ARCTIC P12 PWM PST

Lab ID AC12000067

ID FN25067

ID: 25FN67A

: -

Scheme: PHI







Aristeidis Bitziopoulos,

SECTION A: 噪音测试设备

测试 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
测试方法	Cybenetics Phi Fan Performance Standard

SECTION B: 风扇测试仪器技术规格

Manufacturer	Long Win Science & Technology Corporation
模式 l 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 性能等级

压力 at 25 dB(A)	P (mmAq)	1.42
风量 at 25 dB(A)	Q (CFM)	44.95

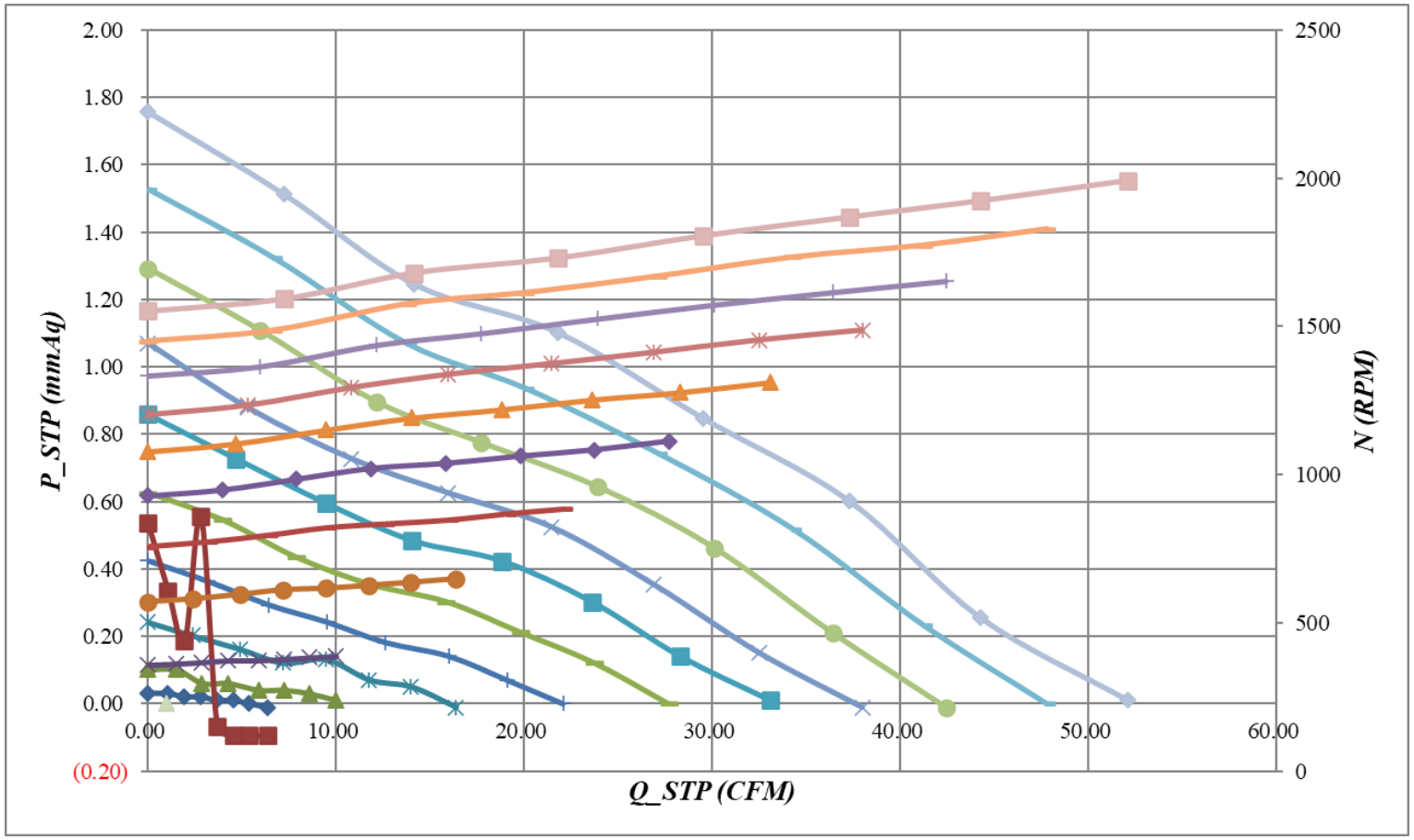
SECTION D: Information about DUT

Product Identification Details	
Brand	ARCTIC

