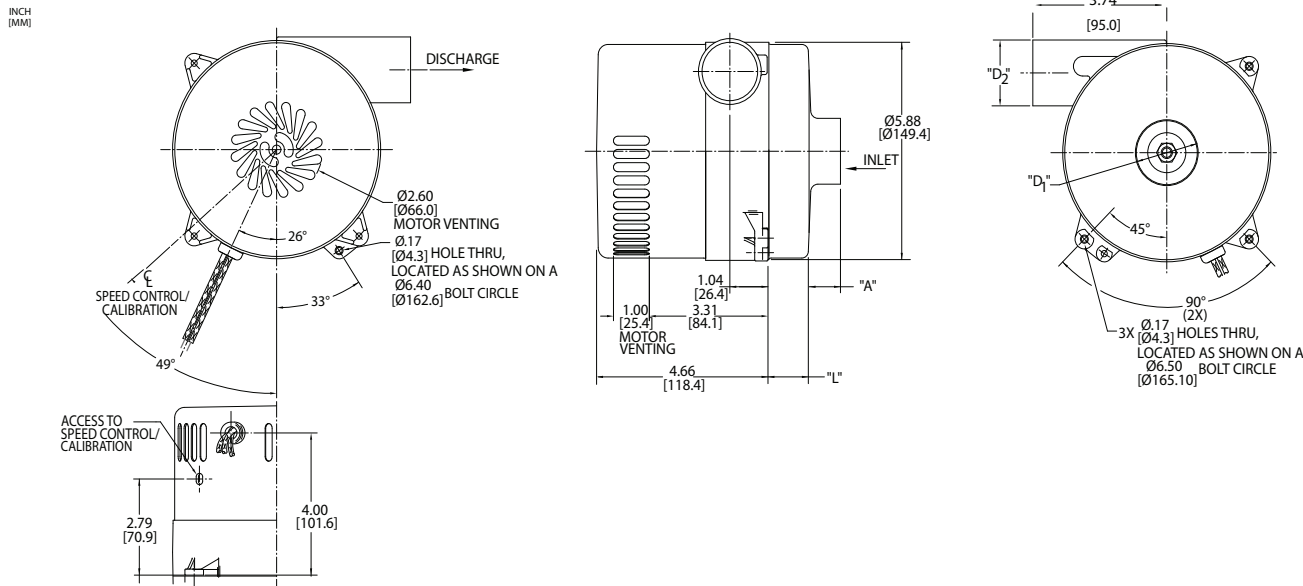


Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower



24 VDC Input, High Flow System



Specification	Units	Part/ Model Number					
		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. H ₂ O mbar	34 84.7	34 84.7	57 142	57 142	22 54.8	22 54.8
Max Open Flow Rate	CFM m ³ /hr	126 214.2	126 214.2	101 171.7	101 171.7	190 323	190 323
Inlet Diameter D1	Inches mm	1.75 44.5	1.75 44.5	1.75 44.5	1.75 44.5	2.75 69.9	2.75 69.9
Discharge Diameter D2	Inches mm	1.75 44.5	1.75 44.5	1.75 44.5	1.75 44.5	2.5 63.5	2.5 63.5
Length (L)	Inches mm	0.50 12.7	0.50 12.7	1.50 38.1	1.50 38.1	0.75 19.1	0.75 19.1
Speed Control	-	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.	Anlg. Spd. Cmd.	Potent. Adjust.

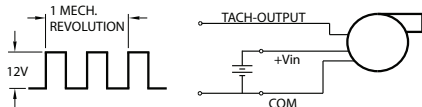
Notes:

- **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 than 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.

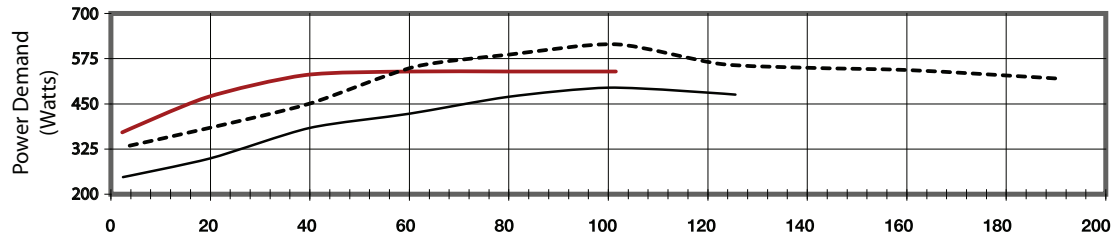
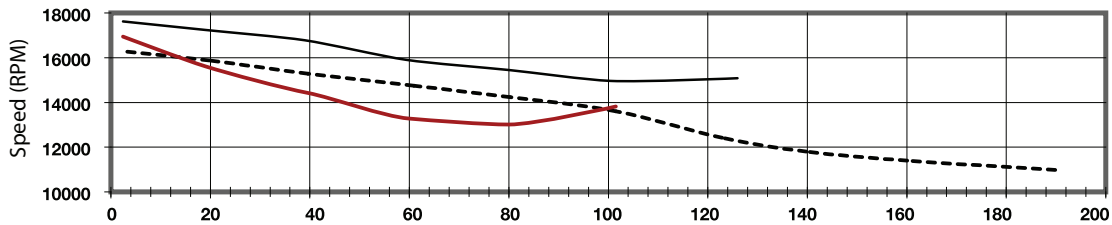
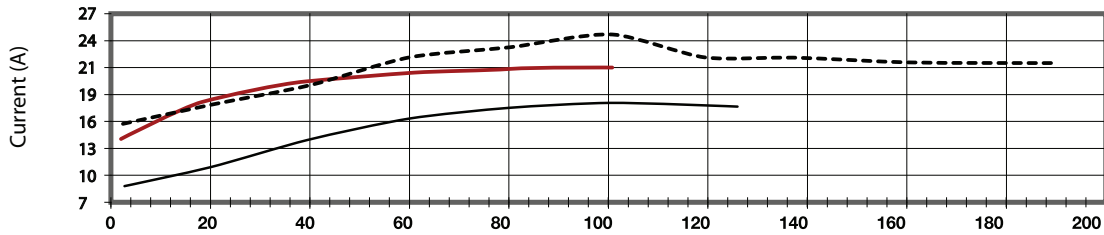
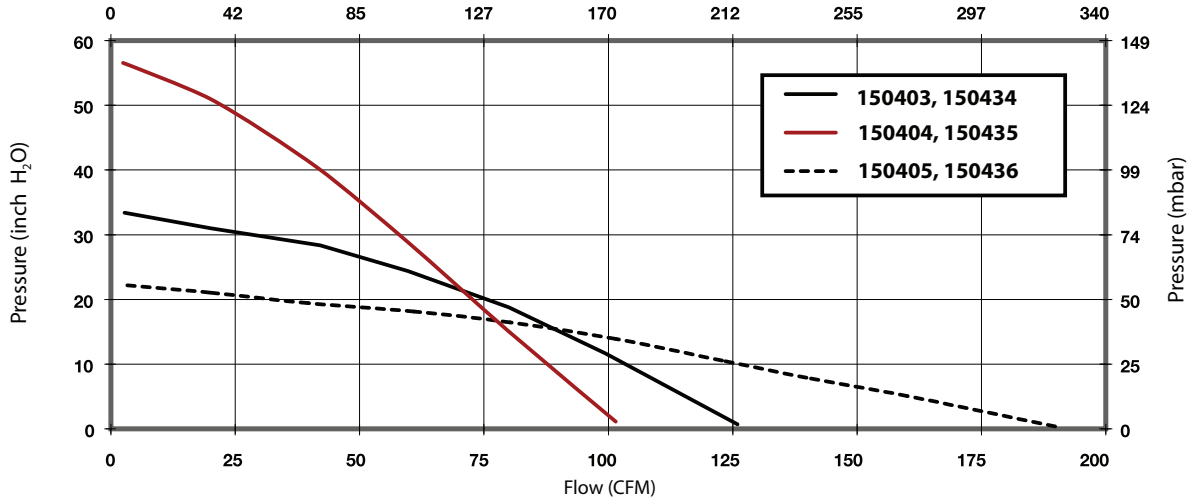
Tachometer Output - All of the models listed above come equipped with a tachometer output: a square wave output that is proportional to blower speed. The frequency of the tachometer output signal is 2x the blower's rotational frequency.



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Typical Performance

(at constant 24V input)
Flow (m³/hr)



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

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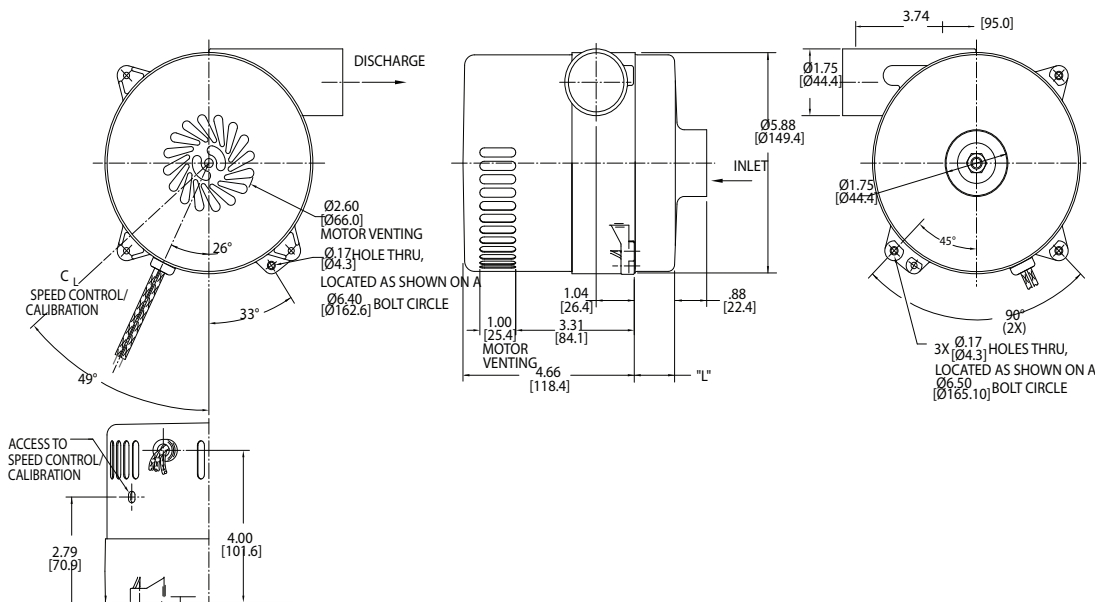
Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

24 VDC Input, High Flow System



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[MM]



Specification	Units	Part/ Model Number					
		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. H ₂ O	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
	m ³ /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.

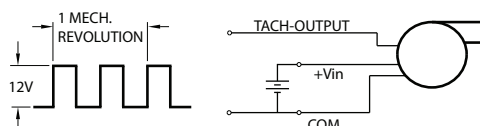
Notes:

- **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 than 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.

