



**Make It Yours.**

## 1 MasterFan M120 ARGB

Serial Number MFZP2DM20NP2R11261400296

Lab ID CM12000235

Certification ID FN25235

Test Result Report ID: 26FN235A

Certificate Issue Date: May 26, 2026

Scheme: PHI

Airflow Rating



Static Pressure Rating

A handwritten signature in blue ink, appearing to read "A. Bitziopoulos", written over a faint circular stamp.

Aristeidis Bitziopoulos, Certification Body General Manager

## SECTION A: Noise Testing Equipment

|                     |                                                |
|---------------------|------------------------------------------------|
| Test Environment    | Hemi-Anechoic Chamber with 6 dB(A) noise floor |
| Conditions          | 25(±2) degrees Celsius, 40-50% humidity        |
| Sound Analyzer      | Bruel & Kjaer 2270-S G4 & 2250-L G4            |
| Microphone          | Bruel & Kjaer Type 4955-A                      |
| Mic Calibrator      | Bruel & Kjaer Type 4231                        |
| Data Logger         | Picoscope TC-08                                |
| Testing Methodology | Cybenetics Phi Fan Performance Standard        |

## SECTION B: Fan Testing Instrument Technical Specifications

|                           |                                                                          |
|---------------------------|--------------------------------------------------------------------------|
| Manufacturer              | Long Win Science & Technology Corporation                                |
| Model Number              | LW-9266                                                                  |
| Air Flow Rate             | 2.4 - 250 CFM                                                            |
| Accuracy of Air Flow Rate | < 3.5% INFS                                                              |
| Repeatability error       | < 2%                                                                     |
| Static pressure           | 0-20mmAq (100mmAq with the high static pressure throttle device)         |
| Overall Dimensions        | 0.7 (W) x 2.2 (L) x 1.6 (H) m                                            |
| Power Source              | 220VAC, 5A, Single Phase, 50/60Hz                                        |
| Based on Standards        | ISO 5801-2007, AMCA 210-0, ASHRAE 51-2007, IEC 61591-2005, GB/T 1236-200 |

## SECTION C: PHI Performance Levels

|                      |          |       |
|----------------------|----------|-------|
| Pressure at 25 dB(A) | P (mmAq) | 2.36  |
| Airflow at 25 dB(A)  | Q (CFM)  | 48.64 |

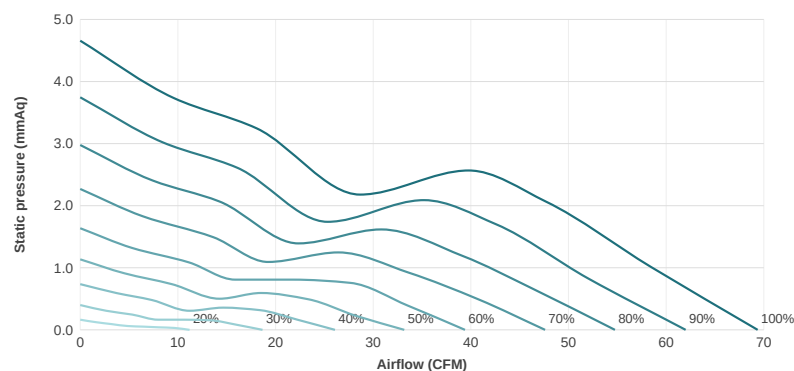
## SECTION D: Information about DUT

|                                                |                                                                                       |
|------------------------------------------------|---------------------------------------------------------------------------------------|
| Product Identification Details                 |                                                                                       |
| Brand                                          | 1                                                                                     |
| Model                                          | MasterFan M120 ARGB                                                                   |
| Serial Number                                  | MFZP2DM20NP2R11261400296                                                              |
| Product Specifications                         |                                                                                       |
| Manufacturer-Provided Information              |                                                                                       |
| Bearing                                        | Magnetic Levitation                                                                   |
| Connector                                      | Proprietary                                                                           |
| Cable length (mm)                              | 90                                                                                    |
| Daisy-chain                                    | Cable                                                                                 |
| RGB Connector                                  | 5V ARGB                                                                               |
| RGB Daisy-chain                                | Cable                                                                                 |
| Cybenetics Measurements                        |                                                                                       |
| Max Speed (RPM)                                | 2343                                                                                  |
| Max Airflow (CFM)                              | 69.37                                                                                 |
| Max Static Pressure (mmAq)                     | 4.66                                                                                  |
| Max Fan Noise Level (dBA)                      | 35.00                                                                                 |
| Fan Max Current (A)                            | 0.24                                                                                  |
| Fan Weight (gr)                                | 280                                                                                   |
| Dimensions (W x H x D)                         | 120mm x 120mm x 30mm                                                                  |
| Cybenetics Testing Information                 |                                                                                       |
| Lab ID                                         | CM12000235                                                                            |
| Date of receipt                                | May 25, 2026                                                                          |
| Testing Date                                   | May 26, 2026                                                                          |
| Report Issued Date                             | May 26, 2026                                                                          |
| Engineer Name                                  | Aris Bitziopoulos                                                                     |
| Authorized By the Laboratory Technical Manager | Aristeidis Bitziopoulos                                                               |
| Signature                                      |  |