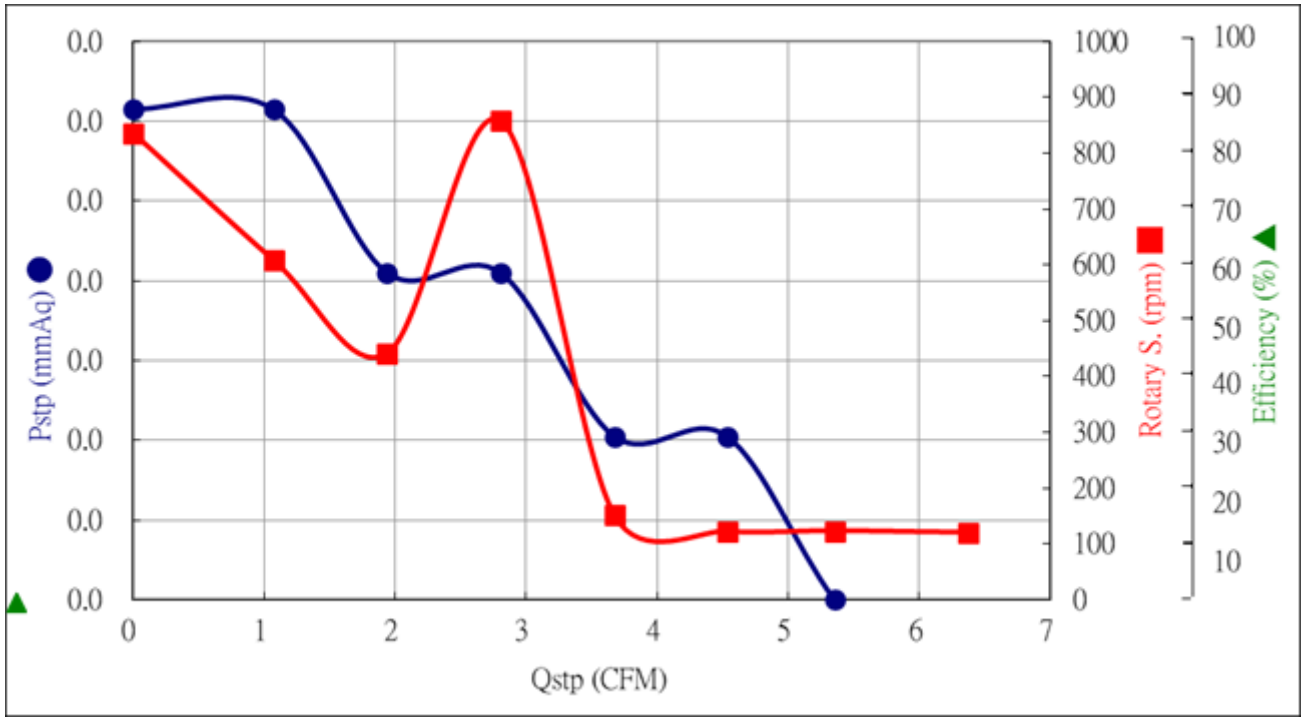
□□ l	P12 PWM PST
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
Bearing	Fluid Dynamic
Connector	PWM
Cable length (mm)	390
Daisy-chain	Cable
RGB Connector	□ ne
RGB Daisy-chain	□ ne
Cybenetics Measurements	
Max Speed (RPM)	1889
Max Airflow (CFM)	52.15
Max Static Pressure (mmAq)	1.76
Max □□□□ Level (dBA)	28.60
Fan Max Current (A)	0.10
Fan Weight (gr)	147
Dimensions (W x H x D)	120mm x 120mm x 25mm
Cybenetics □□ ing Information	
Lab ID	AC12000067
Date of receipt	-
□□ ing Date	-
Report Issued Date	-
Engineer Name	Georgios Theodoros Sarimpalas