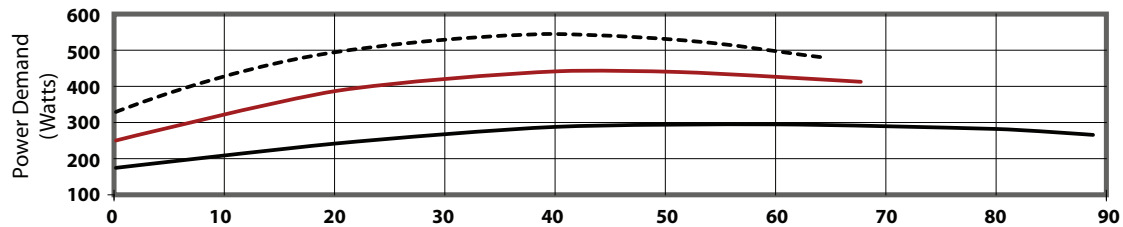
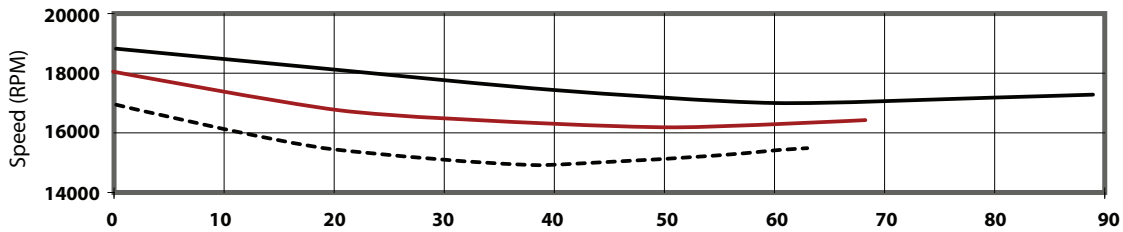
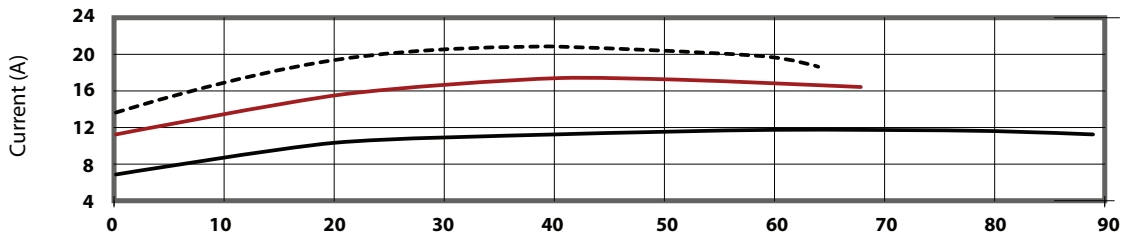
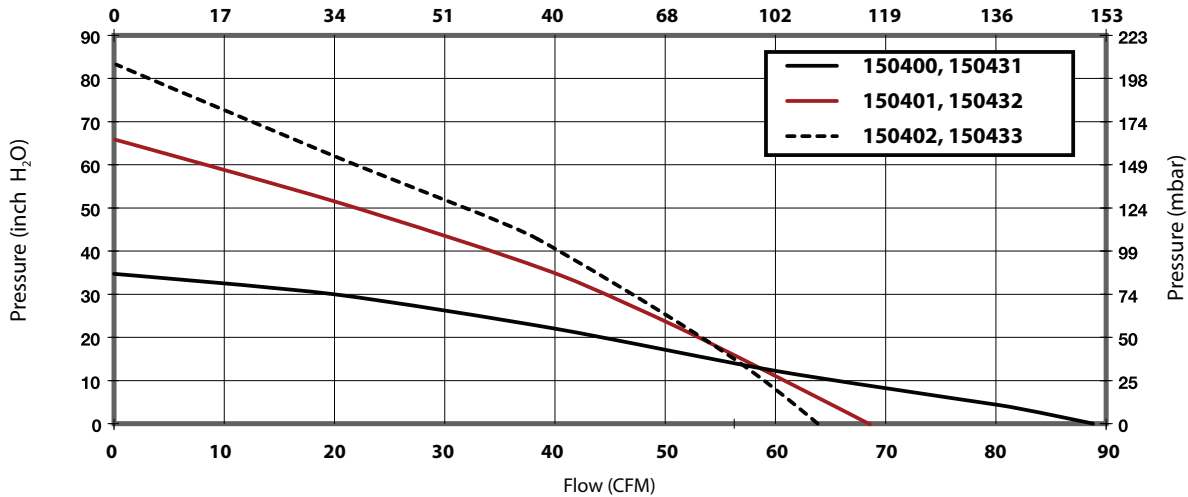
Tachometer Output - All of the models listed above come equipped with a tachometer output: a square wave output that is proportional to blower speed. The frequency of the tachometer output signal is 2x the blower's rotational frequency.



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Typical Performance

(at constant 24V input)
Flow (m³/hr)



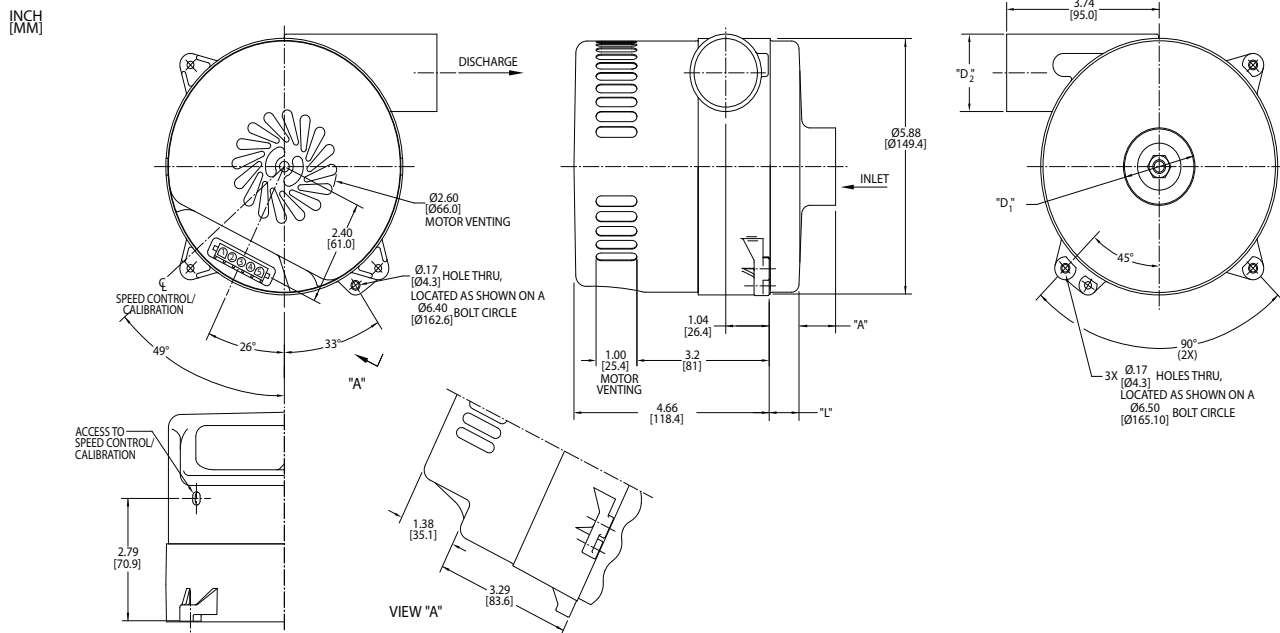
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

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Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

48 VDC Input, High Flow System



Specification	Units	Part/ Model Number					
		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:

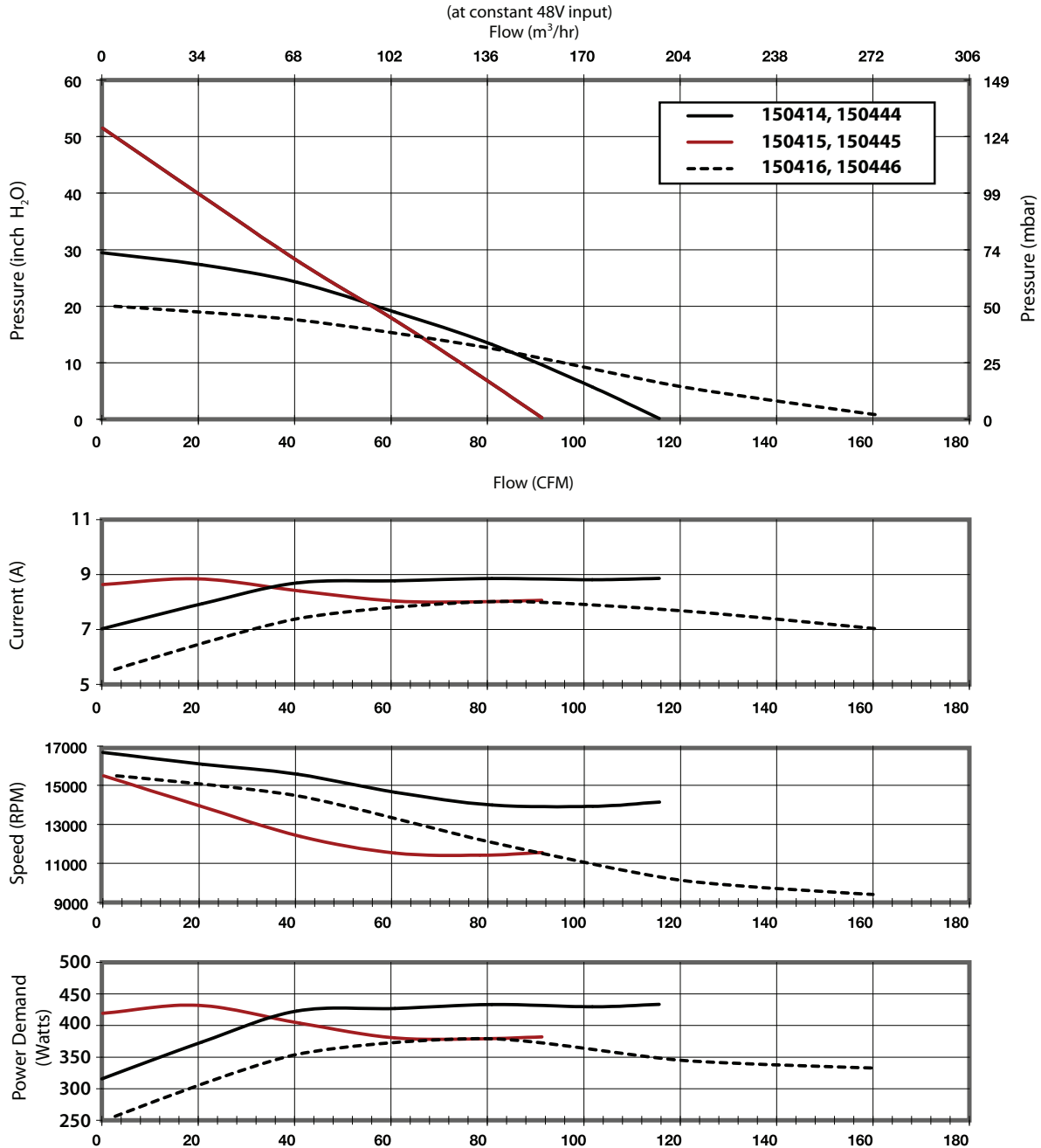
- **Temperature:** Working Air: 0°C to 45°C, Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less than shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

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.

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Typical Performance



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 Vacuum performance available upon request.

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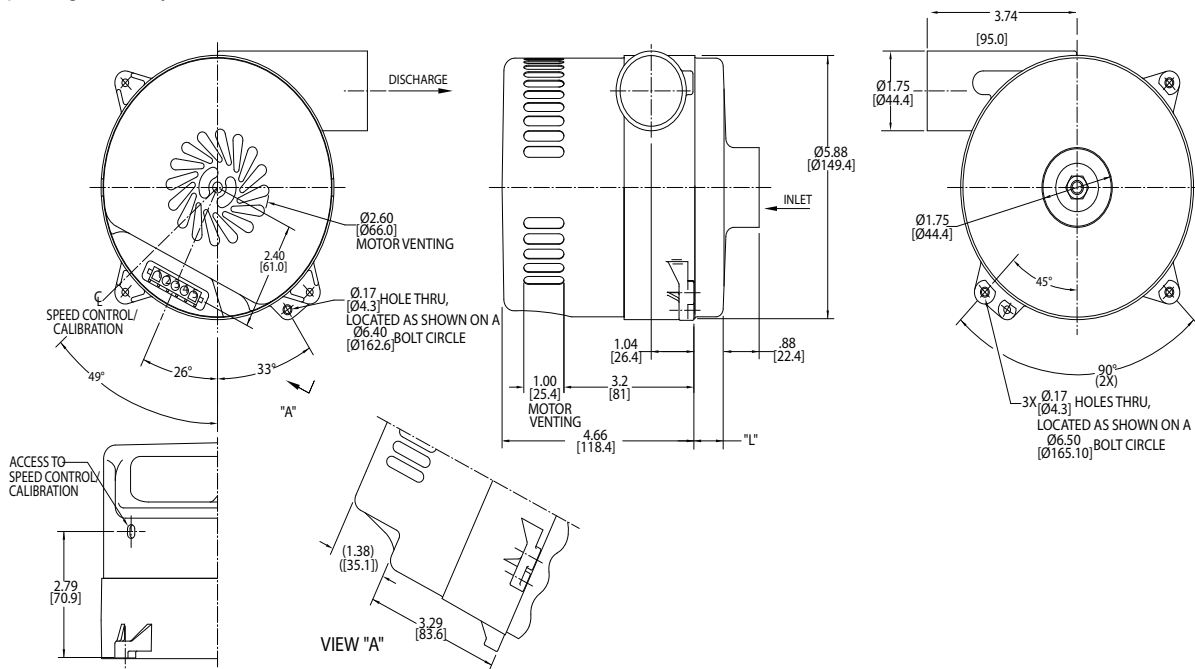
Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

48 VDC Input, High Flow System



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Specification	Units	Part/ Model Number					
		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. H ₂ O	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
	m ³ /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:

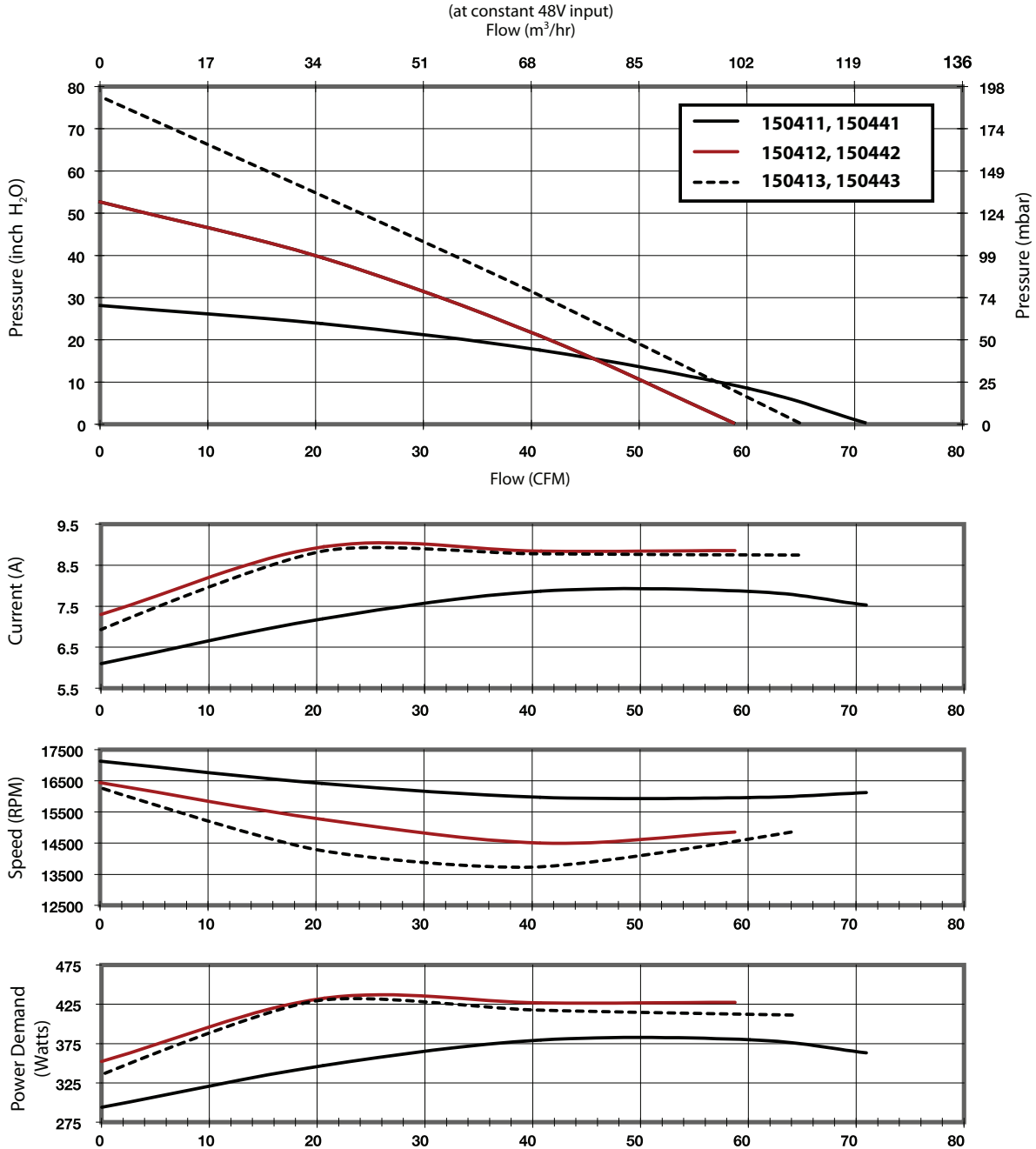
- **Temperature:** Working Air: 0°C to 45°C, Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less than shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

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.

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Typical Performance



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 Vacuum performance available upon request.

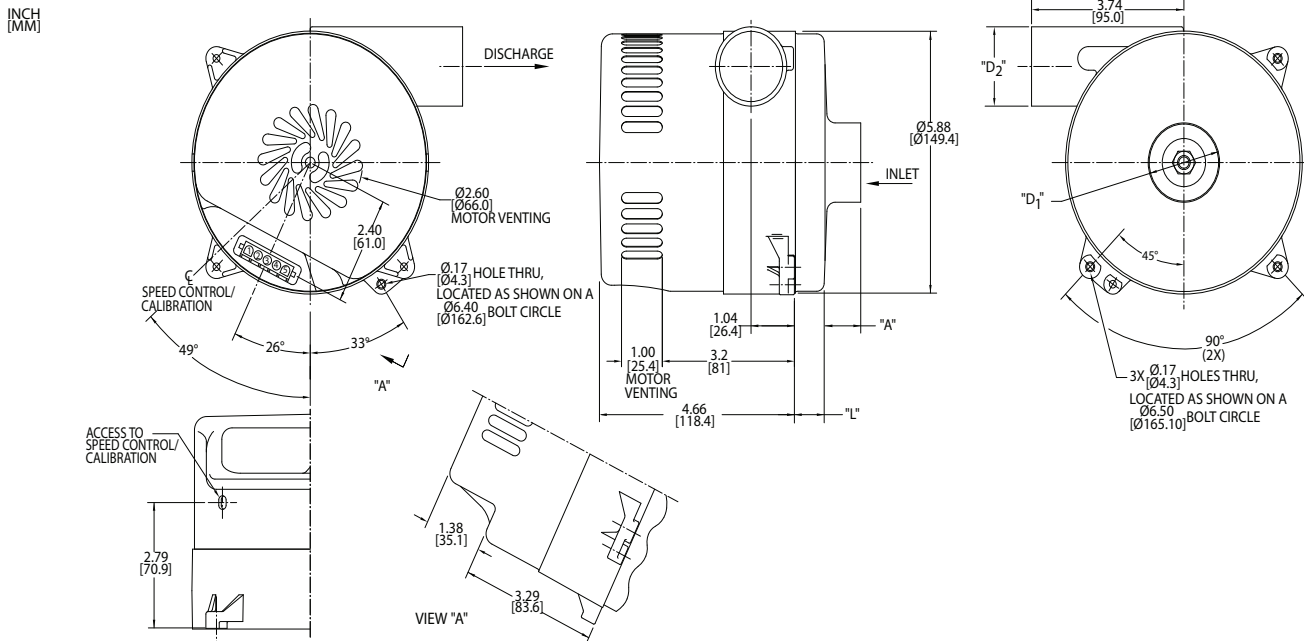
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Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower



72 VDC Input, High Flow System



Specification	Units	Part/ Model Number					
		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:

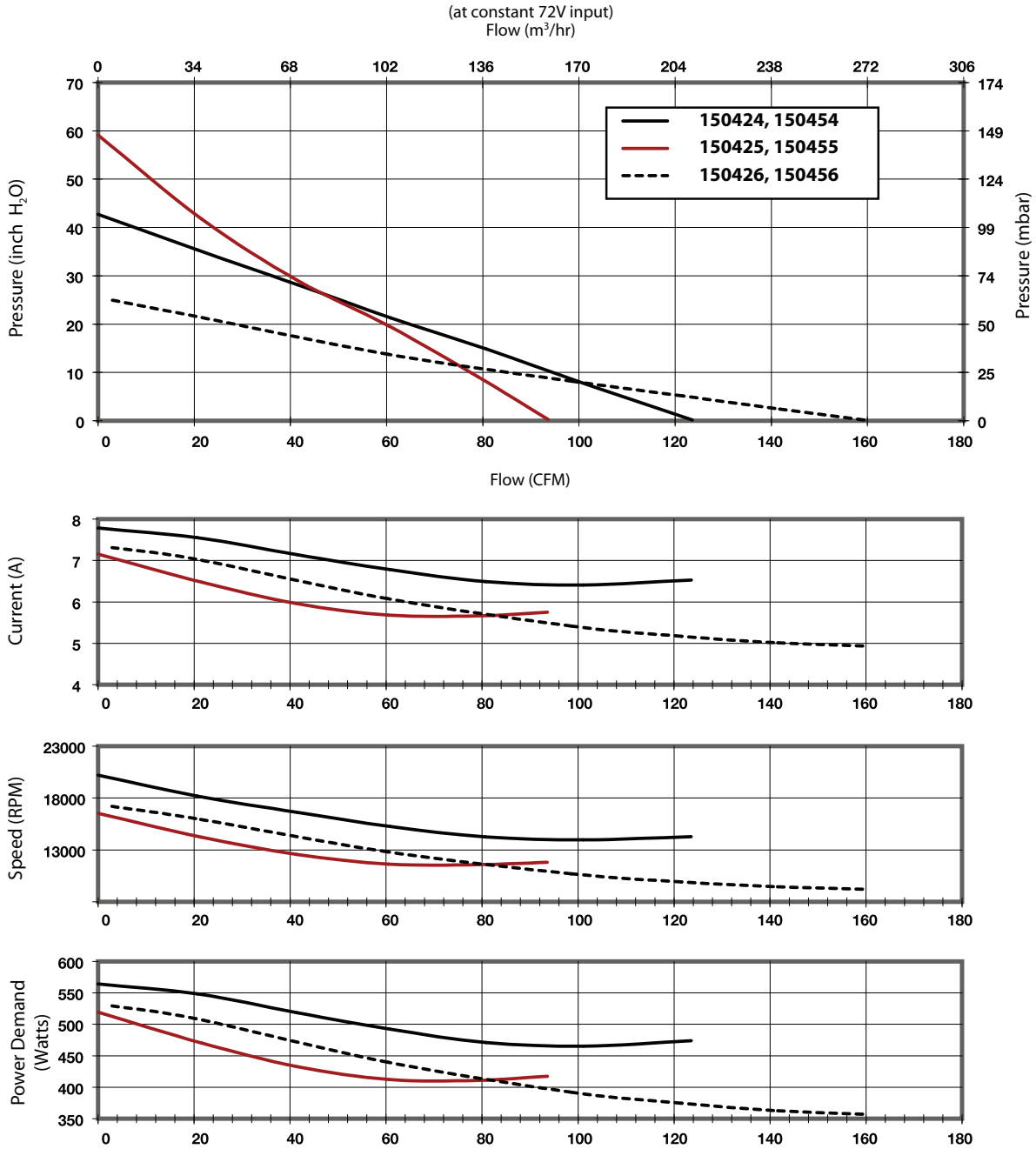
- **Temperature:** Working Air: 0°C to 45°C, Ambient Air: 0°C to 45°C, Storage: -40°C to 85°C.
- When used as a vacuum, the blower performance might be less than shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

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.

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Typical Performance



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Vacuum performance available upon request.

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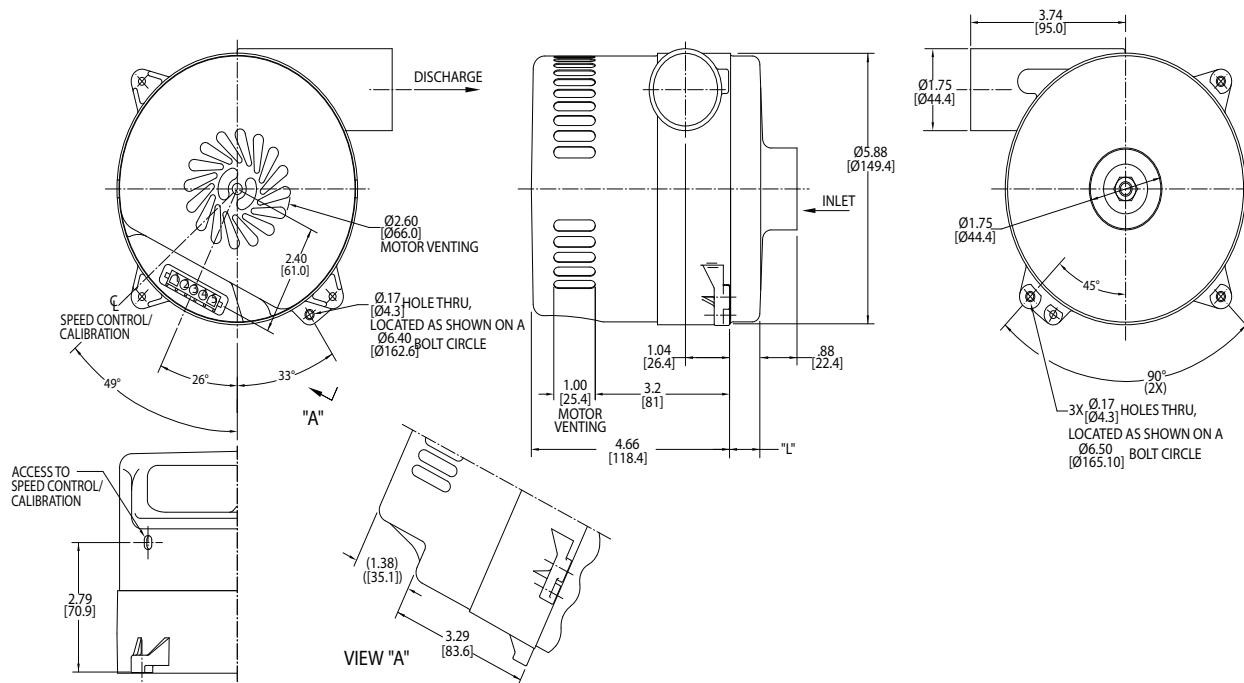
Low Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower



72 VDC Input, Standard Flow System

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Specification	Units	Part/ Model Number					
		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 than shown herein, depending on the operating point.
- **Weight** = 6 lb / 2.2 Kg

