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## Nominal data

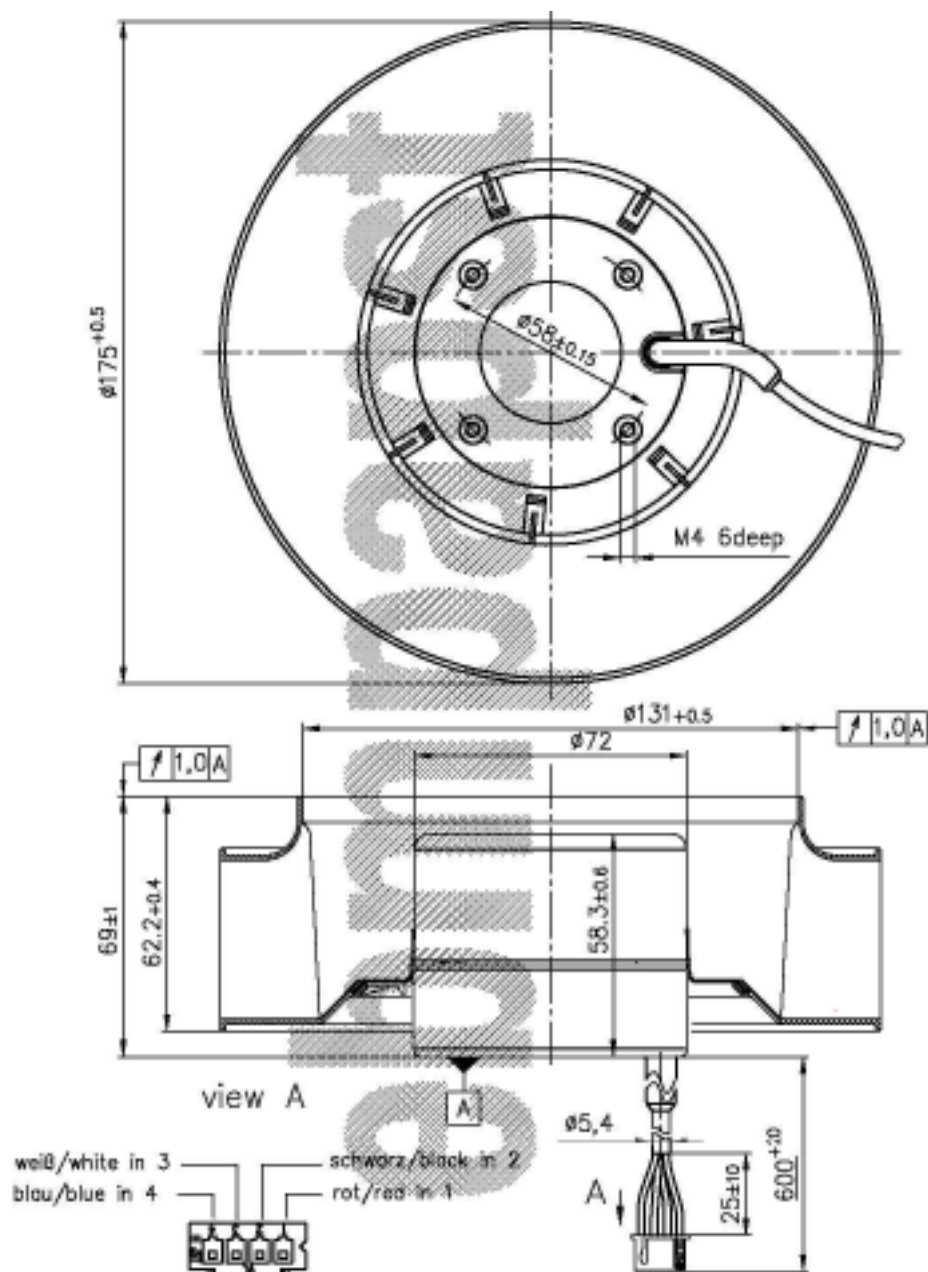
|                          |                      |       |
|--------------------------|----------------------|-------|
| Type                     | R1G175-AB41-64       |       |
| Motor                    | M1G055-BD            |       |
| Nominal voltage          | [VDC]                | 48    |
| Nominal voltage range    | [VDC]                | 36-57 |
| Type of data definition  |                      | rfa   |
| Speed                    | [min <sup>-1</sup> ] | 3100  |
| Power input              | [W]                  | 34    |
| Current draw             | [A]                  | 0.85  |
| Min. ambient temperature | [°C]                 | - 25  |
| Max. ambient temperature | [°C]                 | +70   |
| Air flow                 | [m <sup>3</sup> /h]  | 565   |
| Sound pressure level     | [dB(A)]              | 64,4  |

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations

## Technical features

|                                                          |                                                                             |
|----------------------------------------------------------|-----------------------------------------------------------------------------|
| Leakage current                                          | ≤0.25 mA                                                                    |
| Size                                                     | 175 mm                                                                      |
| Operation mode                                           | Continuous operation(S1)                                                    |
| Direction of rotation                                    | Clockwise, seen on rotor                                                    |
| Mounting position                                        | Any direction                                                               |
| EMC interference emission                                | Acc. to EN 61000-6-3                                                        |
| EMC interference immunity                                | Acc. to EN 61000-6-2                                                        |
| Insulation class                                         | "B"                                                                         |
| Cable exit                                               | Variable                                                                    |
| Condensate discharge holes                               | None                                                                        |
| Bearing motor                                            | Ball bearing                                                                |
| Mass                                                     | 0.85kg                                                                      |
| Material of impeller                                     | PA66                                                                        |
| Motor protection                                         | Reverse polarity and locked-rotor protection                                |
| Product conforming to standard                           | EN 60950-1                                                                  |
| Surface of rotor                                         | Coated in black                                                             |
| Number of blades                                         | 7                                                                           |
| Type of protection                                       | IP 44                                                                       |
| Technical features                                       | Control input PWM<br>- Tach output<br>- Motor current limit<br>- Soft start |
| Max. permissible ambient motor temp. (transp./ storage)  | +70 °C                                                                      |
| Min. permissible ambient motor temp. (transp./storage)   | -40 °C                                                                      |
| Approval                                                 | VDE, CE, UL507, CCC                                                         |
| Rotor weight                                             | 423g                                                                        |
| L10 at 40 °C                                             | 60000h                                                                      |
| Start voltage                                            | 36V                                                                         |
| Max running current                                      | 0.9A                                                                        |
| Locked rotor current                                     | 0.5A                                                                        |
| Protection for rotor blocked                             | OK                                                                          |
| Protection for over current                              | OK                                                                          |
| Soft starting                                            | OK                                                                          |
| Restart automatically                                    | OK                                                                          |
| Protection for positive and Negative polarity connection | OK                                                                          |

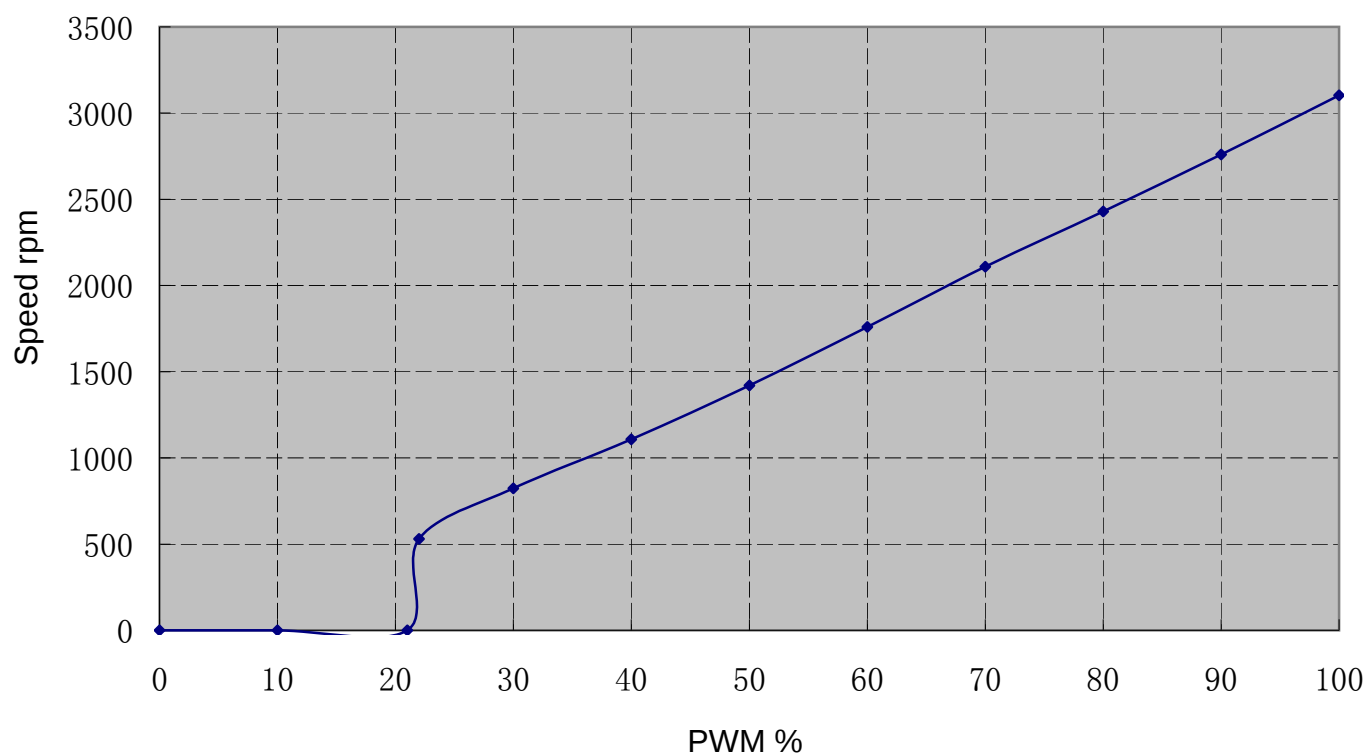
## Product drawing



- |   |                                             |
|---|---------------------------------------------|
| 1 | Connection line AWG20/300V, 4-leads         |
| 2 | Housing JST: XHP-4                          |
| 3 | Pin JST: SXH-001T-P0.6                      |
| 4 | Amounting hole M4, 6mm depth, torque 1.57Nm |