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

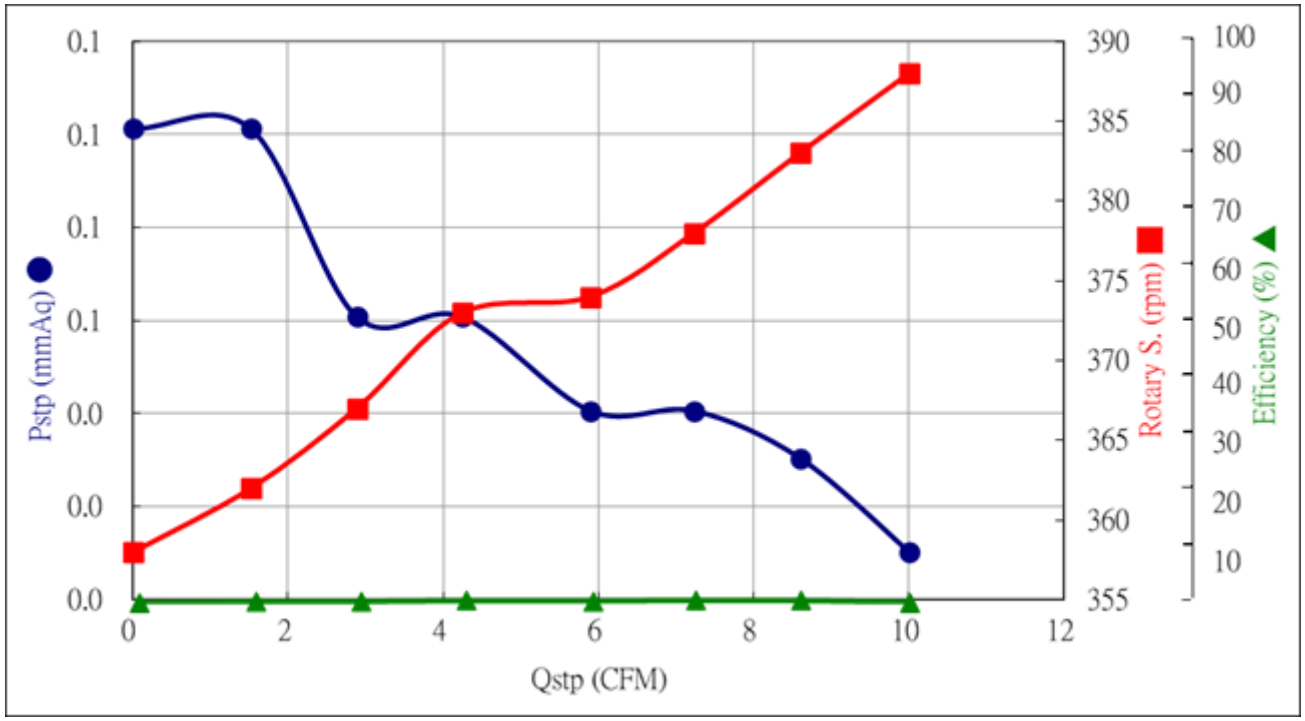
PQ Chart All Speed



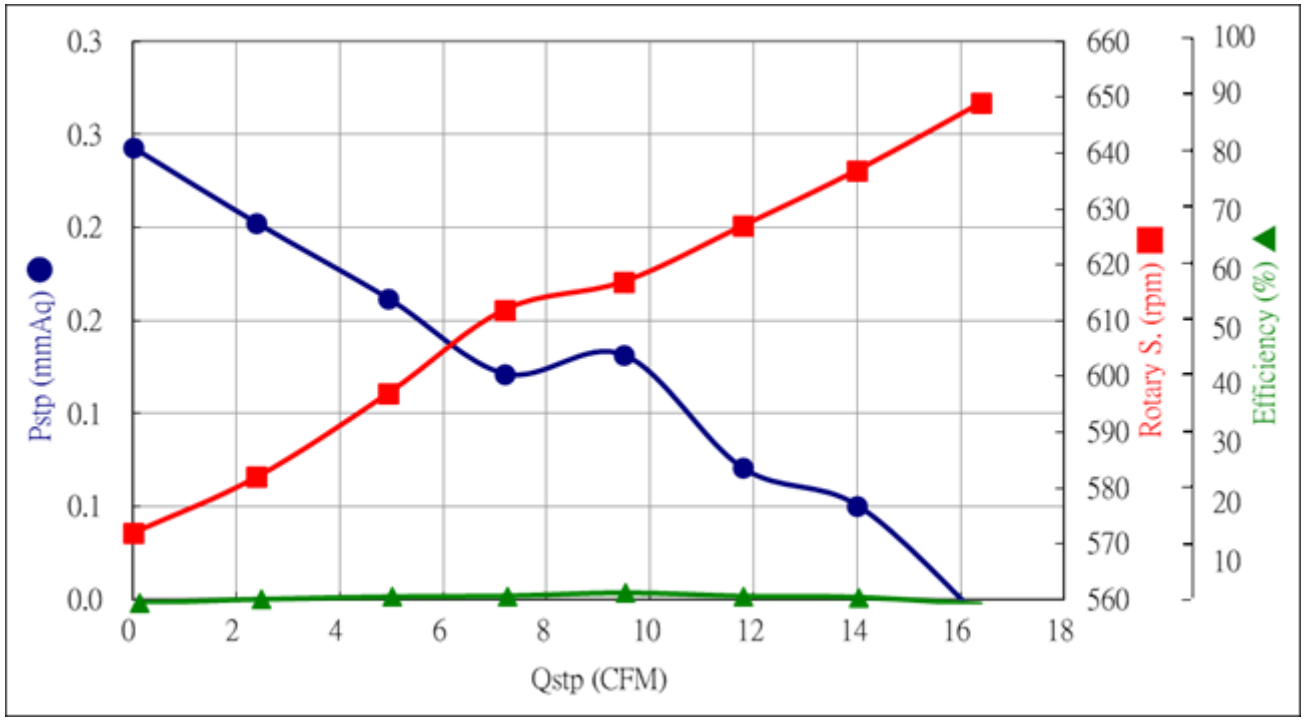
PQ Chart 10% Speed



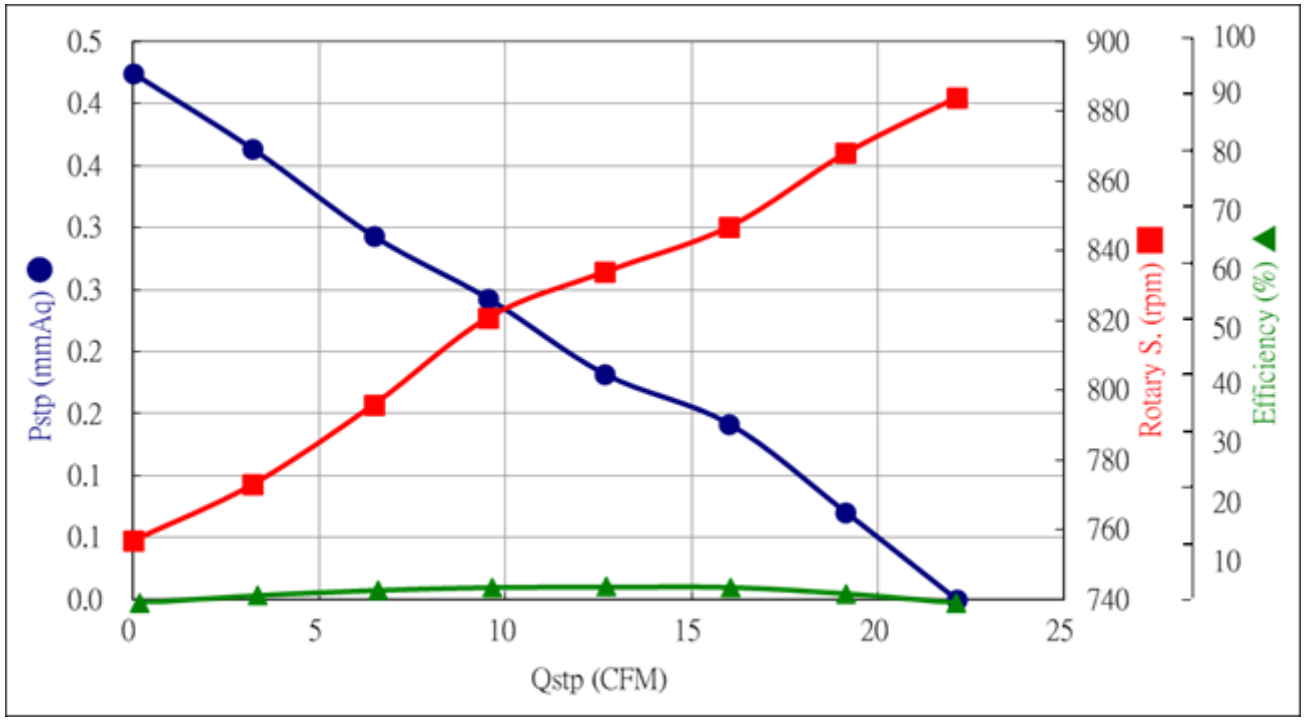
PQ Chart 20% Speed



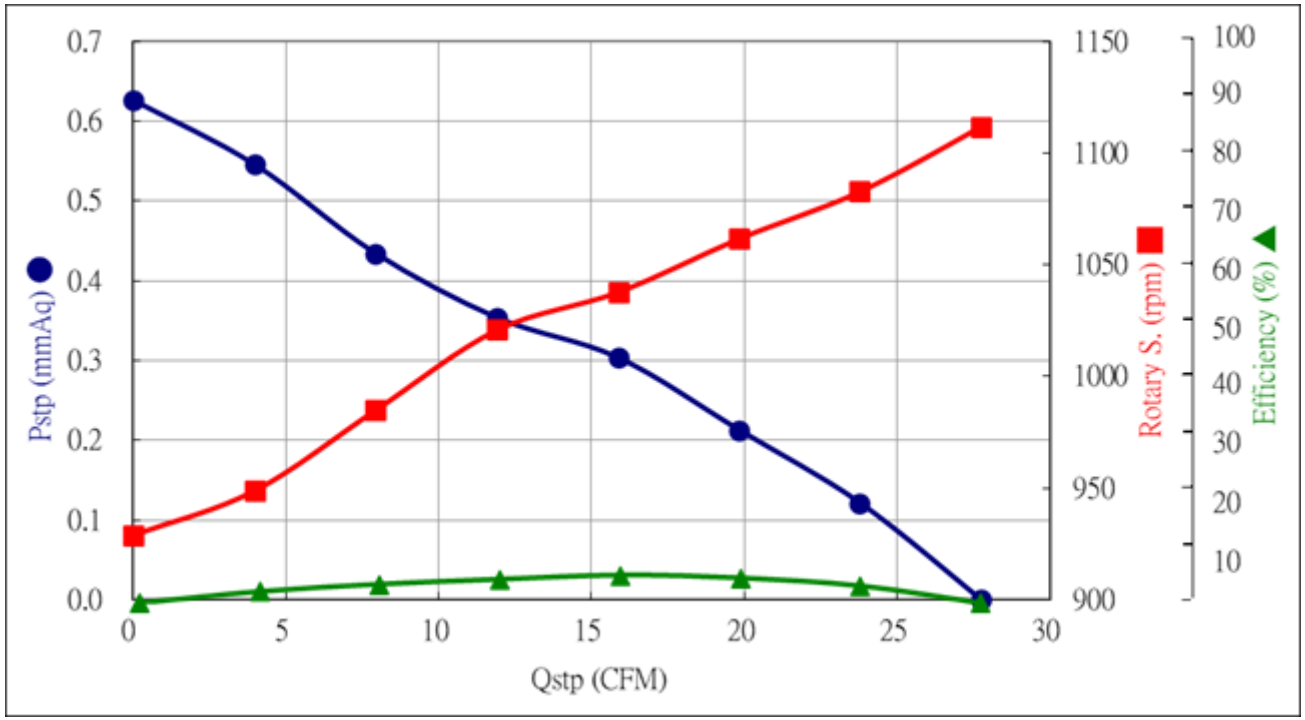
PQ Chart 30% Speed



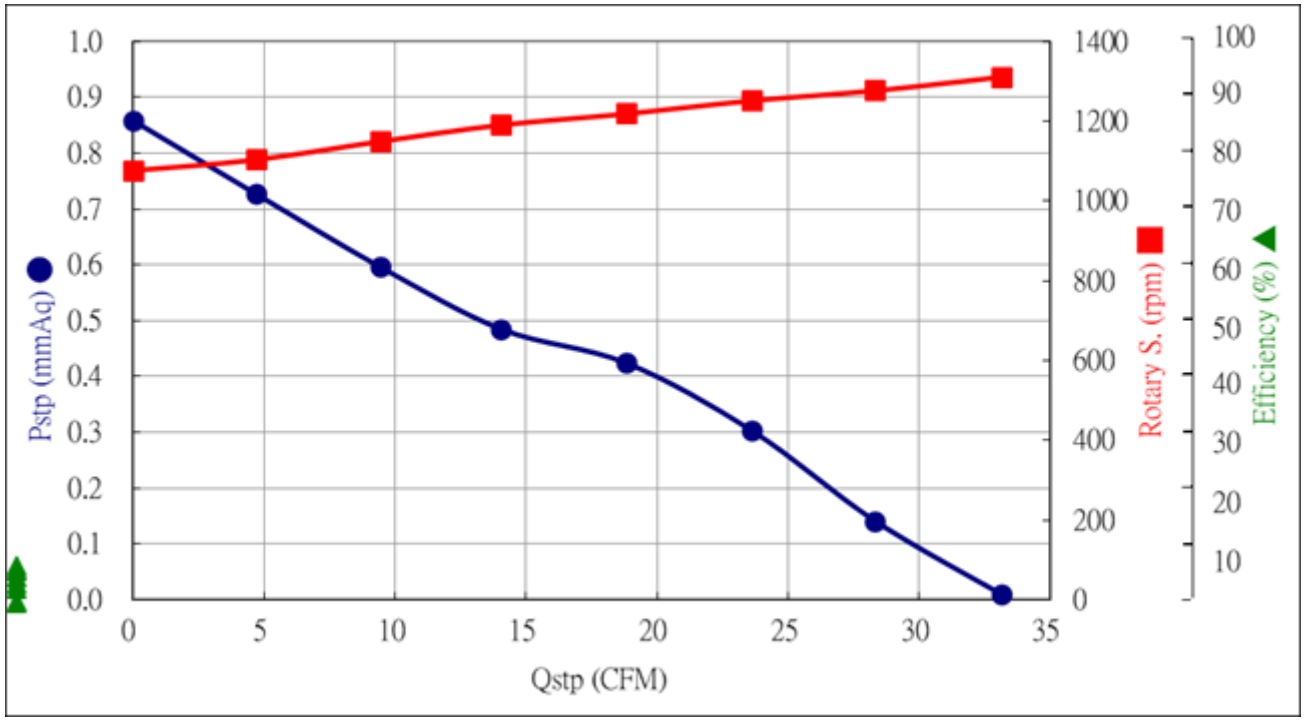