## SECTION E: Long Win LW-9266 - Pressure and Airflow

**PQ Chart - All Speeds**

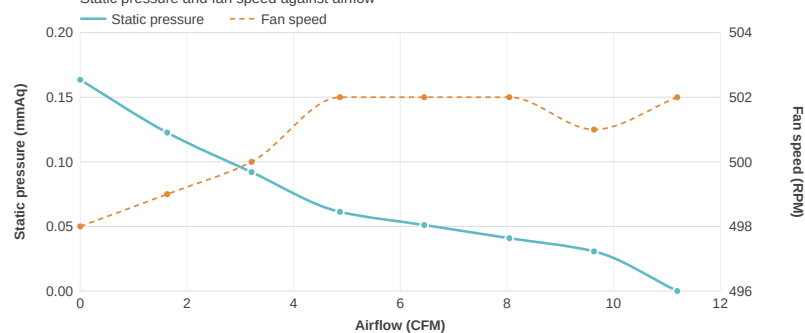
Static pressure against airflow, one curve per speed step



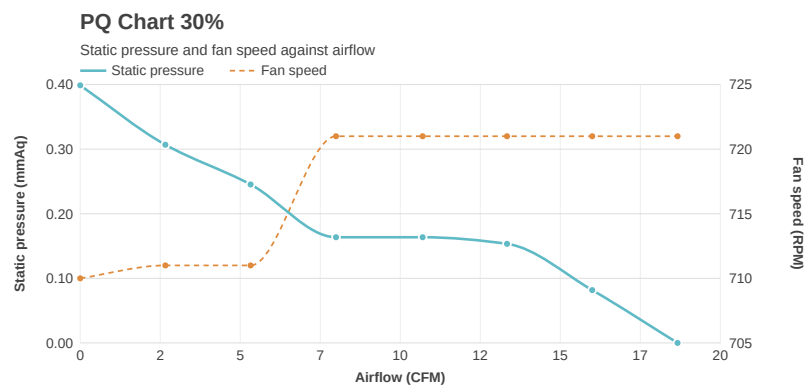
| Speed Setting | Max Airflow (CFM) | Max Static Pressure (mmAq) | Fan Speed (RPM) | Max Power (W) |
|---------------|-------------------|----------------------------|-----------------|---------------|
| 20%           | 11.19             | 0.16                       | 498 - 502       | 0.18          |
| 30%           | 18.66             | 0.40                       | 710 - 721       | 0.25          |
| 40%           | 26.08             | 0.74                       | 949 - 956       | 0.38          |
| 50%           | 33.18             | 1.14                       | 1172 - 1183     | 0.55          |
| 60%           | 39.40             | 1.64                       | 1398 - 1406     | 0.79          |
| 70%           | 47.60             | 2.27                       | 1639 - 1648     | 1.14          |
| 80%           | 54.76             | 2.98                       | 1866 - 1874     | 1.57          |
| 90%           | 61.99             | 3.75                       | 2089 - 2097     | 2.11          |
| 100%          | 69.37             | 4.66                       | 2330 - 2340     | 2.84          |