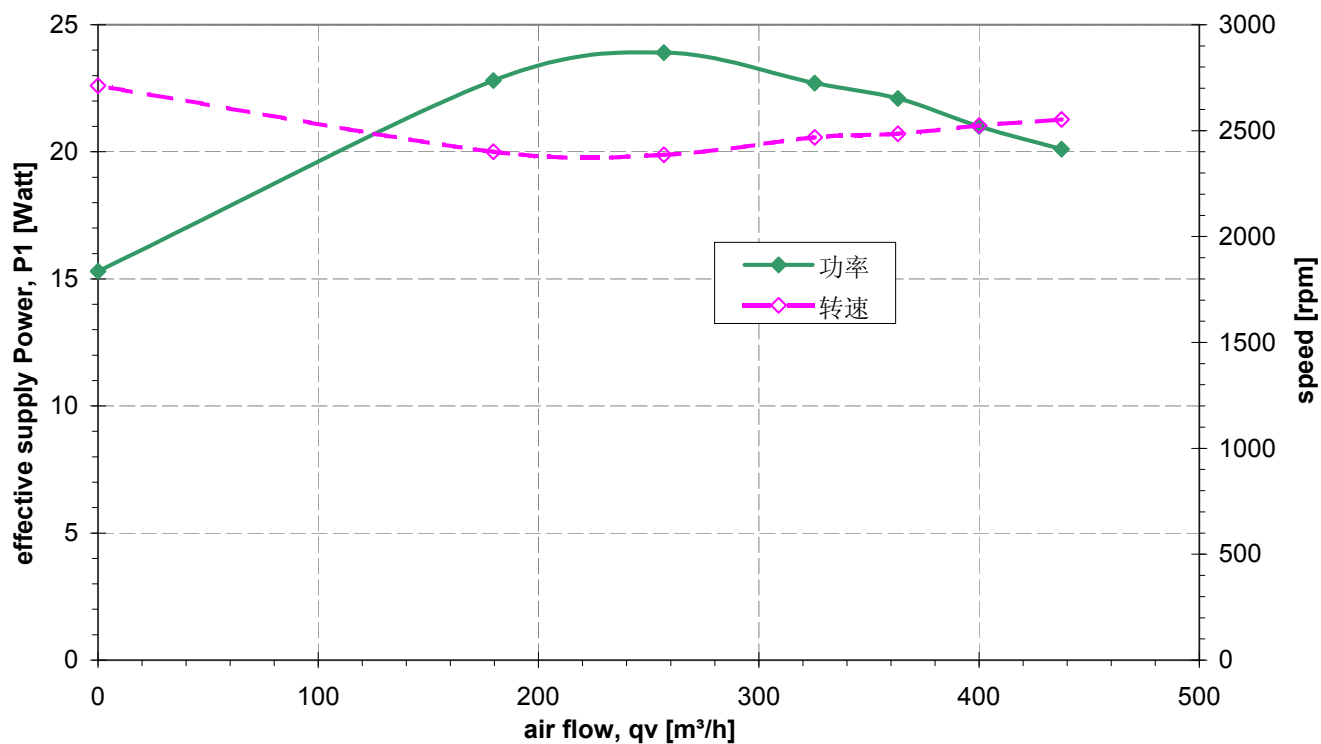
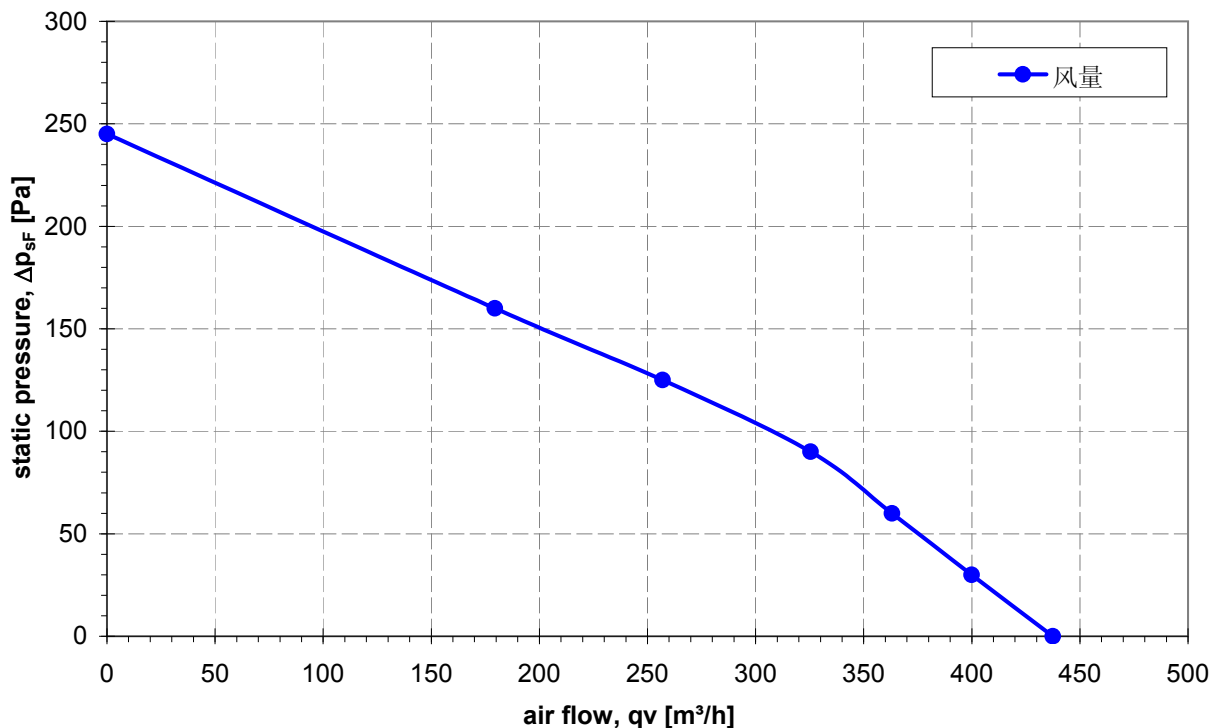
## PWM VS Speed