PQ Chart 40% Speed



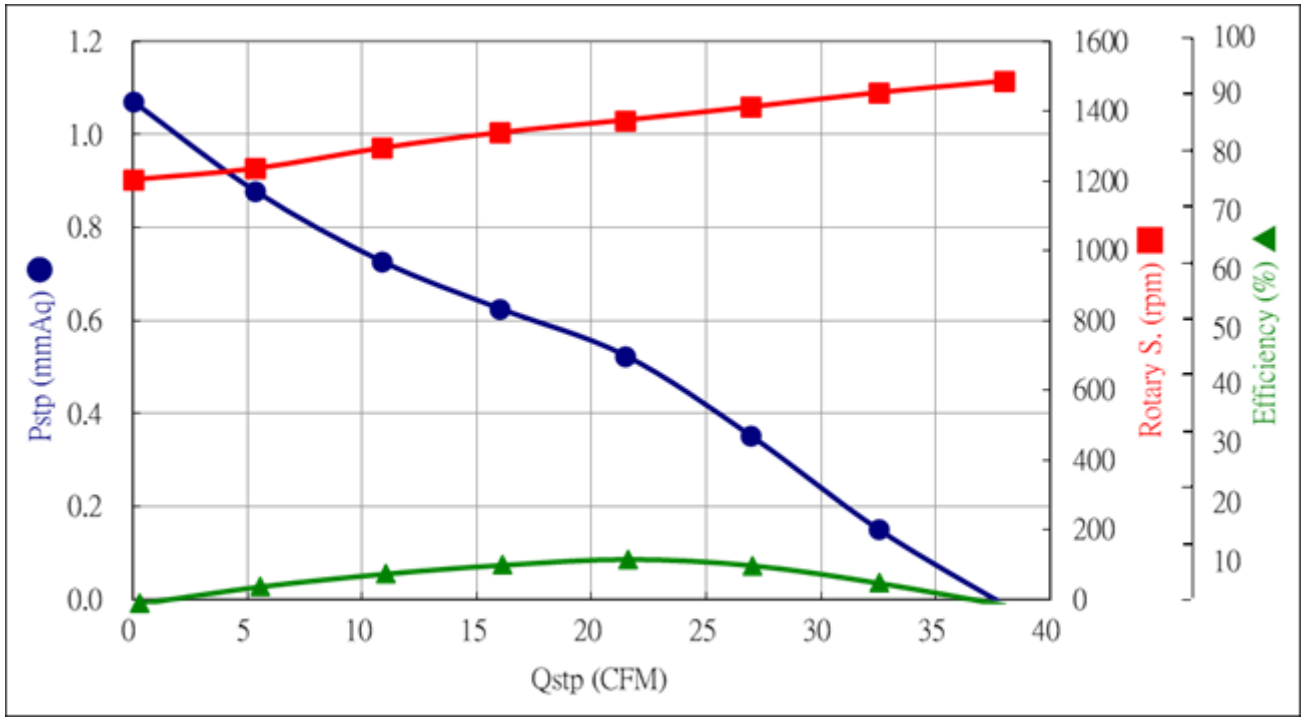
PQ Chart 50% Speed



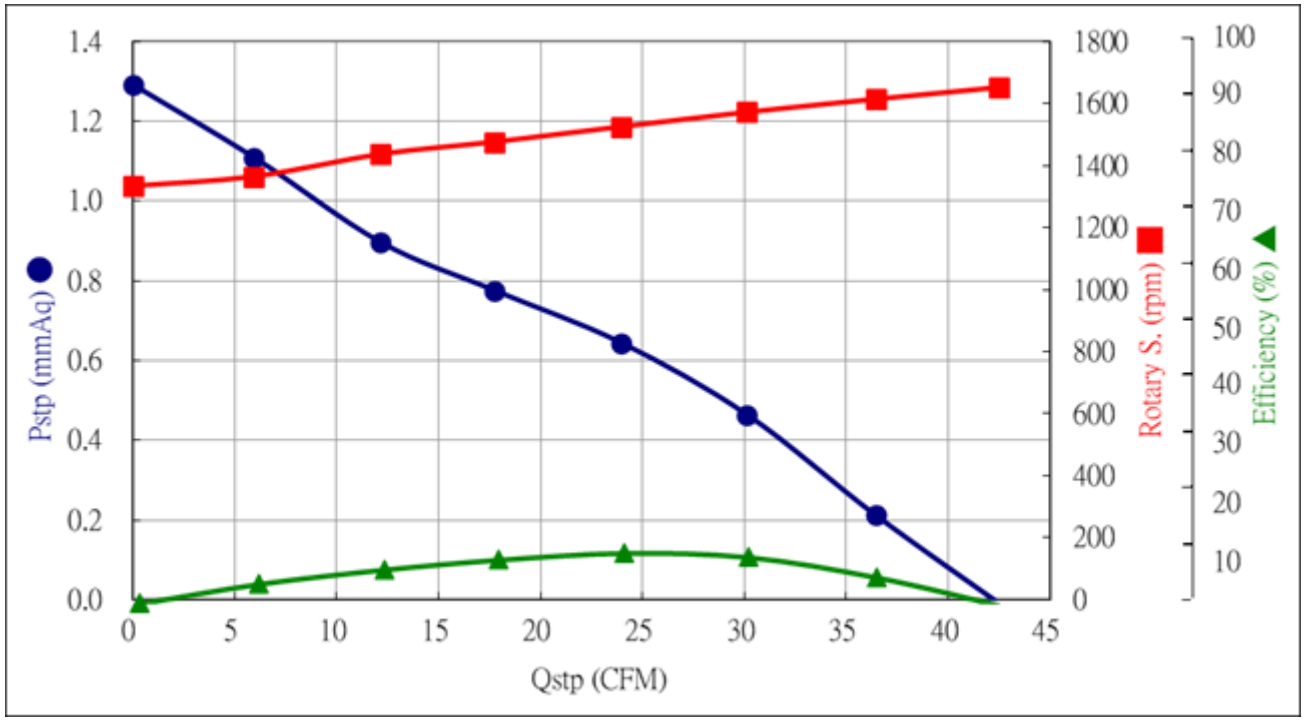
PQ Chart 60% Speed



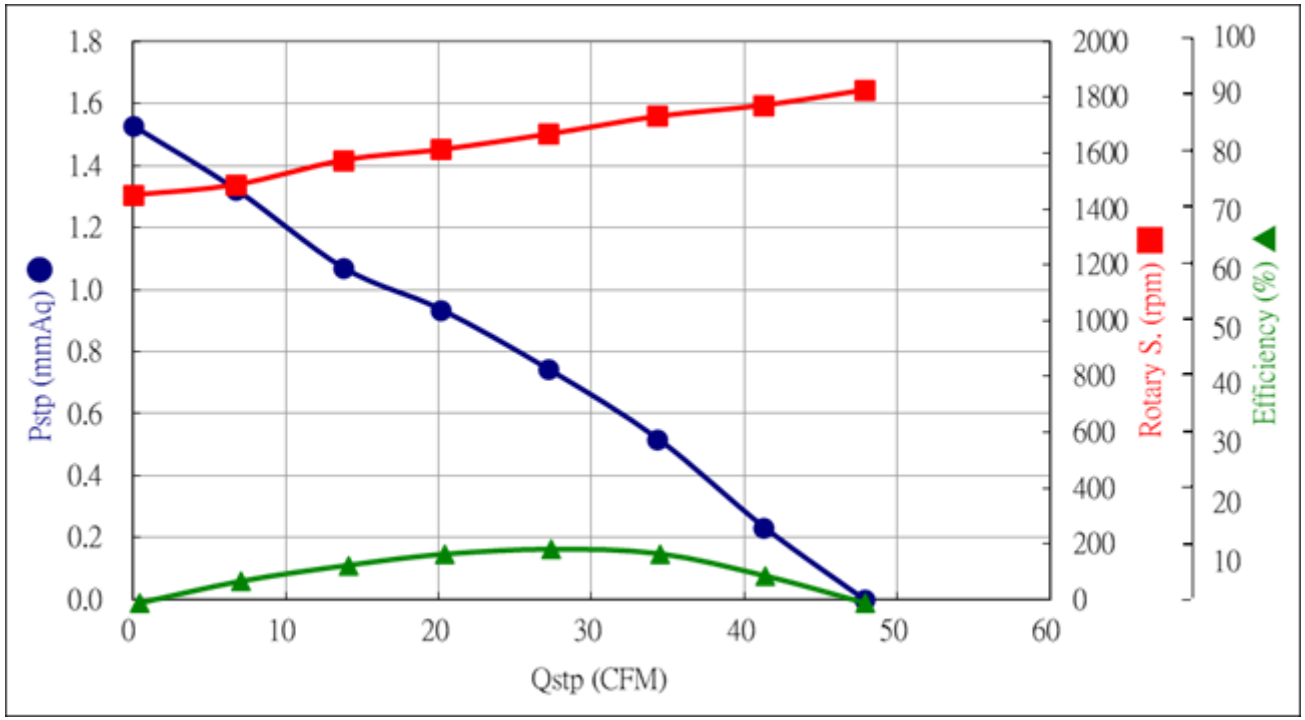
PQ Chart 70% Speed



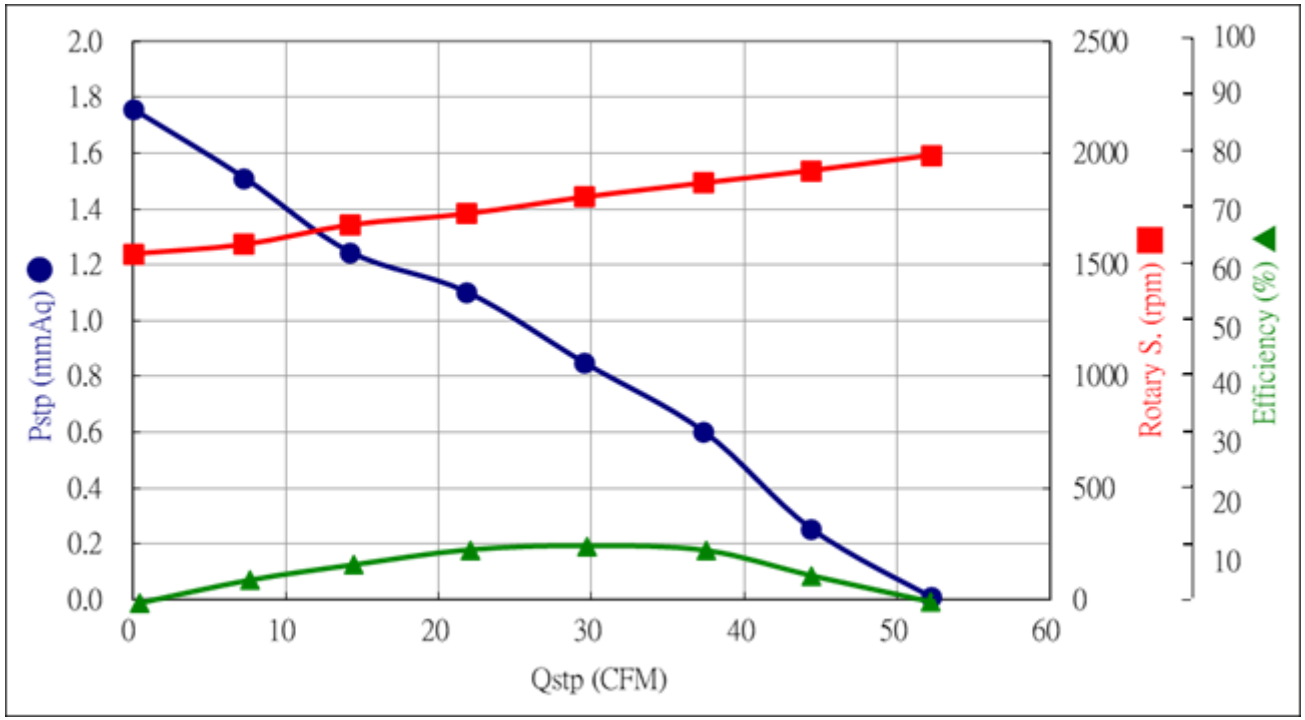
PQ Chart 80% Speed



PQ Chart 90% Speed



PQ Chart 100% Speed

