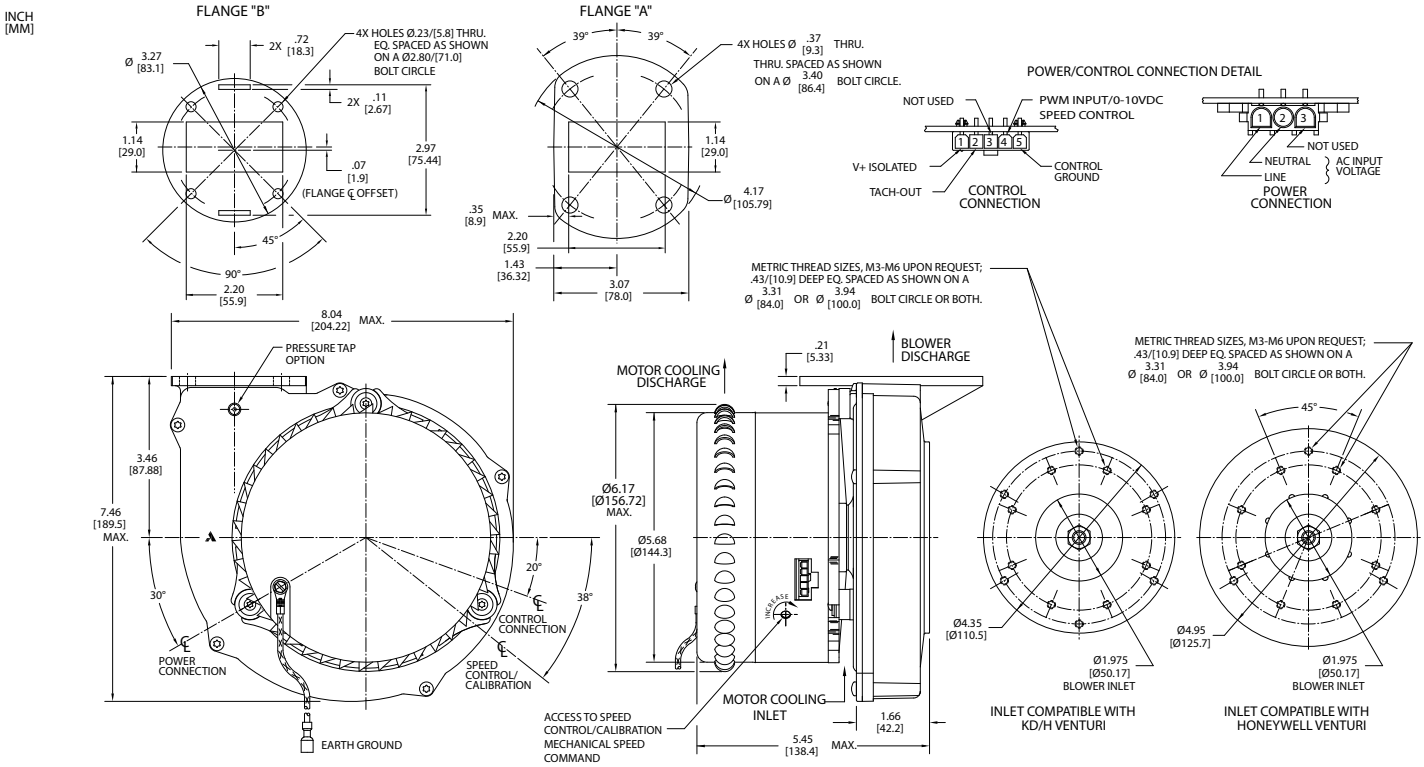
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output Enhanced



		Part/ Model Number					
Specification	Units	150580	150581	150582	150583	150584	150585
Flange Type	-	Large "A"	Large "A"	Large "A"	Small "B"	Small "B"	Small "B"
Speed Control	-	PWM	0-10 VDC	Mechanical	PWM	0-10 VDC	Mechanical

Notes:

- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 3 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation) (1 kHz to 10 kHz)
  0 to 10 VDC speed control.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and compliant under the CE Low Voltage Directive 2006/95/EC.
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION: Blower connector, AMP Universal MATE-N-LOK, part no. 1-350943-0.
  SPEED CONNECTION: Blower connector, Molex Mini-Fit Jr., part no. 39-30-3056.
  Mating harnesses available upon request.

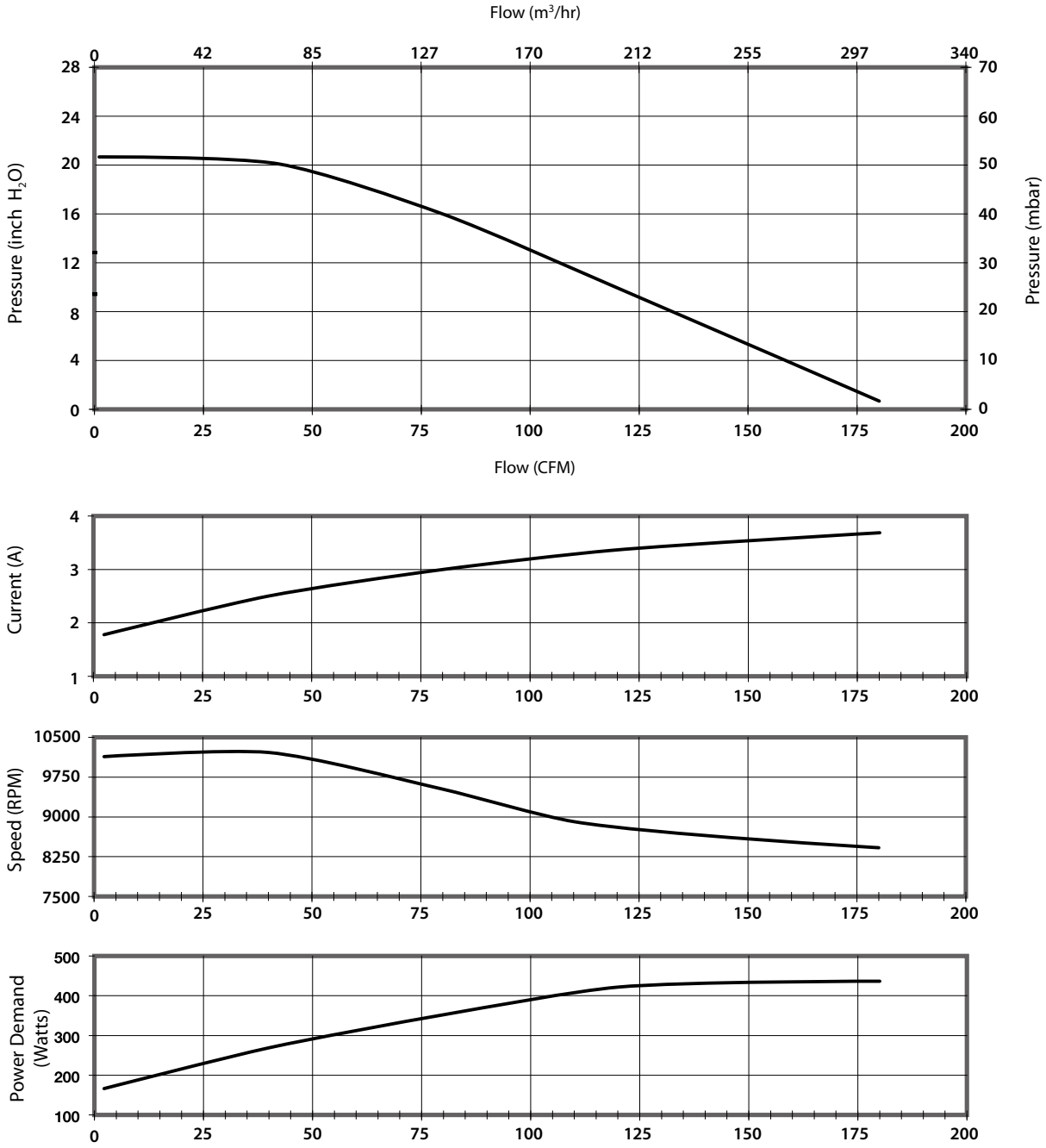
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output Enhanced

Typical Performance



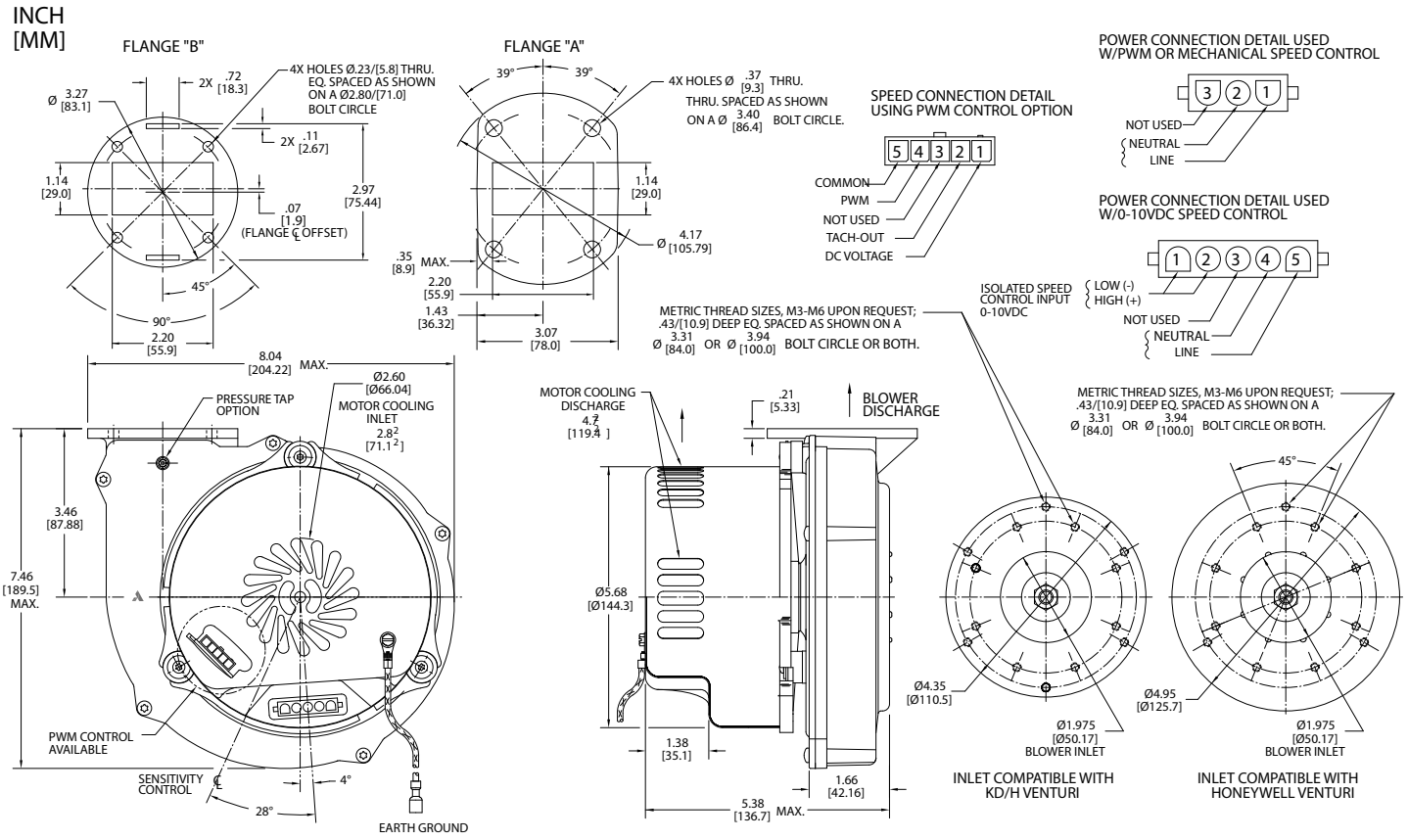
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

120 Volt AC Input, Single Phase, High Output



		Part/ Model Number				
Specification	Units	150930	150931	150932	150934	150935
Flange Type	-	Small "B"	Small "B"	Small "B"	Large "A"	Large "A"
Speed Control	-	PWM	0-10 VDC	Mechanical	PWM	0-10 VDC

Notes:

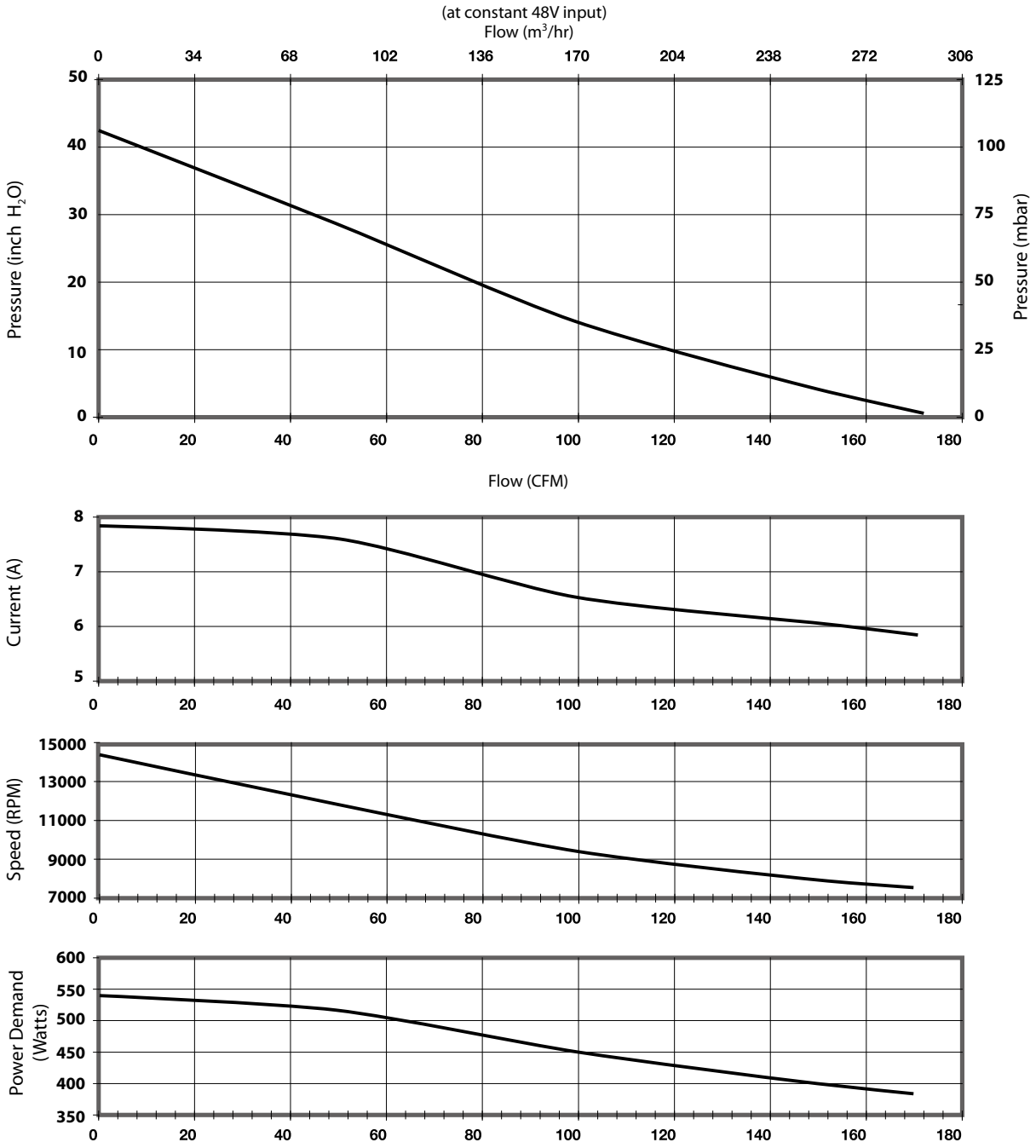
- **Input Voltage Range:** 108-132 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 6.5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation) (1kHz to 10 kHz)
  0 to 10 VDC speed control.
  4-20mA speed control available.
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
- **Approximate Weight:** 4.8 Lbs. / 2.2 Kg.
- **Option Card available for Customization**
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350789-1.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 640900-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-30-3055.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 7.6" (193mm) Variable Speed Blower

120 Volt AC Input, Single Phase, High Output

Typical Performance



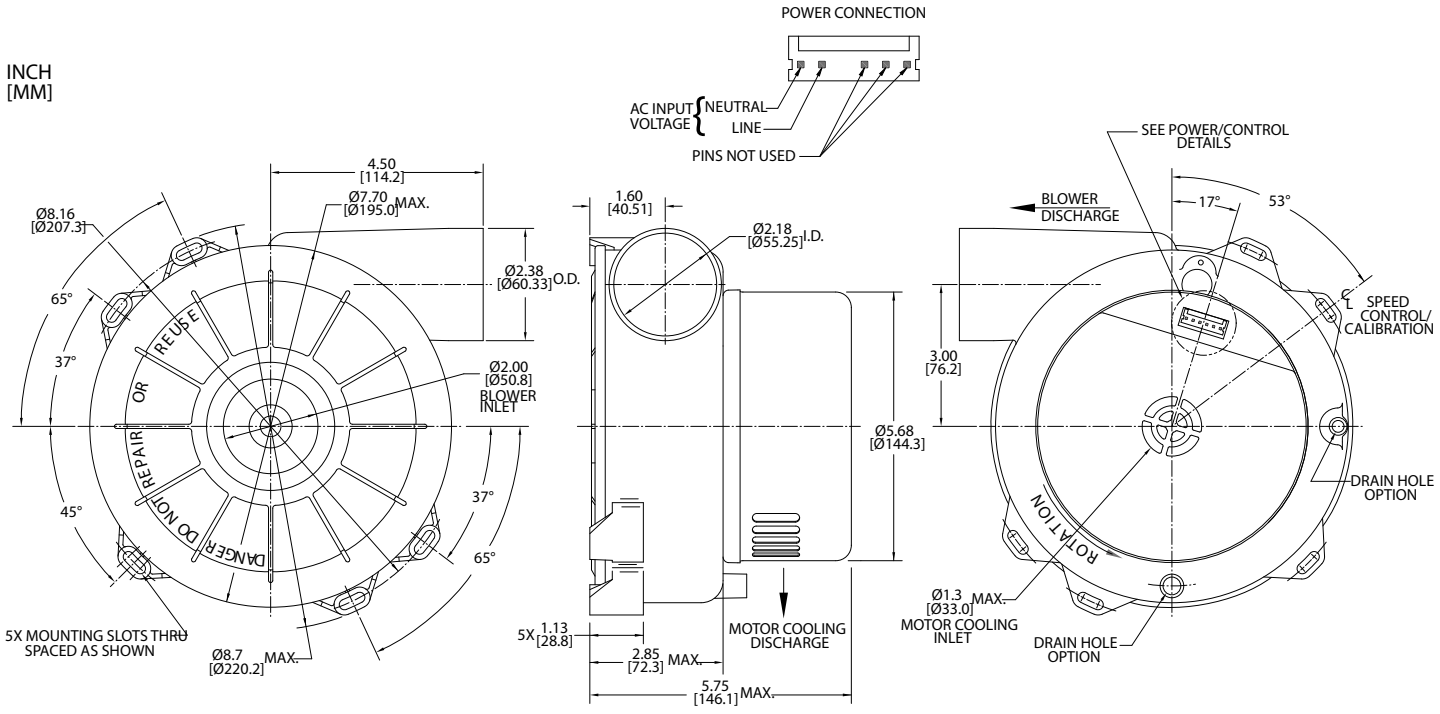
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 8.0" (203mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output



		Part/ Model Number
Specification	Units	117814-00
Speed Control	-	Mechanical

Notes:

- **Input Voltage Range:** 108 - 132 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 2 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Method:** Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for the speed adjustment located in the motor housing.
- **Approximate Weight:** 4.2 Lbs. / 1.9 Kg
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and compliant under the CE Low Voltage Directive 2006/95/EC.
- **Design Features:** Designed to provide variable airflow in non-premix/non-combustion gas applications. Blower housing/cover and impeller assembly constructed of polypropylene to protect against corrosion.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quallity air). Blower to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION: Blower connector, AMP MTA 156 series, part no. 643569-2.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

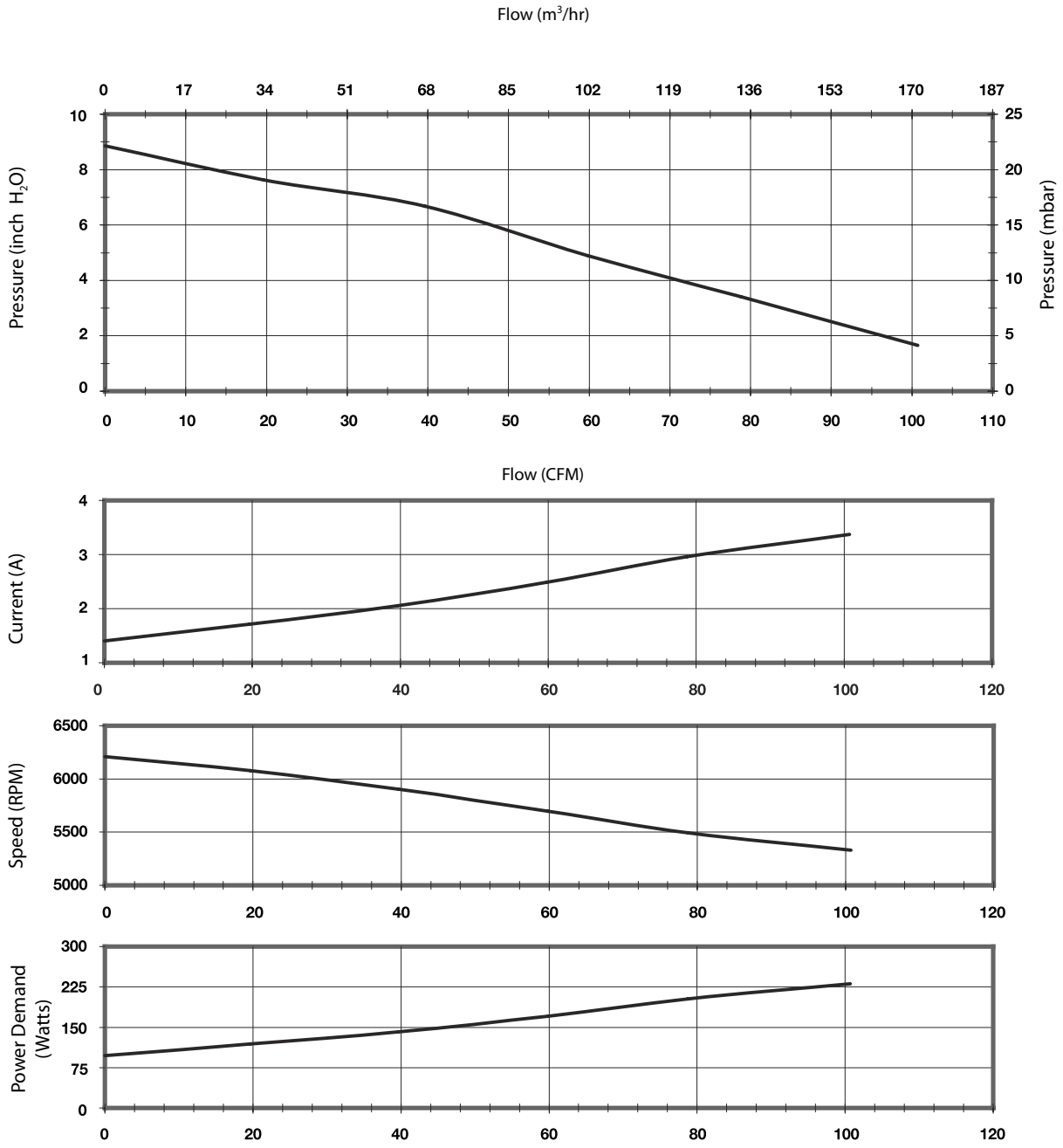
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 8.0" (203mm) Variable Speed Blower

Nautilair

120 Volt AC Input, Single Phase, Standard Output

Typical Performance



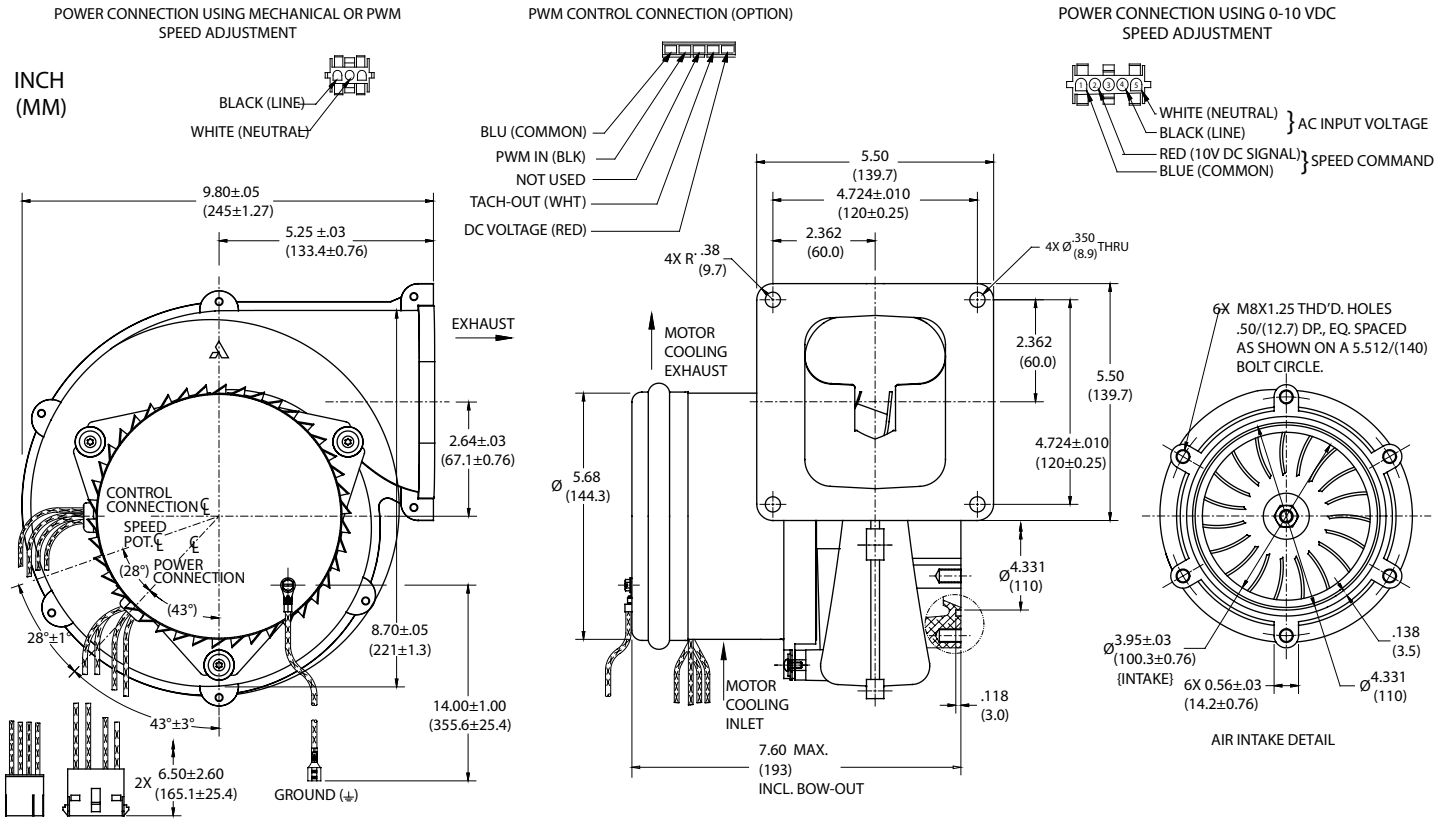
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lbs./ft^3 (29.92″ Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output