PWM VS Speed



100% PWM PQ curve under 36V

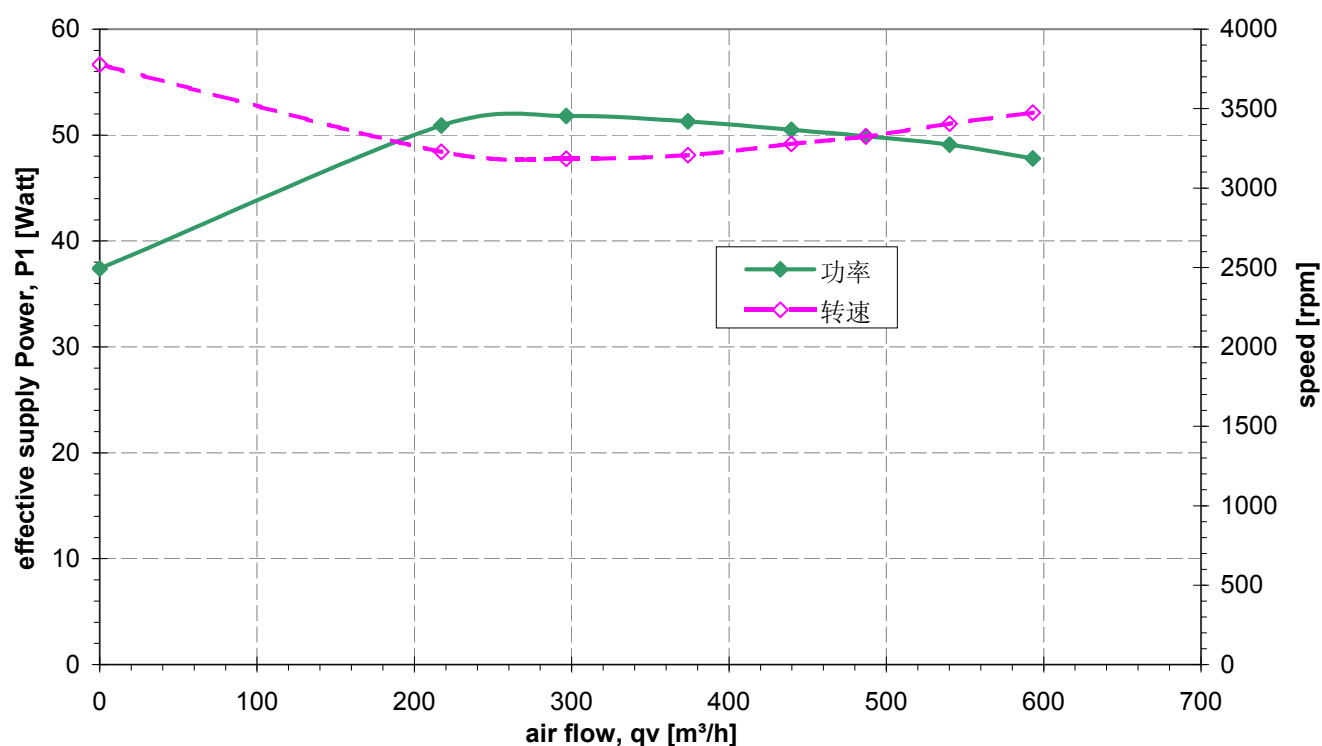
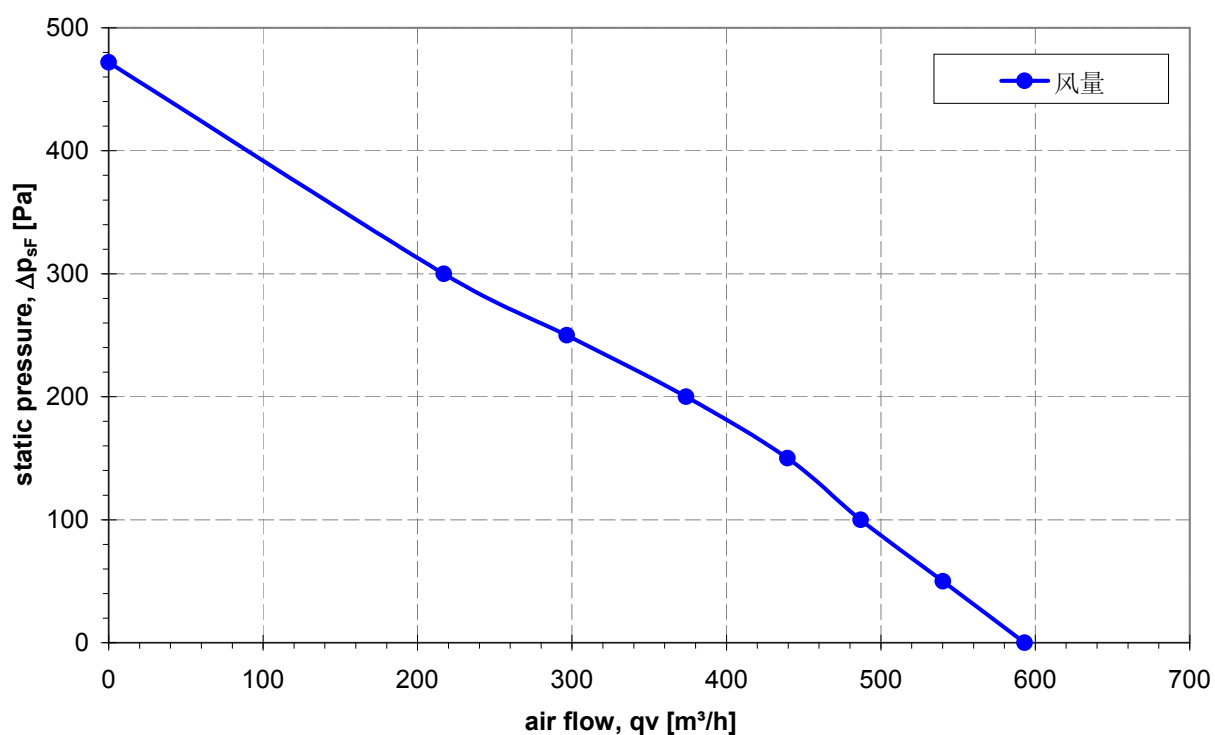
All tested with wall ring 09576-2-4013