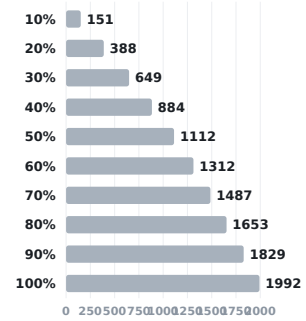


SECTION F: General Performance

RPM

Fan Speed

ARCTIC P12 PWM PST

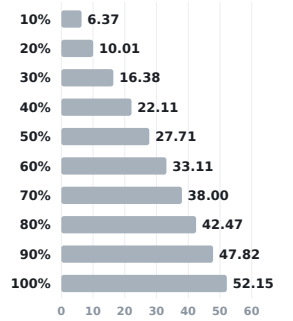


RPM · cybenetics.com

CFM Higher is better

Airflow

ARCTIC P12 PWM PST

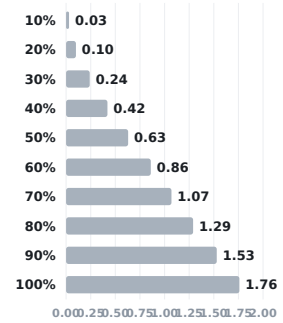


CFM · cybenetics.com

mmAq Higher is better

Static Pressure

ARCTIC P12 PWM PST