		Part/ Model Number		
Specification	Units	150330	150331	150332
Speed Control	-	Mechanical	0-10 VDC	PWM

Notes:

- **Input Voltage Range:** 108 - 132 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 8.5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation). Speed control input signal of 15-45 VDC @ 500 Hz-10 kHz, and tachometer output (2 Pulses / Revolution). Optional tachometer output (3 Pulses / Revolution).
  0 to 10 VDC with a speed control input current of 5 mA to 20 mA at 10 VDC Input with multi-turn potentiometer set to minimum resistance (fully clockwise).
  Mechanical: A potentiometer is available for speed control of the blower. THe potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
  4-20 mA speed control also available.
- **Approximate Weight:** 7.8 Lbs. / 3.5 Kg
- **Option Card available for Customization**
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower constuction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Custome is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 1-480701-0.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350810-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-01-4057.
  Mating harness available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

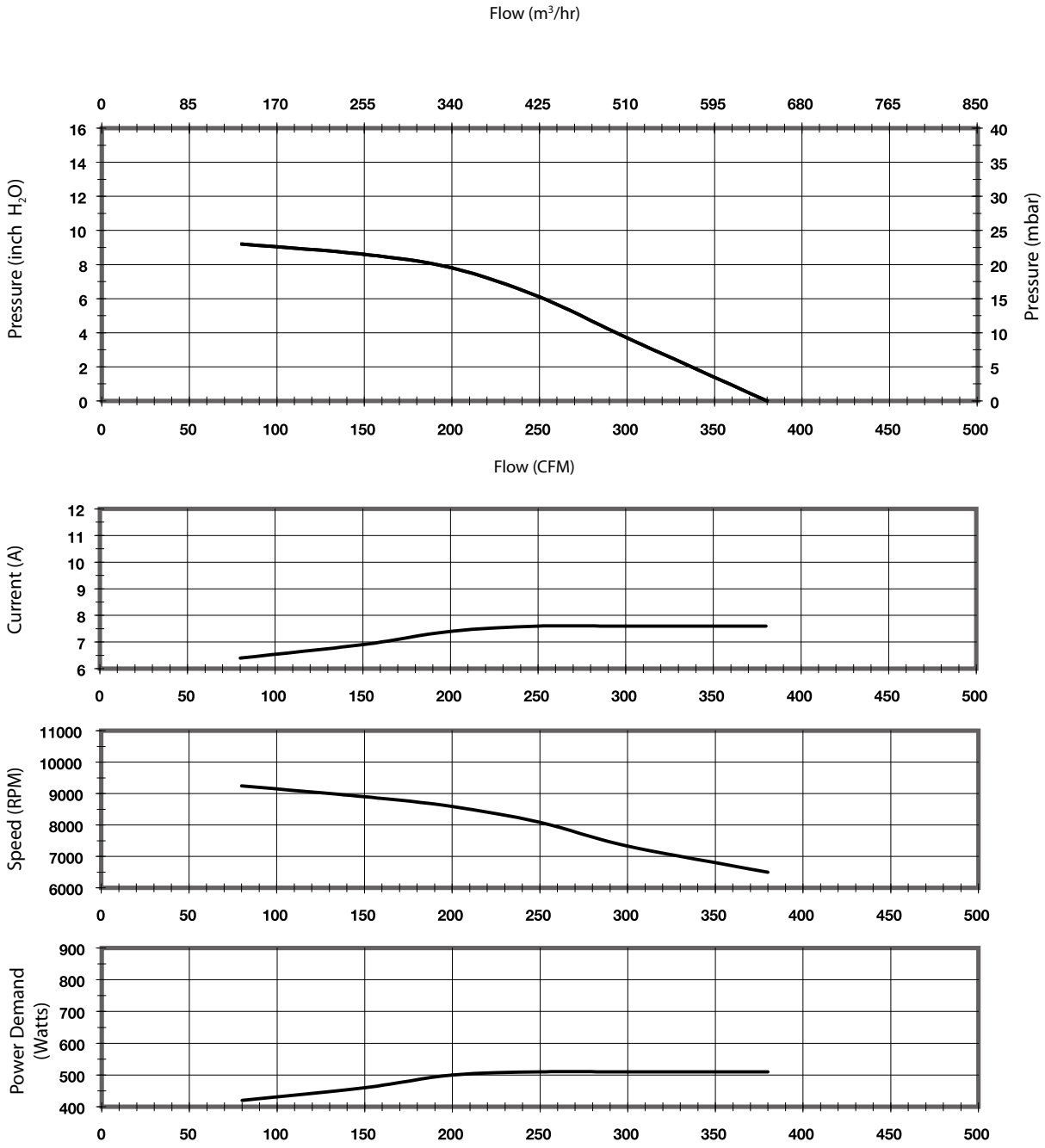
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output

Nautilair

Typical Performance



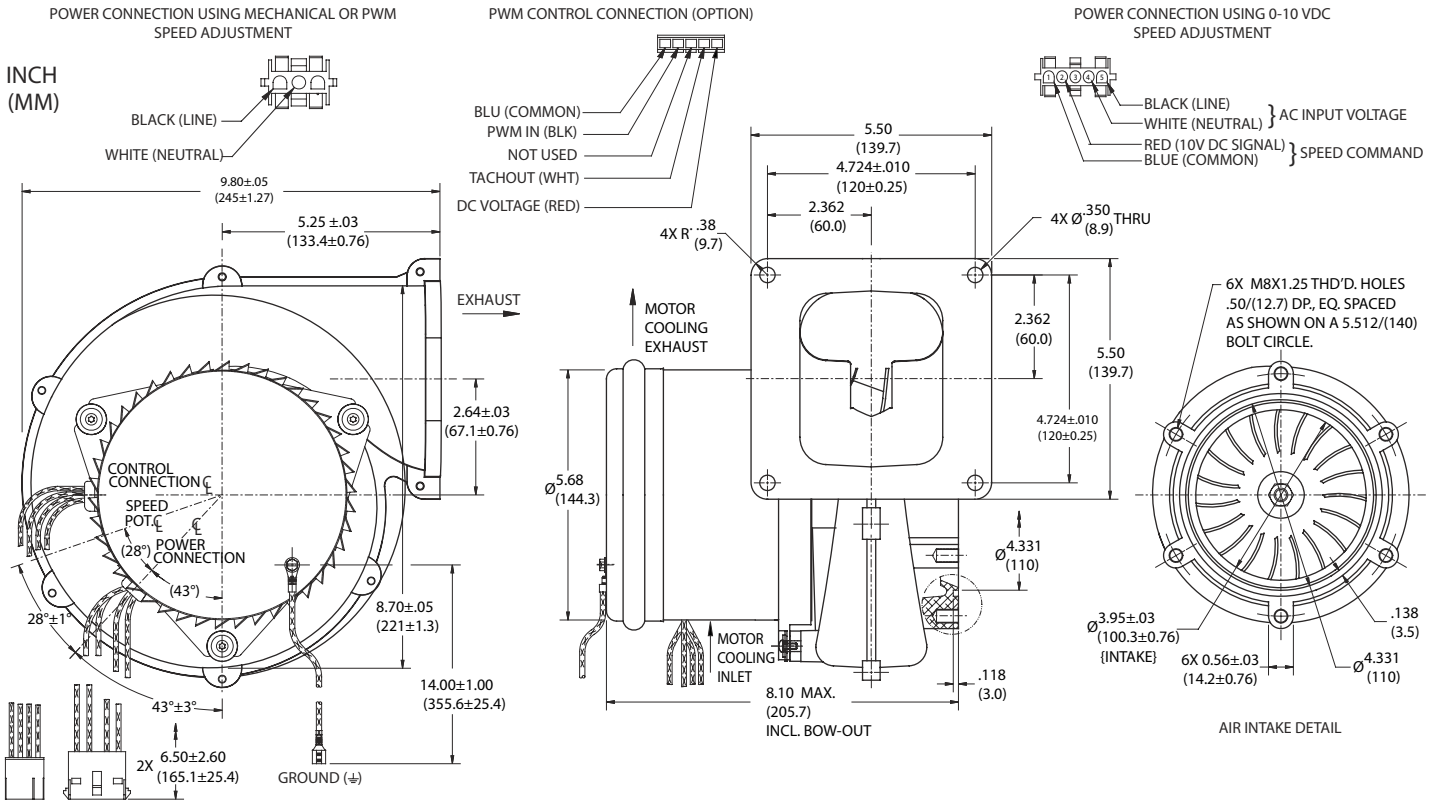
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

120 Volt AC Input, Single Phase, High Output



		Part/ Model Number		
Specification	Units	150230	150231	150232
Speed Control	-	Mechanical	0-10 VDC	PWM

Notes:

- **Input Voltage Range:** 108 - 132 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 12 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation). Speed control input signal of 15 - 45 VDC @ 500 Hz - 10 kHz, and tachometer output (2 Pulses / Revolution). Optional tachometer output (3 Pulses / Revolution).
  0 to 10 VDC with a speed control input current of 5 mA to 20 mA at 10 VDC Input with multi-turn potentiometer set to minimum resistance (fully clockwise).
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
  4-20mA speed control available.
- **Approximate Weight:** 9.3 Lbs. / 4.2 Kg
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and CSA C22.2#133 under File LR43448
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 1-480701-0.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350810-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-01-4057.
  Mating harnesses available upon request.

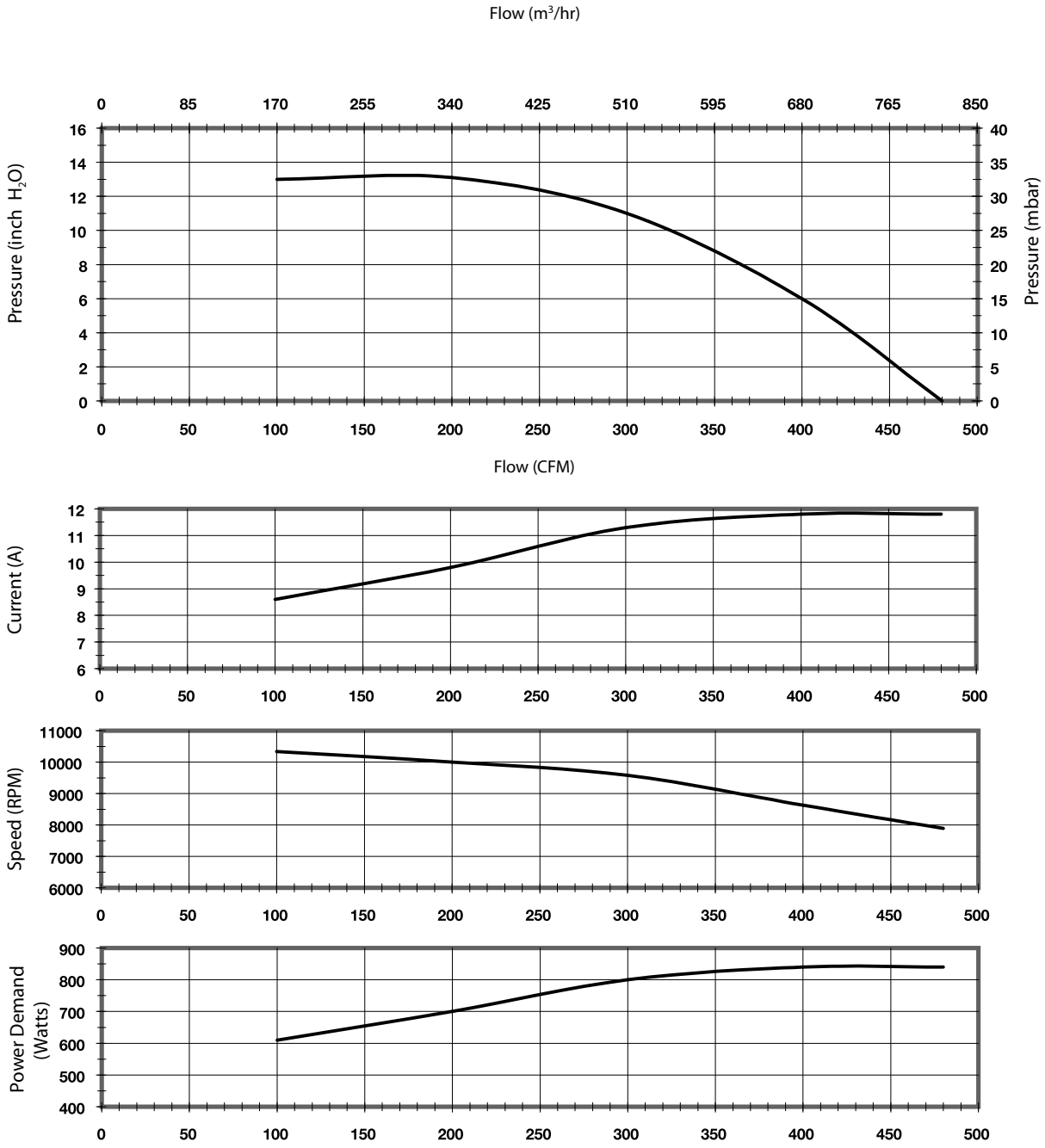
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

120 Volt AC Input, Single Phase, High Output

Nautilair

Typical Performance



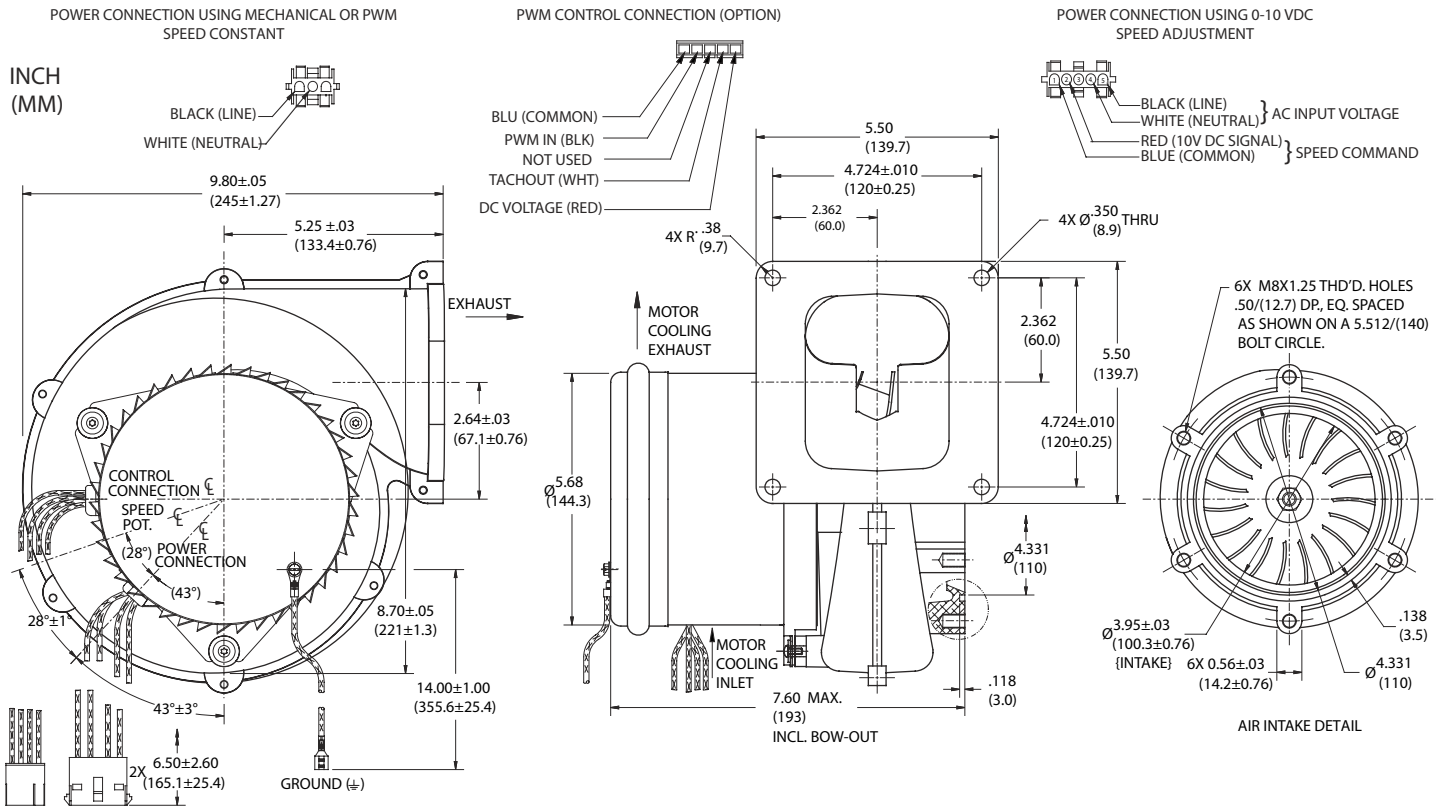
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output



		Part/ Model Number		
Specification	Units	150340	150341	150342
Speed Control	-	Mechanical	Electronic 2	Electronic 1

Notes:

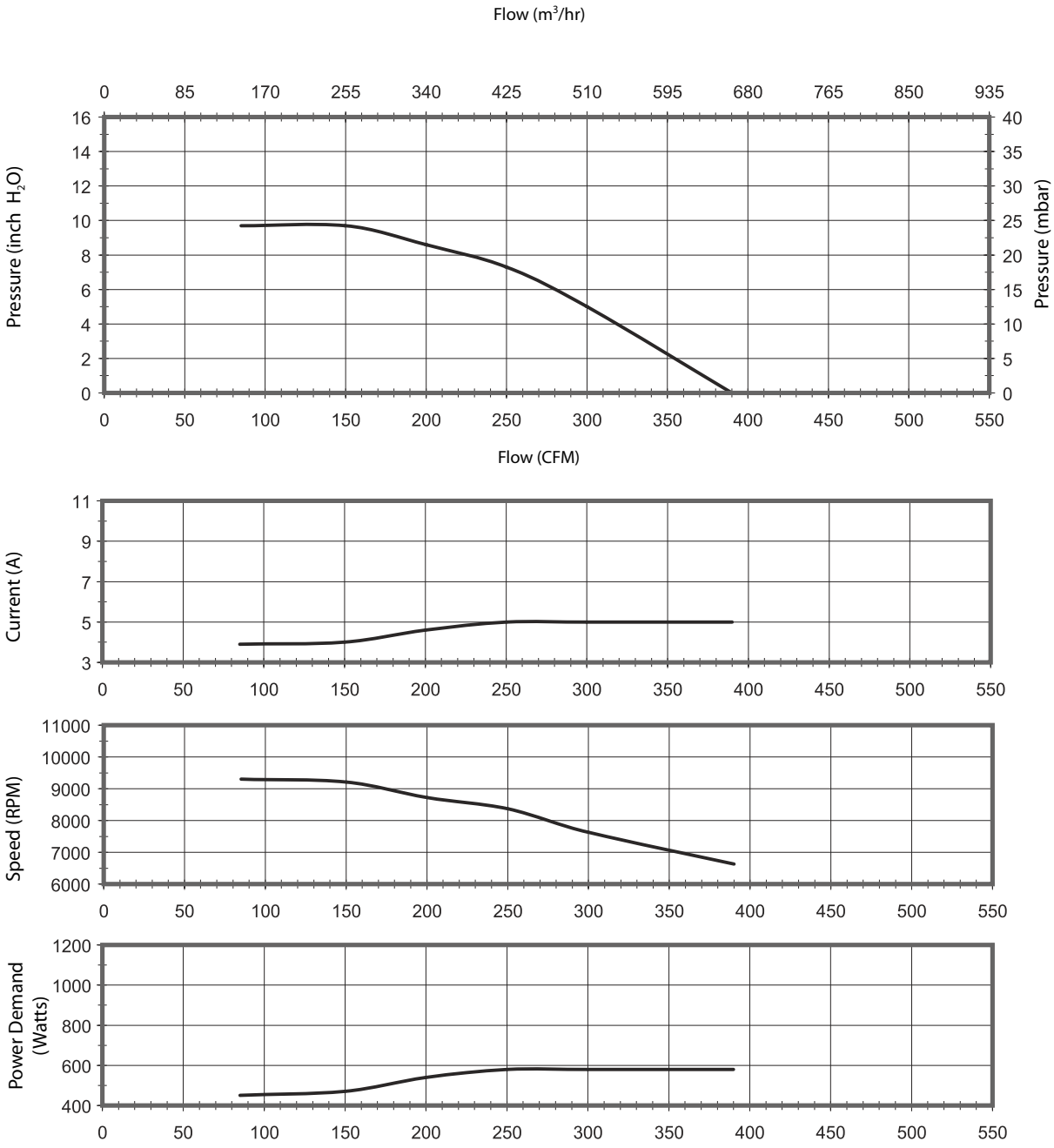
- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 5 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation). Speed control input signal of 15 - 45 VDC @ 500 Hz - 10 kHz, and tachometer outpuT. (2 Pulses / Revolution). Optional tachometer output (3 Pulses / Revolution).
  0 to 10 VDC with a speed control input current of 5 mA to 20 mA at 10 VDC Input with multi-turn potentiometer set to minimum resistance (fully clockwise).
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
  4-20mA speed control available.
- **Approximate Weight:** 7.8 Lbs. / 3.5 Kg.
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and CSA C22.2#133 under File LR43448.
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 1-480701-0.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350810-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-01-4057.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output

Typical Performance



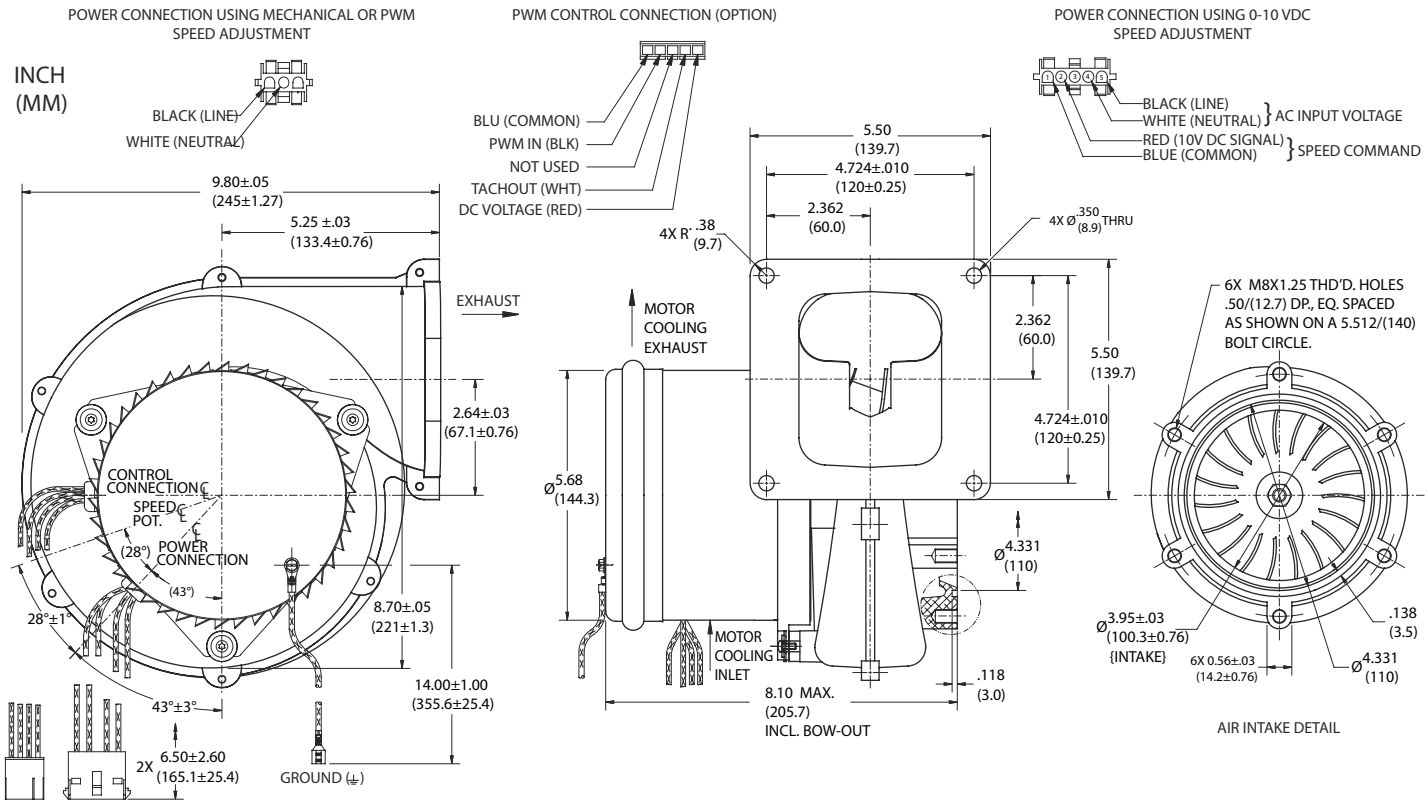
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

240 Volt AC Input, Single Phase, High Output



		Part/ Model Number		
Specification	Units	150240	150241	150242
Speed Control	-	Mechanical	0-10 VDC	PWM

Notes:

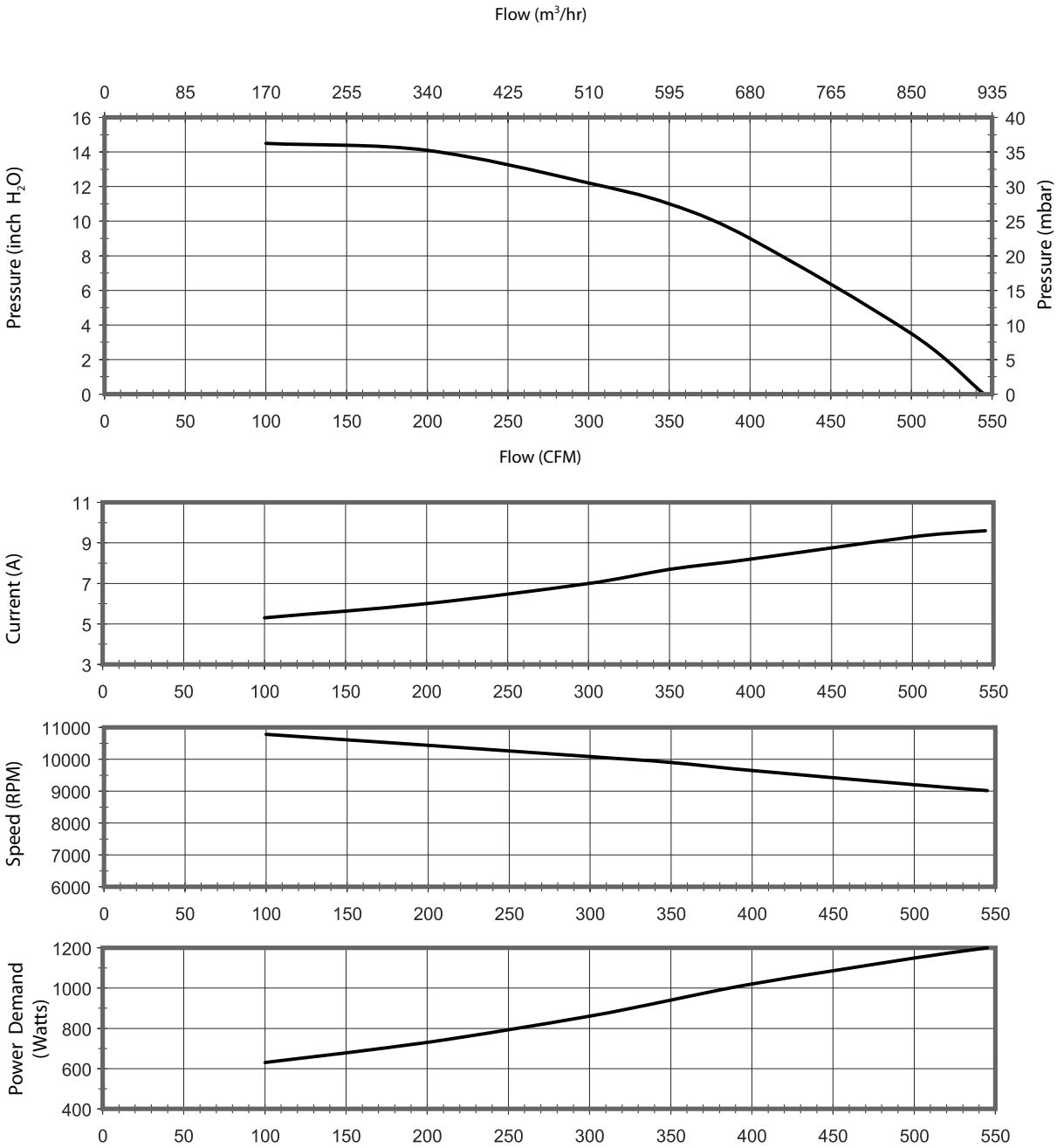
- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, single phase.
- **Input Current:** 10 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1800 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control Methods:** PWM (Pulse Width Modulation). Speed control input signal of 15 - 45 VDC @ 500 Hz - 10 kHz, and tachometer output (2 Pulses / Revolution).
  Optional tachometer output (3 Pulses / Revolution).
  0 to 10 VDC with a speed control input current of 5 mA to 20 mA at 10 VDC Input with multi-turn potentiometer set to minimum resistance (fully clockwise).
  Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.
  4-20mA speed control available.
- **Approximate Weight:** 9.3 Lbs. / 4.2 Kg.
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories Inc. UL507 Recognized under File E94403 and CSA C22.2#133 under File LR43448
- **Design Features:** Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.
- **Miscellaneous:** Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.
  POWER CONNECTION (3 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 1-480701-0.
  POWER CONNECTION (5 CAVITY): Blower connector, AMP Universal MATE-N-LOK, part no. 350810-1.
  SPEED CONNECTION (5 CAVITY): Blower connector, Molex Mini-Fit Jr., part no. 39-01-4057.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Nautilair (TM) 8.9" (226mm) Variable Speed Blower

240 Volt AC Input, Single Phase, High Output

Typical Performance



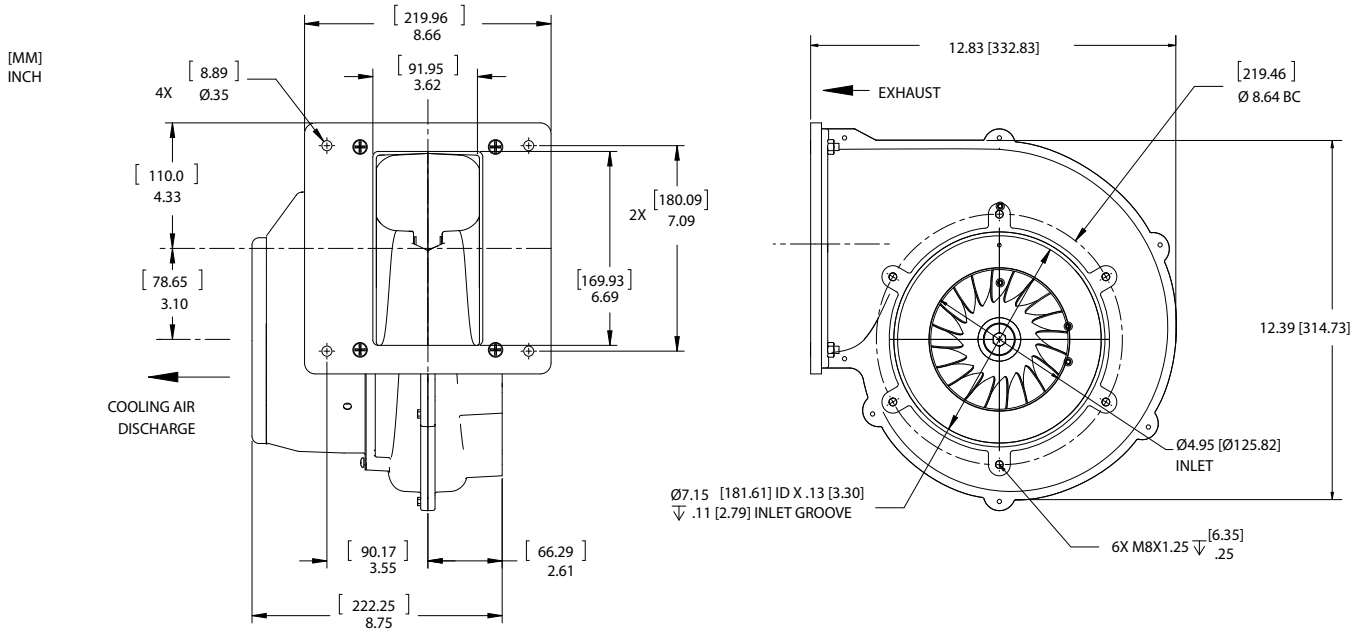
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

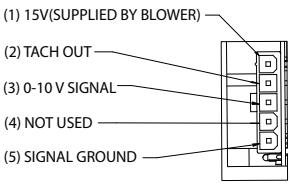
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

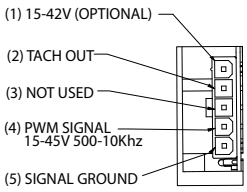
Nautilair (TM) 12.3" (312mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output

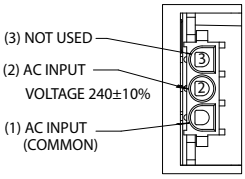




0-10 VDC CONNECTION



PWM CONNECTION



POWER CONNECTION

		Part/ Model Number		
Specification	Units	150530	150531	150532
Speed Control	-	Mechanical	0-10VDC	PWM

Notes:

- **Input Voltage Range:** 108 - 132 Volts AC RMS, 50/60 Hz, single phase or 153 - 187 VDC
- **Input Current:** 16 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** PWM 15-45 VDC @ 500 Hz - 10 kHz; 0-10 VDC; mechanical (potentiometer); 4 - 20 mA; remote potentiometer
- **Approximate Weight:** 28 Lbs. / 12.7 Kg
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Designed to provide variable airflow for low NOx & CO emissions in high efficiency gas-fired combustion systems. Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exaust must be free of grease, oil and foreign particles. Amp housing 350766-1 w/ Amp contacts 350536-1 for power connection (supplied by customer) and Molex housing 39-01-4050 or 39-01-4051 w/ Molex contacts 39-00-0039 (18 - 24 awg) or 39-00-0078 (16 awg) for speed control function (supplied by customer). Non-sparking, hardened aluminum impeller.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

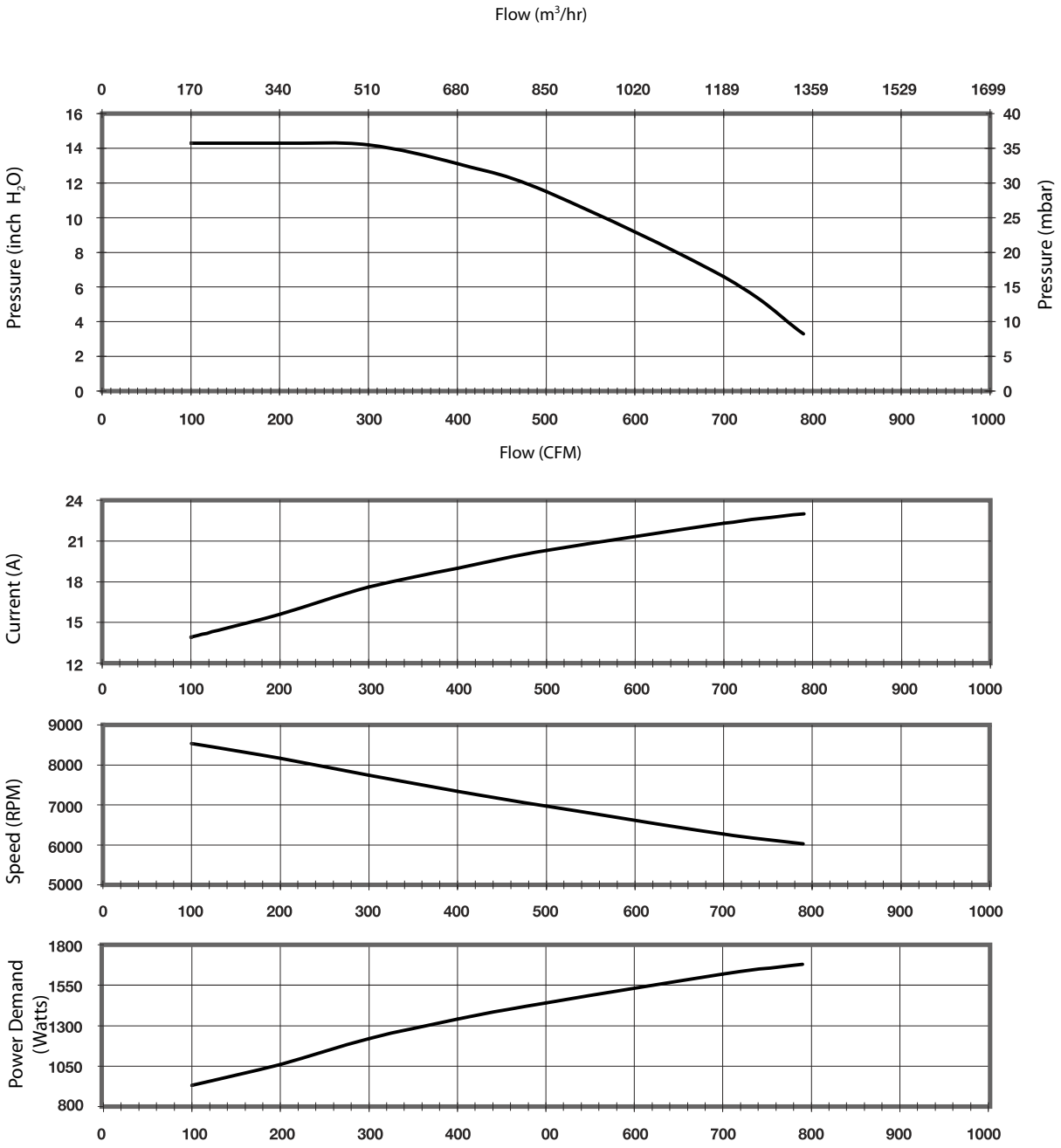
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 12.3" (312mm) Variable Speed Blower

120 Volt AC Input, Single Phase, Standard Output

Nautilair

Typical Performance



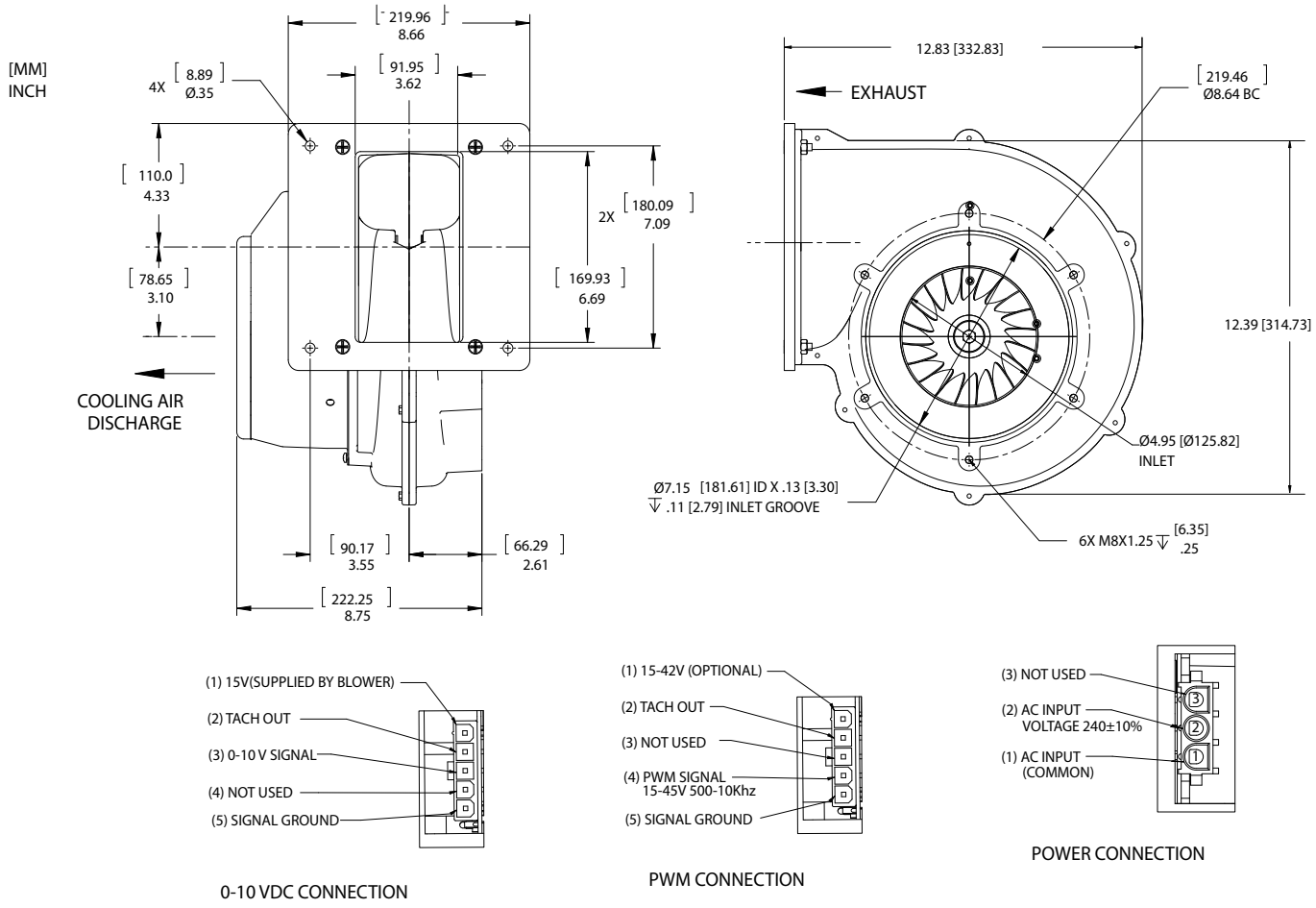
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

High Voltage Brushless DC Blowers

Nautilair (TM) 12.3" (312mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output



0-10 VDC CONNECTION

PWM CONNECTION

POWER CONNECTION

		Part/ Model Number		
Specification	Units	150540	150541	150542
Speed Control	-	Mechanical	0-10VDC	PWM

Notes:

- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, single phase or 305 - 373 VDC
- **Input Current:** 12 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** PWM 15-45 VDC @ 500 Hz - 10 kHz; 0-10 VDC; mechanical (potentiometer); 4 - 20 mA; remote potentiometer
- **Approximate Weight:** 28 Lbs. / 12.7 Kg.
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Designed to provide variable airflow for low NOx & CO emissions in high efficiency gas-fired combustion systems. Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exaust must be free of grease, oil and foreign particles. Amp housing 350766-1 w/ Amp contacts 350536-1 for power connection (supplied by customer) and Molex housing 39-01-4050 or 39-01-4051 w/ Molex contacts 39-00-0039 (18 - 24 awg) or 39-00-0078 (16 awg) for speed control function (supplied by customer). Non-sparking, hardened aluminum impeller.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

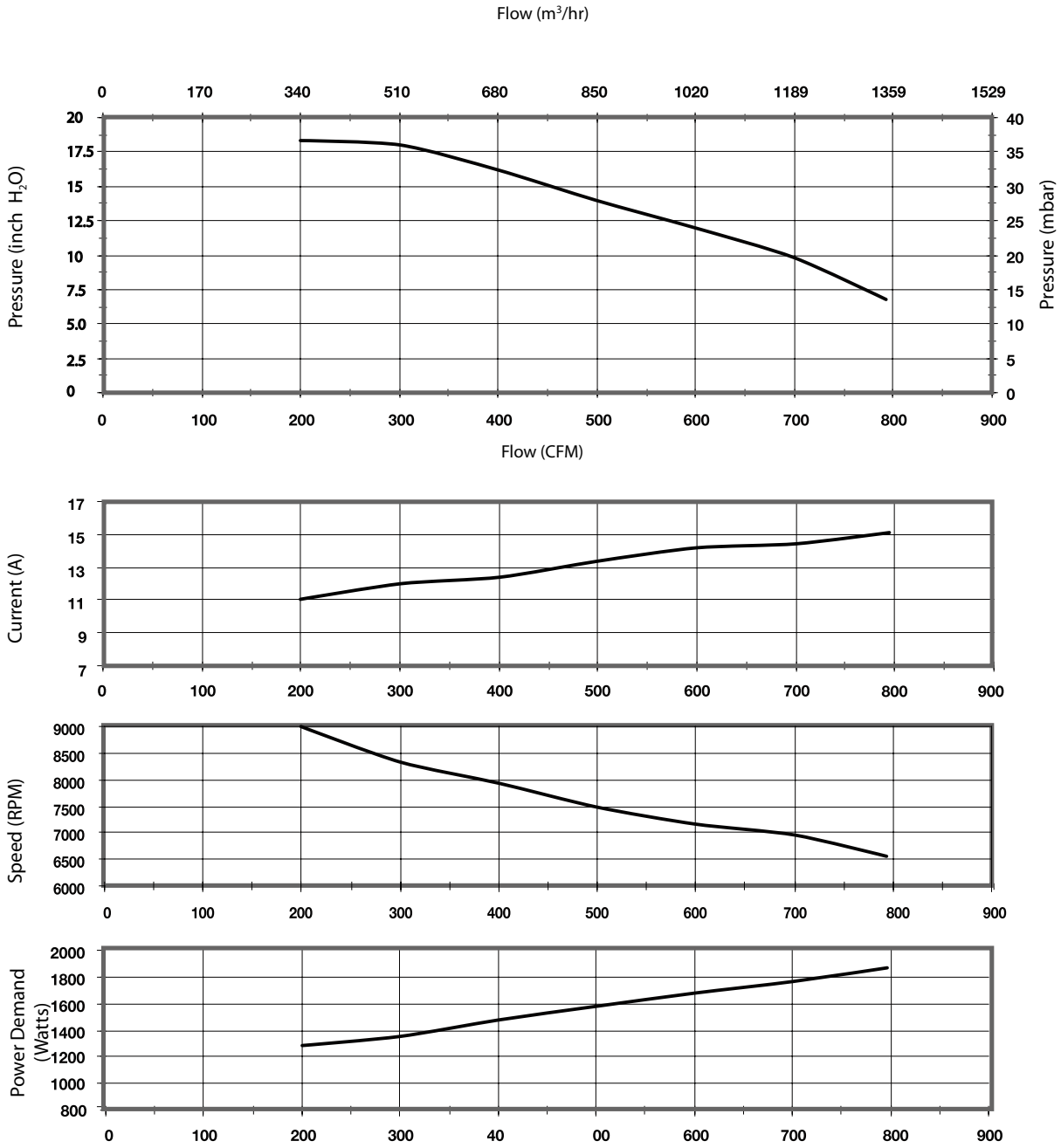
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 12.3" (312mm) Variable Speed Blower

240 Volt AC Input, Single Phase, Standard Output

Nautilair

Typical Performance



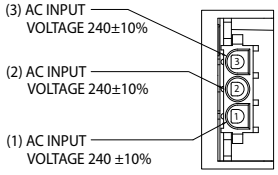
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

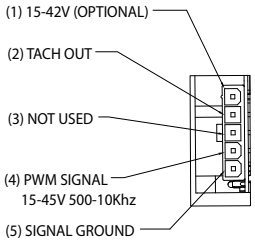
Nautilair (TM) 12.3" (312mm) Variable Speed Blower

Nautilair

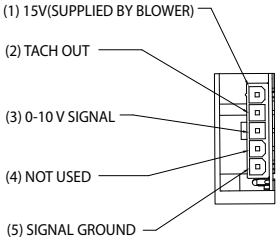
240 Volt AC Input, Three Phase, High Output



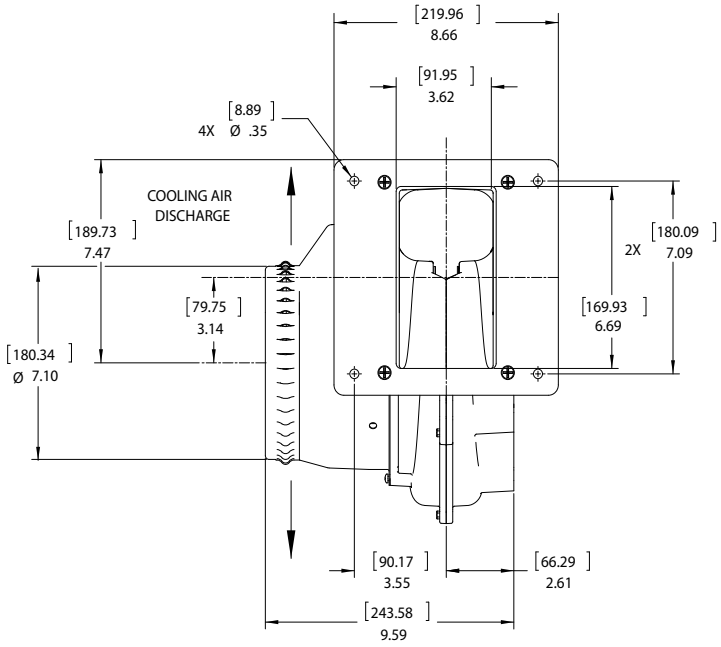
POWER CONNECTION

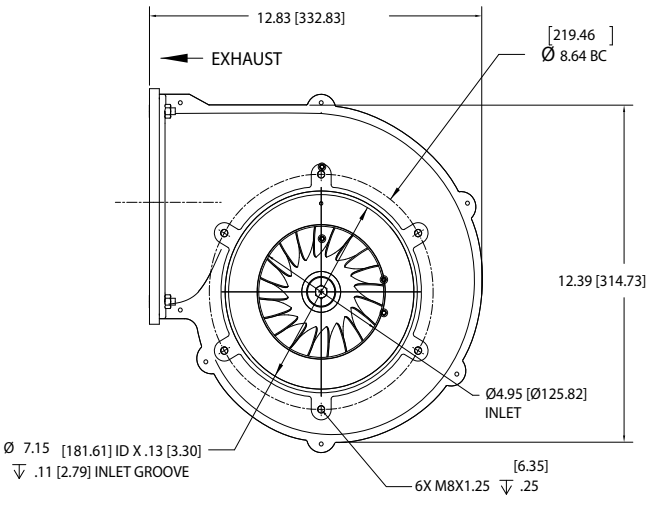


PWM CONNECTION



0-10 VDC CONNECTION





		Part/ Model Number		
Specification	Units	151130	151131	151132
Speed Control	-	Mechanical	0-10 VDC	PWM

Notes:

- **Input Voltage Range:** 216 - 264 Volts AC RMS, 50/60 Hz, three phase, or 305-373 VDC
- **Input Current:** 10 amps AC RMS
- **Operating Temperature (Ambient Air and Working Air):** 0°C to 50°C
- **Storage Temperature:** -40°C to 85°C
- **Dielectric Testing:** 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground, 3mA leakage maximum.
- **Speed Control:** PWM 15-45 VDC @ 500 Hz - 10 kHz; 0-10 VDC; mechanical (potentiometer); 4 - 20 mA; remote potentiometer
- **Approximate Weight:** 28 Lbs. / 12.7 Kg.
- **Option Card available for Customization**
- **Regulatory Agency Certification:** Underwriters Laboratories, Inc. qualified per UL507 under File E-94403. Canadian Standards Association qualified per C22.2#113 under File LR 43448.
- **Miscellaneous:** Designed to provide variable airflow for low NOx & CO emissions in high efficiency gas-fired combustion systems. Intake and exhaust tubes, all cooling ducts and vents must not be obstructed. Intake and exaust must be free of grease, oil and foreign particles. Amp housing 350766-1 w/ Amp contacts 350536-1 for power connection (supplied by customer) and Molex housing 39-01-4050 or 39-01-4051 w/ Molex contacts 39-00-0039 (18 - 24 awg) or 39-00-0078 (16 awg) for speed control function (supplied by customer). Non-sparking, hardened aluminum impeller.
  Mating harnesses available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