## EC centrifugal fan

backward curved, single inlet

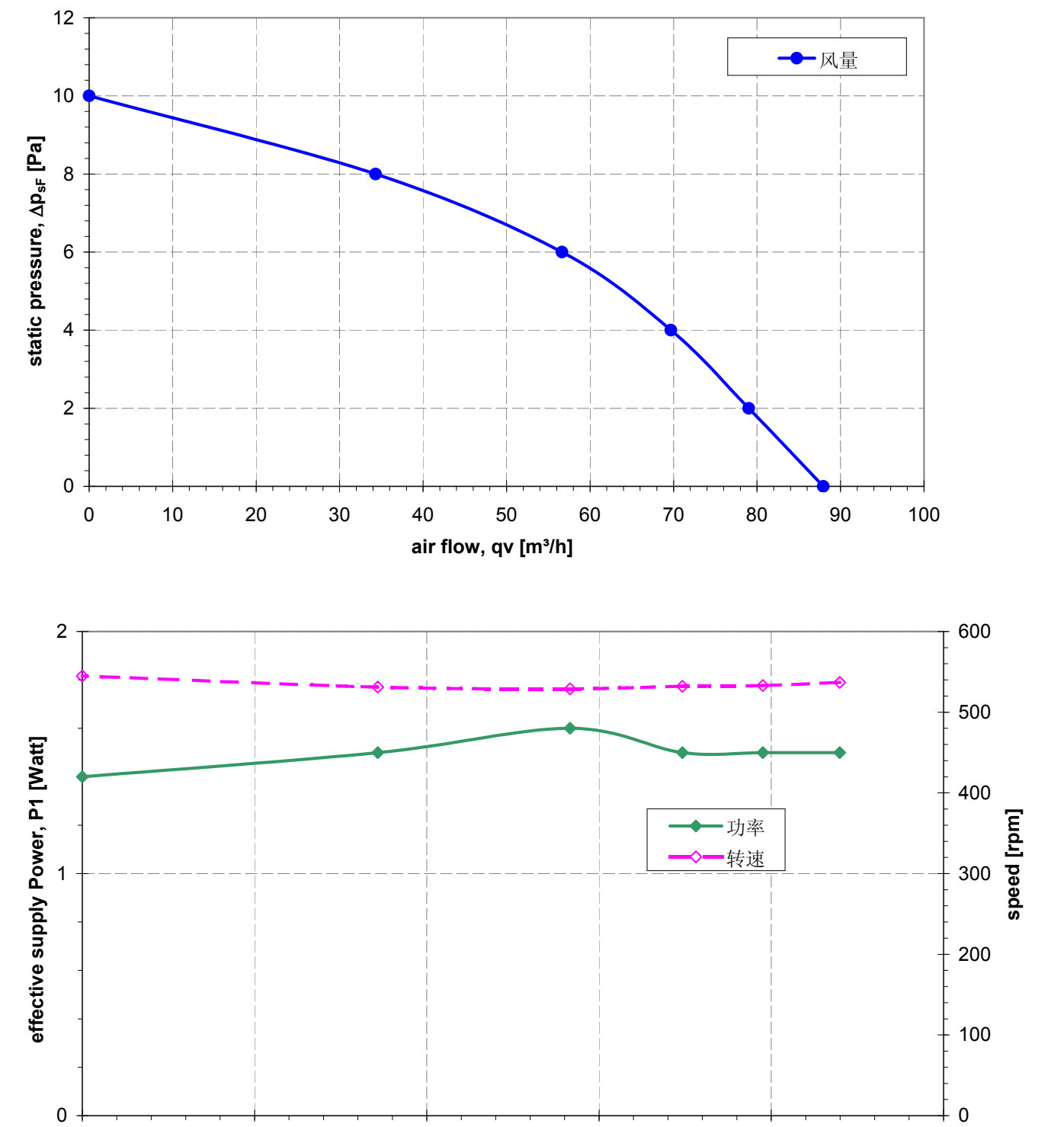
100% PWM PQ curve under 56V



# EC centrifugal fan

backward curved, single inlet

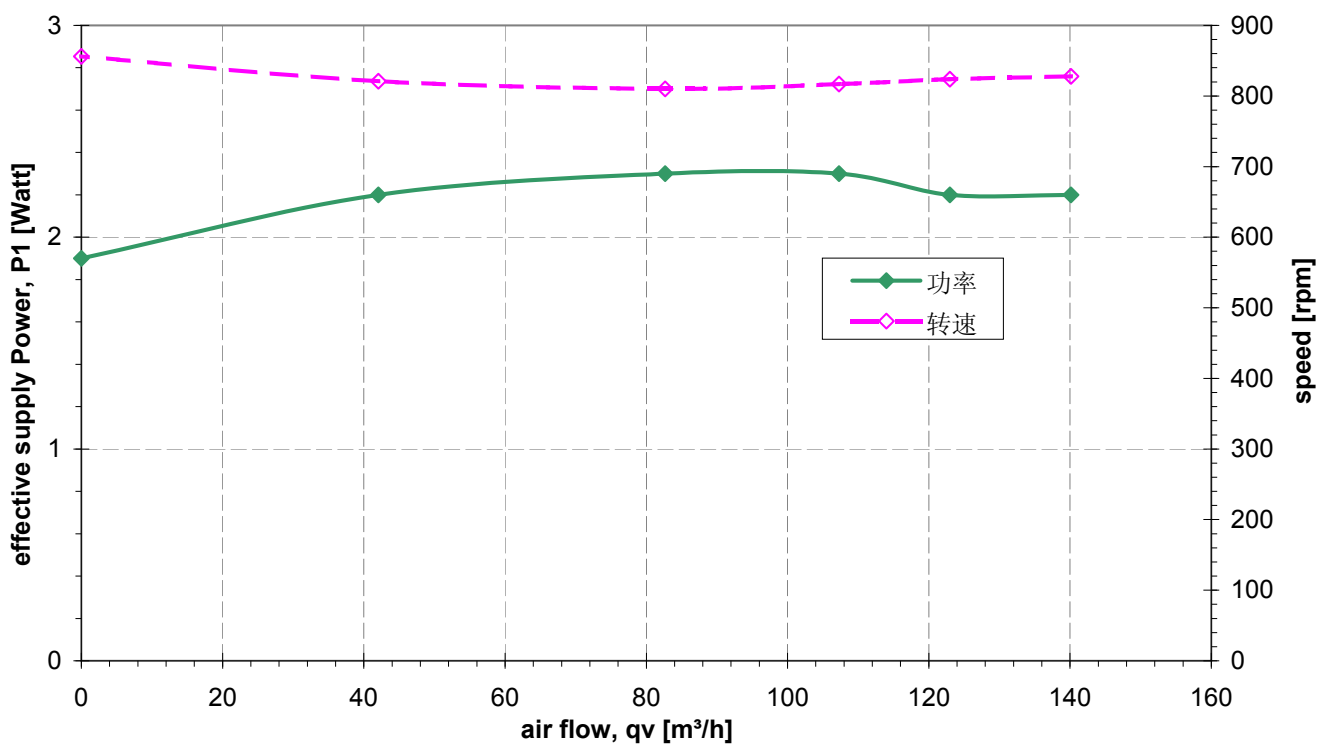
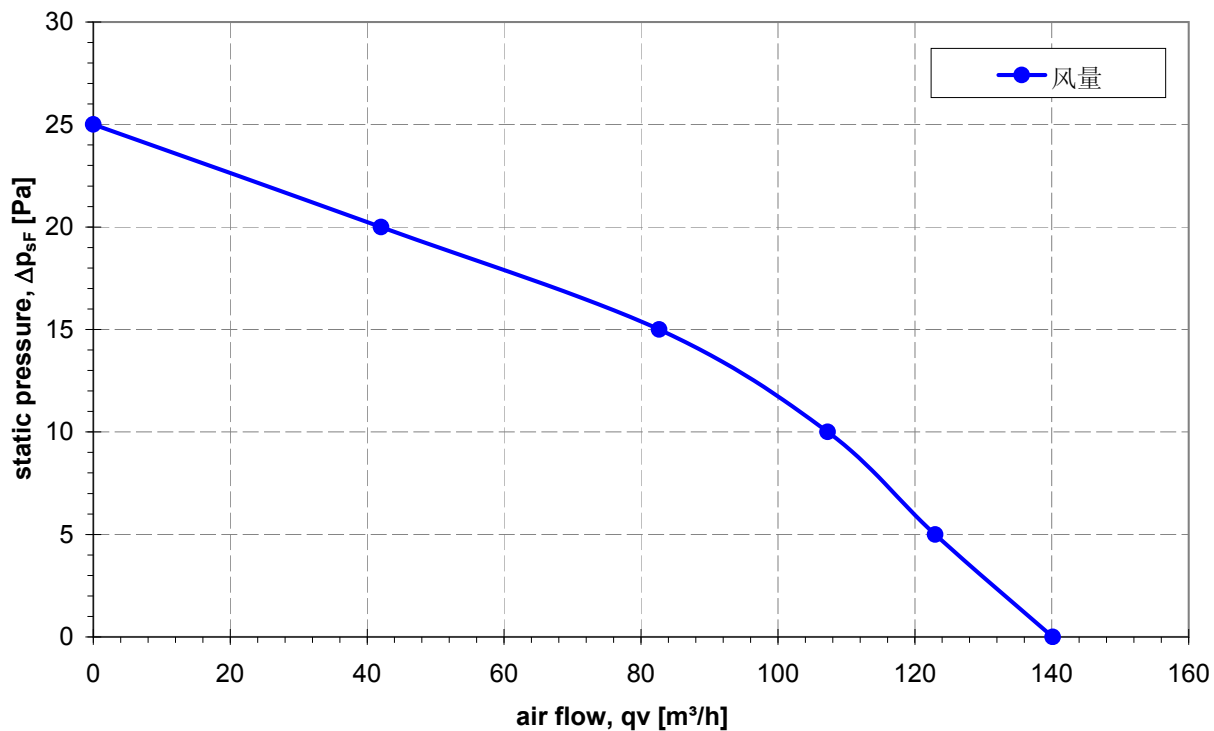
22% PWM PQ curve under 48V



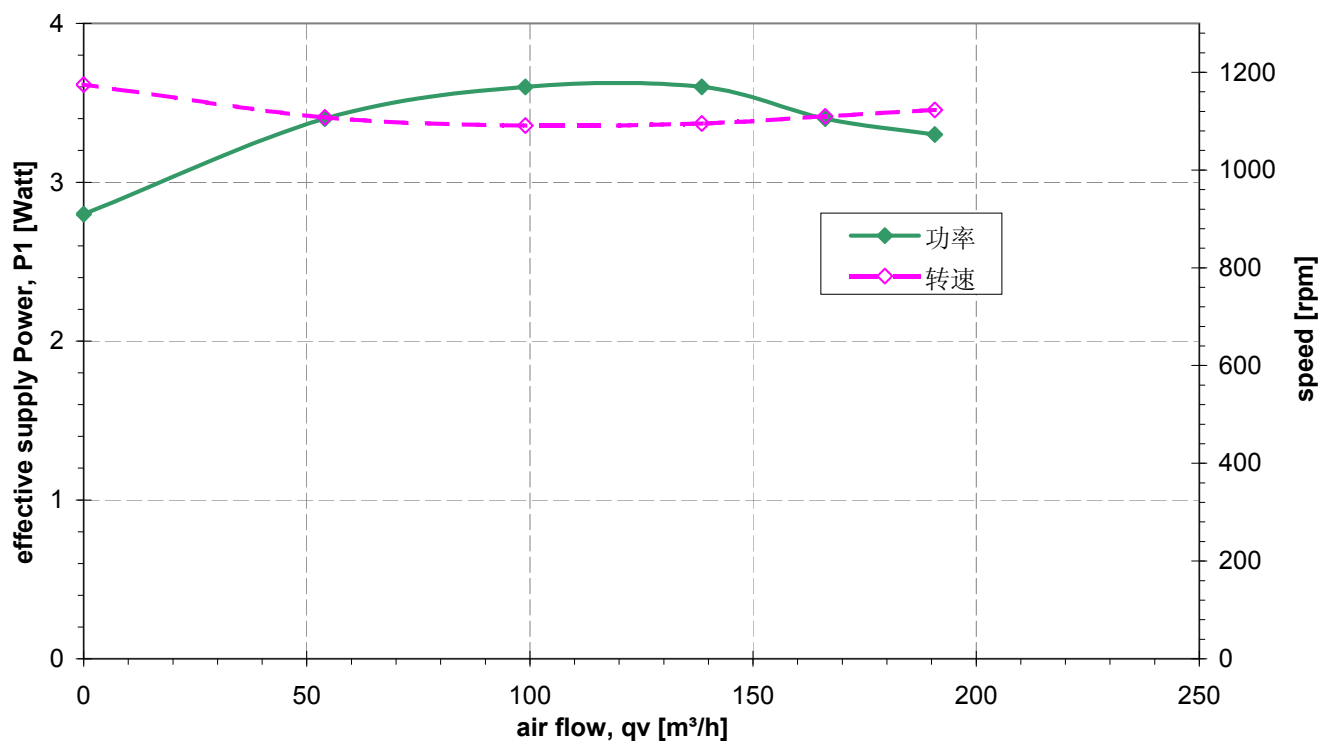
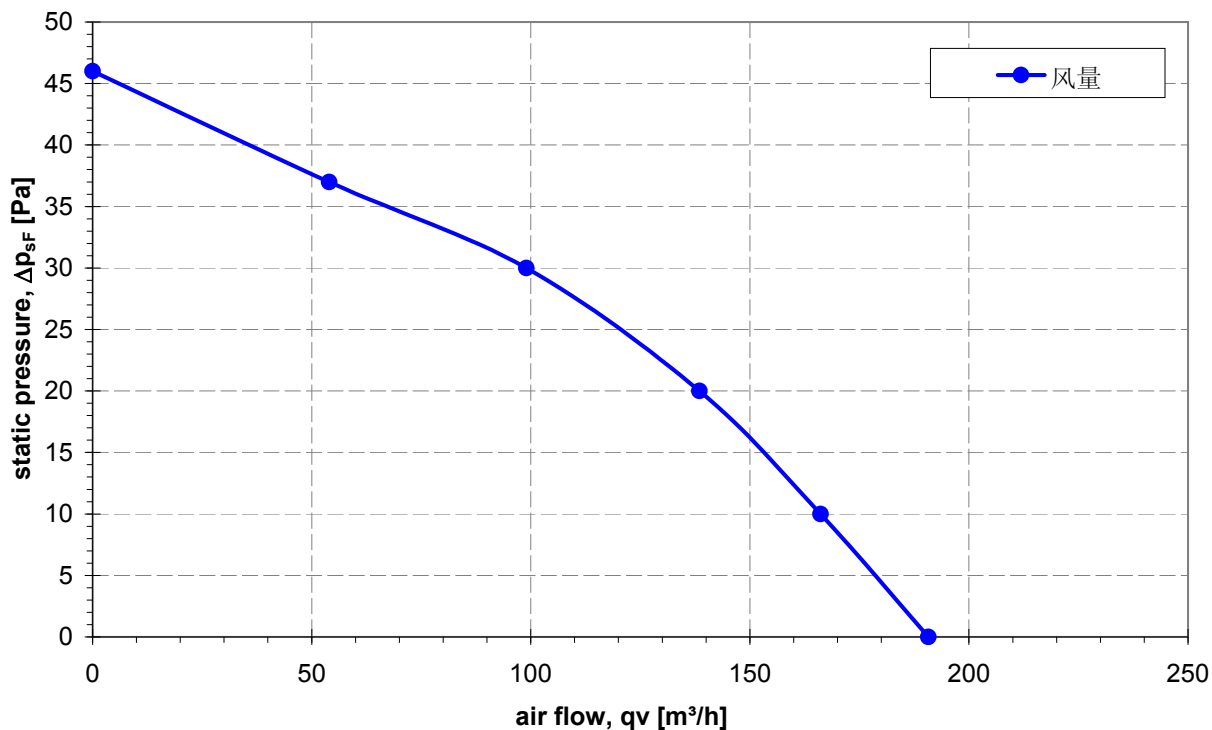
## EC centrifugal fan