**PQ Chart 20%**

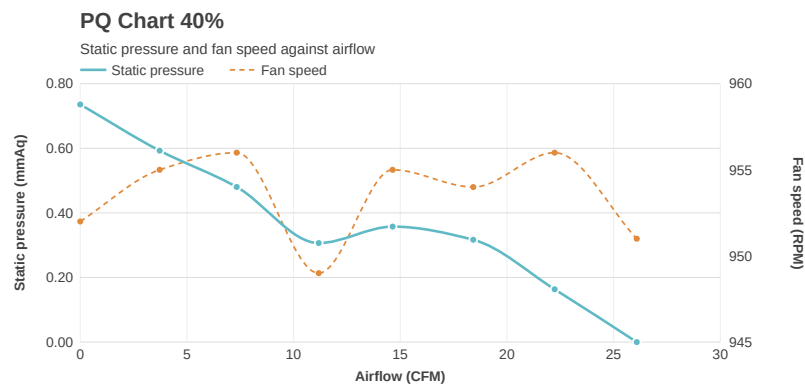
Static pressure and fan speed against airflow



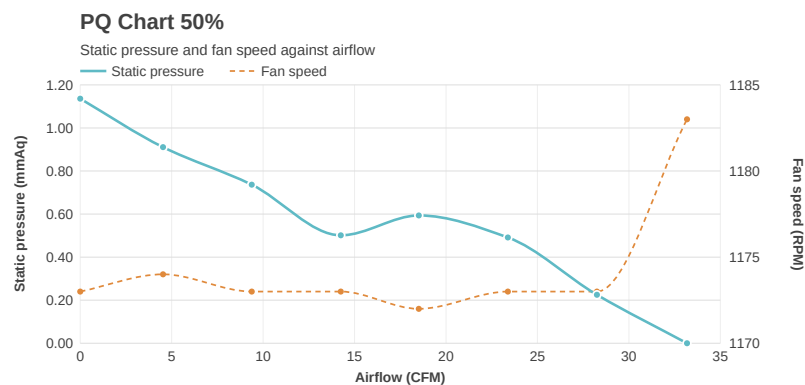
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 0.16                   | 498             | 0.015       | 0.18      |
| 1.63          | 0.12                   | 499             | 0.014       | 0.17      |
| 3.21          | 0.09                   | 500             | 0.014       | 0.17      |
| 4.87          | 0.06                   | 502             | 0.014       | 0.17      |
| 6.45          | 0.05                   | 502             | 0.014       | 0.17      |
| 8.05          | 0.04                   | 502             | 0.013       | 0.16      |
| 9.63          | 0.03                   | 501             | 0.013       | 0.16      |
| 11.19         | 0.00                   | 502             | 0.013       | 0.16      |



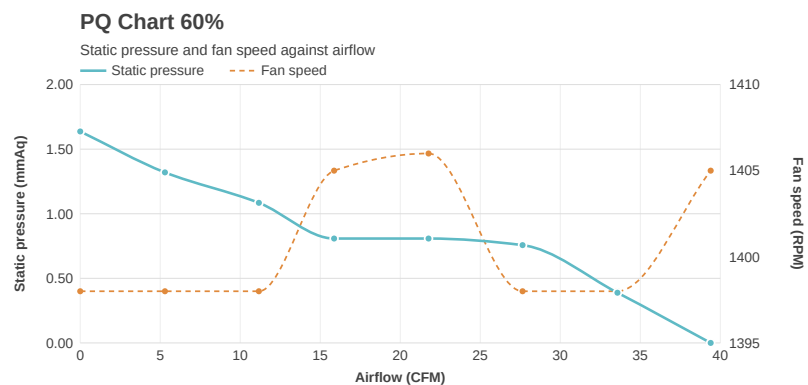
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 0.40                   | 710             | 0.021       | 0.25      |
| 2.66          | 0.31                   | 711             | 0.020       | 0.24      |
| 5.32          | 0.25                   | 711             | 0.020       | 0.24      |
| 7.99          | 0.16                   | 721             | 0.019       | 0.23      |
| 10.70         | 0.16                   | 721             | 0.019       | 0.23      |
| 13.34         | 0.15                   | 721             | 0.019       | 0.23      |
| 16.00         | 0.08                   | 721             | 0.019       | 0.23      |
| 18.66         | -0.01                  | 721             | 0.018       | 0.22      |