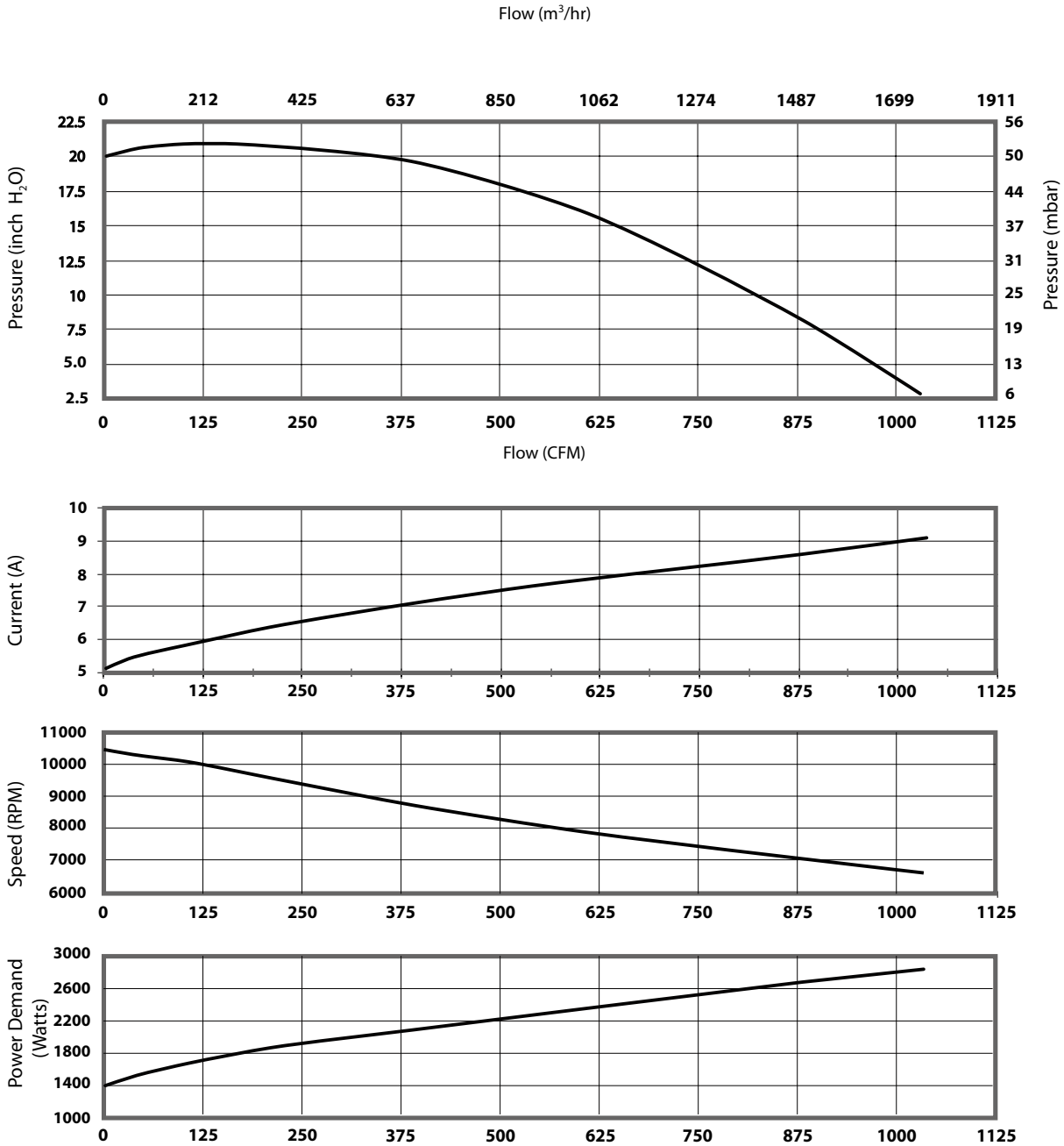
AMETEK®
PRECISION MOTION CONTROL

Nautilair (TM) 12.3" (312mm) Variable Speed Blower

240 Volt AC Input, Three Phase, High Output

Nautilair

Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Brushless DC Fans and Impeller-Style Blowers

AMETEK Technical and Industrial Products' Brushless DC Fans and Impeller-Style Blowers offer multi-speed aerodynamic performances for all types of high airflow applications. Our standard designs come with fully integrated electronics and are available in various input voltages including 12 and 24 VDC (13.8 and 27.6 VDC). Environmentally resistant designs are also available for those applications that may require exposure to natural elements. With airflow exceeding 1900 CFM, these products combine the long life expectations of brushless DC products with maximum cooling and air moving capability.

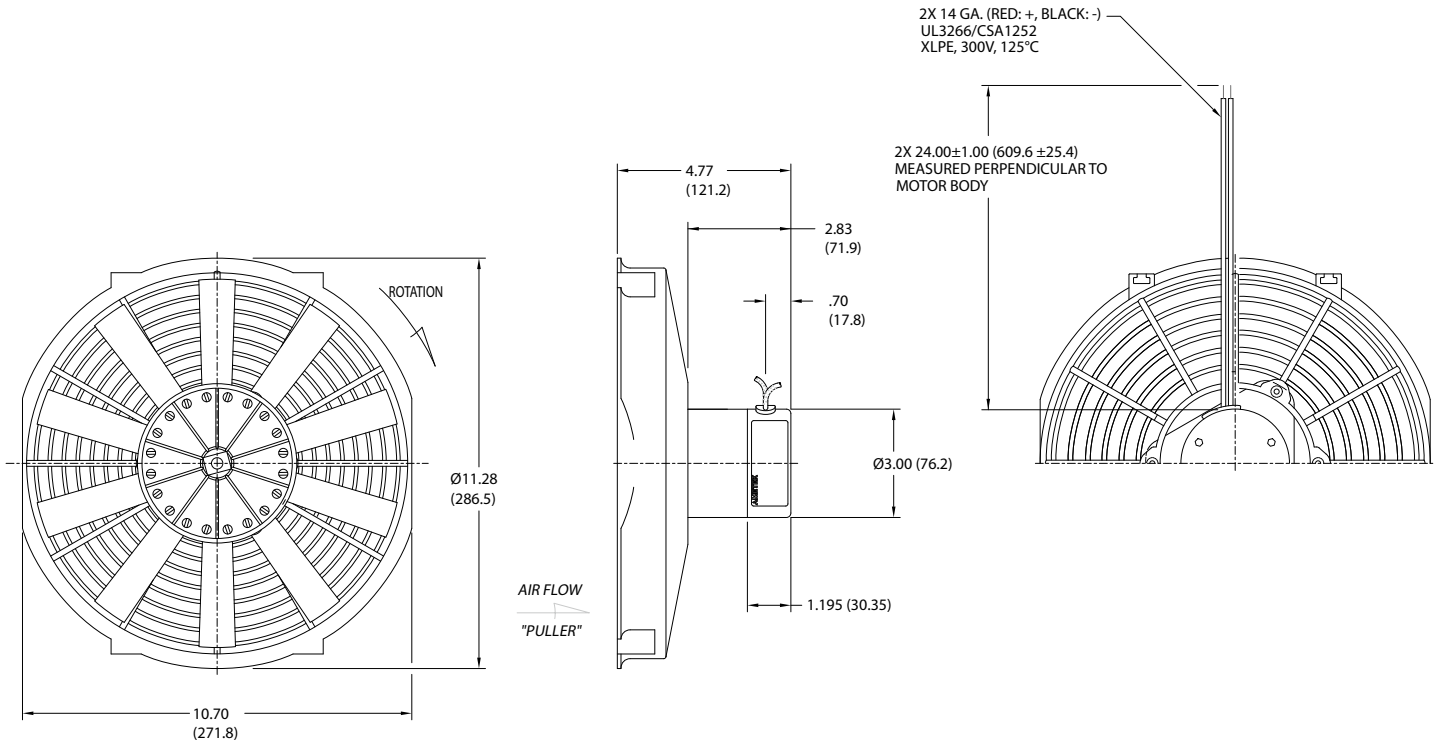
ROTRON®

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

RTP10 12/24 VDC Brushless DC Fan

ROTRON®



		Part/ Model Number	
Specification	Units	150194-00 Puller	150194-02 Pusher
Max Flow Rate	CFM	1000	940
	m3/hr	1700	1598
Voltage	VDC	24 (actual 27.6)	24 (actual 27.6)

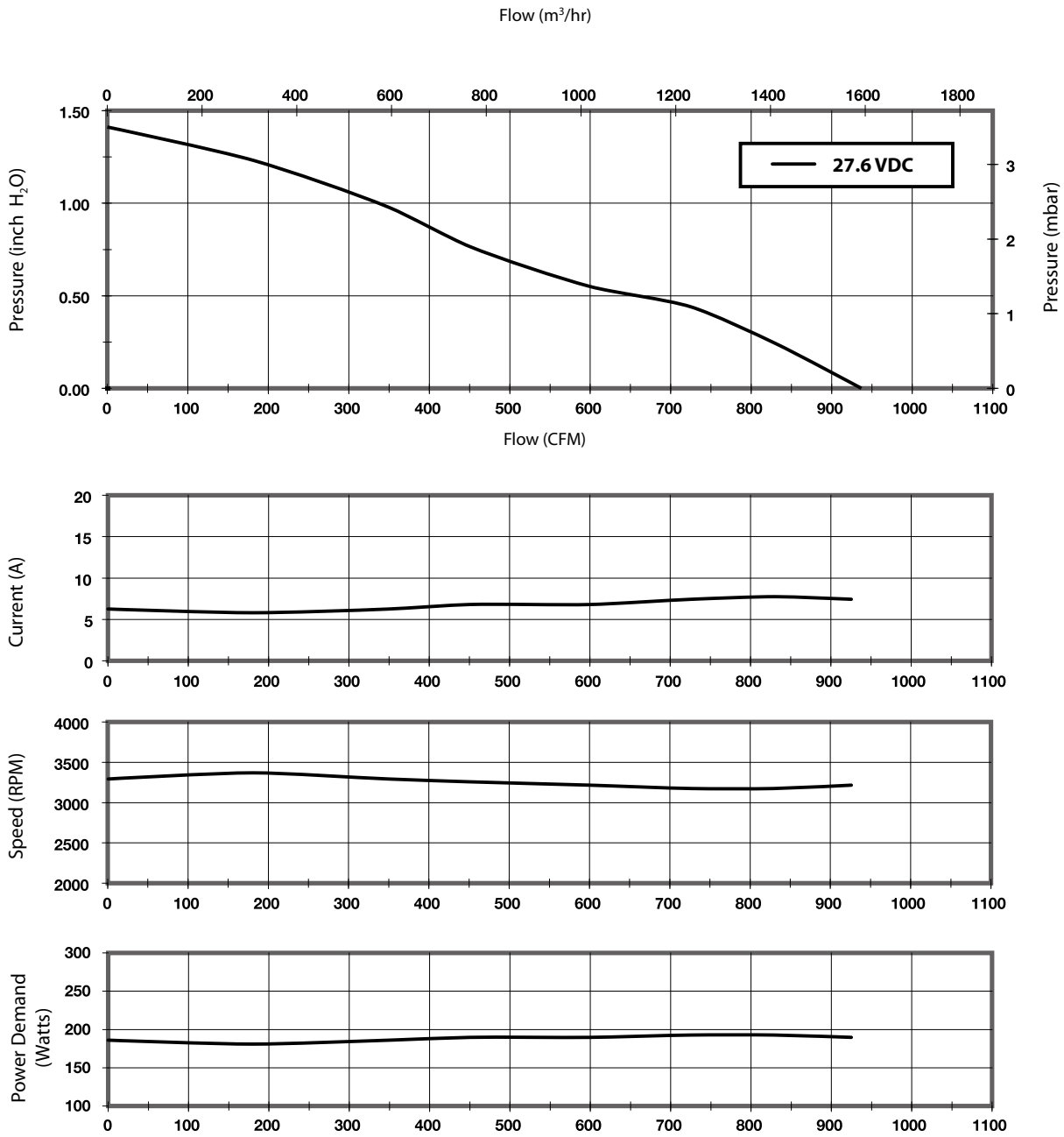
NOTES:

- These fans can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 6 lbs.
- 12.0 VDC Input avaliable

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

Typical Performance

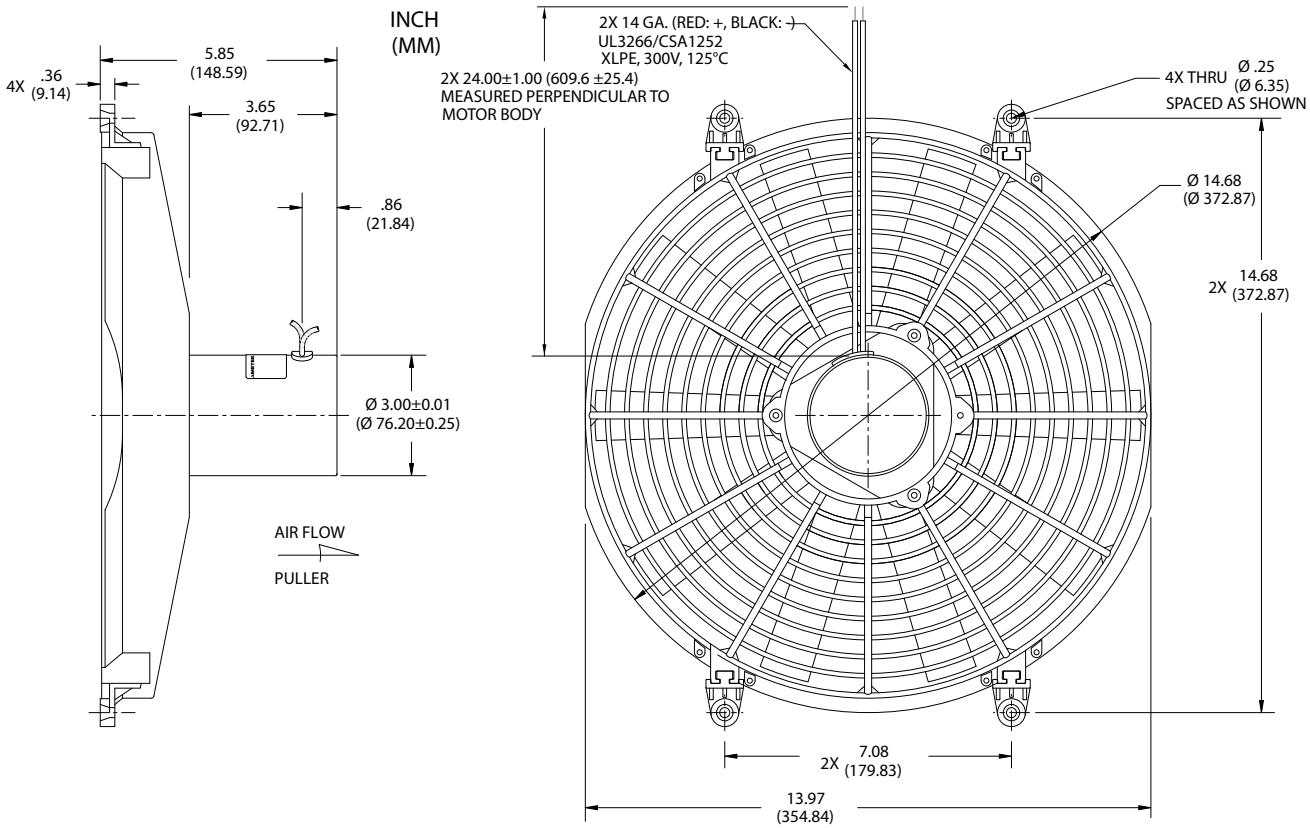


Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

RTP14 24 VDC Brushless DC Fan

ROTRON®



Specification	Units	Part/ Model Number 150078-04 Puller
Max Flow Rate	CFM	1641
	m3/hr	2789.7
Voltage	VDC	24 (actual 27.6)

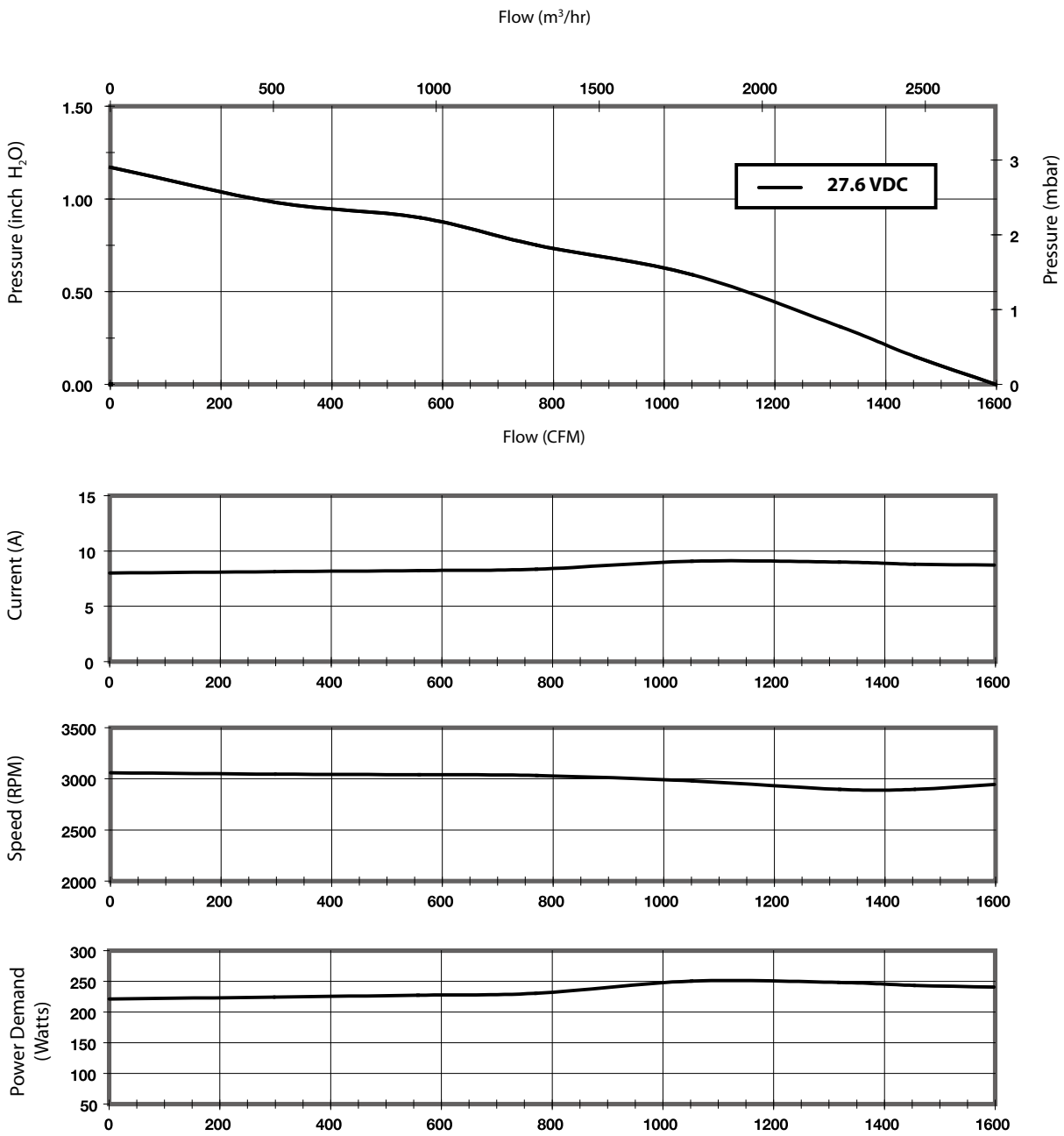
NOTES:

- These blowers can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 7 lbs.
- 12.0 VDC Input available.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

Typical Performance

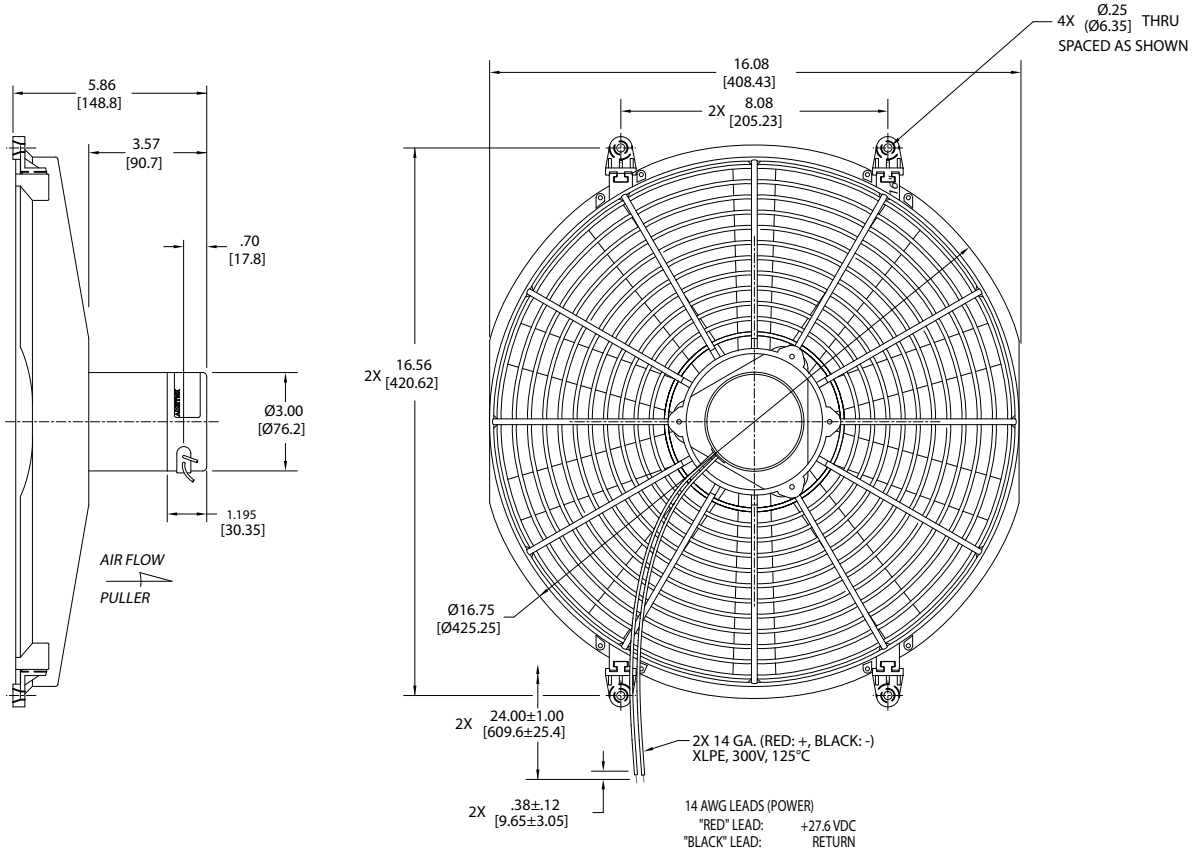


Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

RTP16 12/24 VDC Brushless DC Fan

ROTRON®



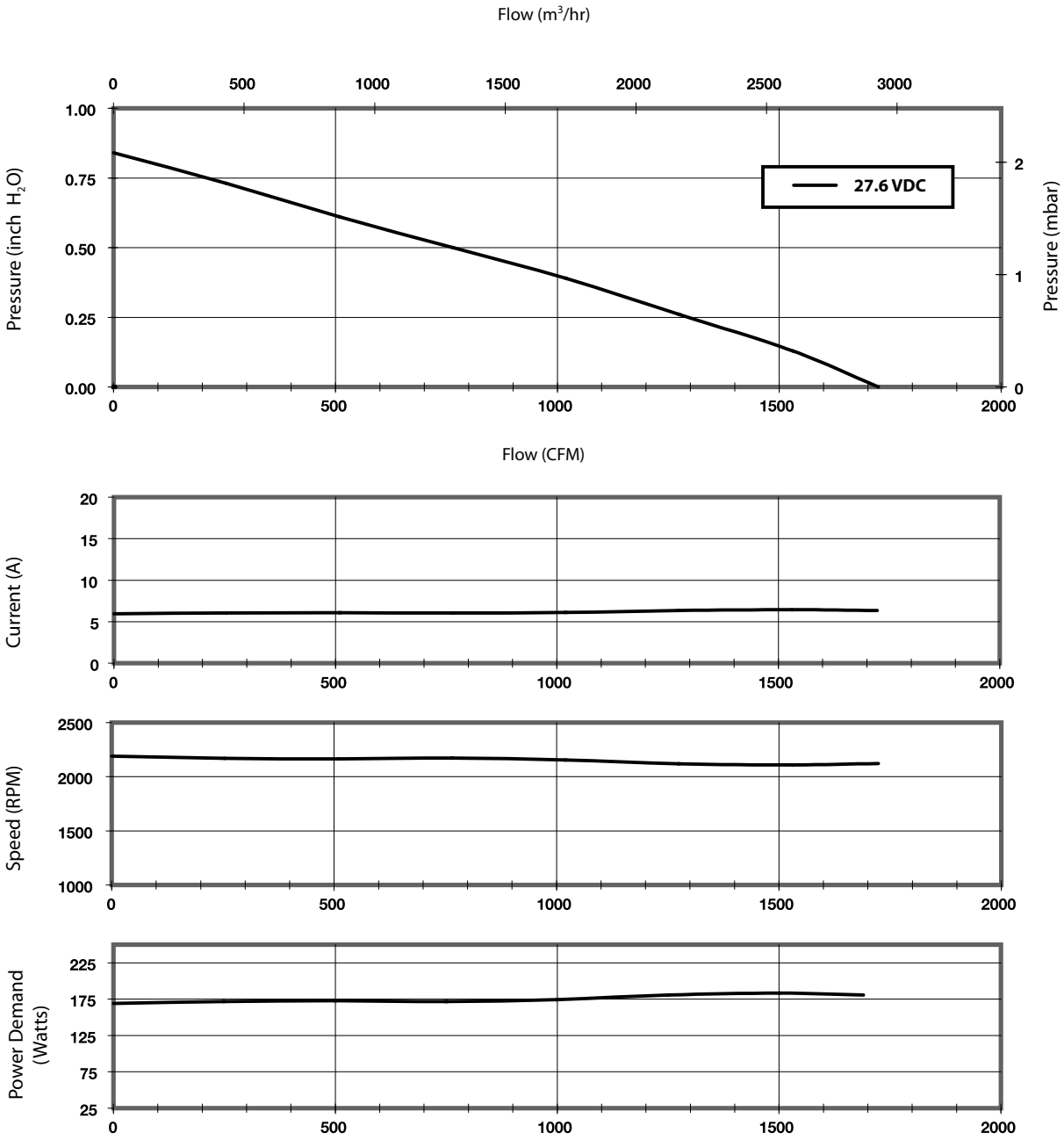
		Part/ Model Number
Specification	Units	150115-02 Puller
Max Flow Rate	CFM	1720
	m3/hr	2924
Voltage	VDC	24 (actual 27.6)

NOTES:

- These fans can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 7 lbs.
- 12.0 VDC Input available.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Typical Performance