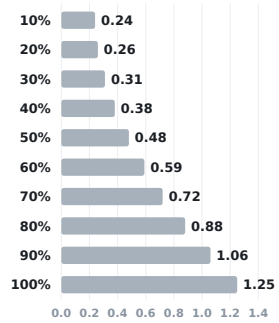


mmAq · cybenetics.com

W Lower is better

Power Consumption

ARCTIC P12 PWM PST



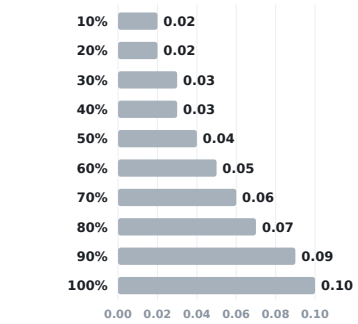
W · cybenetics.com

Cybenetics

A Lower is better

Current

ARCTIC P12 PWM PST



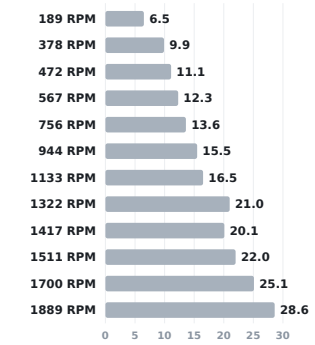
A · cybenetics.com

Cybenetics