backward curved, single inlet

30% PWM PQ curve under 48V



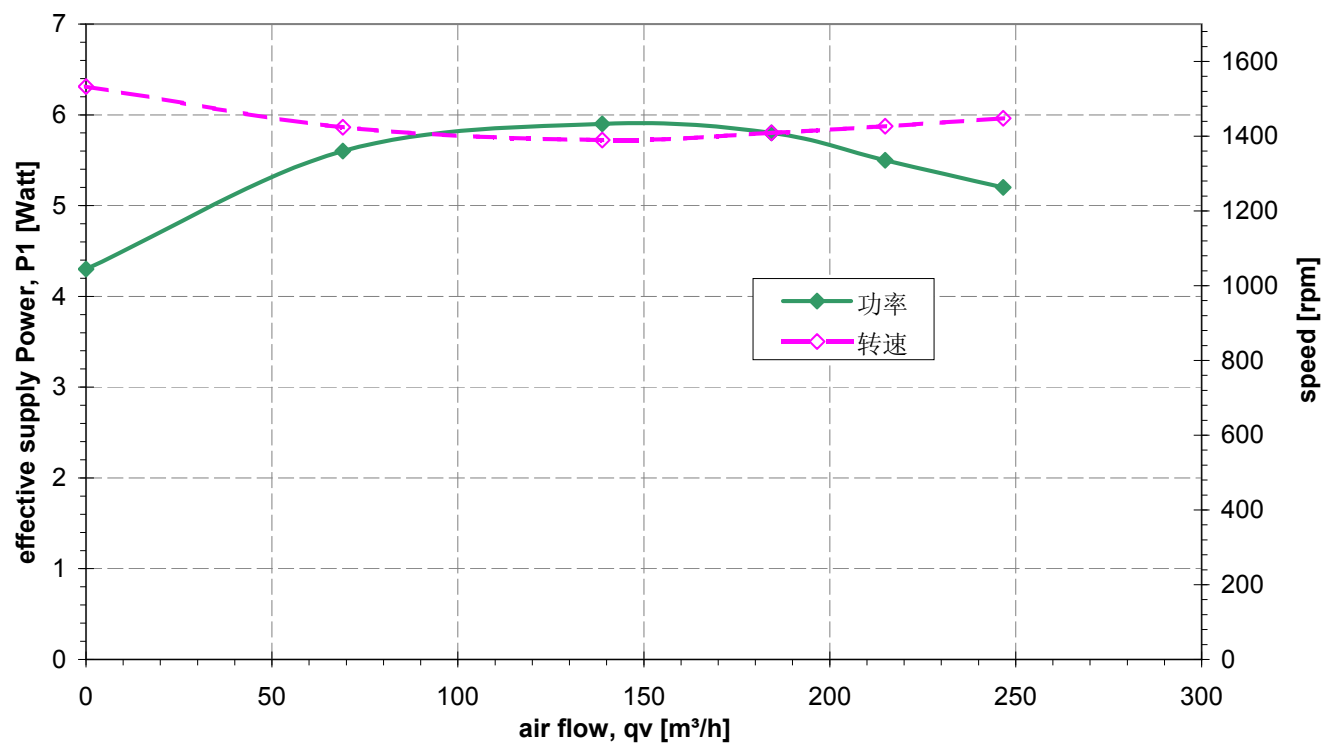
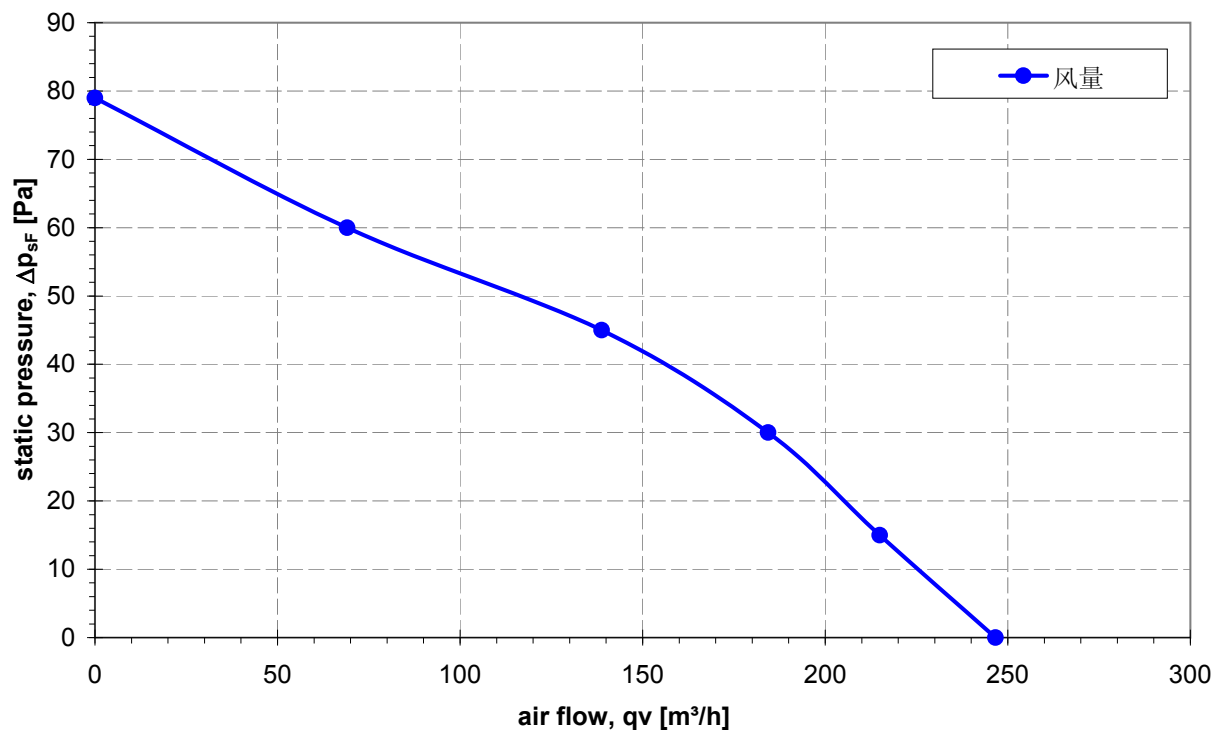
## 40% PWM PQ curve under 48V