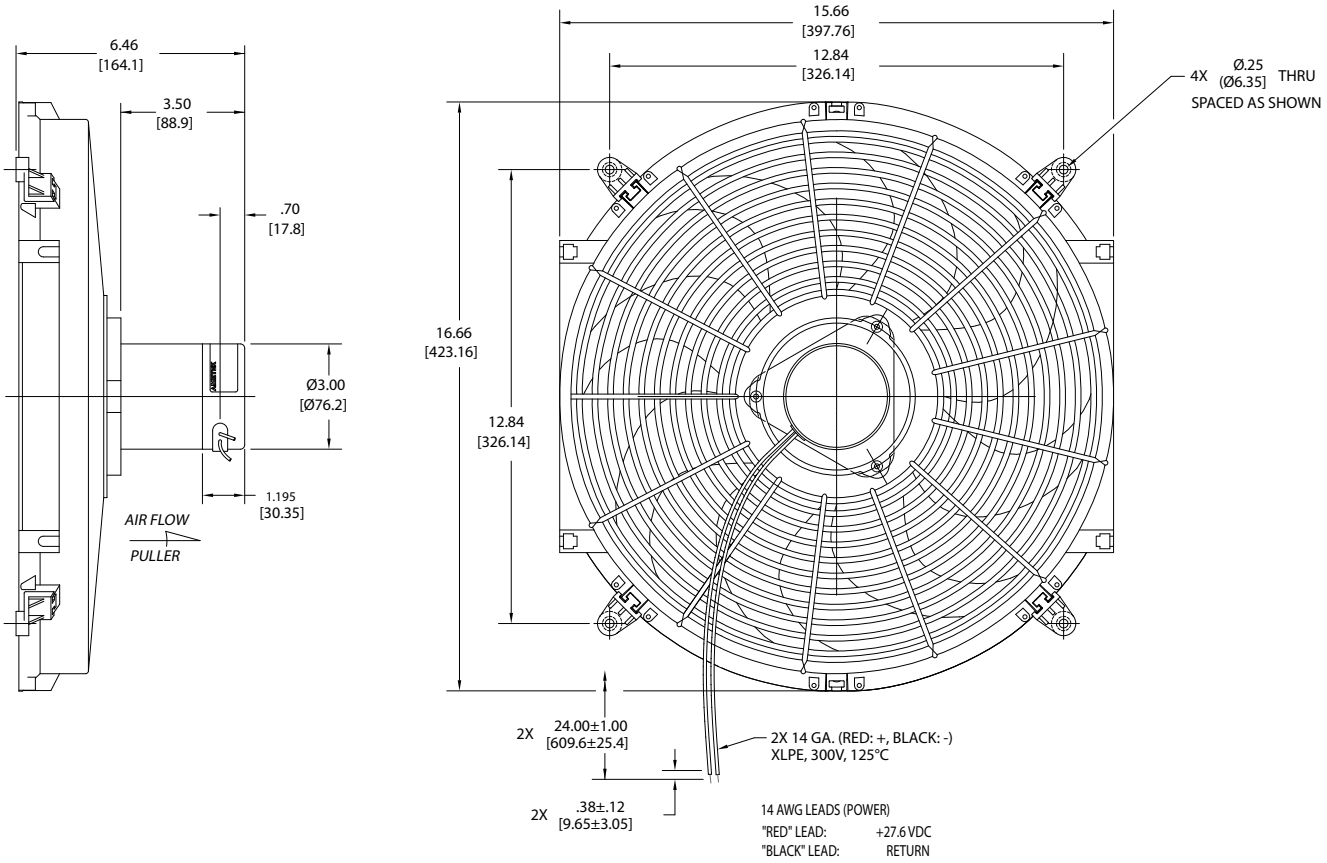


Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

RTP16S 12/24 VDC Brushless DC Fan

ROTRON®



		Part/ Model Number
Specification	Units	150116-02 Puller
Max Flow Rate	CFM	1920
	m3/hr	3264
Voltage	VDC	24 (actual 27.6)

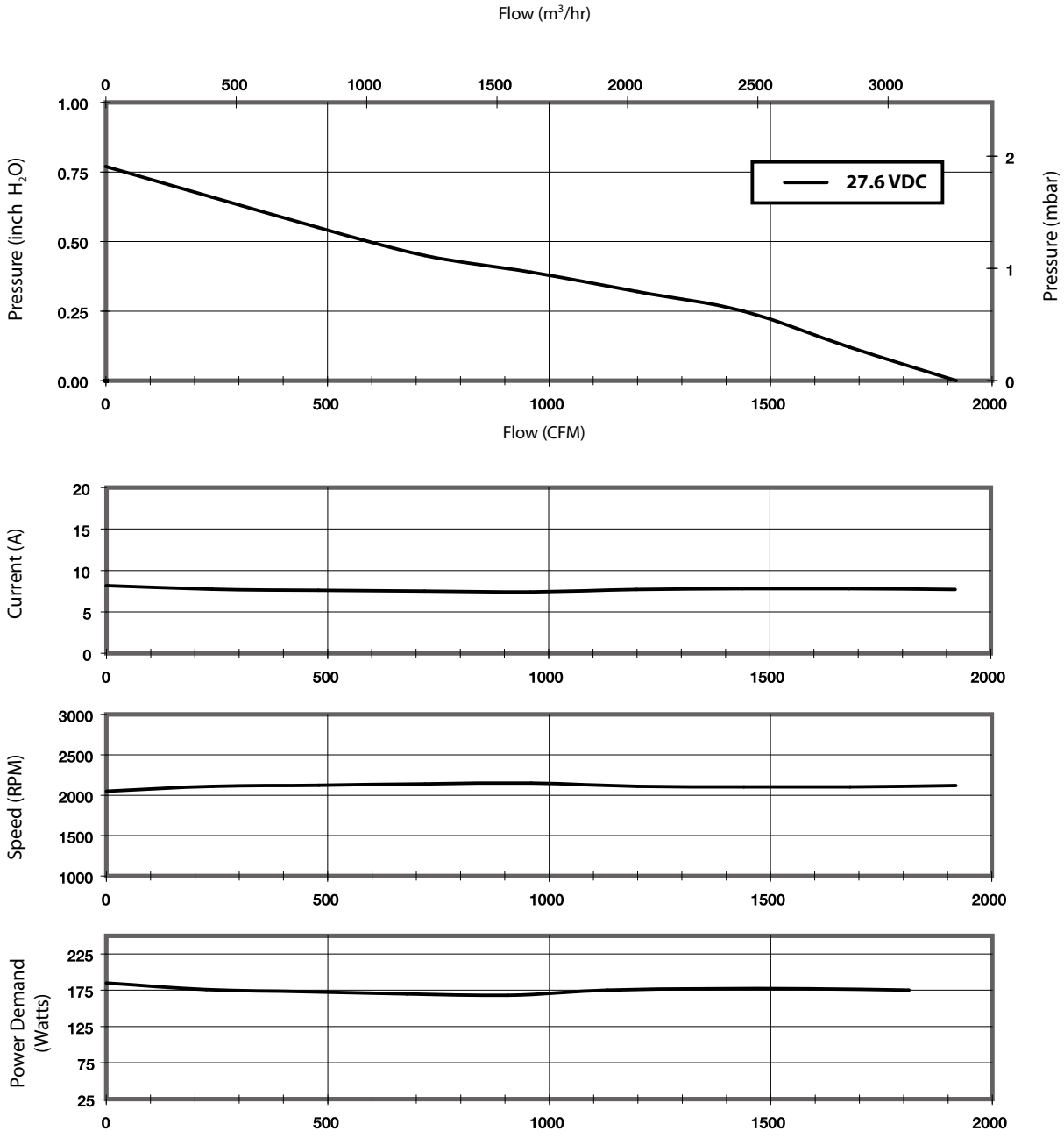
NOTES:

- These blowers can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 7 lbs.
- 12.0 VDC Input available.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

Typical Performance

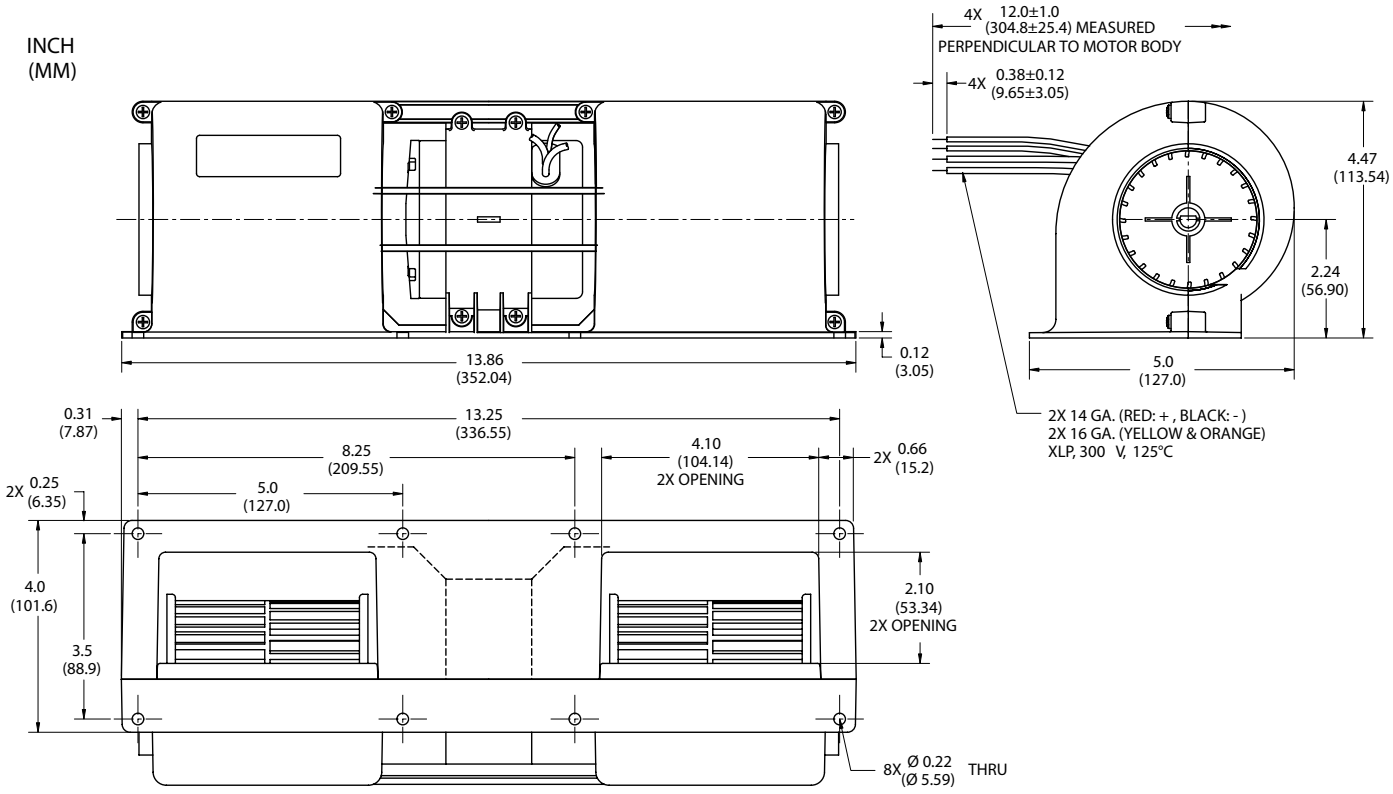


Data presented represents blower performance at STANDARD AIR DENSITY, .075 lbs/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

RTP1300 12/24 VDC Brushless DC Impeller Style Blower

ROTRON®



		Part/ Model Number	
Specification	Units	150295-00	150222-00
Voltage	VDC	12 (actual 13.8)	24 (actual 27.6)
Max Flow Rate	CFM	378	378
	m3/hr	642.6	642.6

NOTES:

- These blowers can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 12.0 VDC (11 to 18 VDC) Performance Recorded at 13.8 VDC.
  24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 7 lbs.
- 12.0 VDC Input available.

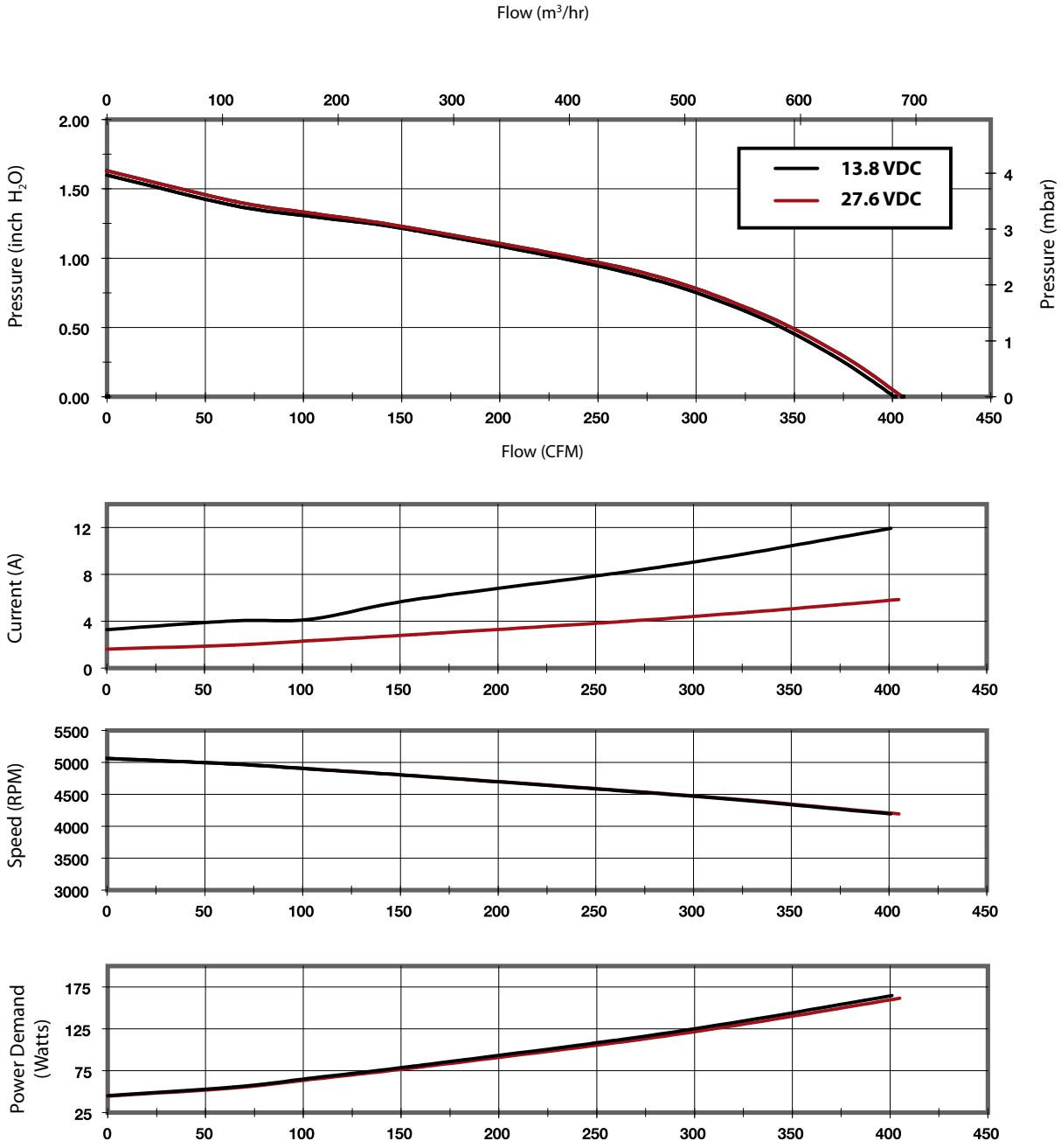
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

RTP1300 12/24 VDC Brushless DC Impeller Style Blower

ROTRON®

Typical Performance



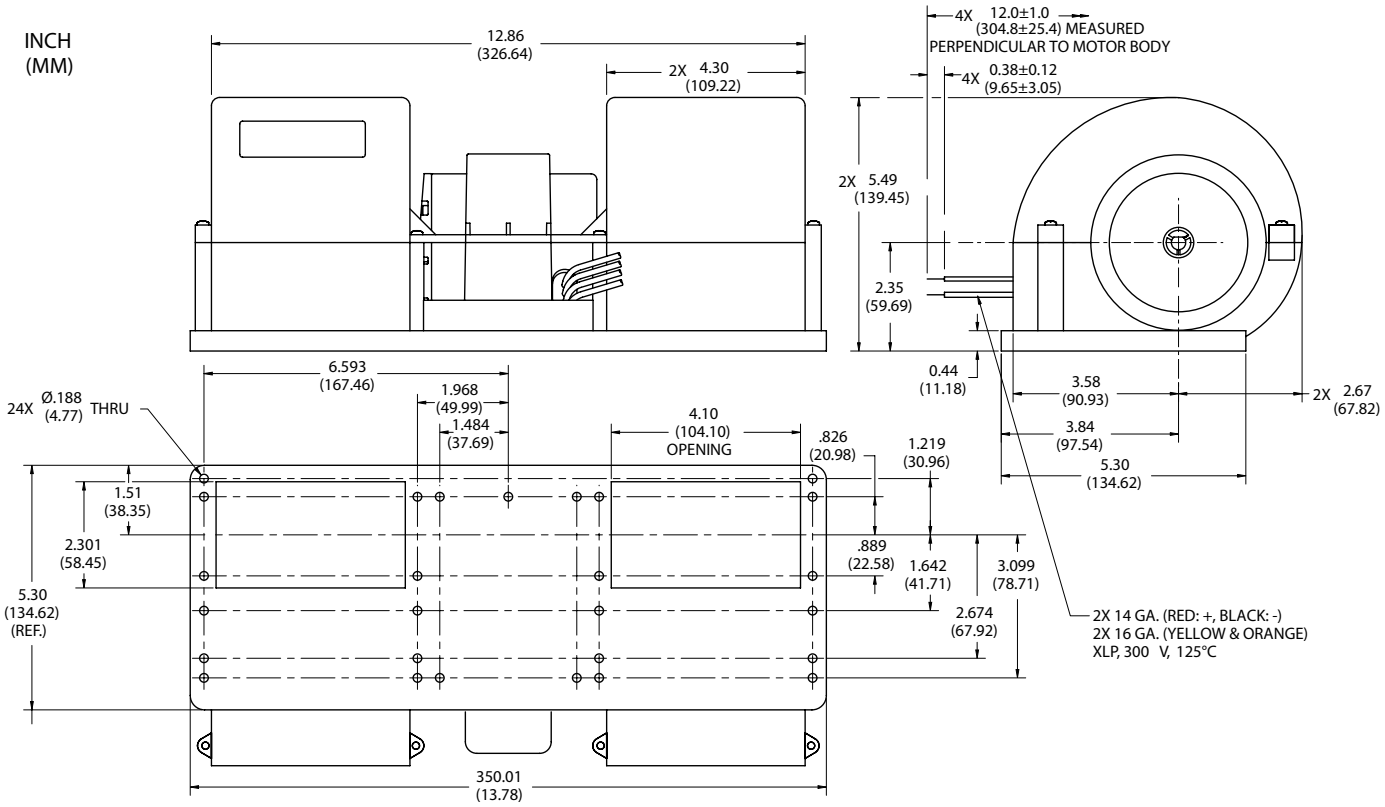
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

RTP1400 12/24 VDC Brushless DC Impeller Style Blower

ROTRON®



		Part/ Model Number	
Specification	Units	150229-00	150221-00
Max Flow Rate	CFM	568	619
	m3/hr	965.6	1052.3
Voltage	VDC	12 (actual 13.8)	24 (actual 27.6)

NOTES:

- These blowers can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 12.0 VDC (11 to 18 VDC) Performance Recorded at 13.8 VDC.
  24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 9 lbs.

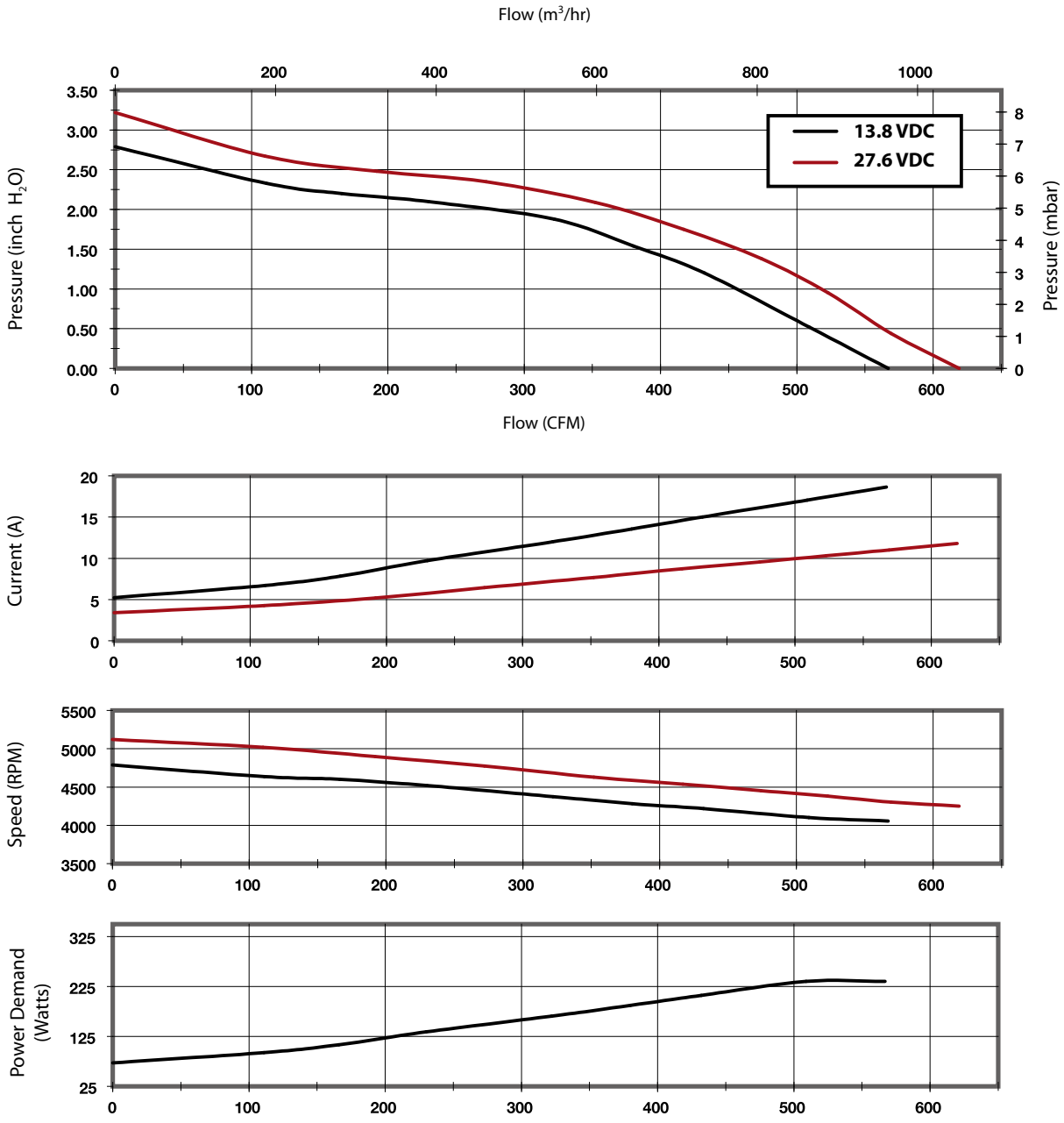
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

RTP1400 12/24 VDC Brushless DC Impeller Style Blower

ROTRON®

Typical Performance



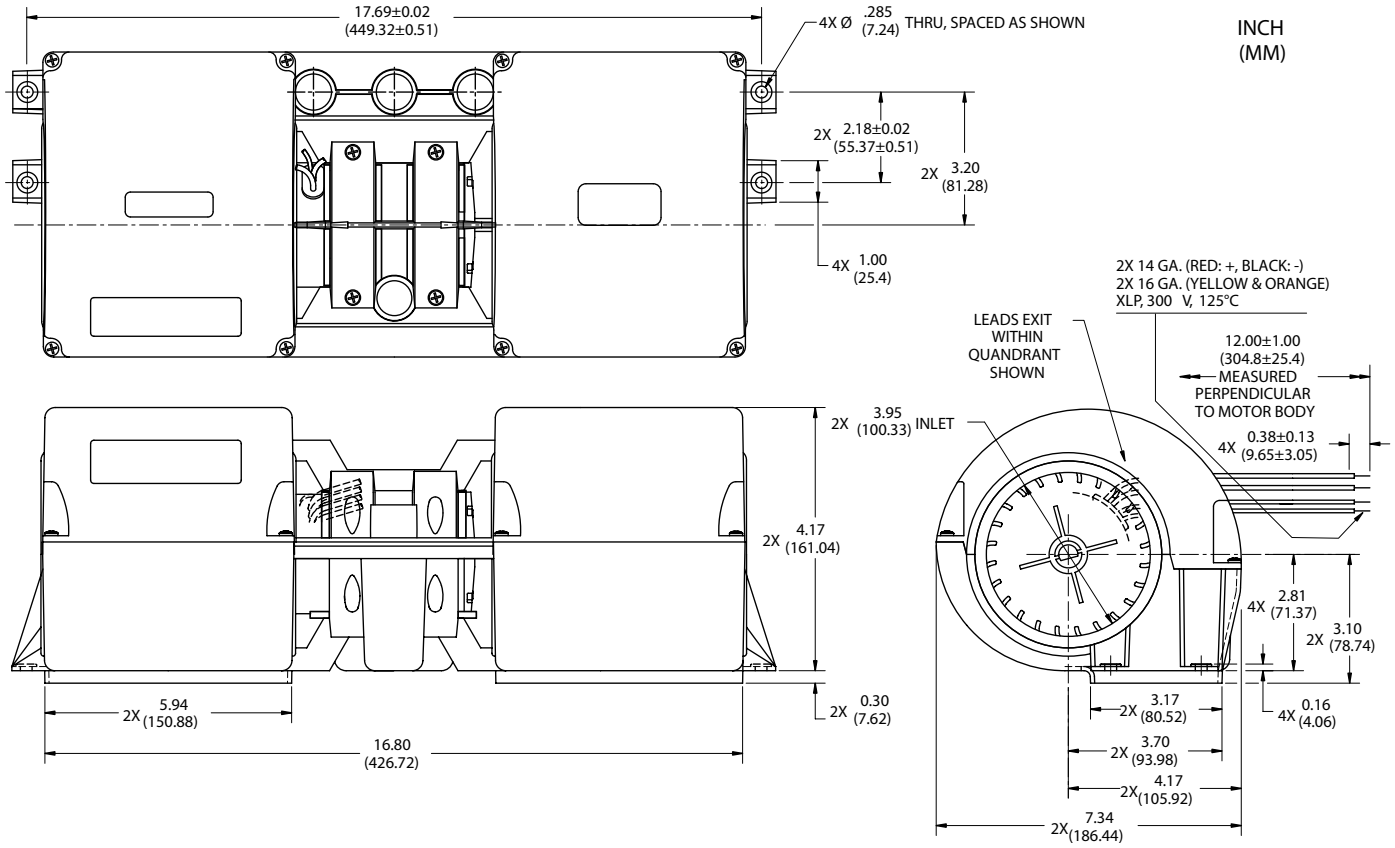
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

RTP1600 12/24 VDC Brushless DC Impeller Style Blower

ROTRON®



		Part/ Model Number	
Specification	Units	150225-00	150226-00
Max Flow Rate	CFM	877	872
	m3/hr	1490.9	1482.4
Voltage	VDC	12 (actual 13.8)	24 (actual 27.6)

NOTES:

- These blowers can be equipped with an option allowing for up to 4 distinct speed settings. Please inquire with the Marketing/Sales Department for specific set points.
- **Temperature**: Working Ambient Air: -40°C to 70°C, Storage Air: -40°C to 85°C.
- **Voltage Range**: 12.0 VDC (11 to 18 VDC) Performance Recorded at 13.8 VDC.
  24 VDC (18 to 32 VDC) Performance Recorded at 27.6 VDC.
- Environmetally resistant design. Please discuss specific operating environmet with Marketing/Sales Department..
- **Approximate Weight**: 10 lbs.