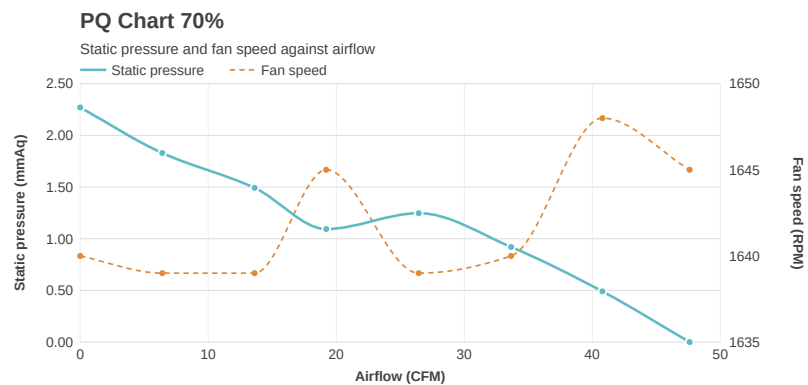
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 0.74                   | 952             | 0.032       | 0.38      |
| 3.72          | 0.59                   | 955             | 0.030       | 0.36      |
| 7.33          | 0.48                   | 956             | 0.028       | 0.34      |
| 11.18         | 0.31                   | 949             | 0.026       | 0.31      |
| 14.64         | 0.36                   | 955             | 0.027       | 0.32      |
| 18.42         | 0.32                   | 954             | 0.027       | 0.32      |
| 22.24         | 0.16                   | 956             | 0.026       | 0.31      |
| 26.08         | 0.00                   | 951             | 0.025       | 0.30      |



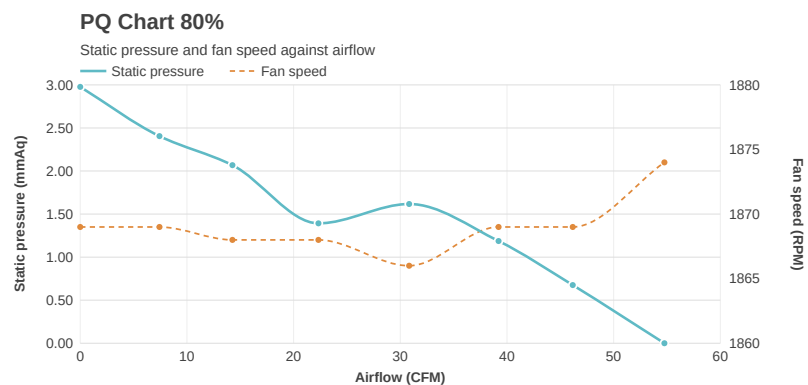
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 1.14                   | 1173            | 0.046       | 0.55      |
| 4.53          | 0.91                   | 1174            | 0.042       | 0.50      |
| 9.38          | 0.74                   | 1173            | 0.040       | 0.48      |
| 14.25         | 0.50                   | 1173            | 0.036       | 0.43      |
| 18.51         | 0.59                   | 1172            | 0.038       | 0.46      |
| 23.38         | 0.49                   | 1173            | 0.038       | 0.46      |
| 28.25         | 0.23                   | 1173            | 0.035       | 0.42      |
| 33.18         | 0.00                   | 1183            | 0.033       | 0.40      |



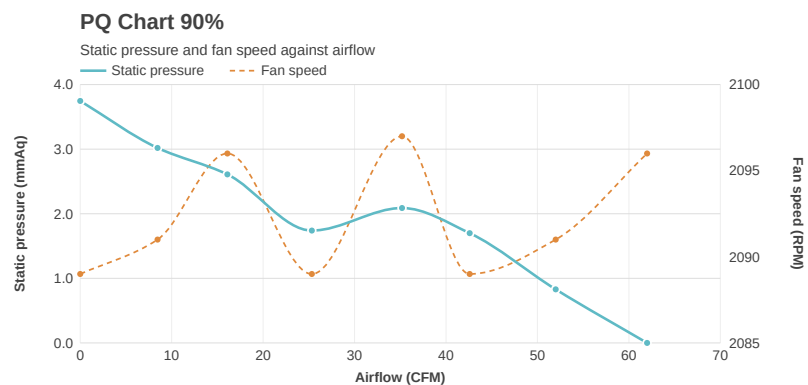
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 1.64                   | 1398            | 0.066       | 0.79      |
| 5.30          | 1.32                   | 1398            | 0.060       | 0.72      |
| 11.16         | 1.08                   | 1398            | 0.056       | 0.67      |
| 15.86         | 0.81                   | 1405            | 0.050       | 0.60      |
| 21.77         | 0.81                   | 1406            | 0.053       | 0.64      |
| 27.64         | 0.76                   | 1398            | 0.053       | 0.64      |
| 33.57         | 0.39                   | 1398            | 0.049       | 0.59      |
| 39.40         | 0.00                   | 1405            | 0.044       | 0.53      |