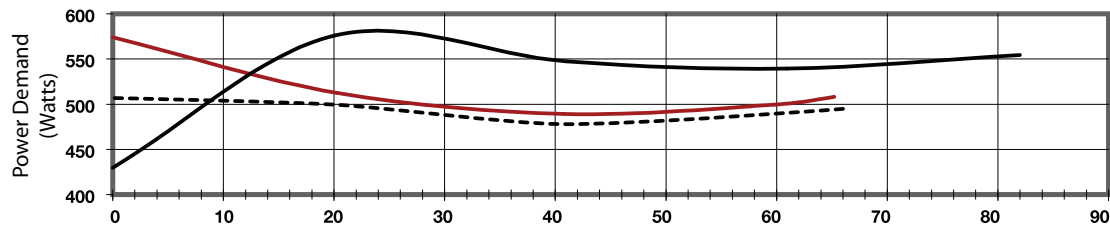
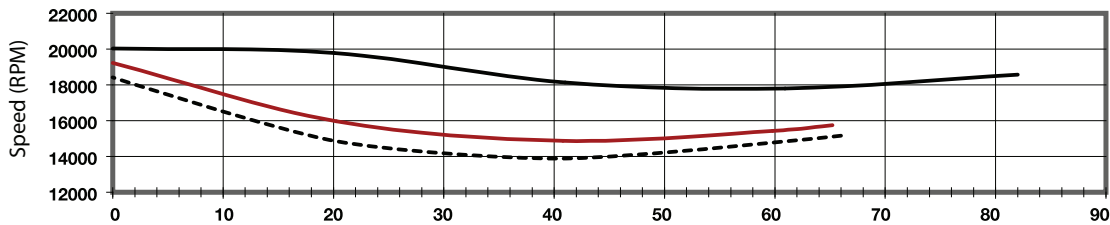
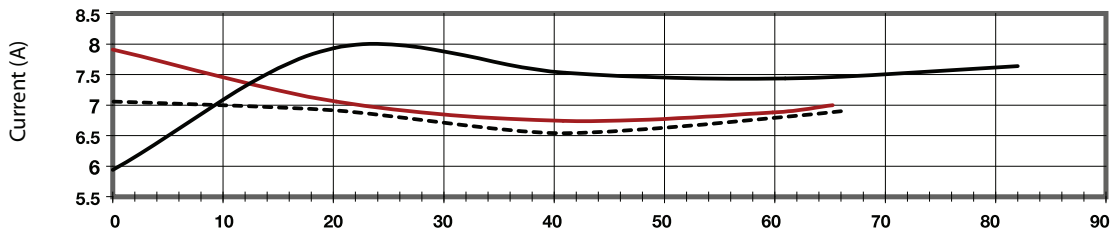
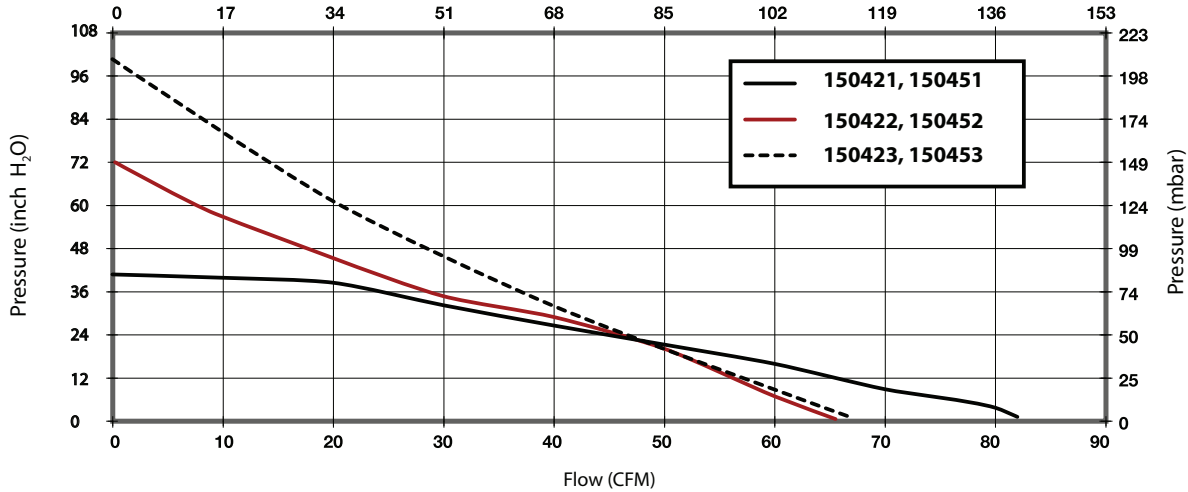
Potentiometer Adjustment (Potent. Adjust.) - The specified supply voltage is applied and the speed is set by adjusting a potentiometer on the side of the blower.

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.

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Typical Performance

(at constant 72V input)
Flow (m³/hr)



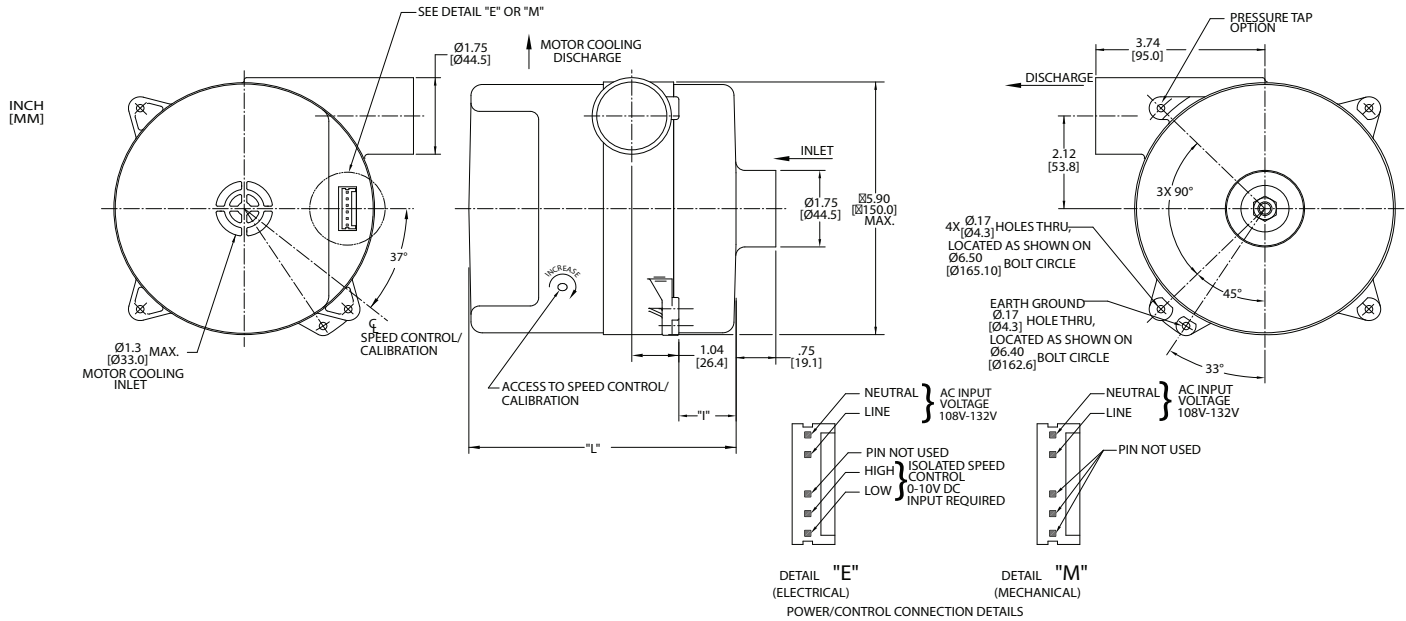
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
Vacuum performance available upon request.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

250 Watt, 120 Volt High Flow



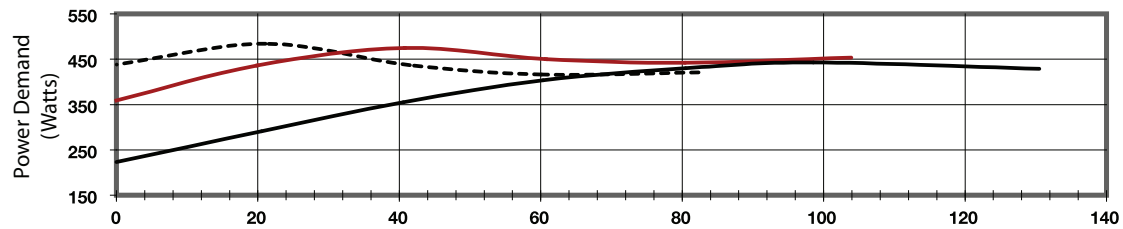
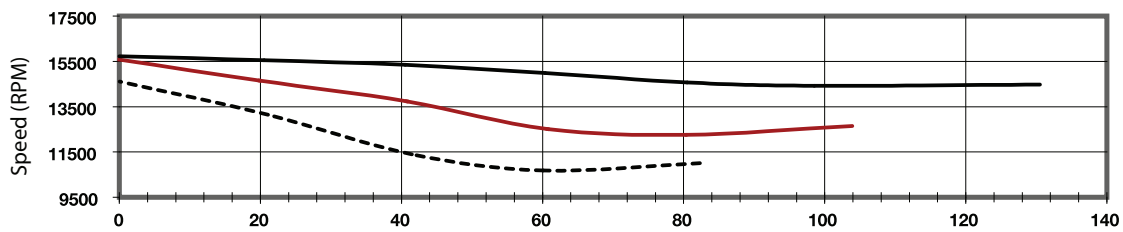
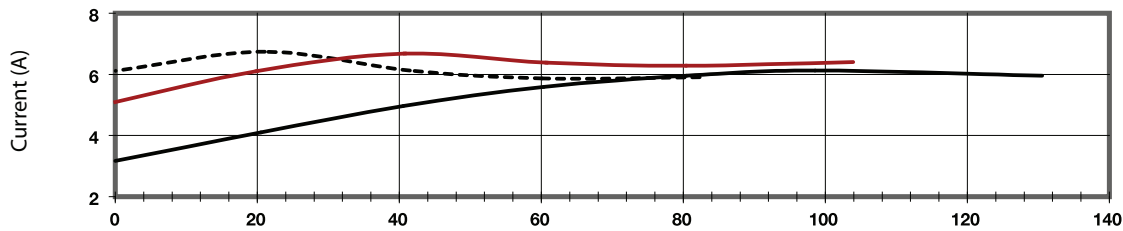
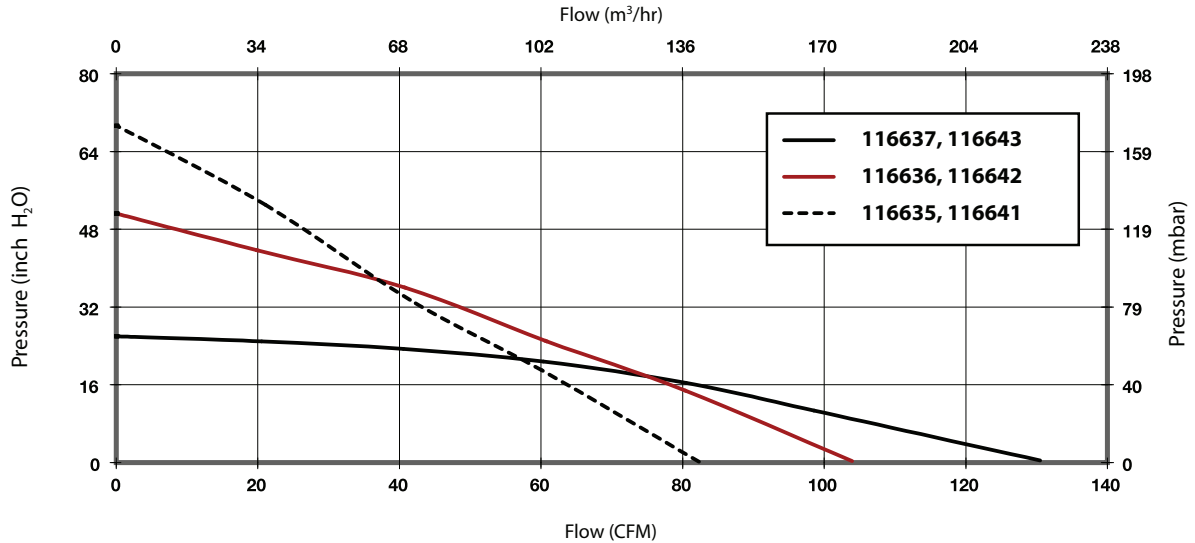
Specification	Units	Part/ Model Number					
		116637	116643	116636	116642	116635	116641
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	25.2	25.2	49.7	49.7	67.2	67.2
	mbar	62.8	62.8	123.8	123.8	167.4	167.4
Max Sealed Pressure	in. H2O	26.0	26.0	51.2	51.2	69.3	69.3
	mbar	64.8	64.8	127.5	127.5	172.6	172.6
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 (supplied 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).