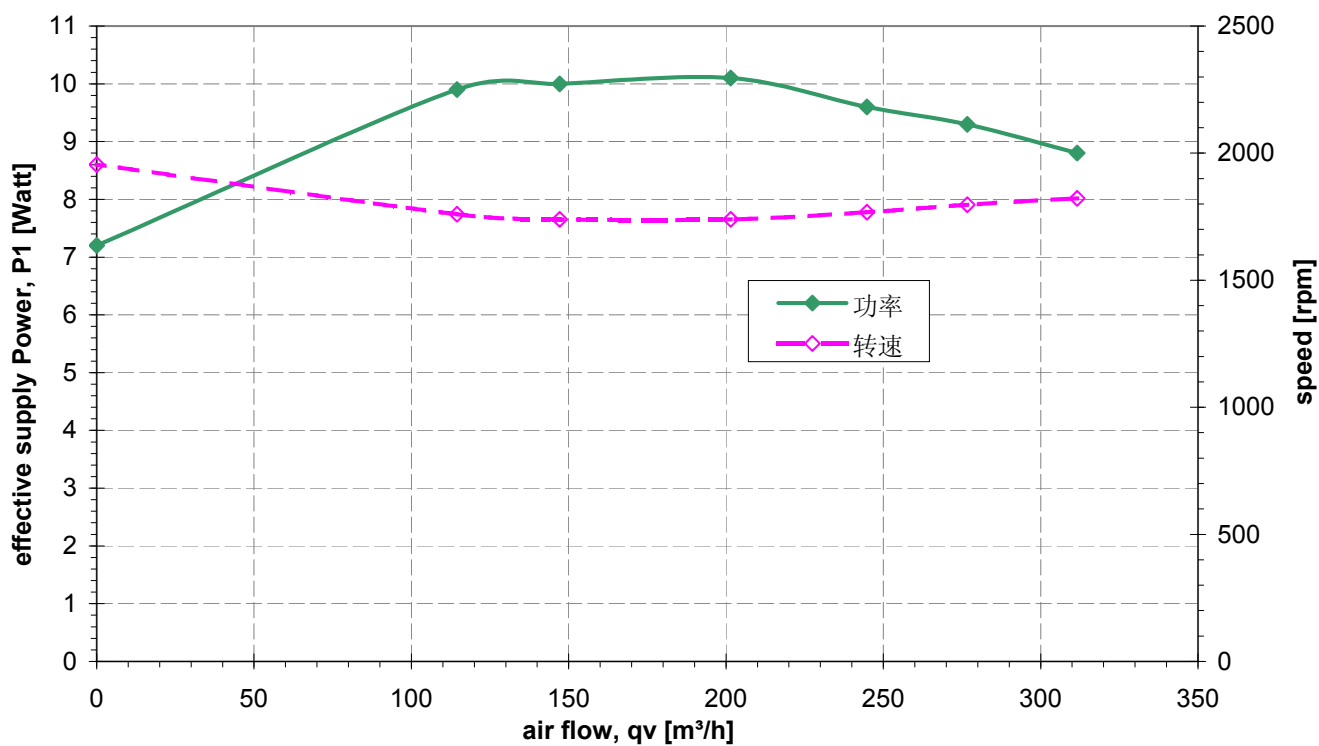
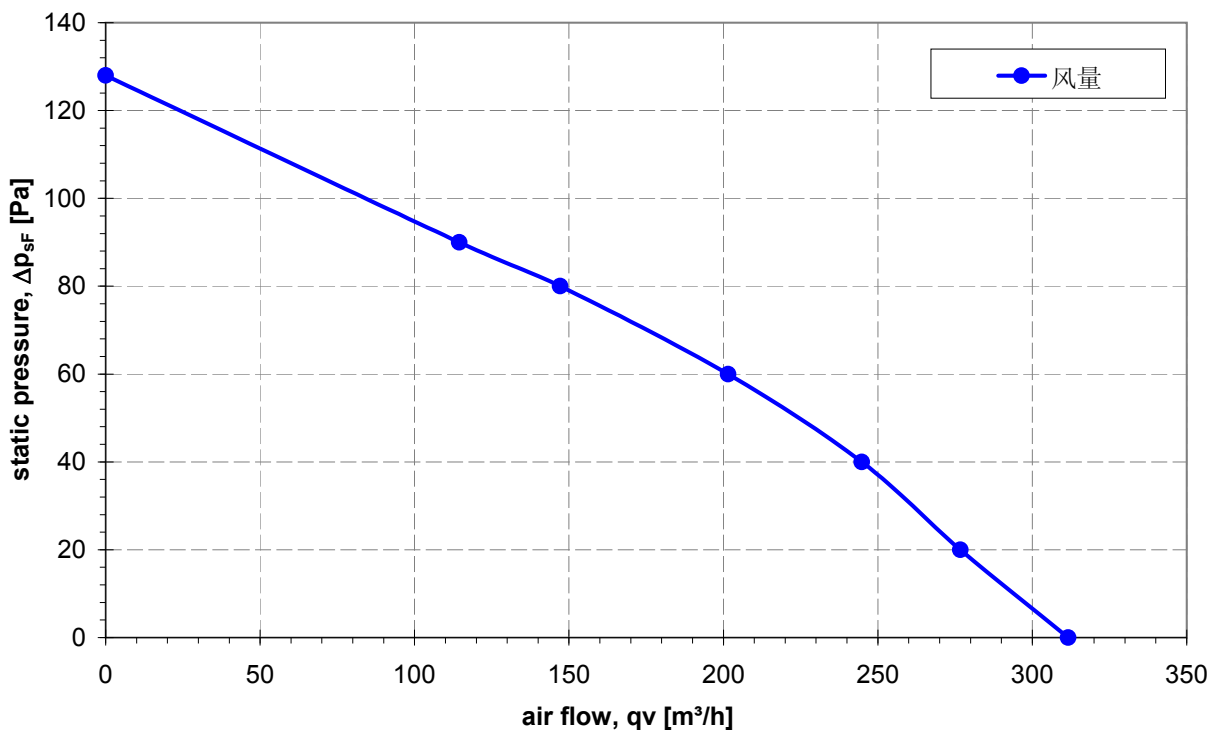
# EC centrifugal fan

backward curved, single inlet

50% PWM PQ curve under 48V



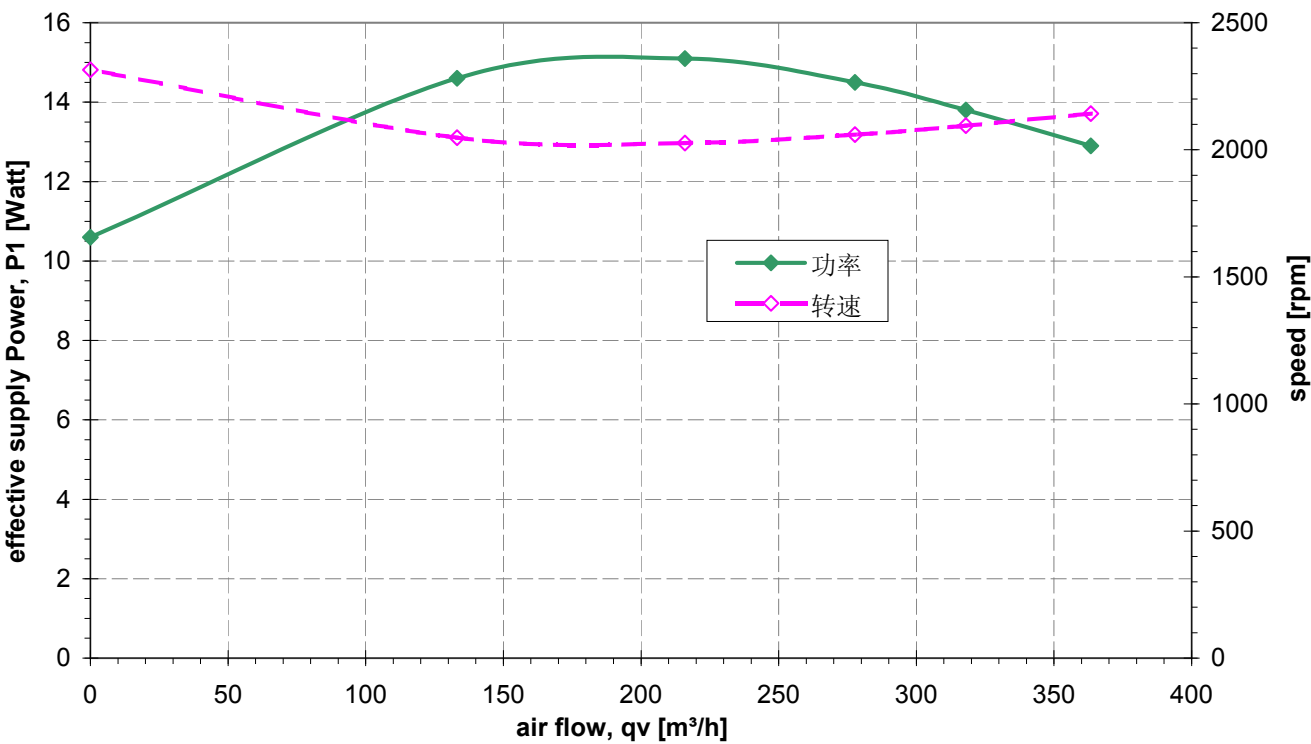
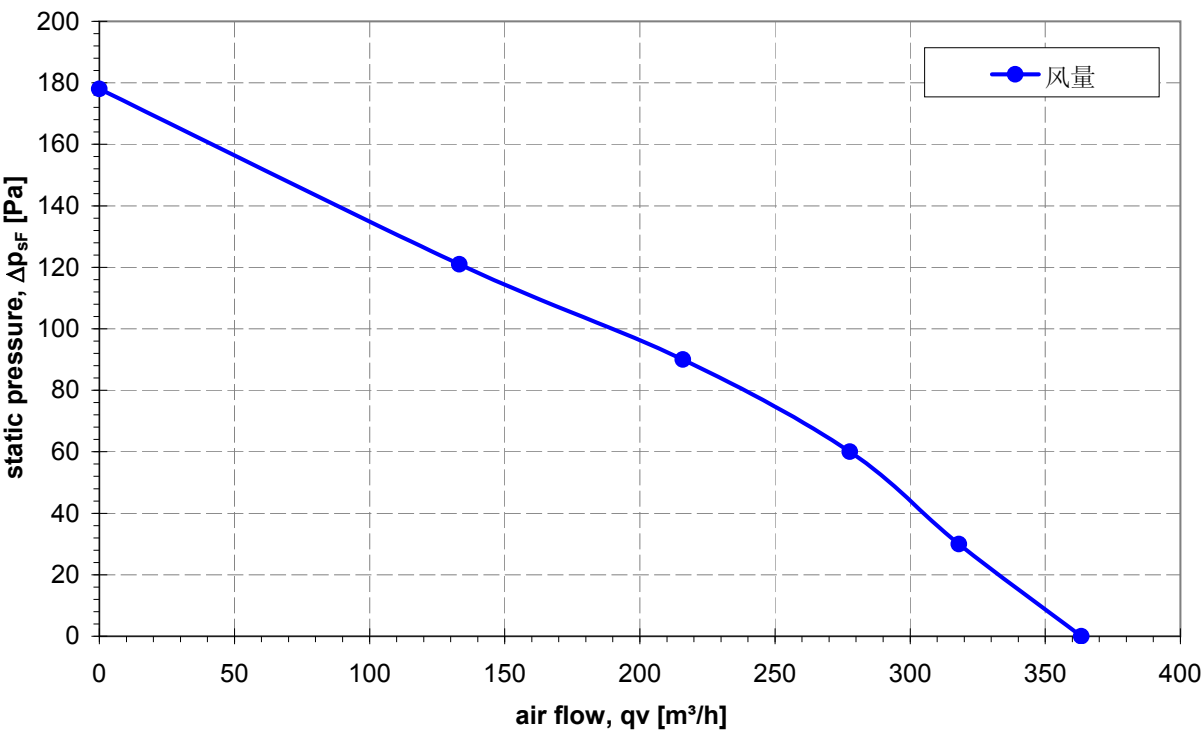
60% PWM PQ curve under 48V