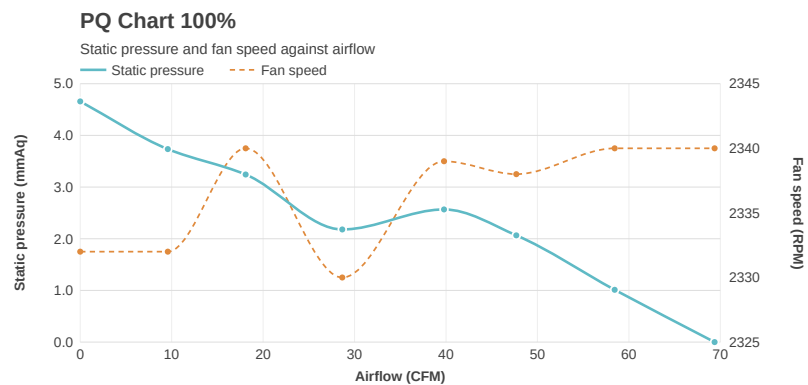
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 2.27                   | 1640            | 0.095       | 1.14      |
| 6.41          | 1.83                   | 1639            | 0.087       | 1.04      |
| 13.62         | 1.49                   | 1639            | 0.078       | 0.94      |
| 19.22         | 1.09                   | 1645            | 0.069       | 0.83      |
| 26.44         | 1.25                   | 1639            | 0.077       | 0.92      |
| 33.66         | 0.92                   | 1640            | 0.073       | 0.88      |
| 40.79         | 0.49                   | 1648            | 0.068       | 0.82      |
| 47.60         | -0.02                  | 1645            | 0.059       | 0.71      |



| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 2.98                   | 1869            | 0.131       | 1.57      |
| 7.43          | 2.40                   | 1869            | 0.118       | 1.42      |
| 14.27         | 2.07                   | 1868            | 0.108       | 1.30      |
| 22.33         | 1.39                   | 1868            | 0.089       | 1.07      |
| 30.83         | 1.62                   | 1866            | 0.104       | 1.25      |
| 39.21         | 1.19                   | 1869            | 0.097       | 1.16      |
| 46.16         | 0.68                   | 1869            | 0.090       | 1.08      |
| 54.76         | -0.01                  | 1874            | 0.074       | 0.89      |



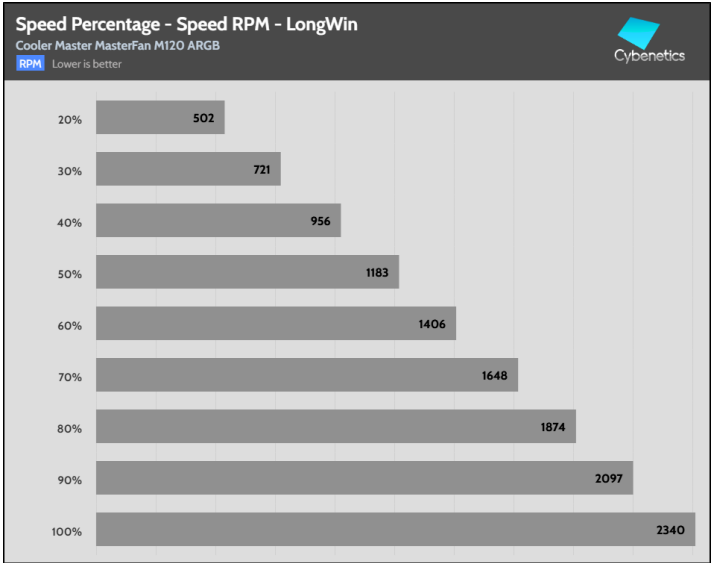
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 3.75                   | 2089            | 0.176       | 2.11      |
| 8.46          | 3.02                   | 2091            | 0.158       | 1.90      |
| 16.09         | 2.61                   | 2096            | 0.145       | 1.74      |
| 25.33         | 1.74                   | 2089            | 0.116       | 1.39      |
| 35.19         | 2.09                   | 2097            | 0.139       | 1.67      |
| 42.59         | 1.70                   | 2089            | 0.132       | 1.58      |
| 51.99         | 0.83                   | 2091            | 0.115       | 1.38      |
| 61.99         | -0.02                  | 2096            | 0.097       | 1.16      |