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Typical Performance



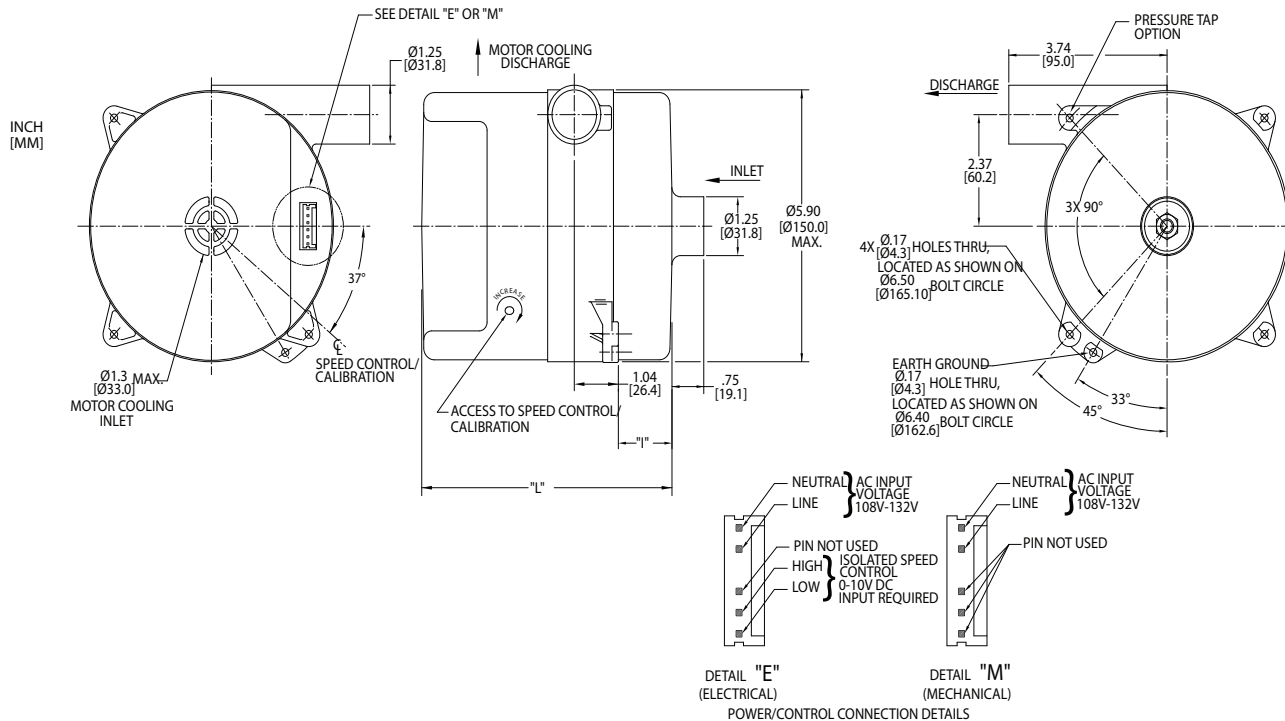
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
 Vacuum performance available upon request.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

250 Watt, 120 Volt Standard Flow



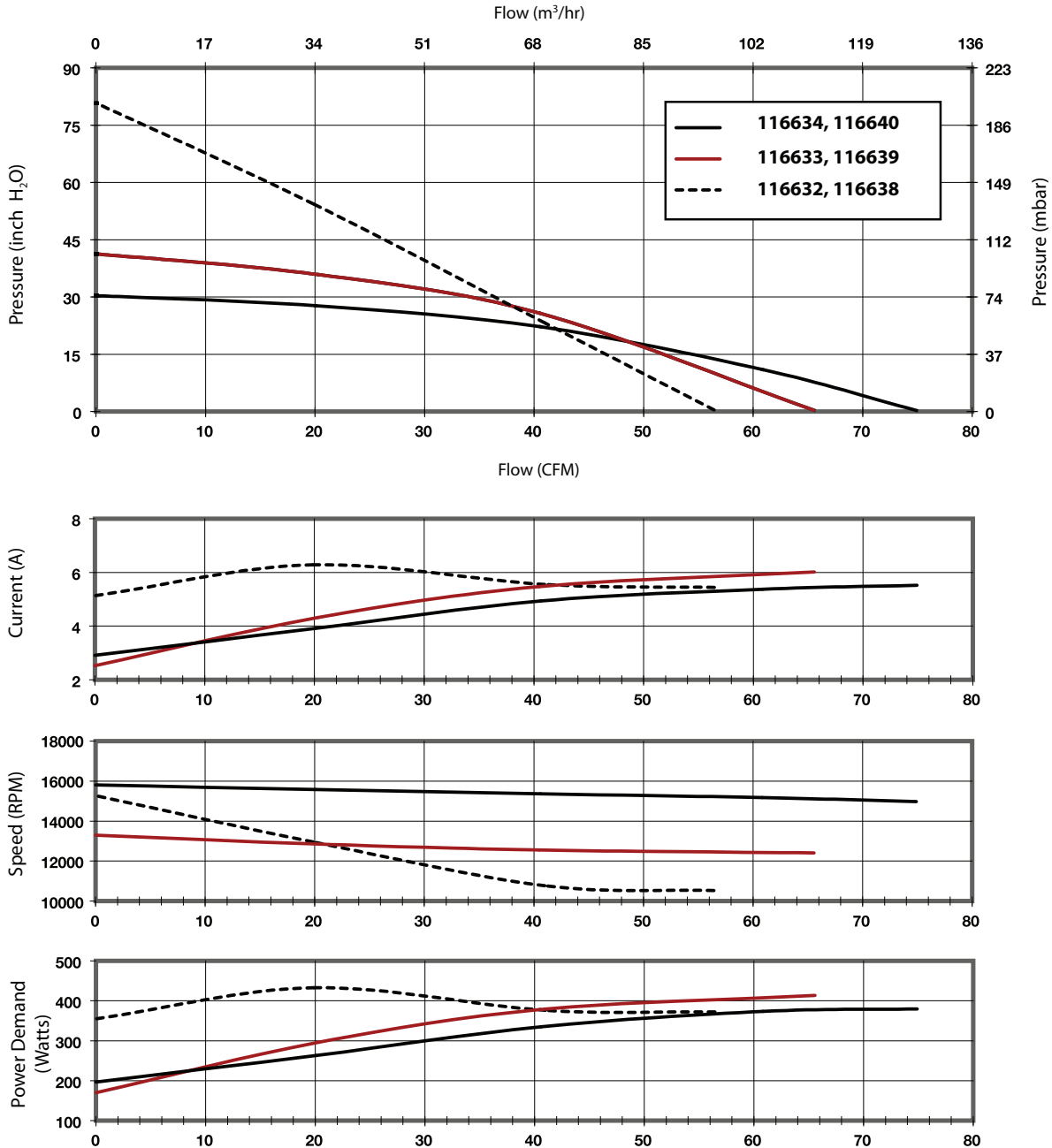
Specification	Units	Part/ Model Number					
		116634	116640	116633	116639	116632	116638
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	29.5	29.5	40.1	40.1	78.4	78.4
	mbar	73.5	73.5	99.9	99.9	195.3	195.3
Max Sealed Pressure	in. H2O	30.4	30.4	41.3	41.3	80.5	80.5
	mbar	75.7	75.7	102.9	102.9	200.5	200.5
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 (supplied 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).

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Typical Performance



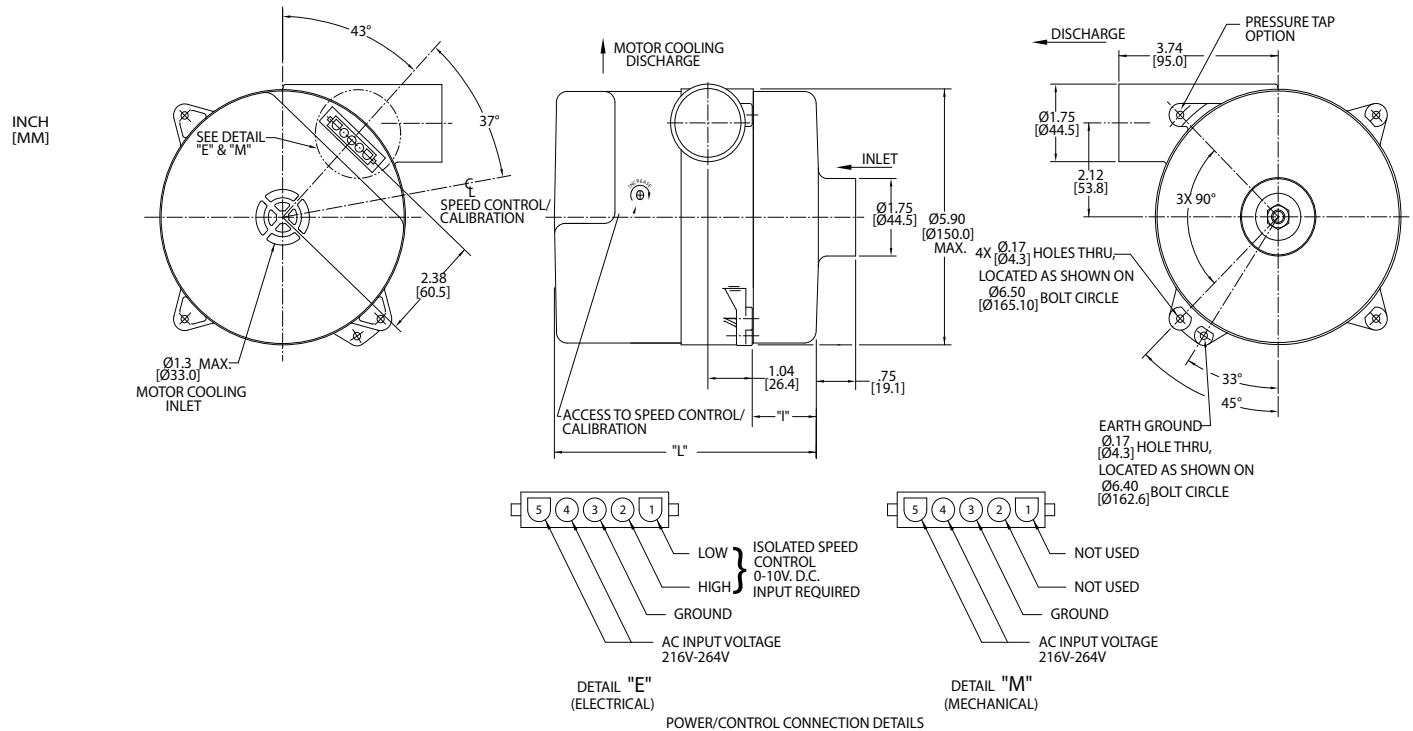
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
 Vacuum performance available upon request.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

400 Watt, 240 Volt High Flow



Specification	Units	Part/ Model Number					
		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

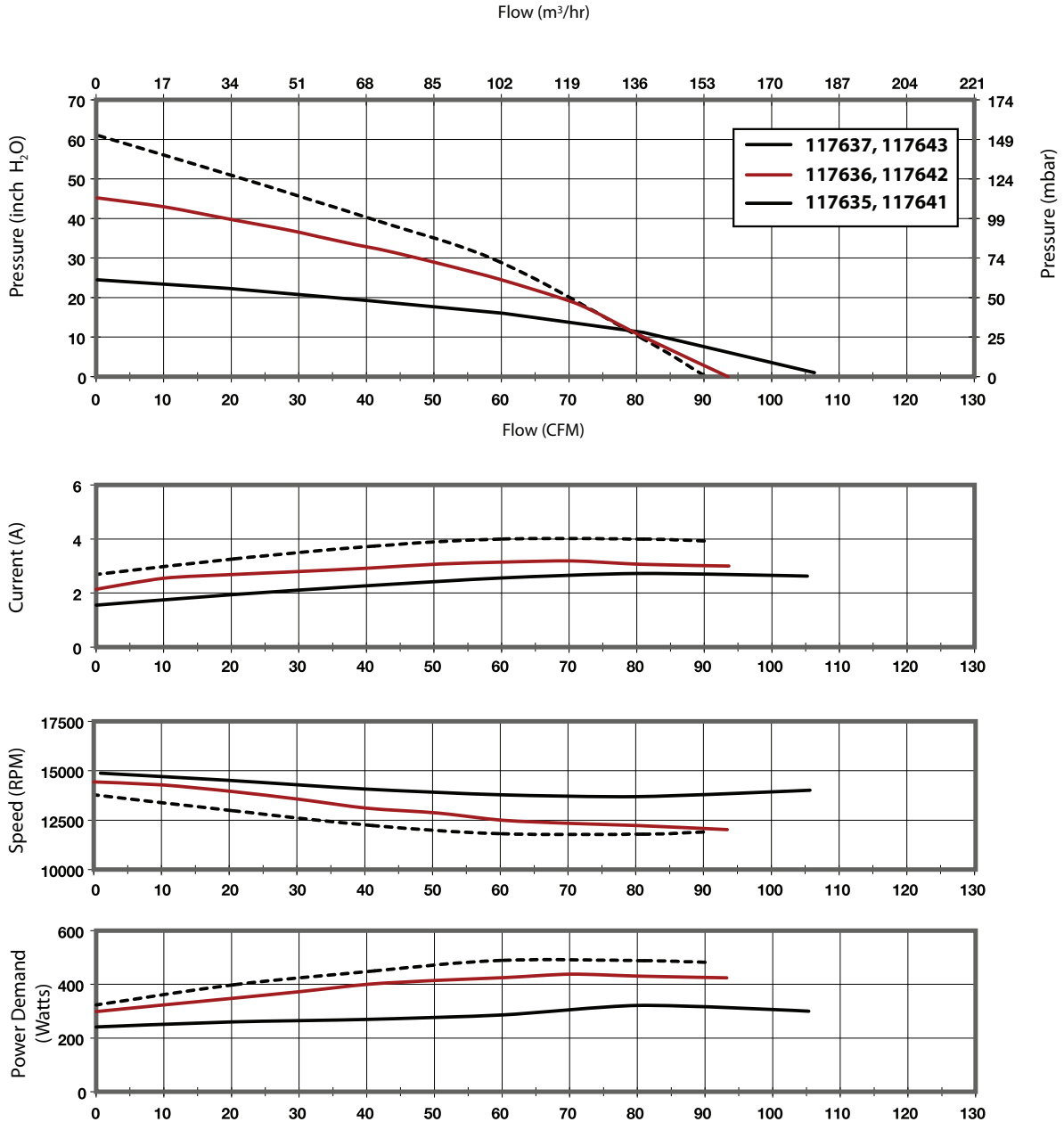


Notes:

- **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 (supplied 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).