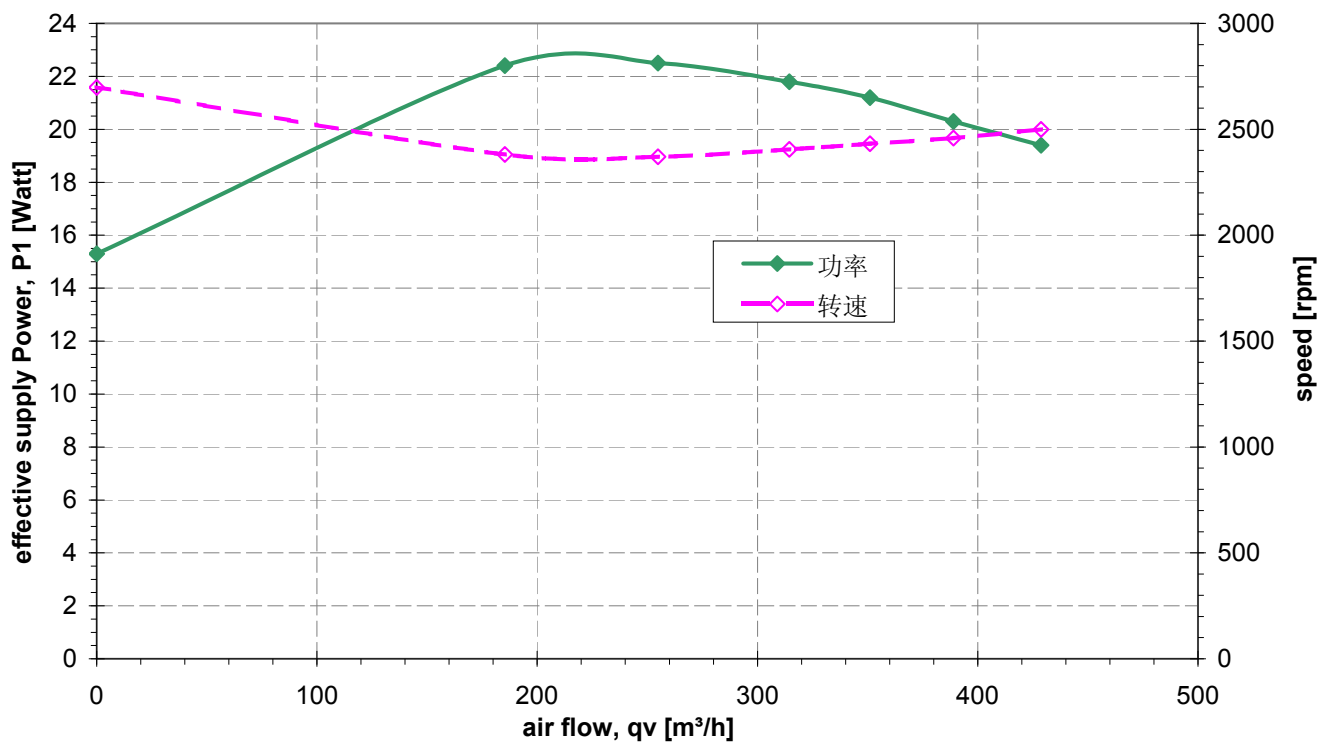
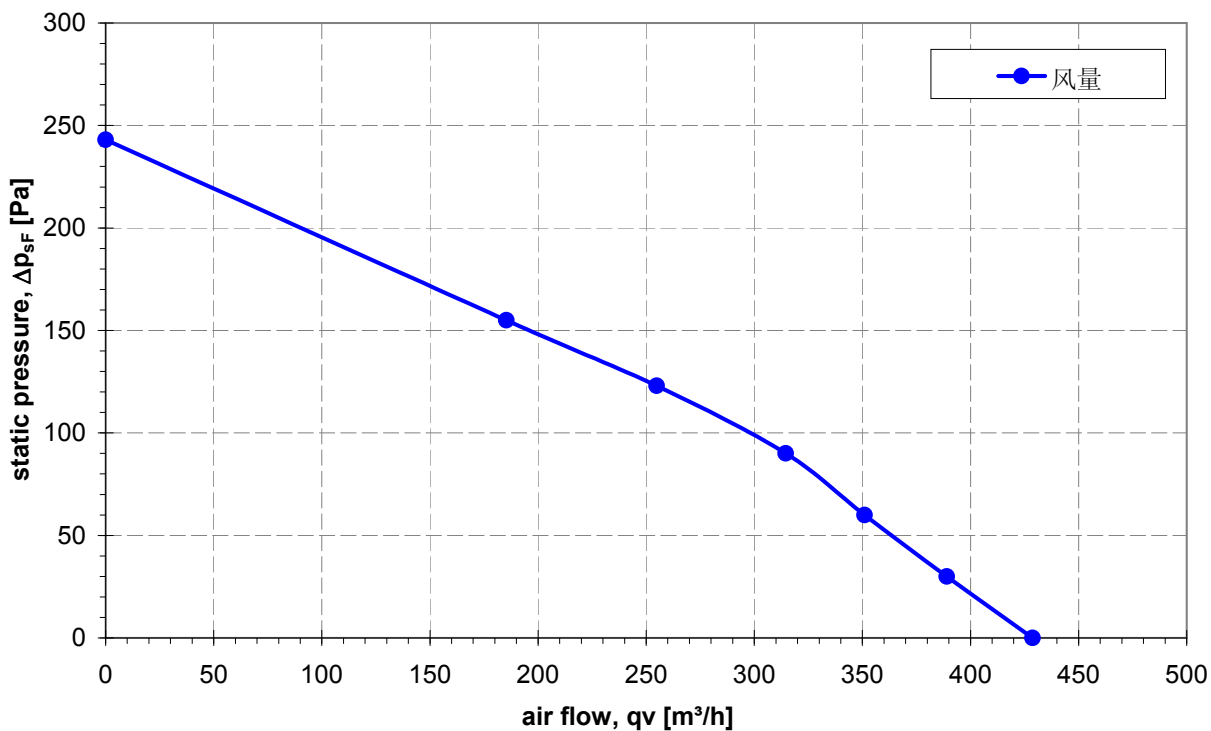
# EC centrifugal fan