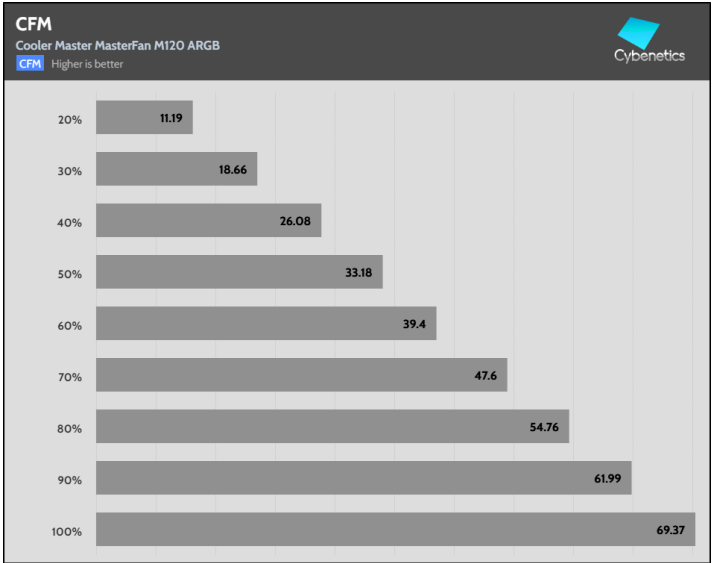
| Airflow (CFM) | Static Pressure (mmAq) | Fan Speed (RPM) | Current (A) | Power (W) |
|---------------|------------------------|-----------------|-------------|-----------|
| 0.00          | 4.66                   | 2332            | 0.237       | 2.84      |
| 9.57          | 3.74                   | 2332            | 0.210       | 2.52      |
| 18.09         | 3.24                   | 2340            | 0.192       | 2.30      |
| 28.65         | 2.18                   | 2330            | 0.151       | 1.81      |
| 39.79         | 2.57                   | 2339            | 0.182       | 2.18      |
| 47.69         | 2.07                   | 2338            | 0.172       | 2.06      |
| 58.45         | 1.01                   | 2340            | 0.149       | 1.79      |
| 69.37         | -0.06                  | 2340            | 0.122       | 1.46      |