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Typical Performance



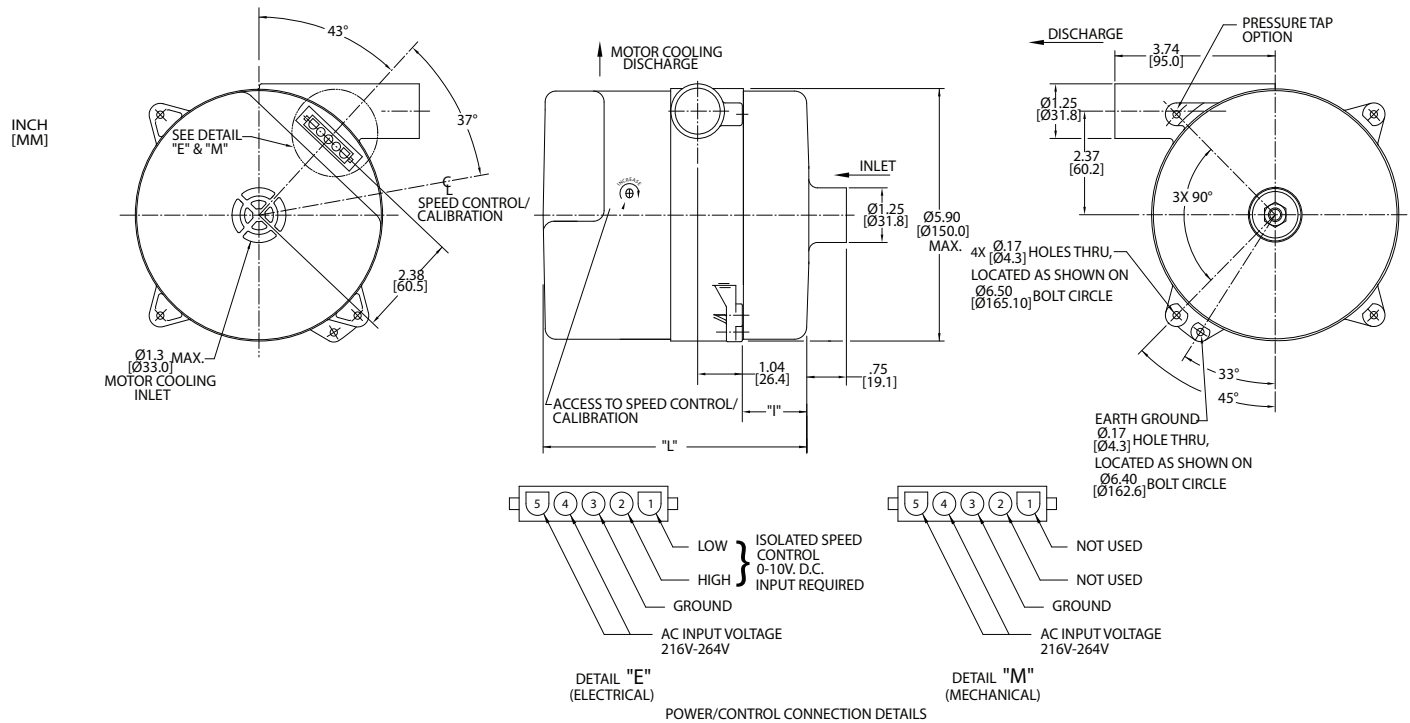
Data presented represents blower performance at STANDARD AIR DENSITY, .075 lb/ft³ (29.92" Hg, Sea Level, 68° F)
 Vacuum performance available upon request.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

400 Watt, 240 Volt Standard Flow



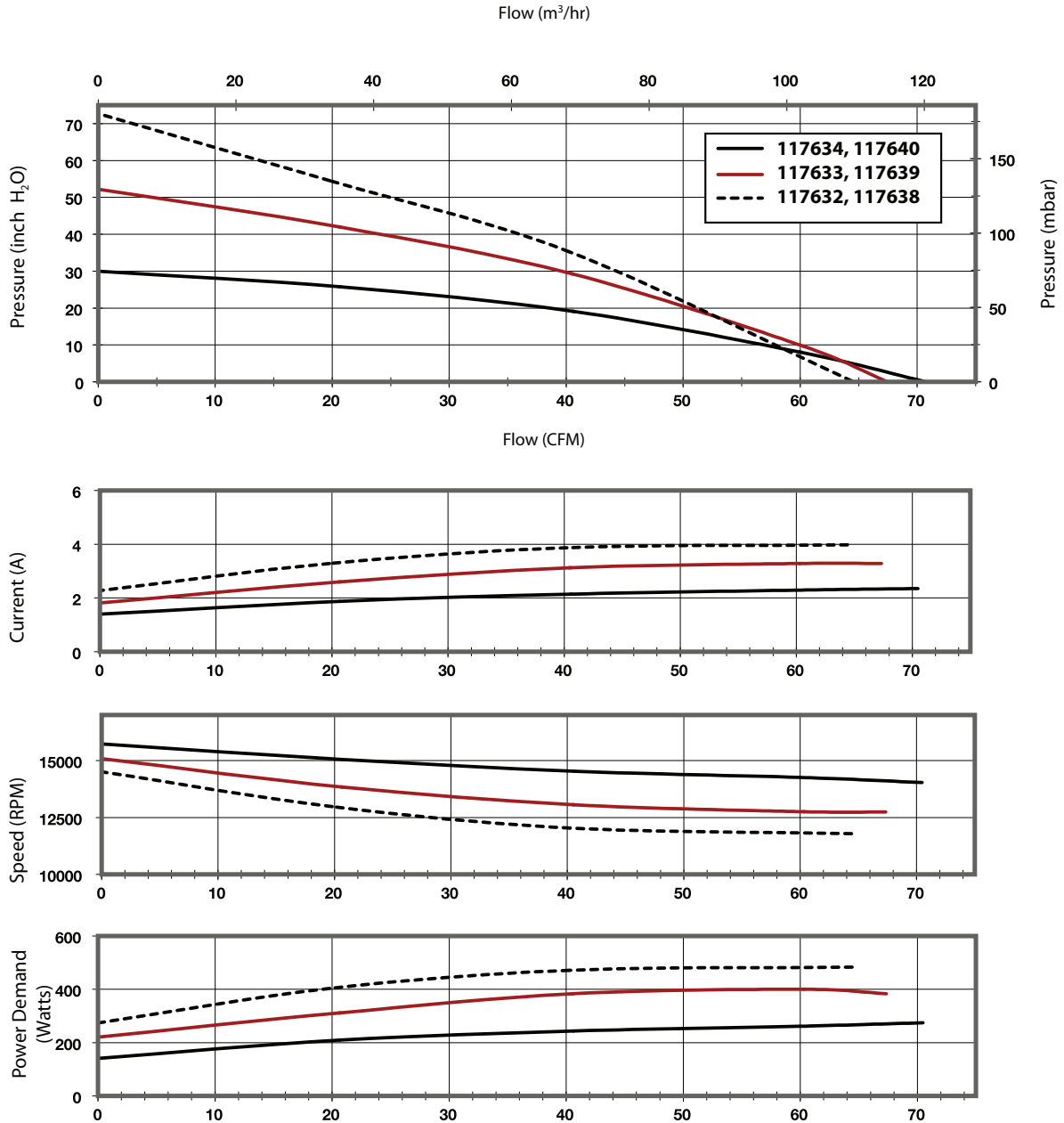
Specification	Units	Part/ Model Number					
		117634	117640	117633	117639	117632	117638
Stages	-	1	1	2	2	3	3
Max Sealed Vacuum	in. H2O	28	28	45	45	60	60
	mbar	69.7	69.7	112.1	112.1	149.5	149.5
Max Sealed Pressure	in. H2O	30	30	51	51	72	72
	mbar	74.7	74.7	127	127	179.4	179.4
Max Flow Rate	CFM	70	70	67	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



- 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 (supplied 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).

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Typical Performance



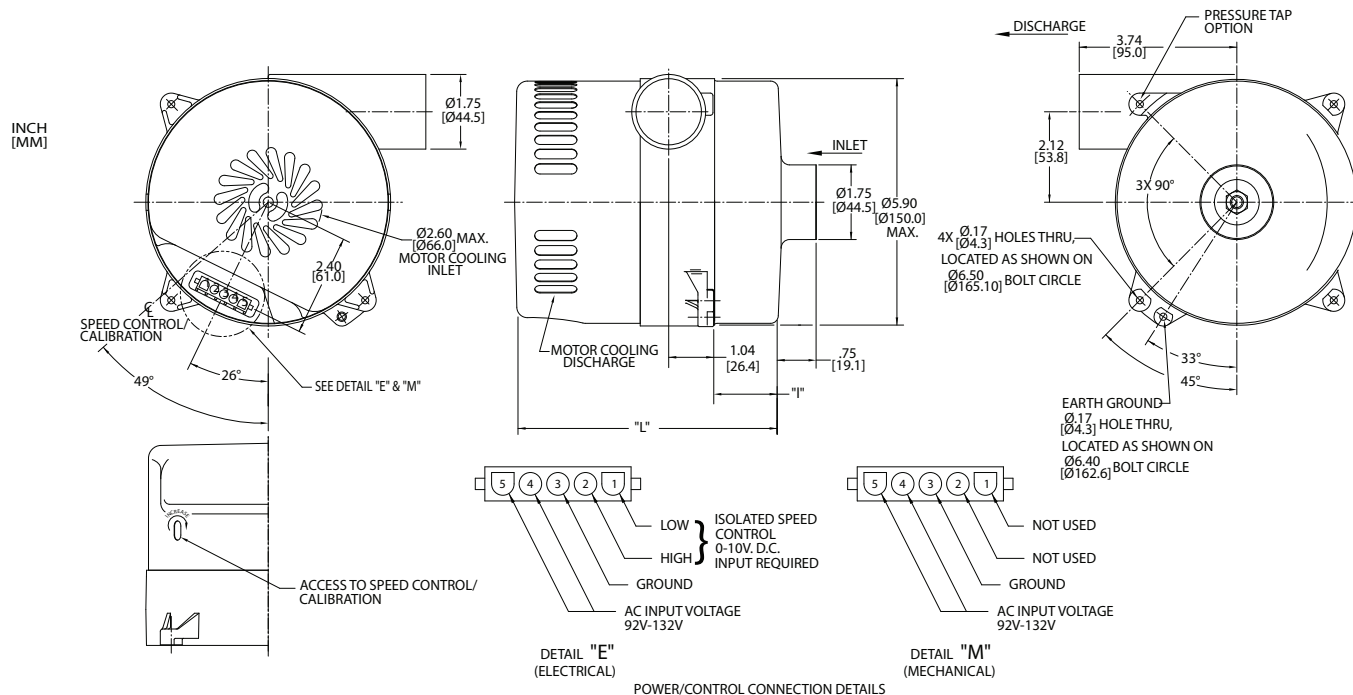
Data presented represents blower performance at STANDARD AIR DENSITY, WHICH IS: .075 lb./ft³ (29.92" Hg, Sea Level, 68° F). Vacuum performance available upon request.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

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



Specification	Units	Part/ Model Number				
		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



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 (supplied by customer) mates with post header assembly. Mating harness available upon request.

