**ТECHNICAL DATA SHEET**

**Customer: Regal Beloit Italy SpA** N**umber: 097461**

Your inquiry / project:

Our quotation number:: 557651 Pos.: 10

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Process air fan** | | | | **P2M-M6B2R-RRB** | | | | | |
| **Efficiency status** (single speed motors) | | | | **fulfills the ErP requirements 2015** | | | | | |
| Fan data in operating point: (warranty according to DIN 24166) | | | | | | | | | |
| Offered accessory which is in contact with the transport medium can alter the characteristic curve and lead to a performance reduction | | | | | | | | | |
|  | | | | | | | | | |
| Gastype: | | | | | Atmospheric air | | | | |
| Air flow by inlet: | |  | | qv |  | | 4964 | | m3/h |
| Total pressure increase | |  | | pF | 7869 | | 7869 | | Pa |
| Static pressure increase | |  | | psF | 7702 | | 7702 | | Pa |
| Presure at inlet: | |  | | pa | 101300 | | 101300 | | Pa |
| Density of media: | | inlet | | ρ | 1.2 | | 1.2 | | kg/m3 |
| Temperature media: | | inlet | | T | 60 | | 20 | | °C |
| Max. allowable media temperature: | | inlet | | Tmax |  | | 60 | | °C |
| Speed: | |  | | n |  | | 2930 | | 1/min |
| Max. allowable impeller speed: | |  | | nmax |  | | 3600 | | 1/min |
| Efficiency | | at optimum | | ηopt |  | | 73 | | % |
| Efficiency | | at operating point | | η |  | | 61 | | % |
| Required power | | at fan shaft | | Pa | 17.88 | | 17.88 | | kW |
| Required power | | at motor shaft | | Pm | 17.88 | | 17.88 | | kW |
| Max. required power | | at motor shaft | | Pmax | 20.56 | | 20.56 | | kW |
| inertia | | at fan shaft | | J |  | | 1.99 | | kg\*m2 |
| Start-up time (note heavy restart by direct switch-on and tA > 6 sec !) | | | | tA |  | | 4.2 | | sec |
| Sound pressure in 1 m distance, free suction | | | | LPA5 | 95 | | 95 | | dB |
| Sound pressure in 1 m distance, casing breakout (without motor) | | | | LPA2 | 76 | | 76 | | dB |
| Sound data according to DIN45635 part 38 (without sound attenuation equipment) | | | | | | | | | |
|  | | | | | | | | | |
| **Motordata** | | | | | | | | | |
|  | | | | | | | | | |
| Motor type: | Standard | | | | | | | | |
|  | | | | | | | | | |
| Manufacturer: | Siemens | | |  | Type: | 1LE1503-1EA23-4FB4 | | | |
| Degree of protection: |  | IP55\* | |  | Mounting type: | B5 | | |  |
| Insulation class: |  | F | |  | Eff-/Temp.Class | IE3 | | | |
| Rated power: | PN | 22.00 | | kW |  |  | |  |  |
| Rated speed: | nN | 2930 | | 1/min | Weight approx.: | G | | 160 | kg |
| Frequency: | fN | 50 | | Hz |  |  | |  |  |
| Voltage: | UN | 400/690 | | V | Sound pressure | LPA | | 73 | dB |
| Rated current approx.: | lN | by 400 V: | 38.50 | A | Sound power | LWA | | 80 | dB |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ErP-data at optimum efficiency and density 1.20 kg/m3** |  |  |  |  |
| Measurement- / Efficiency category |  |  | B / total |  |
| Design status of VSD | without VSD | | |  |
| Overall efficiency (ηopt) |  |  | 67.7 | % |
| Achieved efficiency grade (Nist) |  |  | 66.8 |  |
| Required efficiency grade in 2013 / 2015 (N) |  |  | 61 / 64 |  |
| Air flow rate (Vopt) |  |  | 8362 | m3/h |
| Pressure rise (Δ popt) |  |  | 6914 | Pa |
| Fan speed (nvopt) |  |  | 2886 | 1/min |
| Motor power input (P1opt) |  |  | 23.73 | kW |
| Specific ratio (ddpopt) |  |  | 1.068 |  |

As reference for motor data we use producer Siemens – supply choose by Gebhardt and delivery possibility: Siemens, Simotop,

Marathon or AC-Motoren.

\* by motors for zone 21 the degree of protection is IP 65

**CHARACTERISTIC CURVE**

**Customer: Regal Beloit Italy SpA** N**umber: 097461**

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|  |  |  |
| --- | --- | --- |
| **Process air fan** | **P2M-M6B2R-RRB** | Speed 2930 1/min  Density 1.2 kg/m3 |
|  | | |

**SOUND DATA**

**Customer: Regal Beloit Italy SpA** C**ust-nr: 097461**

Your inquiry / project::

Our quotation number:: 557651 Pos.: 10

**Process air fan P2M-M6B2R-RRB**

**Sound data of fan:** (all data A-weighted)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **LWA** | **63 [Hz]** | **125**  **[Hz]** | **250**  **[Hz]** | **500**  **[Hz]** | **1000**  **[Hz]** | **2000**  **[Hz]** | **4000**  **[Hz]** | **8000**  **[Hz]** | **LPA**  **(1m)** |  |
| Casing brake trough level L\_2: | 92 | 59 | 73 | 82 | 90 | 84 | 79 | 72 | 68 | 76 | dB |
| Level for free intake L\_5: | 103 | 71 | 86 | 94 | 101 | 95 | 88 | 82 | 78 | 95 | dB |
| Level for free outlet L\_6: | 107 | 74 | 89 | 98 | 105 | 100 | 94 | 87 | 81 | 99 | dB |

**DIMENSION SHEET**

**Customer: Regal Beloit Italy SpA** C**ust-nr: 097461**

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