## SECTION F: General Performance

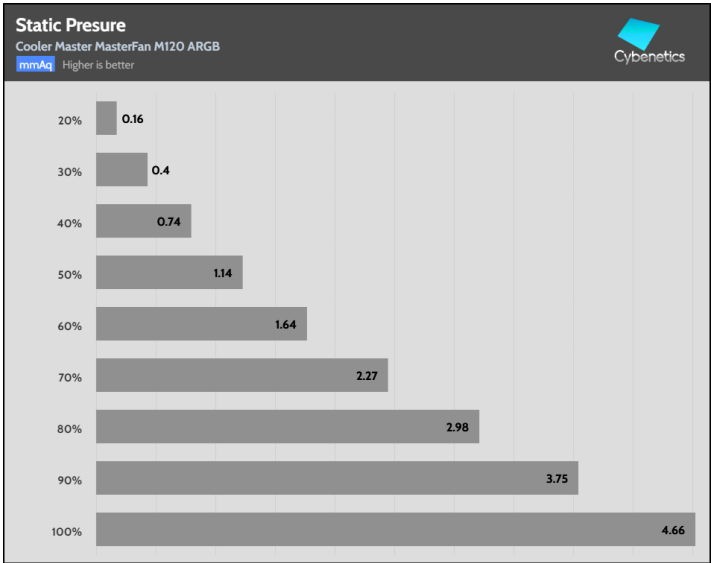
Fan Percentage RPM LongWin



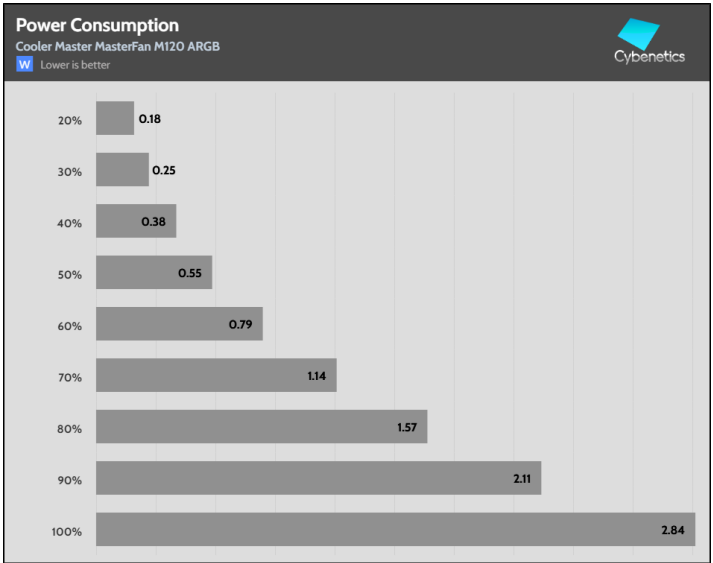
Fan Percentage CFM



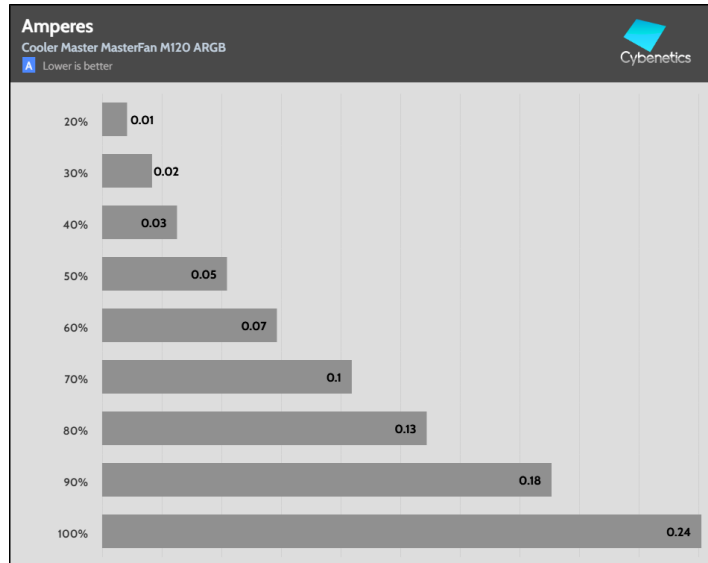
Fan Percentage Pressure



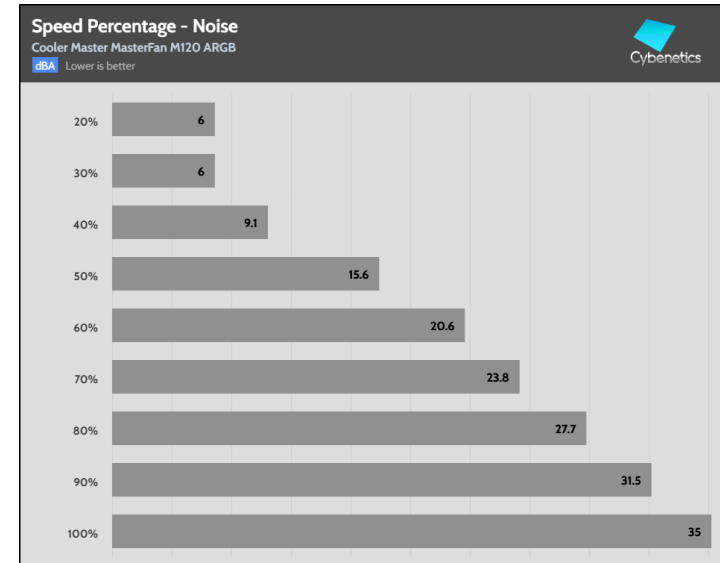
Fan Percentage Power



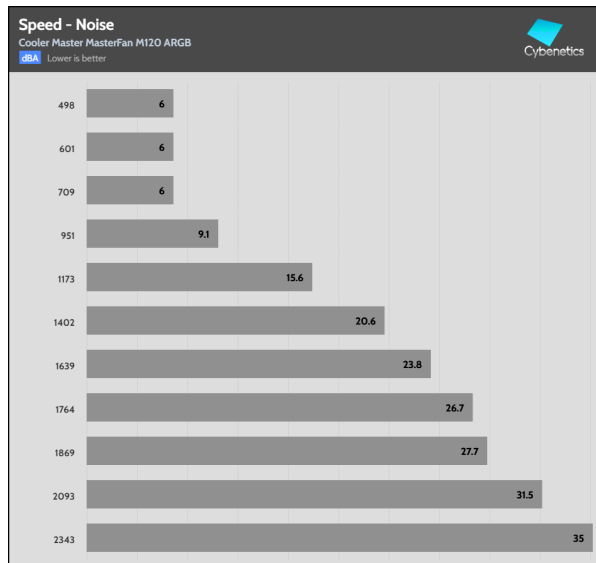
## Fan Percentage Amps



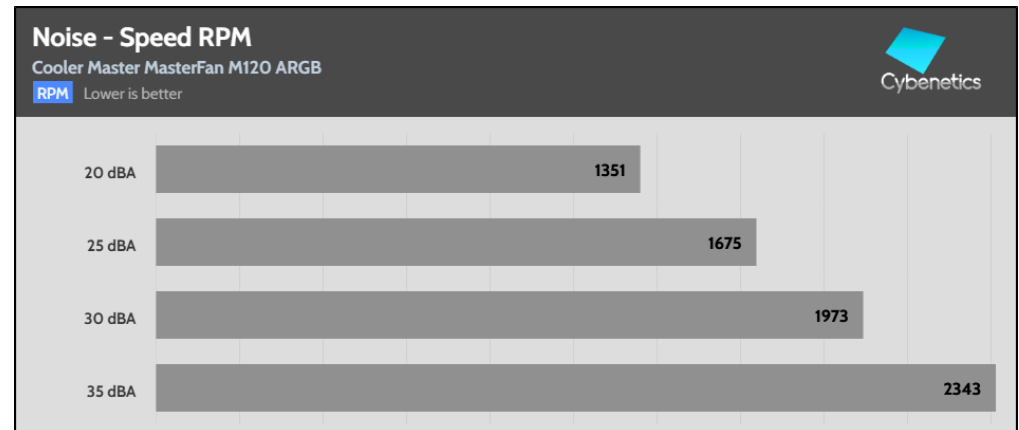
## Fan Percentage Noise



## Fan Speed Noise



## Fan Noise Speed



## SECTION G: Uncertainty

### Fan Performance Uncertainty Estimation

#### General Statement

Measurement uncertainty associated with the reported results was evaluated and estimated in accordance with JCGM 100:2008 (Guide to the Expression of Uncertainty in Measurement — GUM) and ISO/IEC 17025:2017, Clauses 7.6 and 7.2.

The uncertainty budget accounts for all significant identified contributors arising from the measurement process, instrumentation, test conditions, and operator interaction.

The reported expanded uncertainty  $U$  is obtained by multiplying the combined standard uncertainty  $u_c$  by a coverage factor  $k = 2$ , corresponding to a confidence level of approximately 95 %, assuming a normal probability distribution.

Unless otherwise stated, the reported uncertainty applies only to the specific measurements performed and does not include long-term drift, aging effects, or future environmental changes.