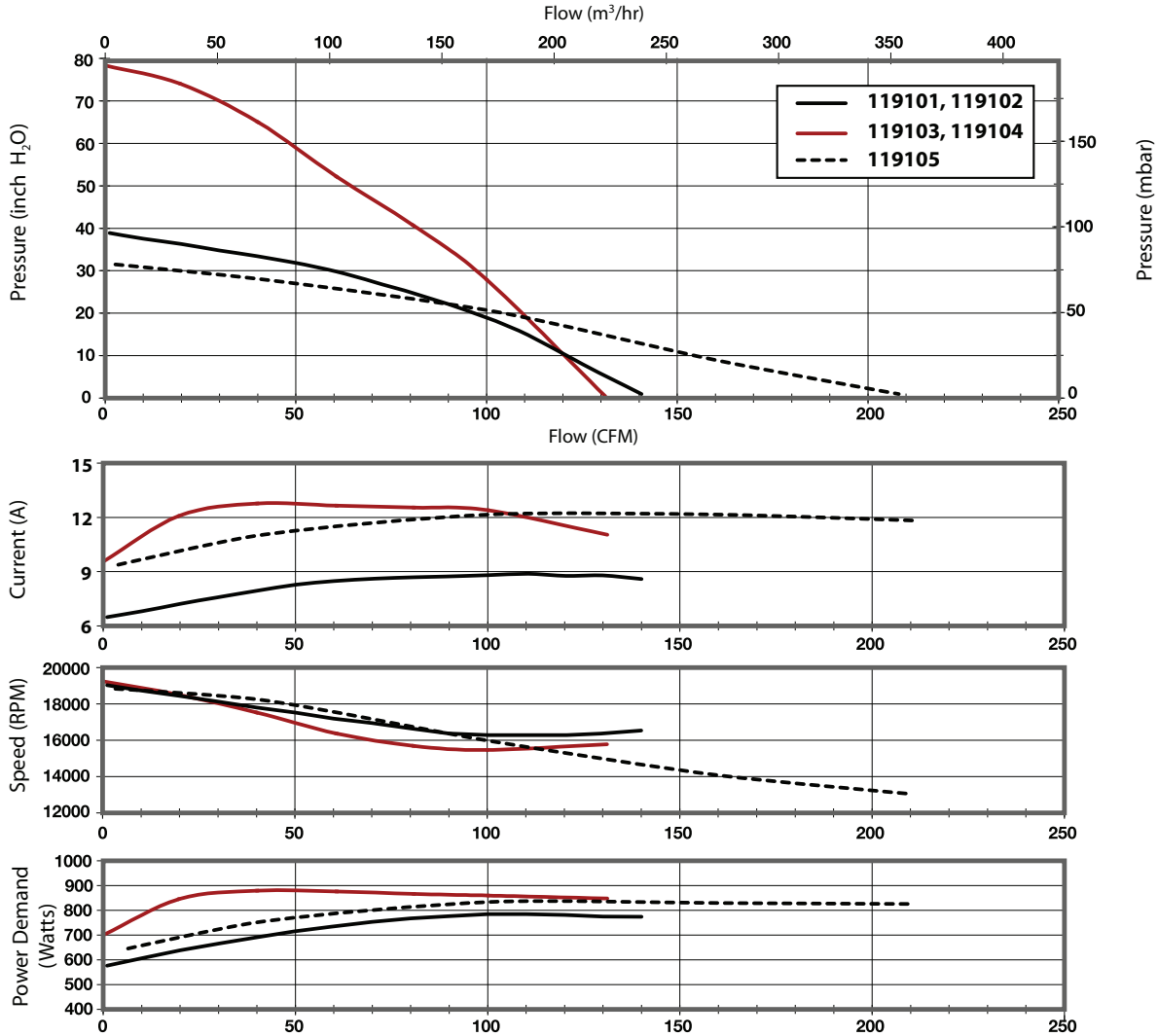
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www.ametektip.com

B 17



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:

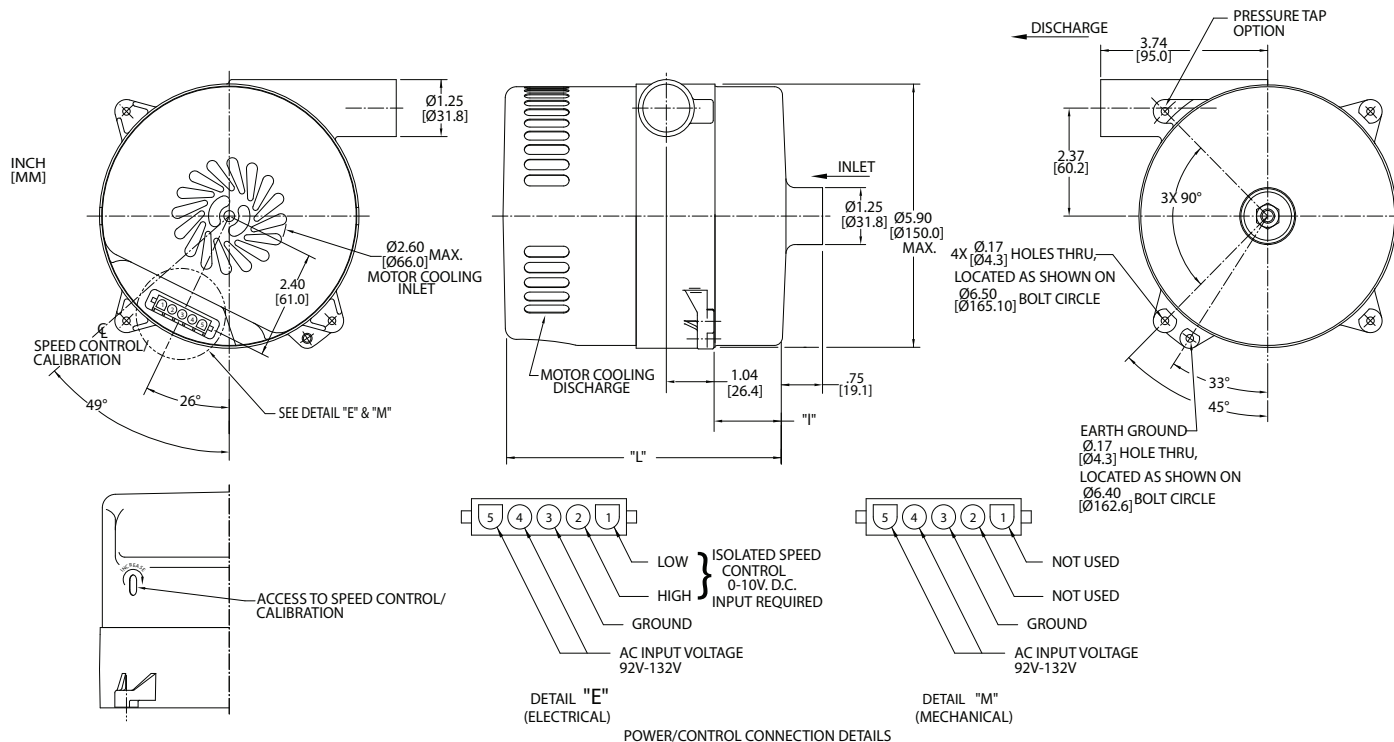
- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
- Connections:
 All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
 A mating connector with leads is supplied with single pack units only.
 Negative 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.

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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

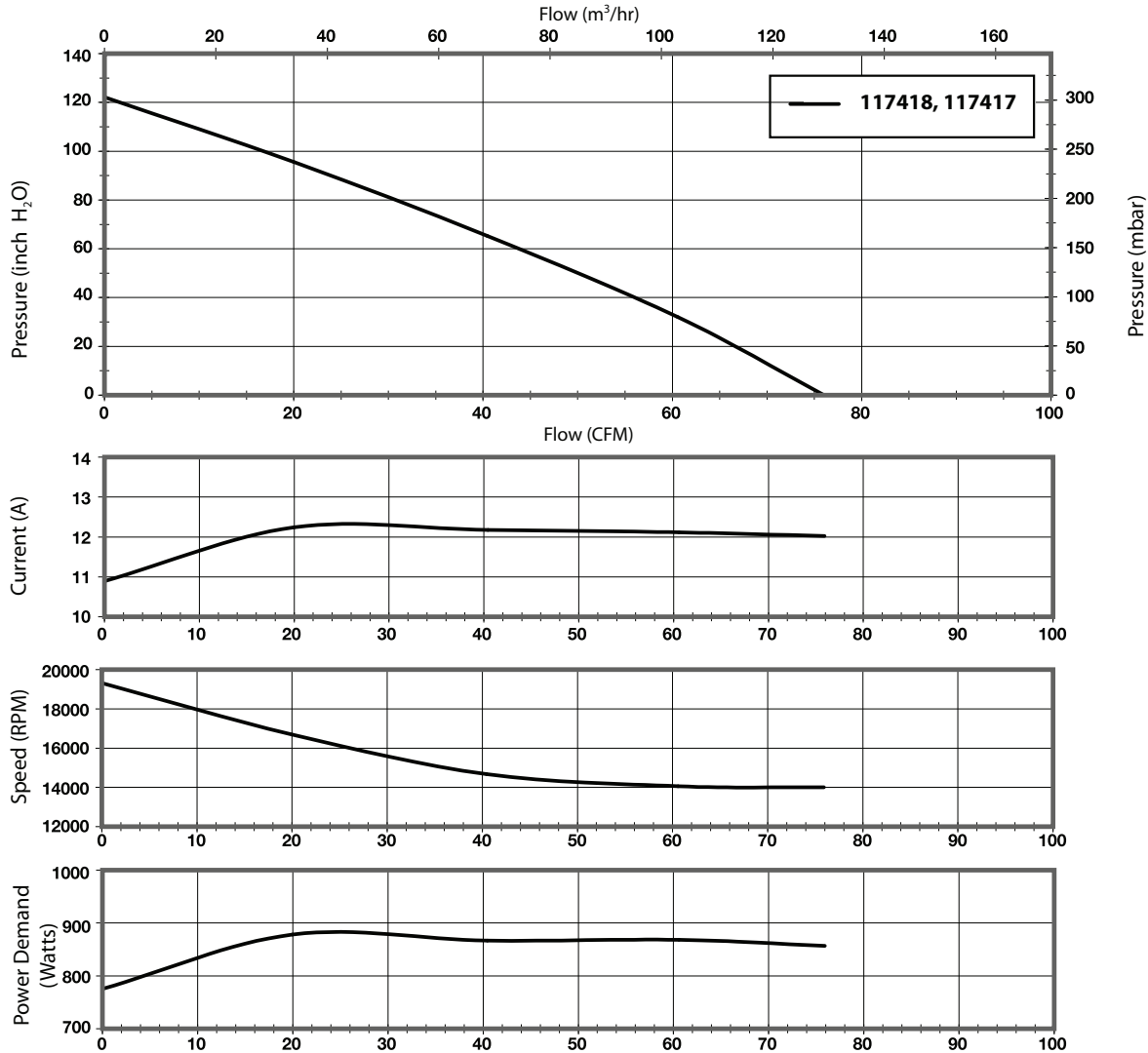


Notes:

- 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 (supplied by customer) mates with post header assembly.
Mating harness available upon request.

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Typical Performance



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 Vacuum performance available upon request.

INSTALLATION:

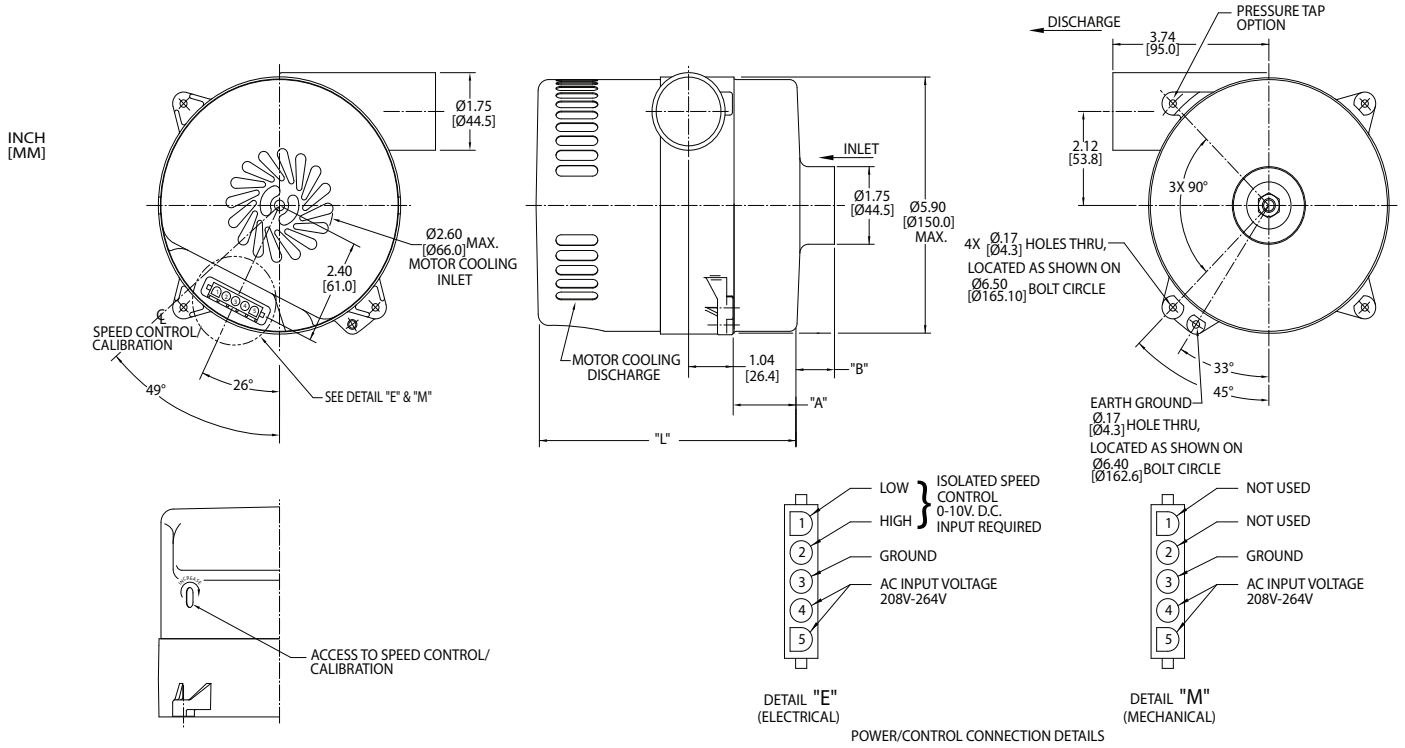
- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
- Connections:
 - All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
 - A mating connector with leads is supplied with single pack units only.
 - 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 optional and custom circuitry.
- Utilizes AMETEK's IntelliGen™ control electronics.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