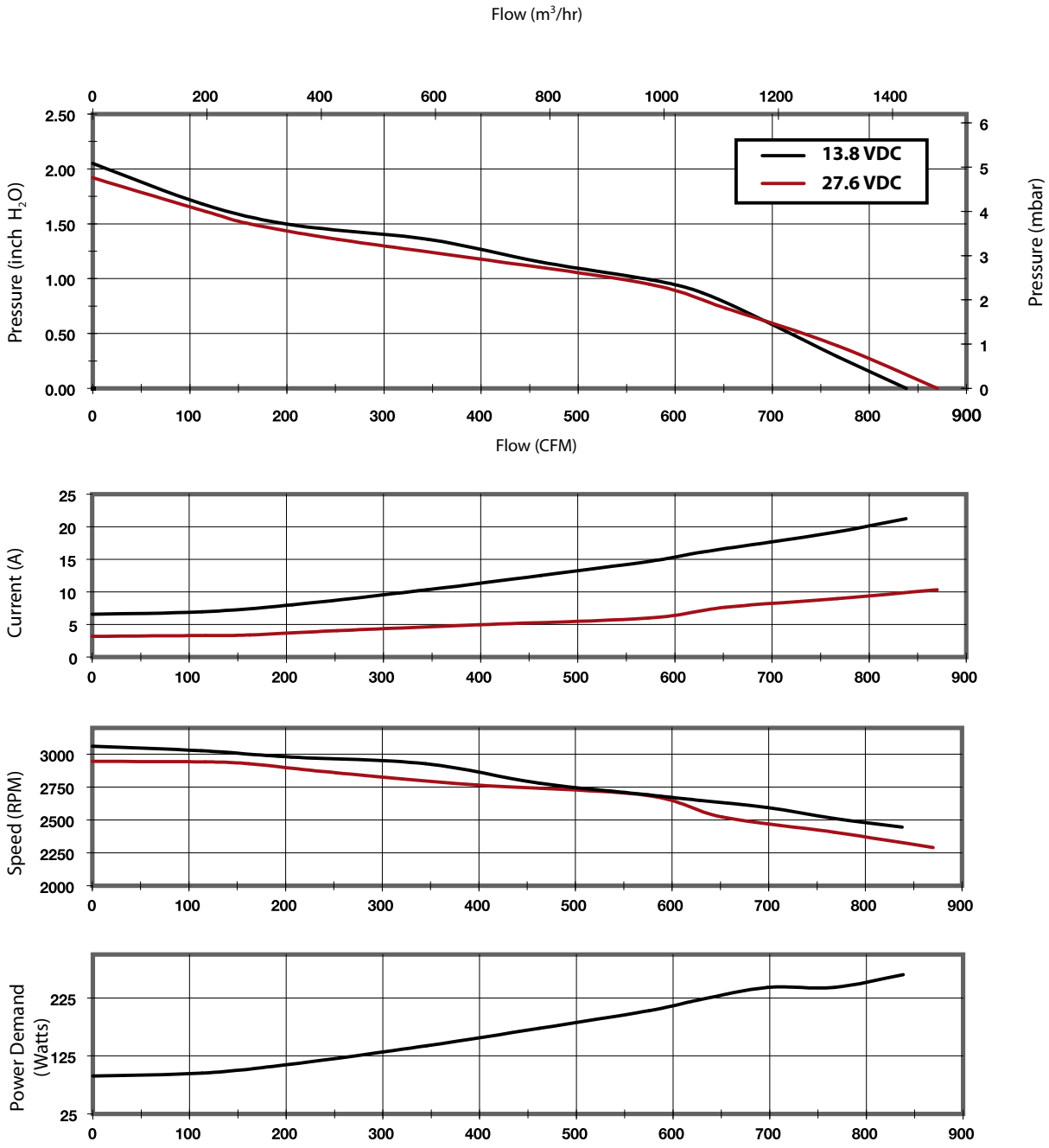
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

RTP1600 12/24 VDC Brushless DC Impeller Style Blower

ROTRON®

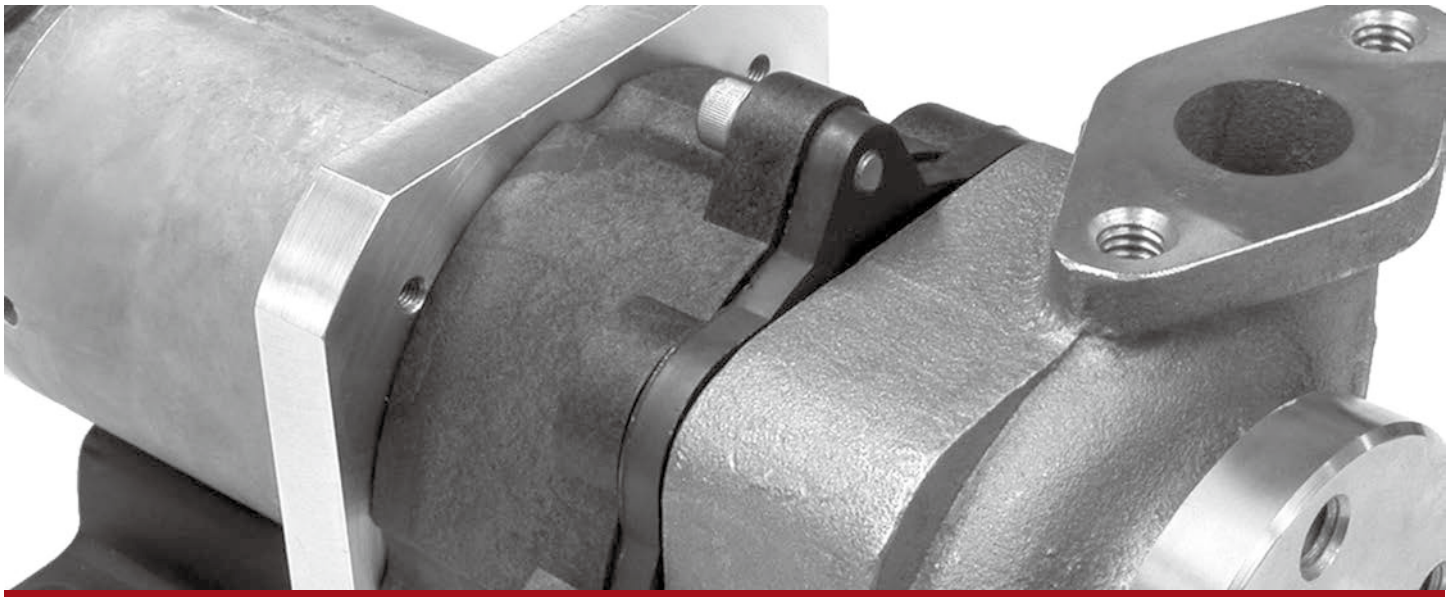
Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

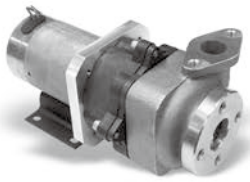
AMETEK®
PRECISION MOTION CONTROL



Pumps

Our Seal-less Brush and Brushless Water Circulating Pumps offers four basic pump/motor designs from 10 GPM (37.9 L/min) to 26 GPM (98.4 L/min) in either 12 VDC or 24 VDC motor designs. Variable speed is available upon request for the brushless designs. The seal-less pump design is magnetically coupled which provides for a leak-proof pump. There are no rotating wet seals to wear out and leak. Detailed pump information is provided on the individual product sheets. AMETEK seal-less pumps are not design for, and should not be used in, life sustaining applications.





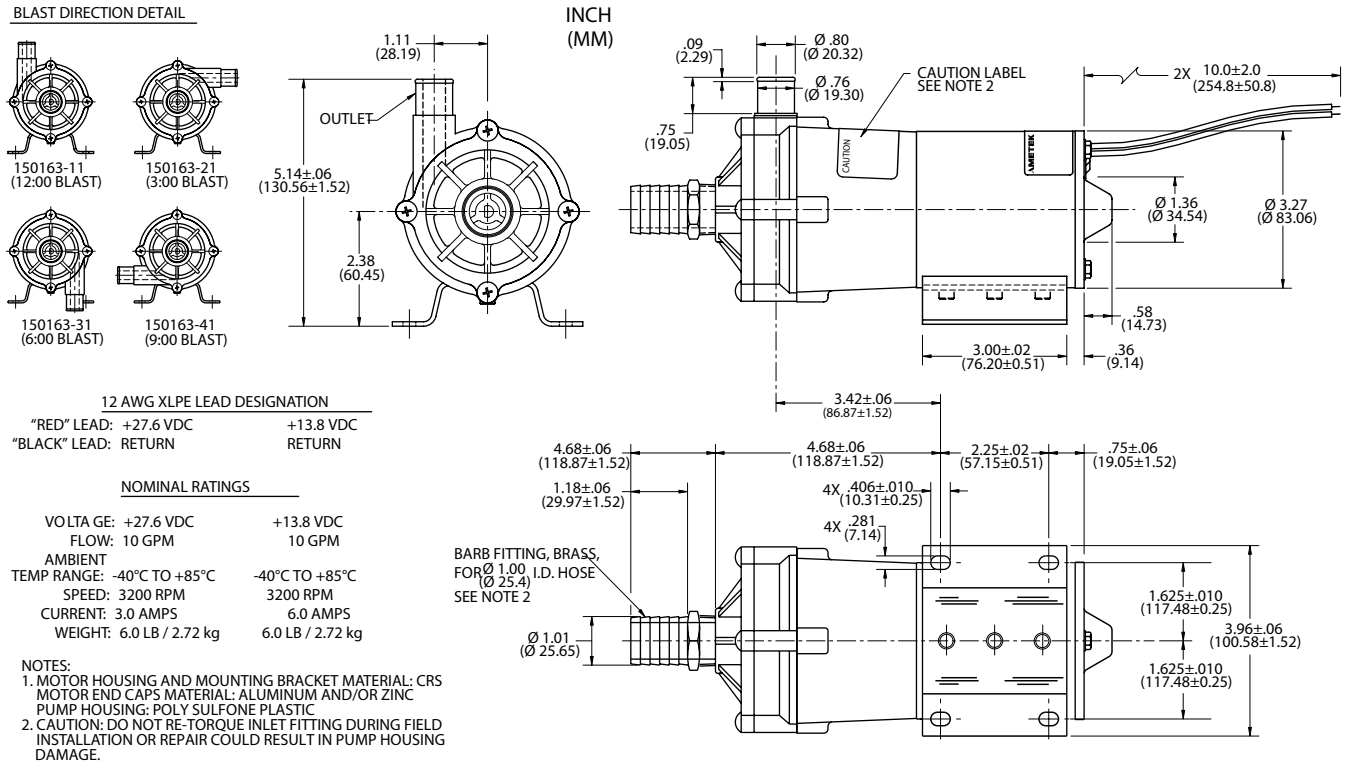
ROTRON®

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

10 Gallon Seal-less Pump, Brush Motor

ROTRON®



12 AWG XLPE LEAD DESIGNATION

"RED" LEAD:	+27.6 VDC	+13.8 VDC
"BLACK" LEAD:	RETURN	RETURN

NOMINAL RATINGS

VOLTAGE:	+27.6 VDC	+13.8 VDC
FLOW:	10 GPM	10 GPM
AMBIENT TEMP RANGE:	-40°C TO +85°C	-40°C TO +85°C
SPEED:	3200 RPM	3200 RPM
CURRENT:	3.0 AMPS	6.0 AMPS
WEIGHT:	6.0 LB / 2.72 kg	6.0 LB / 2.72 kg

NOTES:
1. MOTOR HOUSING AND MOUNTING BRACKET MATERIAL: CRS
   MOTOR END CAPS MATERIAL: ALUMINUM AND/OR ZINC
   PUMP HOUSING: POLY SULFONE PLASTIC
2. CAUTION: DO NOT RE-TORQUE INLET FITTING DURING FIELD INSTALLATION OR REPAIR COULD RESULT IN PUMP HOUSING DAMAGE.

		Part/ Model Number	
Specification	Units	150163-11	150162-11
Voltage	VDC	13.8	27.6
Voltage Range	VDC	9-18	18-32
Flow	GPM	10	10
	L/min	37.9	37.9
Current	Amps (A)	6	3
Speed	RPM	3200	3200
Ambient Temperature	Celsius	-40 deg to 85 deg	-40 deg to 85 deg

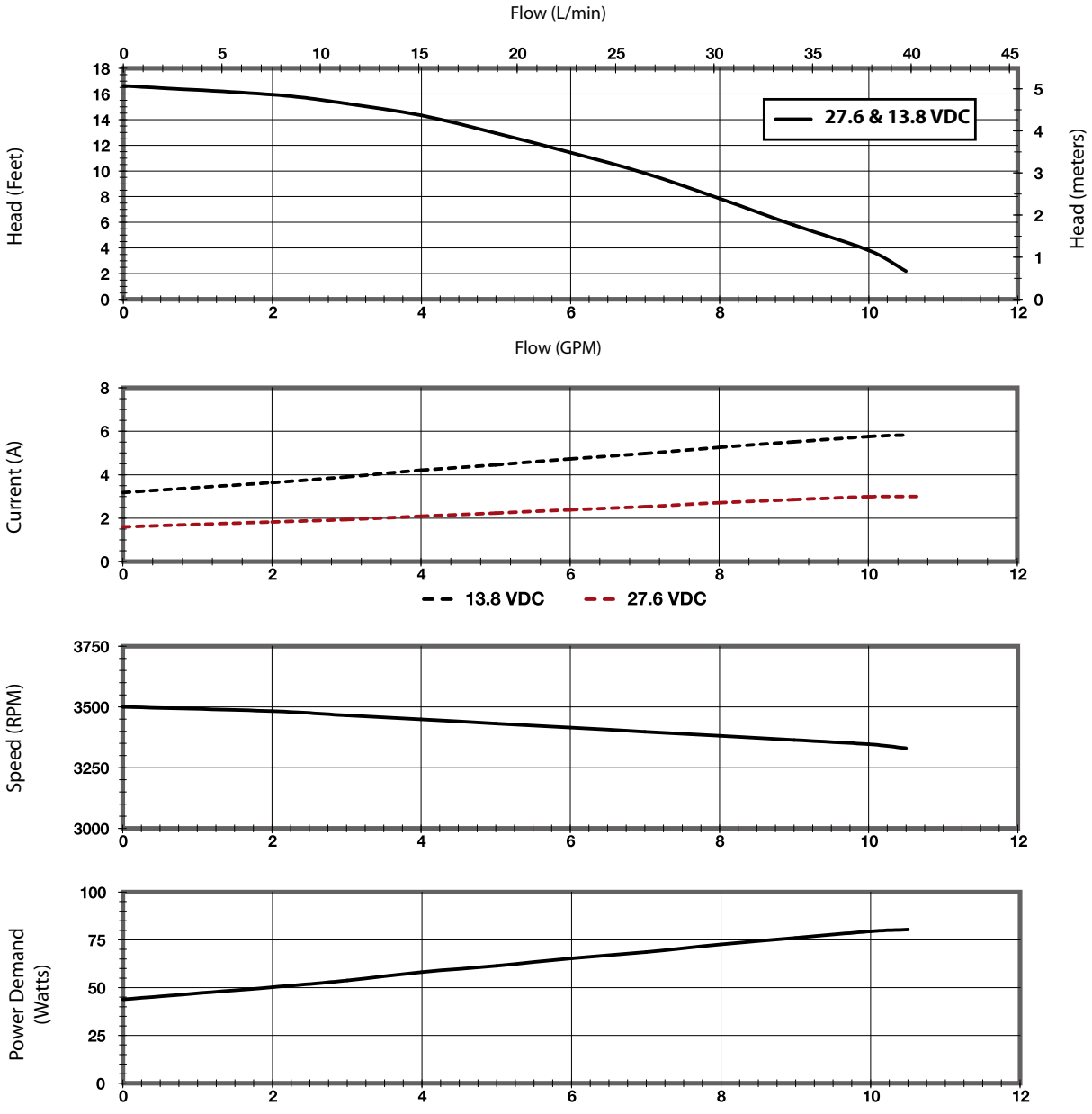
NOTES:

- Motor design characteristics are based on an operating environment of 85°C.
- Nominal and maximum performance figures are based on a windung temperature of 105°C.
- This product is designed for medium duty harsh environment applications such as shuttle bus and other medium duty transit bus applications.
- This product is environmentally resistant to hot water spray, rain, humidity, salt, fog, shock, and vibrations associated with vehicle applications.
- The seal-less pump is leak proof and features a magnetic coupling with no wet seal to wear or replace.
- The brush motor is removable from the pump without draining the coolant system.
- Approximate typical weight: 6 lbs.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

Typical Performance



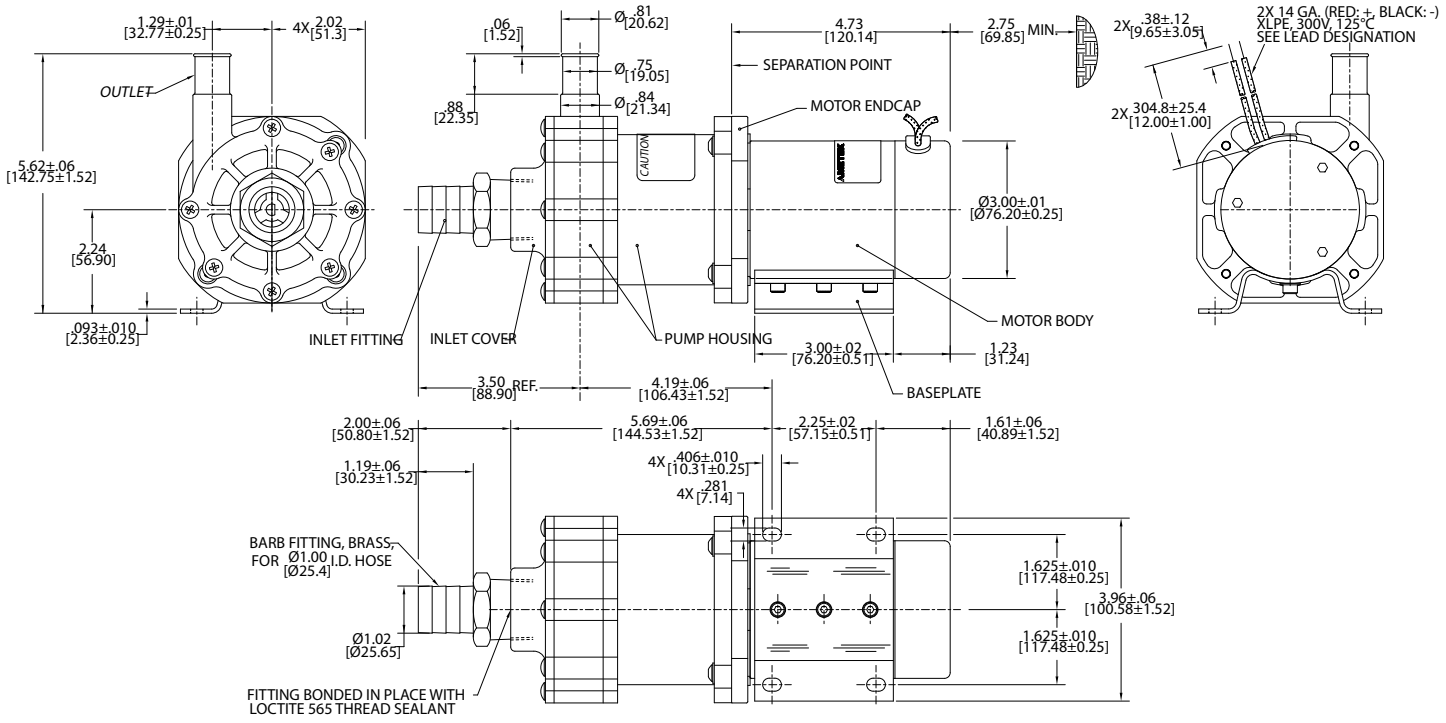
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

12 Gallon Seal-less Pump, Brushless Motor

ROTRON®

INCH
(MM)



		Part/ Model Number	
Specification	Units	150042-11	150011-11
Voltage	VDC	13.8	27.6
Voltage Range	VDC	11-18	18-32
Flow	GPM	12	12
	L/min	45.4	45.4
Current	Amps (A)	12	6
Speed	RPM	3300	3300
Ambient Temperature	Celsius	-40 deg to 85 deg	-40 deg to 85 deg

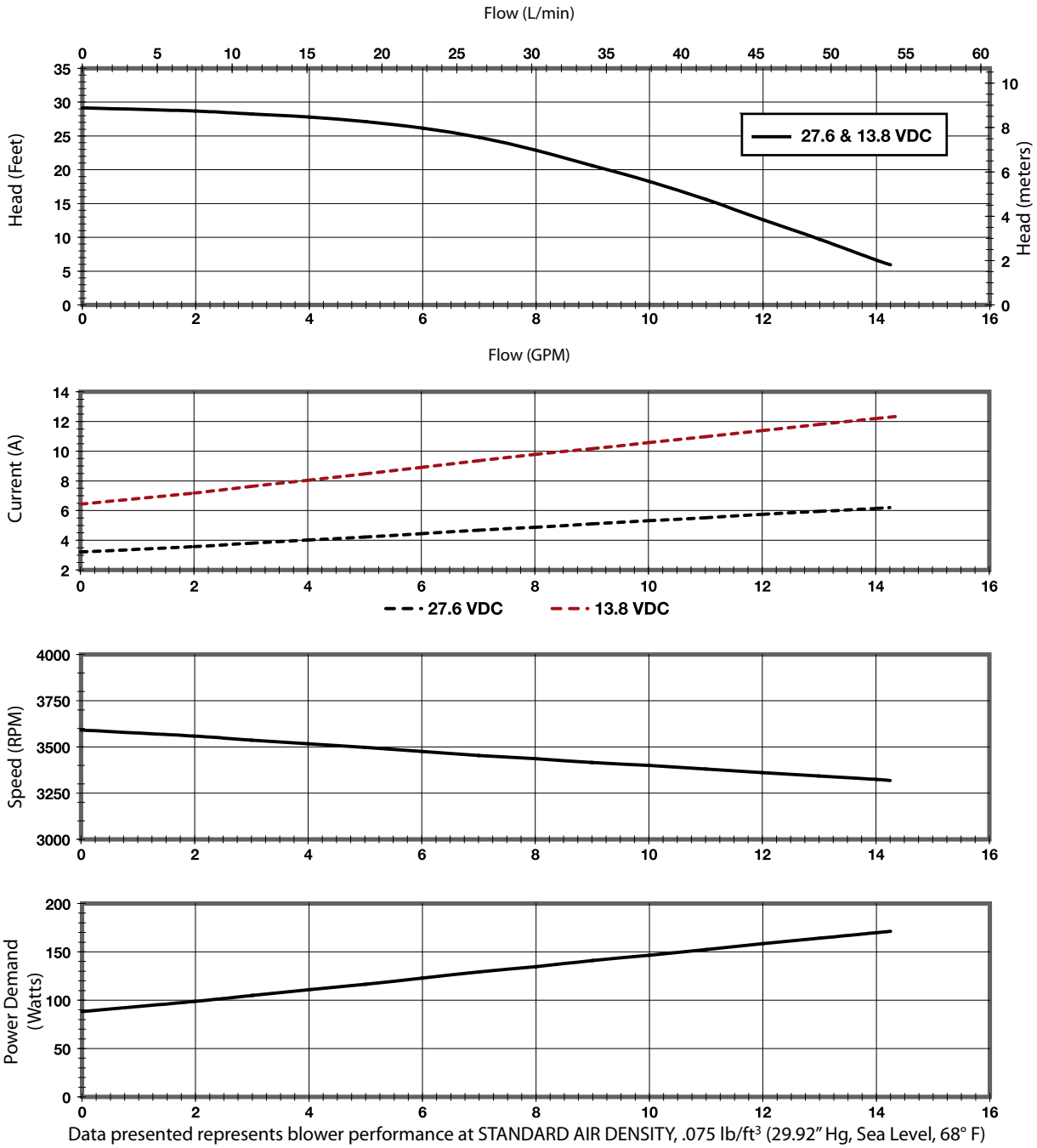
NOTES:

- Motor design characteristics are based on an operating environment of 85°C.
- Nominal and maximum performance figures are based on a windung temperature of 105°C.
- This product is designed for medium duty harsh environment applications such as shuttle bus and other meduim duty transit bus applications.
- This product is environmentally resistant to hot water spray, rain, humidity, salt, fog, shock, and vibration associated with vehicle applications.
- The seal-less pump is leak proof and features a magnetic coupling with no wet seal to wear or replace.
- The brushless motor is removable from the pump without draining the coolant system and has no brushes to be replaced. The motor is electronically commutated.
- Approximate typical weight: 8 lbs.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