dB(A) Lower is better

Noise at Each Fan Speed

ARCTIC P12 PWM PST



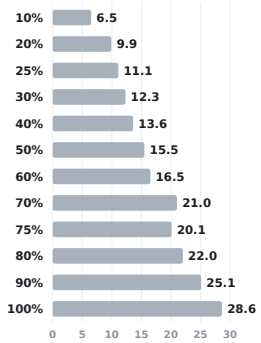
dB(A) · cybenetics.com

Cybenetics

dB(A) Lower is better

Noise Output

ARCTIC P12 PWM PST



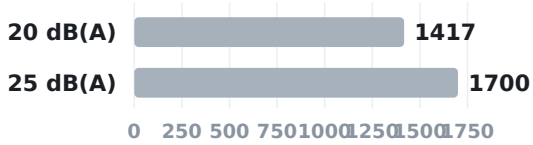
dB(A) · cybenetics.com

Cybenetics

RPM

Fan Speed at Fixed Noise Levels

ARCTIC P12 PWM PST



RPM · cybenetics.com

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 uc 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	±1.23176 % of reading (k=2) — e.g. ±3.69 CFM at 25 CFM, ±4.29 at 92 CFM, ±7.15 at 250 CFM
Fan Static Pressure	±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.

ARCTIC P12 PWM PST



Front



Rear

□□□