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



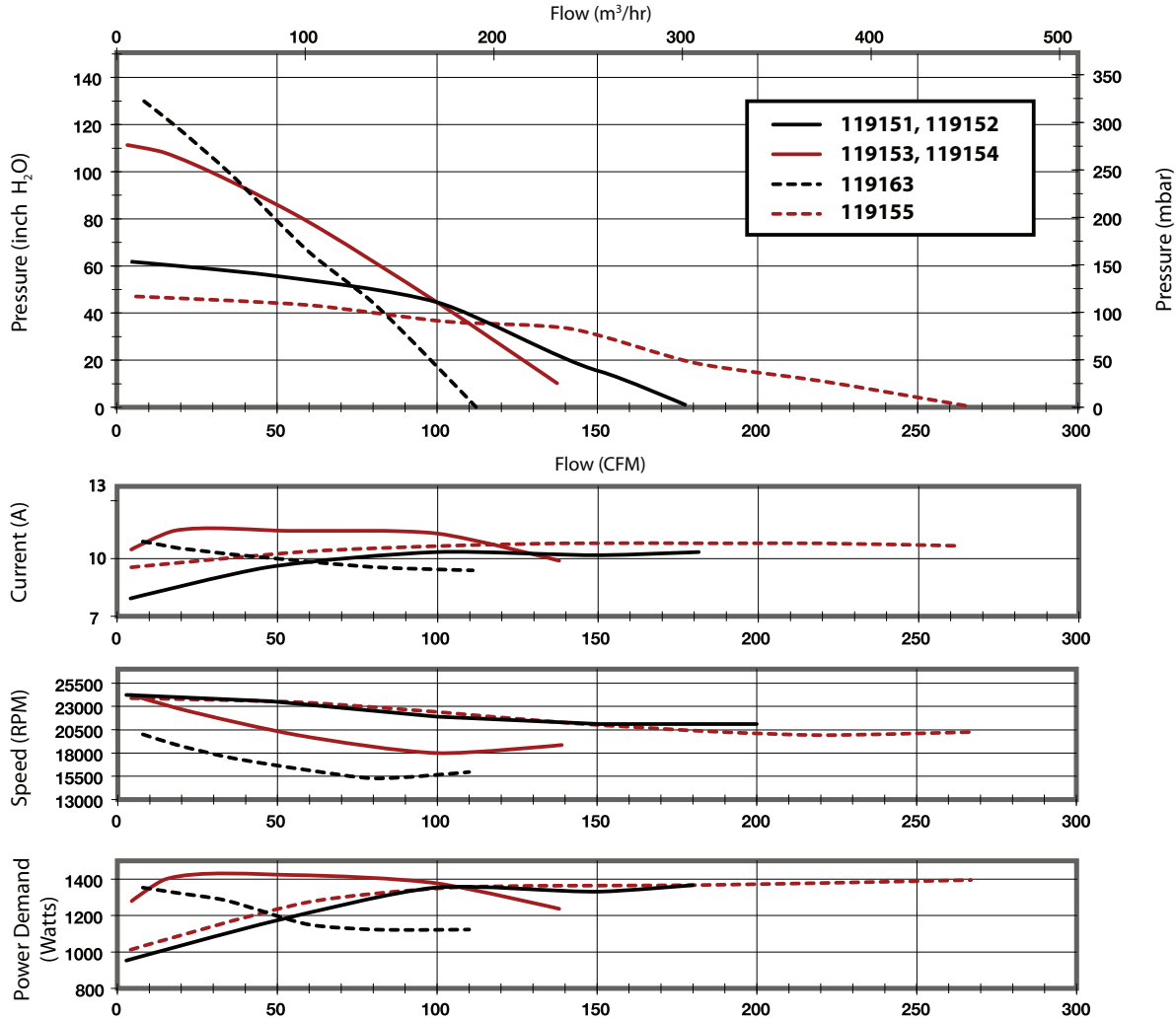
Specification	Units	Part/ Model Number					
		119152	119151	119154	119153	119156	119155
Flow	-	High Flow	High Flow	High Flow	High Flow	High Flow	Ultra High Flow
Stages	-	1	1	2	2	3	1
Max Sealed Vacuum	in. H2O mbar	46 114.6	46 114.6	80 199.3	80 199.3	119 296.4	42 104.6
Max Sealed Pressure	in. H2O mbar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

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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:

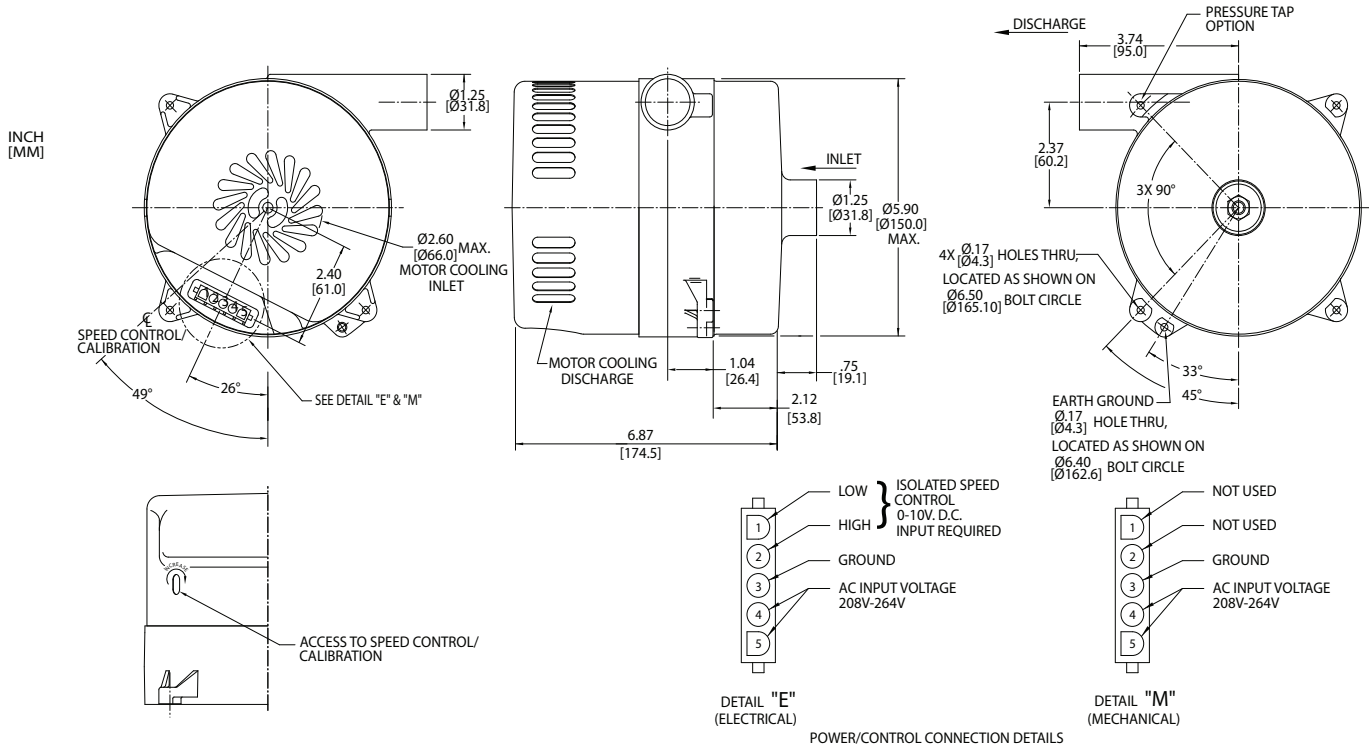
- The blower must be secured using mounting tabs, prior to applying power. This is a high speed device with rapid acceleration.
- Connections:
 . All of the Windjammer IntelliGen™ series blowers have a standard 5 pin connector.
 A mating connector with leads is supplied with single pack units only.
 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.

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High Voltage Brushless DC Blowers

5.7" (145mm) BLDC Bypass Blower

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



Specification	Units	Part/ Model Number	
		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

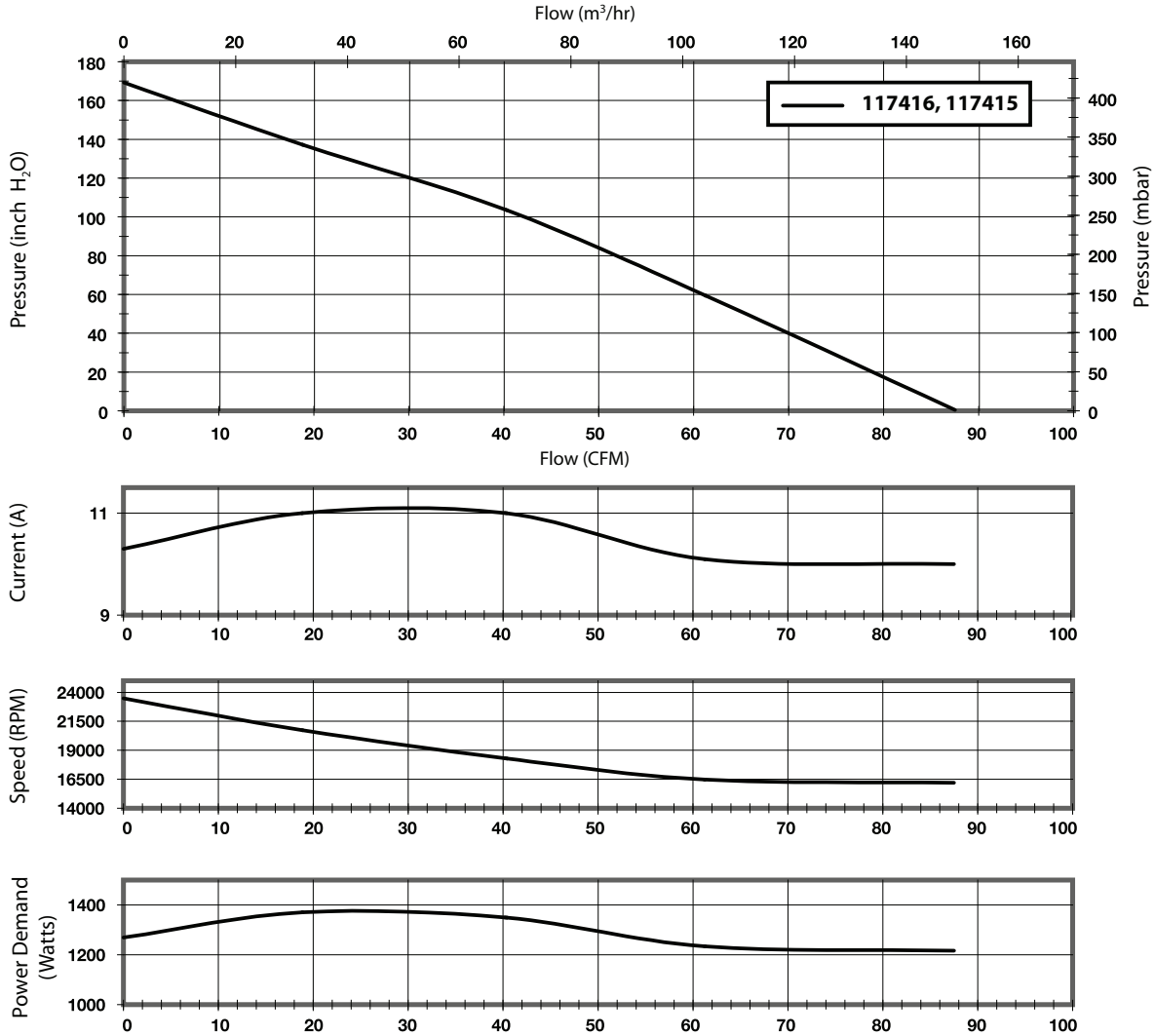


Notes:

- 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 (supplied by customer) mates with post header assembly.
Mating harness available upon request.

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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.
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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 be connected to the blower's 12V or 24V V_{in} pin to ensure full speed.

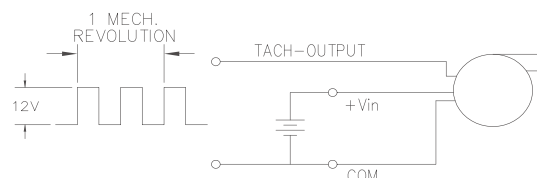
(ii) The *5.7 inch Windjammer* models have a calibration potentiometer that allows the user to set the range over which the speed command signal operates within a 0-10V range, or to precisely calibrate a group of blowers to the same speed for a given command voltage and operating condition.

(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.

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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.

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