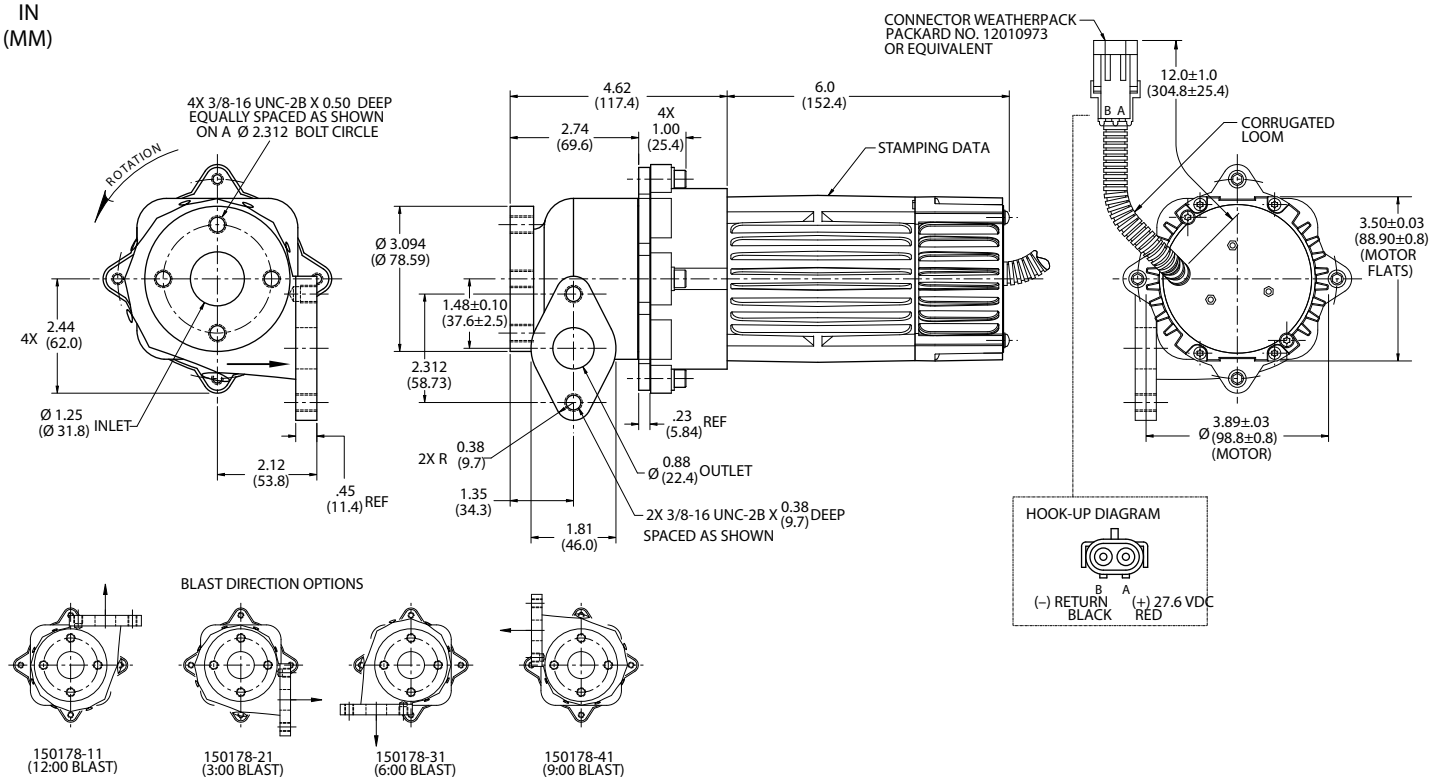
Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

18 Gallon Seal-less Pump, Brushless Motor

ROTRON®



		Part/ Model Number	
Specification	Units	150299-11	150178-11
Voltage	VDC	13.8	27.6
Voltage Range	VDC	9-18	18-32
Flow	GPM	18	18
	L/min	68.1	68.1
Current	Amps (A)	10	5
Speed	RPM	3100	3100
Ambient Temperature	Celsius	-40 deg to 85 deg	-40 deg to 85 deg

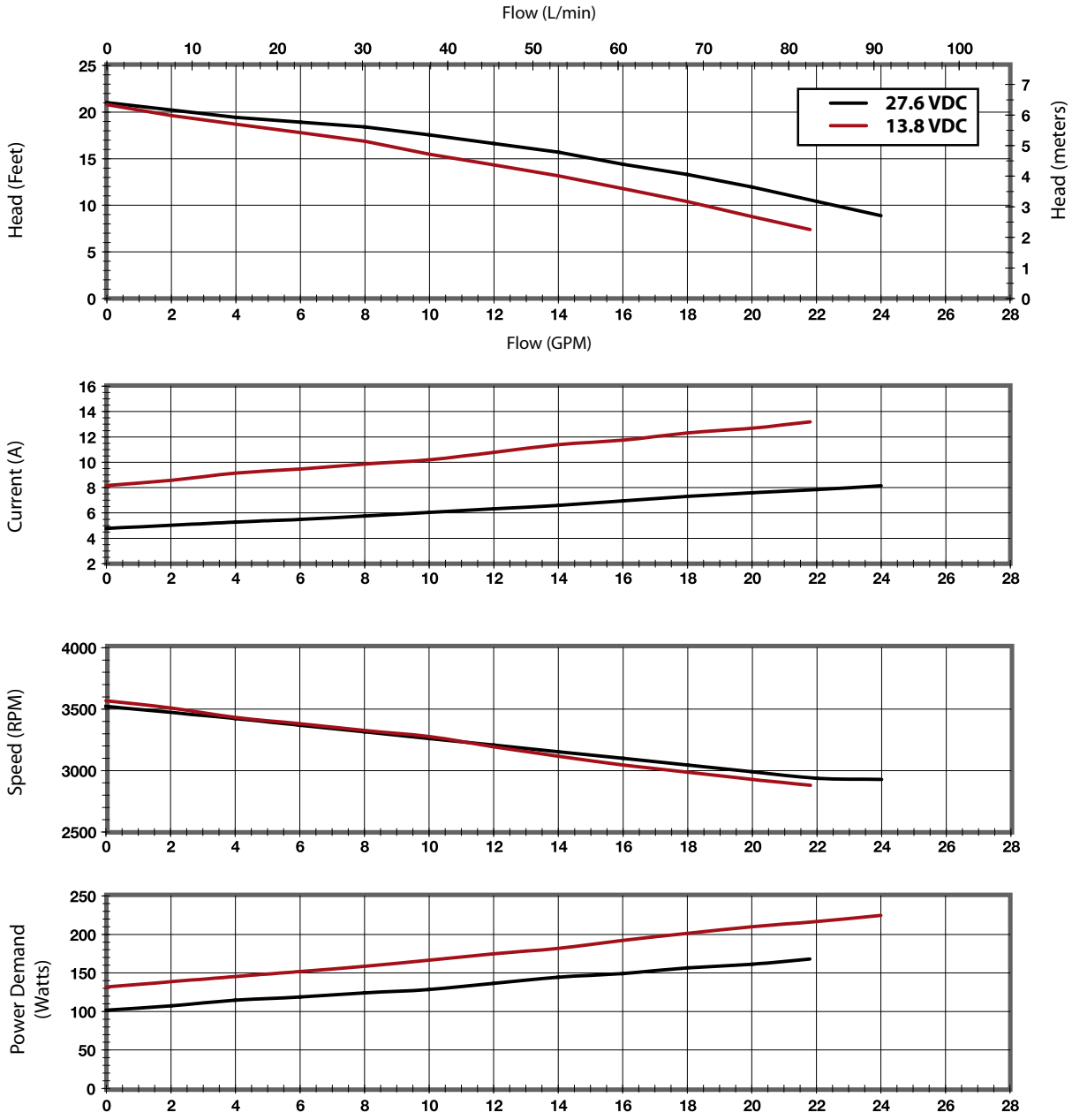
NOTES:

- Motor design characteristics are based on an operating environment of 85°C.
- Nominal and maximum performance figures are based on a windung temperature of 105°C.
- This product is designed for heavy duty harsh environment applications such as heavy duty transit bus applications.
- This product is environmentally resistant to hot water spray, rain, humidity, salt, fog, shock, and vibration associated with vehicle applications.
- The seal-less pump is leak proof and features a magnetic coupling with no wet seal to wear or replace.
- The brushless motor is removable from the pump without draining the coolant system and has no brushes to be replaced. The motor is electronically commutated.
- Approximate typical weight: 15 lbs.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

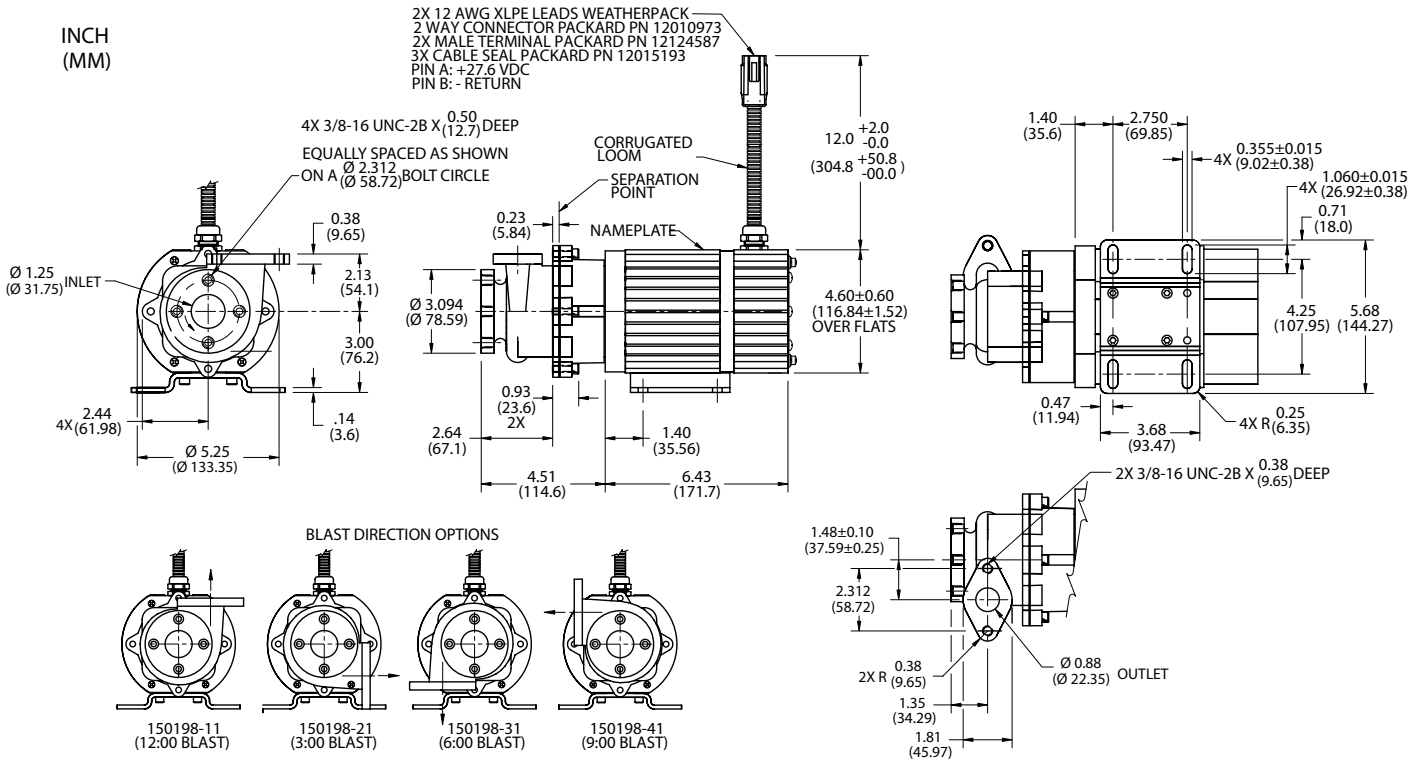
Typical Performance



Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

26 Gallon Seal-less Pump, Brushless Motor

ROTRON®



Specification	Units	Part/ Model Number 150393-11
Voltage	VDC	27.6
Voltage Range	VDC	18-32
Flow	GPM	26
	L/min	98.4
Current	Amps (A)	10
Speed	RPM	3850
Ambient Temperature	Celsius	-40 deg to 85 deg

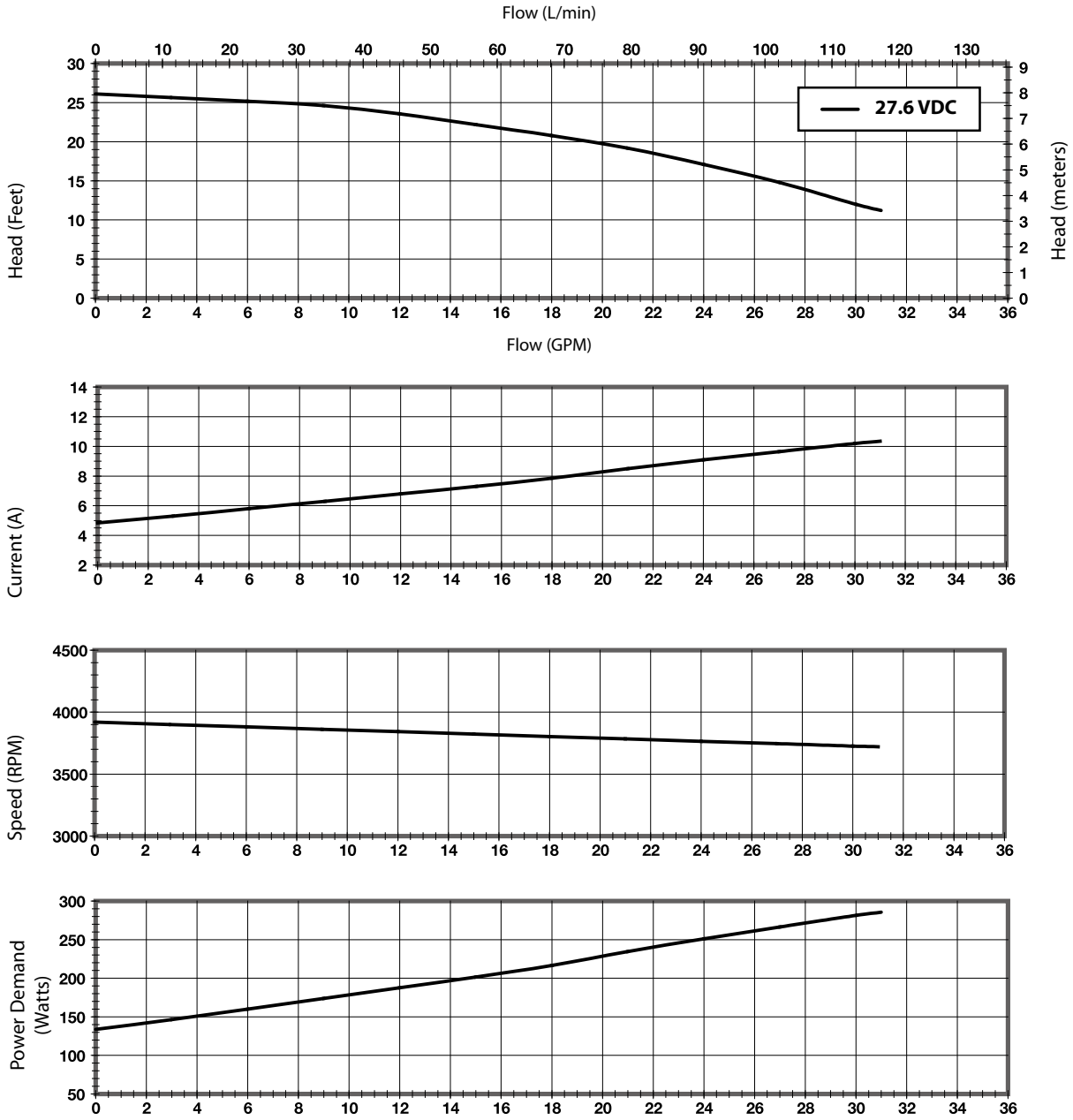
NOTES:

- Motor design characteristics are based on an operating environment of 85°C.
- Nominal and maximum performance figures are based on a windung temperature of 105°C.
- This product is designed for heavy duty harsh environment applications such as heavy duty transit bus applicatio0ns.
- This product is environmentally resistant to hot water spray, rain, humidity, salt, fog, shock, and vibration associated with vehicle applications.
- The seal-less pump is leak proof and features a magnetic coupling with no wet seal to wear or replace.
- The brushless motor is removable from the pump without draining the coolant system and has no brushes to be replaced. The motor is electronically commutated.
- Approximate typical weight: 25 lbs.

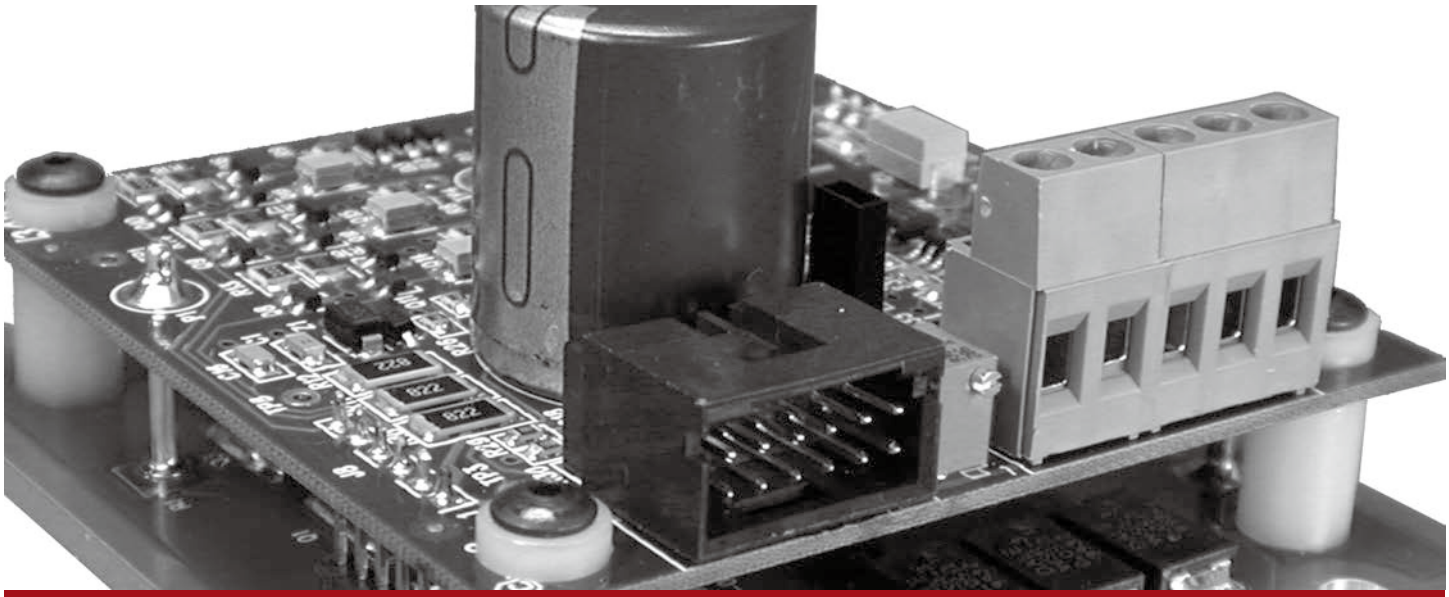
AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

Typical Performance



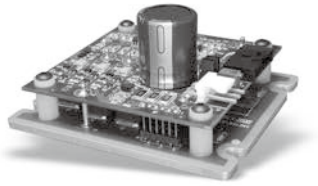
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft^3 (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

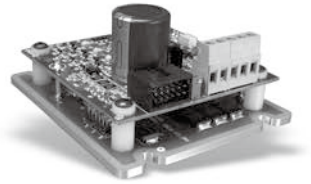


Controllers

All AMETEK brushless DC motors and blowers require a controller to operate. Many of these AMETEK BLDC motors and blowers feature a built in, integrated controller that takes the DC input from a power supply or battery and processes it into phase drive signals that are used to commutate the motor.

Motors and blowers that require low voltage DC input (11 to 52 volts) that do not come equipped wit an integrated, onboard controller, require on of the external controllers described in this section.





Windjammer® BRUSHLESS BLOWERS

MICROjammer® BRUSHLESS DC BLOWERS

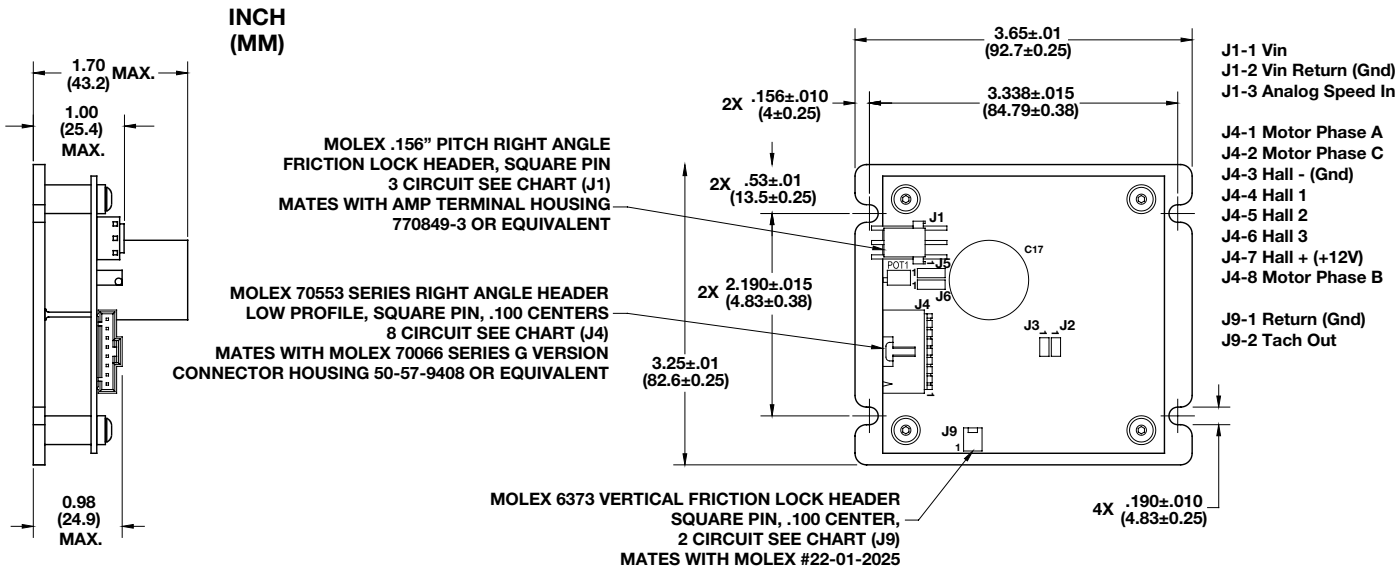
MINIjammer® BRUSHLESS DC BLOWERS

ROTRON®

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK®
PRECISION MOTION CONTROL

5 Amp BLDC Blower Controller



		Part/ Model Number
Specification	**Units**	48132
Input Voltage	VDC	11-52
Max Continuous Current	Amps (A)	5
Controller PWM Frequency	kHz	25
Analog Speed Input	VDC	0-5
Electrical Hall Spacing	Degrees	60 or 120
Waveform	-	6-Step Trapezoidal
Current Limit Protection	-	Yes
Rotation	-	CW / CCW

NOTES:

- Temperature: Operating: 0°C to 50°C, Storage Air: -40°C to 85°C.
- Speed Control: Electrical speed control is achieved by applying a 0 to 5 VDC signa l on J1 Pin 3 with respect to J1 Pin 2. Mechanical speed control is achieved by adjusting the potentiometer when J6 is in position 1 to 2.
- Current Control: 5 Amp RMS maximum.

Jumper Settings:

J2-Motor Sensor Spacing:	120° electrical spacing with jumper connected (default). 60° electrical spacing with jumper disconnected.
J3-Rotations:	Clockwise rotation with jumper connected (default). Counter-clockwise rotation with jumper disconnected. Do not change while motor is running or damage will occur.
J5-Input Voltage:	Position 1-2 for 16-52 VDC (default). Position 2-3 for 11-16 VDC.
J6-Speed Control:	Position 1-2 for internal speed adjust, via on board potentiometer (default). Position 2-3 for analog speed input, via 0-5 VDC signal applied to J1 pins 2 and 3.
J9:	F out provides a 0-12 VDC square wave to monitor speed $F\ out\ (Hz) = \left(\frac{Motor\ RPM}{120}\right)\left(Motor\ Poles\right)$

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Windjammer® BRUSHLESS BLOWERS

Blower Application Basics:

Selecting a blower for a particular application first requires knowledge or an estimate of the application's operating point: the flow rate required and the resistance to flow that the system, ductwork, filters, obstructions, etc., will impose. This system resistance is often referred to as backpressure or head loss. The performance curves shown in this catalog represent each model's typical maximum performance (full speed) at a constant input voltage. The performance curve describes a blower's ability to deliver flow rate against backpressure - from zero backpressure ("open flow") to completely blocked flow ("sealed"). Since all Ametek BLDC blowers have adjustable speed control, any operating point that lies underneath a given performance curve can be reached. With knowledge of the desired operating point, it is then a simple matter to browse the catalog to identify blowers having performance curves that exceed the desired operating point. Other factors should then be considered, which will be discussed hereafter.

System Resistance Curve: A resistance to flow is typically characterized by a pressure drop for a given flow rate, and often follows a 2nd order relationship (see Figure 1) (in some cases such as certain filters, the relationship is more linear). If the desired operating point is known, then its associated system curve can be estimated according to the relationship $P=CQ^2$. Plugging the values for desired operating point into the P (pressure drop) and Q (flow rate) terms yields the constant C. The system curve can then be overlaid graphically onto a given blower performance curve. The intersection of the two curves is the actual operating point (see Figure 2). The pressure rise provided by the blower matches the pressure loss imposed by the system resistance. For quick checks, simply place the operating point on a given blower curve and "eyeball" the system curve through it.

There are likely to be several models that can achieve the desired performance, but not all will operate with the same efficiency. The blower performance curves in this catalog include not only pressure vs. flow rate information, but also current and input power vs. flow rate. An application is normally best served by selecting the blower that delivers the desired performance with the least amount of input power. Typically, the most efficient blower is the one where the system resistance curve intersects the blower curve at approximately the middle, i.e., half the maximum flow rate.