#### Expanded Measurement Uncertainty by Measurement Type

| Measurement         | Expanded Uncertainty $U$ ( $k=2$ , norm)                                                                          |
|---------------------|-------------------------------------------------------------------------------------------------------------------|
| Fan Air Flow        | $\pm 1.23176$ % of reading ( $k=2$ ) — e.g. $\pm 3.69$ CFM at 25 CFM, $\pm 4.29$ at 92 CFM, $\pm 7.15$ at 250 CFM |
| Fan Static Pressure | $\pm 0.6727$ Pa                                                                                                   |

Air flow uncertainty is relative to the reading:  $U(Q) = 2 \cdot \sqrt{[(1.8200)^2 + (0.0123176 \cdot Q)^2]}$  CFM, valid over the declared measuring range 2.4 – 250 CFM.

The reported static pressure uncertainty applies over the 0 – 20 mmAq (0 – 196.1 Pa) measuring range of the Long Win LW-9266 apparatus. The apparatus can be extended to 100 mmAq (981 Pa) with the high static pressure throttle device; the uncertainty of that extended range has not been separately verified and the value stated above does not apply to it.

1 MasterFan M120 ARGB



Front



Rear

Cybenetics [REDACTED] ETA [REDACTED] LAMBDA [REDACTED] SAFE [REDACTED]  
CYBENETICS LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

DELTA [REDACTED] PHI [REDACTED]

[www.cybenetics.com](http://www.cybenetics.com) - [info@cybenetics.com](mailto:info@cybenetics.com)