backward curved, single inlet

70% PWM PQ curve under 48V



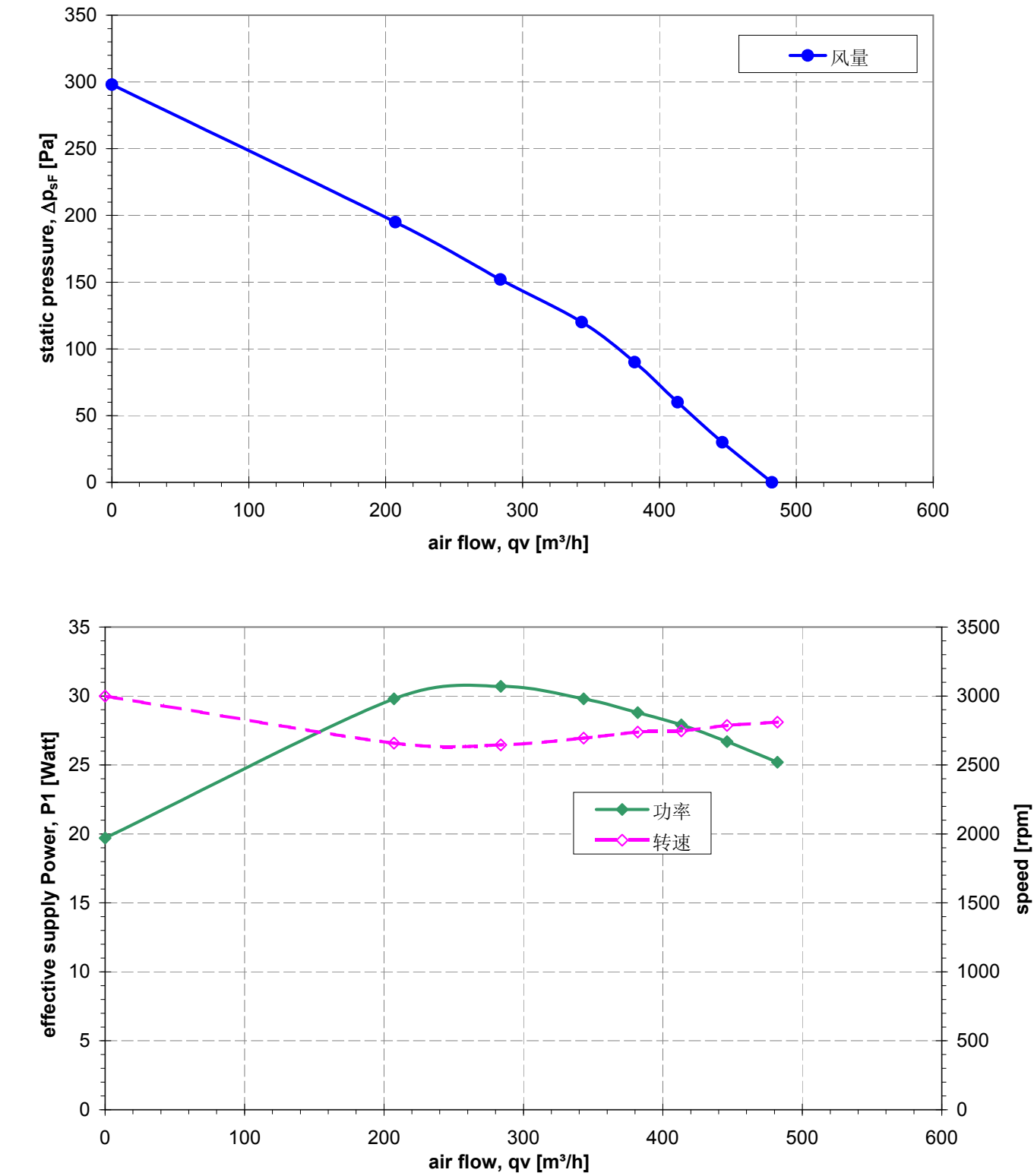
80% PWM PQ curve under 48V



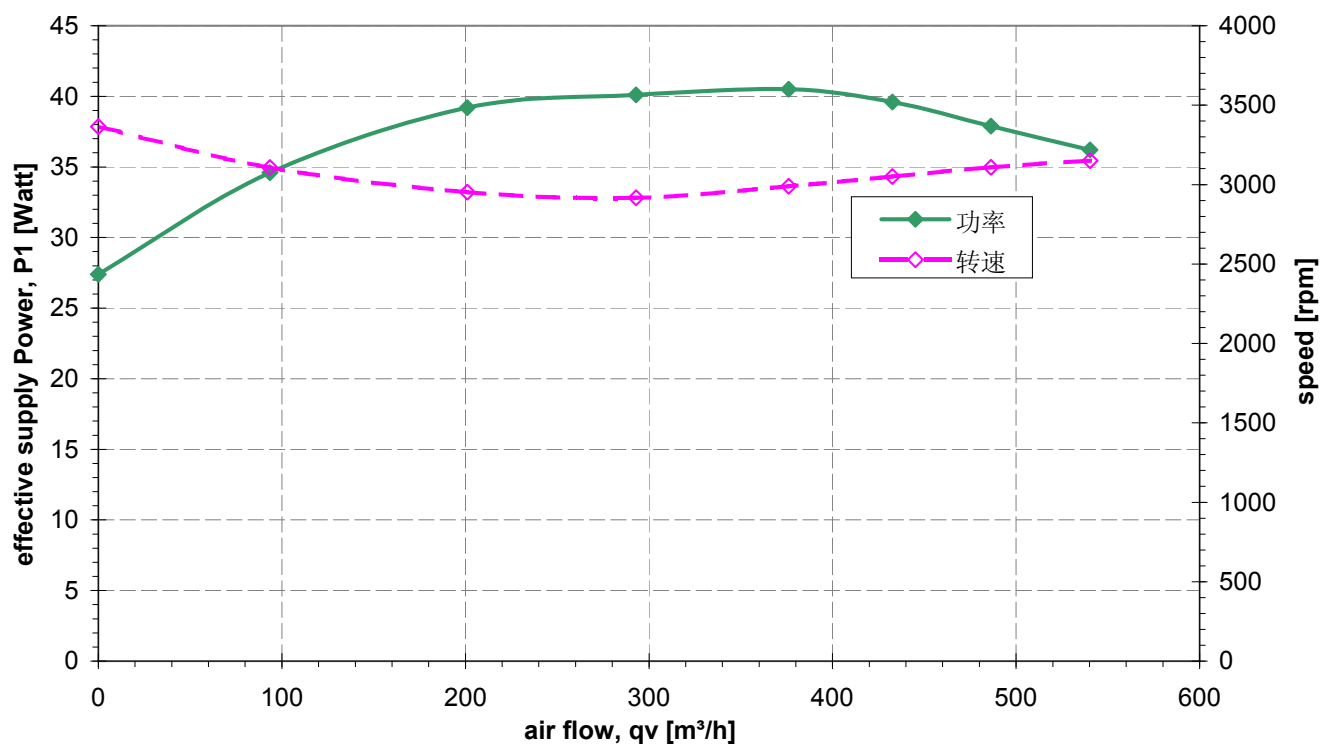
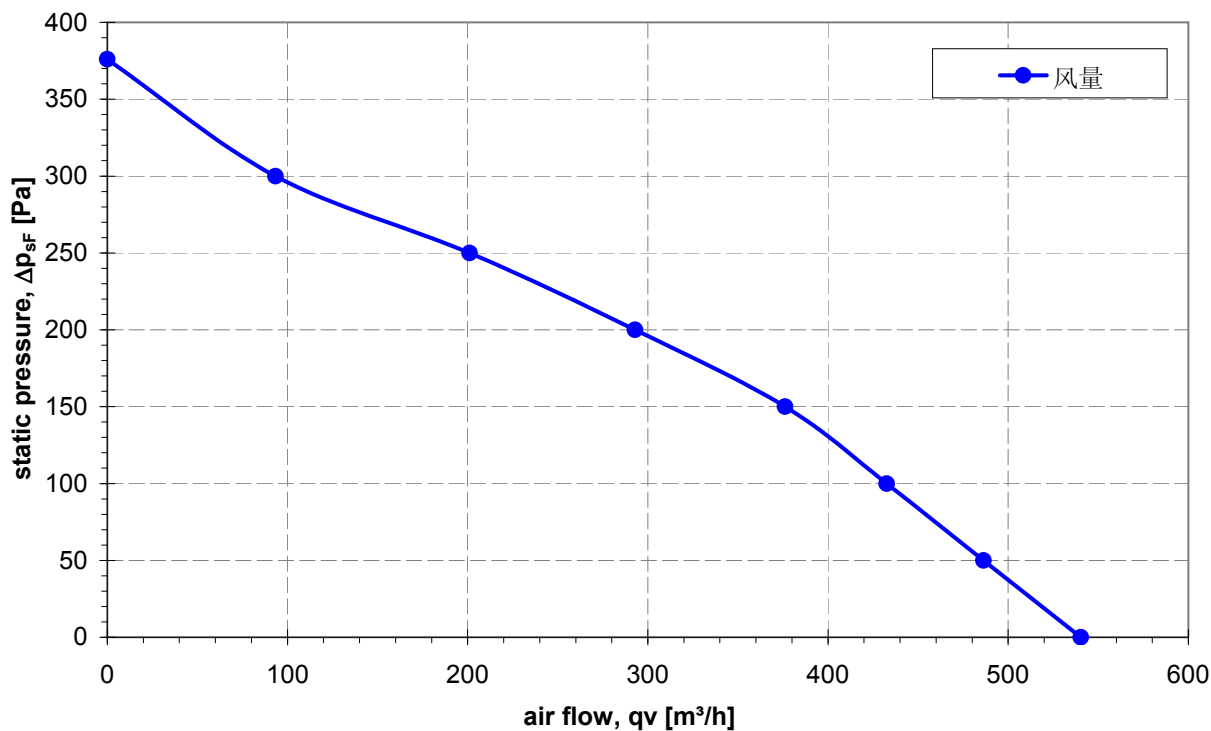
# EC centrifugal fan

backward curved, single inlet

90% PWM PQ curve under 48V



## 100% PWM PQ curve under 48V



## Version

| Version | Date      | Person | Content                                |
|---------|-----------|--------|----------------------------------------|
| A       | 2012-7-4  | JJ     | Initiat                                |
| B       | 2012-7-24 | JJ     | Add new data with Noise, amouting data |
|         |           |        |                                        |
|         |           |        |                                        |