Figure 1: Typical System Resistance Curve - Pressure Drop vs. Flow Rate

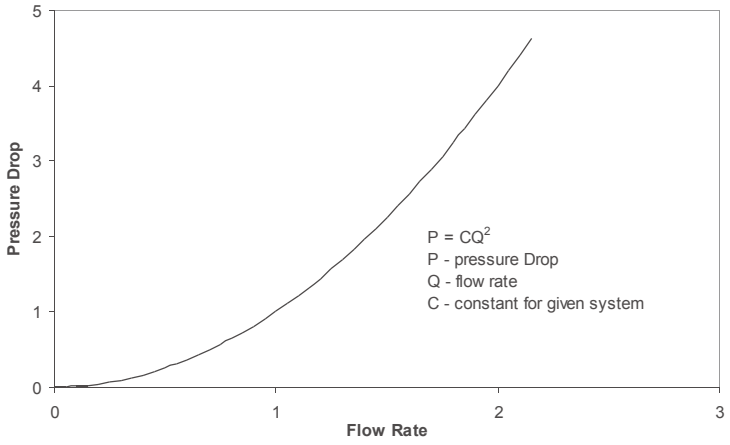
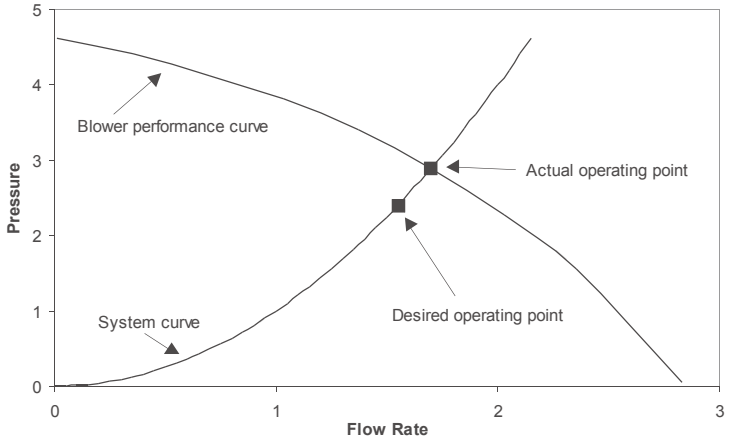


Figure 2: System and Blower Curves - Identifying the Operating Point



Other questions to consider when selecting a blower:

- Will a blower of this size fit in my application?
- Would I prefer that the blower have an on-board controller or would I prefer to provide an external controller?
- Do I need a blower with fast dynamic response?
- Is loudness a major factor?
- Does my application require modulating the speed during operation, or simply a single speed adjustment made at the time of installation?
- What input voltage will I have available for powering the blower?
- Are there additional features that I require such as a tachometer output, dynamic braking, or speed control functions?
- Is it a problem for the working fluid to come into contact with electronics?
- What are the environmental factors associated with my application?

Blower Performance vs. Speed Changes: Since Ametek's blowers are speed controllable, the speed can be reduced to a desired operating point or

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

AMETEK® PRECISION MOTION CONTROL

increased if a different operating point is needed in a dynamic system. Blowers conveniently have very predictable behavior when it comes to changes in speed. Table 1 summarizes these relationships.

Gage Pressure vs. Absolute Pressure: Before proceeding, it's important at this point to note that this tutorial makes reference to both "absolute pressure" and "gage pressure." Gage pressure is simply the difference above or below atmospheric (or barometric) pressure. Absolute pressure is the sum of atmospheric and gage pressures:

$$P_{absolute} = P_{gage} + P_{atm}$$

Pressure values stated hereafter are gage values unless otherwise stated.

Figure 3 with Example 1 demonstrates how to calculate the power requirement for an operating point that occurs at a reduced speed.

Example 1:
An application calls for air performance of 8 cfm (ft^3/min) at a pressure of 6 inch H_2O. The blower whose performance is shown in Figure 3 has been chosen. What will be the power consumption at 8 cfm, 6 in H_2O?

Table 1: Fan Laws Related to Changes in Blower Speed

$$Q_2 = Q_1\left(\frac{N_2}{N_1}\right)$$

$$\dot{m}_2 = \dot{m}_1\left(\frac{N_2}{N_1}\right)$$

$$P_2 = P_1\left(\frac{N_2}{N_1}\right)^2$$

$$\mathcal{P}_2 = \mathcal{P}_1\left(\frac{N_2}{N_1}\right)^3$$

Where, $N \rightarrow$ fan rotational speed
$\dot{m} \rightarrow$ mass flow rate
$Q \rightarrow$ volume flow rate
$P \rightarrow$ static pressure (gage)
$\mathcal{P} \rightarrow$ blower power demand

All other variables constant.

Answer: At full speed, the blower will deliver about 8.8 cfm in this system, whose backpressure is about 7.2 in H_2O at that flow rate (see Figure 3). Since this is delivering too much, the speed must be reduced to achieve the desired operating point.

At full speed, Figure 3 shows the blower speed to be about 19.8 krpm and the power consumption is 18.3 W. Using the fan laws shown in Table 1 yields:

$$8\text{ cfm} = 8.8\text{ cfm}\left(\frac{N_2}{19.8\text{ krpm}}\right)$$

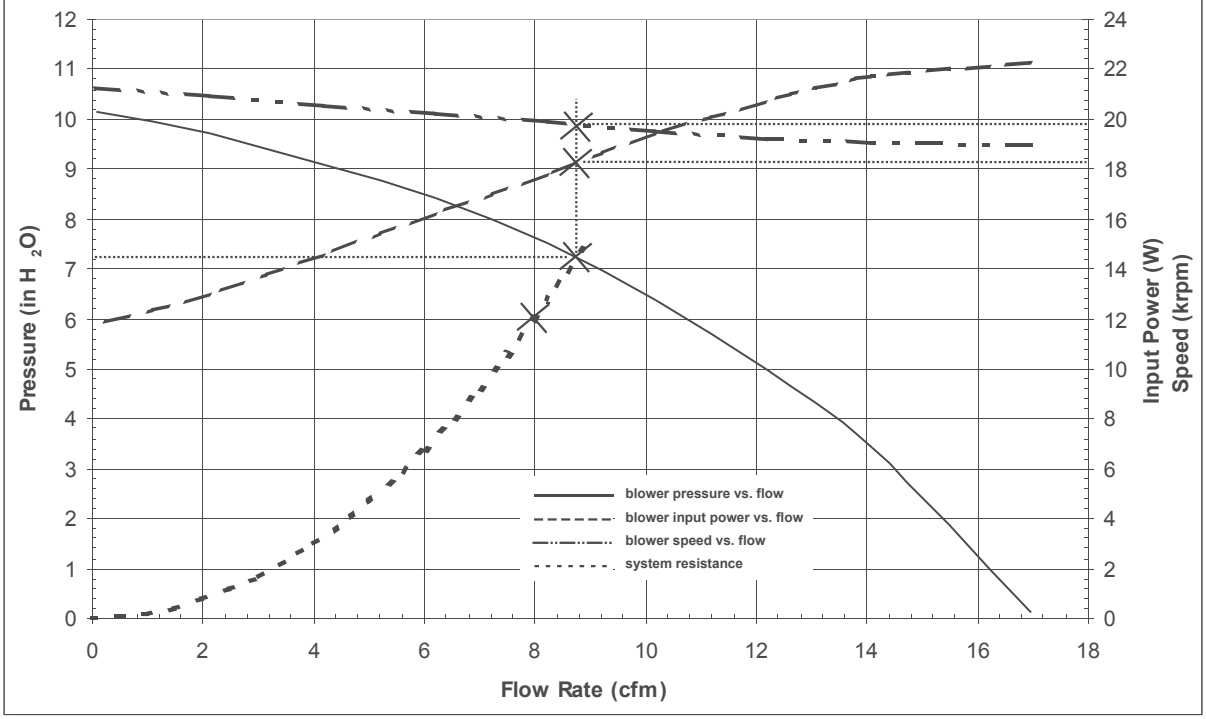
$$N_2 = 18.0\text{ krpm}$$

So, the power consumption at the reduced speed is:

$$\mathcal{P}_2 = 18.3\text{ W}\left(\frac{18.0\text{ krpm}}{19.8\text{ krpm}}\right)^3$$

$$\mathcal{P}_2 = 13.7\text{ W}$$

Figure 3: Speed Change Calculation Example



AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

The speed at the desired operating point could also have been found by using the ratio of pressures:

$$6 \text{ in } H_2O = 7.2 \text{ in } H_2O\left(\frac{N_2}{19.8 \text{ krpm}}\right)^2$$

Note: There is some minor error in this calculation because there will likely be some small change in motor efficiency at the different operating point. This can usually be neglected for estimating power requirements.

Static and Velocity Pressure: The energy of a fluid can be viewed as having two types of pressure: static pressure and velocity pressure.

Static pressure is the force per unit area exerted by the fluid on its surroundings, and is independent of the fluid's motion. This is the pressure that would be measured by a pressure sensor ported normal to the direction of flow. Dividing this pressure by the fluid density yields an energy term (per unit mass) often referred to as "pressure head."

Velocity pressure is essentially the kinetic energy content, or velocity head, of the fluid. It is the pressure that would result from slowing down the streamline velocity to zero, converting the kinetic energy into pressure head. Mathematically, it takes the form $P=\frac{1}{2}\rho V^2$, where ρ is the fluid density and V is the fluid velocity (including the density value maintains force per area, i.e., pressure units).

The sum of the static pressure and velocity pressure is the total pressure.

Within a flow system, there are also likely to be changes in elevation (potential energy or elevation head) that contribute to the energy content of the stream at a given point. But the changes in elevation head for gas flow are usually small enough to be safely ignored.

The blower performance curves herein are plotted as static pressure (or vacuum) rise vs. flow rate. The velocity pressure is typically not a useful energy quantity for overcoming resistance to flow. In other words, in most cases the resistance to flow results in a loss of static pressure of the streamline and not to a loss of velocity pressure. Technically, a diverging nozzle could be used to convert velocity pressure to static pressure, thereby increasing the blower's ability to provide flow against backpressure, but this is not a common practice.

Fluid Density: The density of the working fluid has a significant influence on blower performance, as can be seen in the relationships listed in Table 2. Because fluid density is a variable that is independent of the blower, the density must be stated as part of any blower performance specification. In the previous example, the density was ignored for simplicity. But the performance curves for all blowers in this catalog have the statement *"normalized to air density = .075 lb/ft³,"* or equivalent statement. So, in the previous example, it was assumed that the desired performance of (8 cfm, 6 in H_2O) had also been normalized to .075 lb/ft³.

The density value of **.075 lb/ft³** is a somewhat arbitrary selection, but it is close to typical air density at sea level. It is commonly referred to as "Standard Density" in the fan and blower industry. Any target operating point must be normalized to .075 lb/ft³ when evaluating blower performance curves in this catalog. Examples hereafter demonstrate how to do this.

The vast majority of blower applications are designed to move air, but Ametek blowers can be used with any non-explosive, non-corrosive gas mixture (exception - see Ametek's Nautilair series for blowers designed for combustion pre-mix applications). Caution: most of the blowers in this catalog are not designed to be leak-proof, and many vent some working fluid to cool the motor. At the temperature and pressure ranges for most blower applications, the gas mixture can be considered an ideal gas, and it will behave according to the relationship:

$$\rho = \frac{PM}{R_u T}$$

Where, **P** is the absolute pressure
ρ is the density
R_u is the universal gas constant
T is the absolute temperature
M is the molar mass

For gas mixtures, the molar mass of the mixture can be determined from the weighted average of the component gases. Refer to texts on thermodynamics or contact Ametek engineering for help in calculating density for gas mixtures. Because of the difference in viscosity between air and other gases at the same conditions, the blower performance curves herein will have some error when evaluating non-air performance, even if the operating point is normalized to standard density. Contact Ametek engineering for help in selecting a blower for non-air applications.

Determining air density requires knowing the temperature, barometric pressure, and humidity of the working environment. Measuring temperature is relatively easy, but barometric pressure requires a barometer, and humidity requires either a wet bulb thermometer, a hygrometer, or a dew point detector. (Note: be careful if using barometric values obtained from weather services - they are normalized for altitude and are not the actual barometric pressure measurements.

Once these values are known, the easiest way to determine density is to use a psychrometric chart, which gives the properties of air for large ranges of temperature and humidity. (There are also on-line calculators available). Some notes on using a psychrometric chart:

1) Instead of density, the specific volume, which is the reciprocal of density, usually is plotted.
2) The specific volume is typically given in terms of volume per unit mass of *dry air*. But the working fluid is a mixture of air and water vapor (except at 0% humidity, of course). See the example

Table 2: Fan Laws Related to Changes in Fluid Density:

$$P_2 = P_1\left(\frac{\rho_2}{\rho_1}\right)$$

$$\mathcal{P}_2 = \mathcal{P}_1\left(\frac{\rho_2}{\rho_1}\right)$$

$$\dot{m}_2 = \dot{m}_1\left(\frac{\rho_2}{\rho_1}\right)$$

Where, $\rho \rightarrow$ fluid density
$P \rightarrow$ static pressure (gage)
$\mathcal{P} \rightarrow$ power demand
$\dot{m} \rightarrow$ mass flow rate

Note: volume flow rate, Q, is independent of density for gases.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

hereafter for calculating the actual specific volume, i.e., volume per unit mass of the air-water vapor mixture.
3) Dry bulb temperature is simply the temperature measured using a regular thermometer.
4) For humidity, the wet bulb temperature can be used directly without having to convert to another type of humidity quantity. As an alternative, relative humidity or humidity ratio can be used.
5) Psychrometric charts are plotted at a single barometric pressure which is noted in the heading of the chart. A correction is needed to adjust density values to the actual barometric pressure.

Example 2: A laboratory makes the following measurements of the ambient air conditions:

Barometric pressure = 28.60 in Hg
Dry bulb temperature = 72 °F
Wet bulb temperature = 65 °F

What is the ambient density?

Answer: Using a psychrometric chart plotted at 29.921 in Hg, the intersections of the curves corresponding to the dry bulb and wet bulb values above yields a specific volume of 13.64 $ft^3/lb_{dry\ air}$ and a humidity ratio of .0116 $lb_{water\text{-}vapor}$ per lb_{air}. Correct the specific volume per lb air-water vapor mixture:

$$\frac{m_{wv}}{m_{air}} = .0116$$

$$m_{mixture} = m_{wv} + m_{air}$$
$$= .0116 m_{air} + m_{air}$$
$$= 1.0116 m_{air}$$

$$\frac{m_{air}}{m_{mix}} = .989$$

$$.989(13.64\ ft^3/lb_{air}) = 13.49\ ft^3/lb_{mix}$$

Finally, correcting this value for the actual barometric pressure yields:

$$13.49\ ft^3/lb_{mix}\left(\frac{29.921\ in\ Hg}{28.60\ in\ Hg}\right)$$

$$= 14.12\ ft^3/lb_{mix}$$

$$= .0708\ lb_{mix}/ft^3$$

The density of air varies substantially with weather and altitude. The Standard Atmosphere Table (not included herein, but widely available in reference texts and internet sites) gives a good estimate for typical outdoor ambient conditions as a function of altitude. The following example demonstrates how to account for the lower density at high altitude:

Example 3: An application calls for a blower to deliver 50 cfm of air at 30 inch H_2O at an altitude of 7000 ft above sea level where the average air density is 0.062 lb/ft^3, according to the Standard Atmosphere Table. For the purpose of selecting a blower from this catalog, what operating point should be used?

Answer: Refer to Table 2. Since volume flow rate does not change with density, the flow rate remains at 50 cfm. The pressure does change in proportion to density:

$$P_2 = 30\ inch\ H_2O\left(\frac{.075\ lb/ft^3}{.062\ lb/ft^3}\right)$$

$$P_2 = 36.3\ inch\ H_2O$$

So, the operating point normalized to standard density is 50 cfm, 36.3 inch H_2O.

Example 3 continued: A blower is selected from the catalog that can deliver the above performance with a power demand of 600 W at standard density, as shown on the published performance curves. What will be the power demand at the intended location at 7000 ft altitude?

Answer: Refer to Table 2 for correcting power demand for a change in density.

$$\mathcal{P}_2 = 600\ W\left(\frac{.062\ lb/ft^3}{.075\ lb/ft^3}\right)$$

$$\mathcal{P}_2 = 496\ W$$

Example 3 continued - Redefining the problem in terms of mass flow rate: The application requires a mass flow rate of 3.1 lb/min of air regardless of altitude.
A) How much must the speed be reduced if the application is moved from a location at 7000 ft (.062 lb/ft^3) to sea level (.075 lb/ft^3)?
B) If the speed is not adjusted to compensate for the change is density, what will be the change in volume flow rate between the two locations?
C) How much will the power demand change?

Answer:
A) Table 2 shows that the change in mass flow rate is a simple ratio of the densities. If the blower speed is maintained between the two locations, the mass flow rate delivered at sea level will be:

$$\dot{m}_2 = 3.10\ lb/min\left(\frac{.075\ lb/ft^3}{.062\ lb/ft^3}\right)$$

$$\dot{m}_2 = 3.75\ lb/min$$

Mass flow rate is directly proportional to a change in speed (Table 1), so to maintain 3.1 lb/ft^3, the speed must be reduced by:

$$3.10\ lb/min = 3.75\ lb/min\left(\frac{N_2}{N_1}\right)$$

$$\left(\frac{N_2}{N_1}\right) = .827 = 17.3\%\ reduction$$

B) Since volume flow rate is independent of density, the volume flow rate will not change between the two locations if the speed remains constant. This illustrates the difference between the quantities of volume flow and mass flow - a factor that must be kept in mind when evaluating an application's air performance needs.

C) Tables 1 and 2 show that the power demand is directly proportional to both density and speed, although a speed change has a much larger influence. Combining both relationships yields:

$$\mathcal{P}_2 = \mathcal{P}_1\left(\frac{\rho_2}{\rho_1}\right)\left(\frac{N_2}{N_1}\right)^3$$

$$\mathcal{P}_2 = \mathcal{P}_1\left(\frac{.075\ lb/ft^3}{.062\ lb/ft^3}\right)(.827)^3$$

$$\mathcal{P}_2 = .684\ \mathcal{P}_1 = 31.6\%\ reduction$$

Incompressible Flow: Although the density of the working fluid is a variable that must be accounted for, in a given application the density is assumed to be constant for applications involving the blowers herein. In other words, for a given blower in operation the fluid entering the blower has the same density as the fluid leaving the blower. Another term for this is "incompressible flow." Density variations are less than one

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

percent for flow speeds less than Mach = 0.2, which is greater than typical applications for these blowers.

Blower Life: Brushless DC blowers have the advantage of long life compared to blowers driven by brush motors. Since the motor is electronically commutated there are no brushes to wear out, so the end of life scenario for brushless blowers is normally bearing failure.

Since long life is one of the main attributes of brushless technology, the question "How long will it last?" is common. Unfortunately, there is no simple answer to this question. There are a number of factors that influence life, and we currently have no way to account for every possible application. The primary factors that influence life are:

- temperature
- bearing contamination
- mechanical shock
- operating point

Temperature: The deterioration of bearing grease is directly proportional to its temperature. So, the higher the temperature, the shorter the bearing life. There is no hard limit on bearing temperature, but just a general rule that cooler is better. There is a point of diminishing returns that is application dependent - reducing temperature is unnecessary if the blower life is adequate for the application. A rule of thumb for Ametek blowers is 45 ^{o}C maximum ambient temperature, but this can be exceeded under certain circumstances. Please consult Ametek engineering for applications a high temperatures. Ultimately, it is up to the customer to determine whether or not a blower can provide adequate life. Thorough testing is recommended. Also keep in mind that extreme temperature can cause premature failure of electronics or the motor winding.

Bearing Contamination: The introduction of particulate matter increases the rolling friction of the bearing, which increases temperature. Particulates also scar the surface of the bearing raceways and balls, which increases pitting and flaking, further exacerbating the condition. Corrosive gases can react negatively with grease or cause corrosion of the steel in the bearings. Liquids of any kind should be avoided. Water vapor is not a problem as long as it does not condense into liquid water inside the blower.

Mechanical Shock: Mechanical shock can cause denting of the bearing's rolling elements. This results in unwanted noise and can lead to flaking and pitting inside the bearing. Applications that subject the blower to mechanical shock should be thoroughly tested to ensure adequate life.

Operating point: The amount of backpressure a blower works against is another influencing factor in some blower models. The backpressure results in a pressurized blower housing, putting a pressure gradient across the adjacent bearing. The pressure gradient tends to push the grease out and contamination in. Ametek has implemented design features to minimize this effect, and the customer should not be hesitant to operate at high pressure if the application calls for it.

Again, blower life is highly application dependent. Customer requests for MTTF (Mean Time To Failure) information are difficult to answer. Moreover, what constitutes a failure is often open to interpretation. For example, there can be situations where a blower is delivering air performance as required, but it has deteriorated bearings that produce unacceptable noise for sound-critical applications.

Ametek does conduct an ongoing life test program to gather life information and to improve the durability of our blowers. Tests are conducted on blowers that represent all model families. History has shown that Ametek blowers survive beyond 10,000 hours of continuous running in typical applications. It is common for blowers to endure more than 20,000 hours, and some blowers have accumulated 30,000+ hours. But again, it must be stressed that blower life is application dependent, and the customer is encouraged to conduct a life test in-situ under the application's most rigorous conditions. The life values mentioned above are not to be used as a basis for warranty claims.

Safety Bulletin: In the application of Ametek, Inc. motors and/or blowers as a component in your product, you must exercise the following minimum precautions:

THE FAILURE TO OBSERVE THE FOLLOWING SAFETY PRECAUTIONS COULD RESULT IN SERIOUS BODILY INJURY, INCLUDING DEATH IN EXTREME CASES. We recommend that *adequate instructions and warnings by the original equipment manufacturers (OEM)* include labels setting forth the precautions listed below to the end user.

The motors and/or blowers must be connected to a proper and effective ground or mounted in a manner that will guarantee electrical isolation and insulate the user and others from electric shock. End product design should not rely solely on the primary insulation of the motor.

Standard blowers and/or motors are not designed to handle volatile or flammable materials through the fan system unless specifically designed. Passing combustible gases or other flammable materials through the fan system could result in leakage which could cause a fire or explosion.

These products must not be used in an area contaminated by volatile or flammable materials since sparking is predictable in the normal operation of the motor and may ignite the volatile causing a dangerous explosion.

The Technical and Industrial Products Division of Ametek, Inc. can supply specifically designed motors and blowers for use in handling combustible gases or for use in hazardous duty locations. These specially designed units should only be used in conjunction with combustible gases, which they were specifically designed to handle. The type of gases must be so noted on the product label and in the instructions.

The rotation of the motor shaft, or anything mounted on the shaft, is a potential source of injury and must be taken into account in the design of your end product. You must provide the necessary guarding or housing as required by the finished product and you must indicate to the user the direction of rotation. Do not remove guard as severe bodily injury may occur to fingers or appendages.

Products incorporating vacuum motors/blowers must be designed so as to prevent the vacuum or air pressure from being concentrated in a manner that can expose the user to injury by coming into contact with any body area, such as eyes, ears, mouth, etc.

AMETEK DYNAMIC FLUID SOLUTIONS
100 E. Erie Street, Kent OH 44240
USA: +1 215-256-6601 - Europe: +49 7703 930 909 - Asia: +86 21 5763 1258
www.ametektip.com

Unit Conversions

Length: 1 ft = 12 inch
= .3048 m
= 30.48 cm
= .0001894 mile

Volume: 1 ft^3 = .02832 m^3
= 28.32 L
= 7.481 gal

Mass: 1 lb_m = .4536 kg

Force: 1 lb_f = 32.174 $lb_m \cdot ft/s^2$
= 4.448 N

Volume Flow Rate: 1 cfm (ft^3/min) = 28.32 L/min
= 1.699 m^3/hr

Pressure: 1 inch H_2O = .249 kPa
= 2.49 mbar
= .0361 psi (lb_f/in^2)
= .0735 inch Hg

Density: 1 lb_m/ft^3 = 16.03 kg/m^3
= .01602 g/cm^3

Energy: 1 $ft \cdot lb_f$ = 1.356 J
= 1.356 N•m
= .001285 Btu

Power: 1 W = .00134 hp
= 3.413 Btu/hr
= 550 $(ft\text{-}lb_f)/s$

Temperature: T (^oR) = T(^oF) + 459.7
= 1.8[T(^oC + 273.15]
= 1.8T(K)

Universal Gas Constant, R_u: = 10.73 $psia \cdot ft^3/(lbmol \cdot {}^oR)$
= 1545 $ft \cdot lb_f/(lbmol \cdot {}^oR)$
= 8.314 kJ/(kgmol•K)
= 8.314 $kPa \cdot m^3/(kgmol \cdot K)$

The motors and/or blowers must not be exposed to moisture or liquid or used outdoors, except in equipment which is specifically designed for outdoor use and meets the appropriate regulatory agency requirements for outdoor use. Moisture or liquid can damage the motor/blower and defeat the electrical insulation resulting in a severe electrical shock to the user.

Ametek motors/blowers must not be operated above the design voltage. Over voltage conditions can cause excessive speed of the motor and can result in severe electrical shock and/or other traumatic injury to the operator.

Precautions must be exercised to ensure motor leads are properly routed and connected in your equipment. Lead wires must be routed and retained to ensure that they do not become pinched or come in contact with rotating parts during assembly or subsequent operations. Connections must be designed so that proper electrical contact is established and the connections must be properly insulated.

Disassembly or repairs of Ametek products should not be attempted. If accomplished incorrectly, repairs can create an electrical shock and/or operational hazard. It is recommended that repairs be made only by Ametek and not by others.

In the event that the motor or blower ceases to operate, power must be disconnected before examination and/or removal from the system.

Contact Ametek, Inc. to discuss any questionable application before selecting a standard motor or blower.

In setting forth the above listed recommendations with regards to precautionary steps that must be considered, we in no way intend to imply that if these steps are taken a product will meet the applicable safety standards. We, at Ametek, are not sufficiently conversant with the specific safety hazards which may be associated with particular products. We can only advise precautions to be employed generally for the safe use of Ametek products as components. For testing specifically related to the safety of the product, we recommend that you contact the appropriate regulatory agency as indicated by the type of product being manufactured.

AMETEK, Inc.

AMETEK is a leading global manufacturer of electronic instruments and electromechanical devices with annualized sales of more than $2.5 billion. AMETEK has nearly 11,000 colleagues working at more than 80 manufacturing facilities and more than 60 sales and service centers in the United States and over 30 other countries around the world.

AMETEK Dynamic Fluid Solutions (DFS)

AMETEK Dynamic Fluid Solutions (DFS) is a world leader in motors, blowers and pumps for mass-transit, medical, business machine and computer applications. It also is a leader in regenerative blowers for pressure and vacuum applications used by broad range of industries.

AMETEK supports its customers globally from its manufacturing facilities in Minnesota, New York, North Carolina, Ohio, Pennsylvania, Italy and China. Our brushless DC motors, blowers, controllers, pumps, and fans are ideally suited for a wide range of applications, including medical instruments, robotics, pumps, compressors, office equipment, fans, machine tools, tape drives, or any other precise rotary motion/air delivery applications.

Dynamic Fluid Solutions (DFS)' product line of regenerative blowers for pressure and vacuum applications services the process, industrial, environmental, waste, and wastewater industrial industry. Typical applications areas include solution agitation and aeration, pneumatic conveying, part hold-down and pick up, part blow off, gas and fume extraction, and process gas handling.

AMETEK Dynamic Fluid Solutions (DFS) supplies the solution for unique performance, mounting, environmental and agency requirements.

Windjammer® BRUSHLESS BLOWERS

ROTRON®

Nautilair

Your Choice Our Commitment™

AMETEK
PRECISION MOTION CONTROL

100 East Erie Street, Kent, OH 44240 U.S.A.
Tel: +1 215-256-6601 • Fax: +1 330-667-3306 • **www.ametektip.com**
Europe: +49 7703 930909 • Asia: +86 21 5763 1258