

# Macawi Turbine Blower specifications.

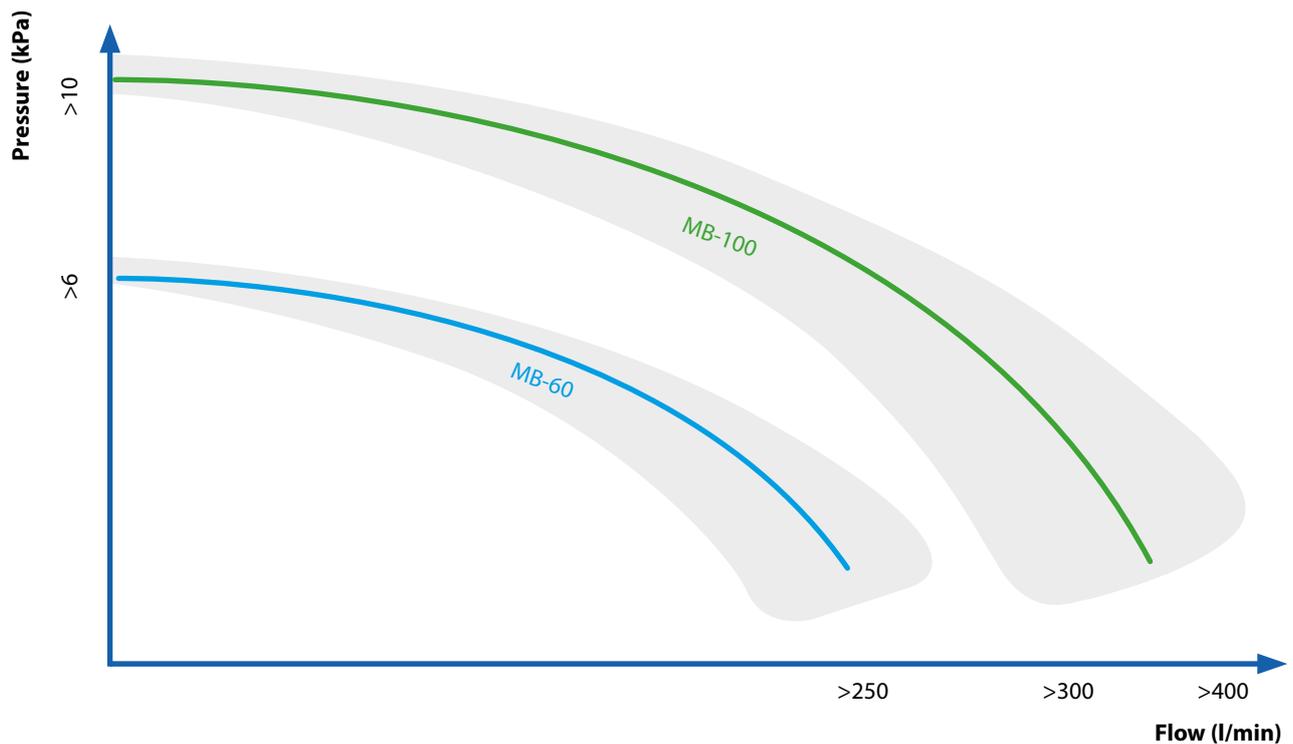
**MTB-100****MTB-60**

## MACAWI TURBINE BLOWERS

The Macawi radial turbine blowers for respiratory applications are specially designed for high pressure efficiency combined with high flow capability which makes it the best choice for ventilation. Special driving software has been developed, that guarantees the lowest power consumption during all ventilation scenarios. Consequently, very high respiratory rates are possible and excellent responsiveness to respiratory efforts depending on the patients' need.

BLOWER PERFORMANCE	MBT-100	MBT-60
<b>BLOWER PROPERTIES</b>	<b>Value</b>	<b>Value</b>
Power Supply Voltage	24 V <sub>DC</sub>	24 V <sub>DC</sub>
P <sub>el</sub> at 2 kPa at 0 flow	≈ 4 W <sup>(1)</sup>	≈ 4 W <sup>(1)</sup>
P <sub>el</sub> at 6 kPa at 0 flow	≈ 17 W <sup>(1)</sup>	≈ 17 W <sup>(1)</sup>
Max. pressure at 0 flow	>10 kPa <sup>(2)</sup>	>6 kPa <sup>(2)</sup>
Max. output flow	>300L/min. <sup>(1)</sup>	> 250L/min <sup>(1)</sup>
Max. speed	100.000 RPM	65.000 RPM
Max. pressure response	>5 kPa / 100 msec. <sup>(1)</sup> (dependent of resp. circuit compliance)	>3 kPa / 100 msec <sup>(1)</sup> (dependent of resp. circuit compliance)
Operating temperature	-20 – + 60 °C	-20 – +60 °C
Relative air humidity	0 – 95% R.H.	0 – 95% R.H.
Expected life time at moderate ventilation loads	> 45.000 hours <sup>(3)</sup>	> 45.000 hours <sup>(3)</sup>
Gas media compliancy	Compatible for use in O <sub>2</sub> enriched environment	Compatible for use in O <sub>2</sub> enriched environment
Dimensions	Ø 75 mm x 55 mm	Ø 75 mm x 55 mm
Blower mass excl. electronics	< 150 g	< 150 g
Hall sensors inside	Yes	No
<p>(1 at 101 kPa environmental pressure  (2 not continuously, depends on thermal management  (3 at 50 °C motor temperature</p>		

#### MACAWI TURBINE BLOWERS FOR 24V DC @SEA LEVEL



# OPTIONAL COMPONENTS

## MOTOR CONTROLLER MTB-100

### ELECTRICAL OPERATING CONDITIONS

Property	Value	Remark
Peak current	≤ 6A	Max. 250 ms during maximum pressure ramp-up
Continuous current	≤ 3A	@ 100 mbar
Nominal power consumption	5 – 30 W	Depending on ventilation conditions

### DIGITAL INTERFACE

Property	Value	Remark
Serial interface	UART compatible	3.3V
Commands	<ul style="list-style-type: none"> <li>• Speed control mode</li> <li>• Get speed and status info</li> <li>• Set baud rate</li> <li>• Firmware update</li> </ul>	Speed control Digital or Analog - - -
Digital speed control	0 – 100.000 RPM	-
Analog speed control	0 – 5 V DC = 0 – 100.000 RPM	Standard active from start up
Digital output tacho signal	1 pulse per rotation	Open collector
Digital input motor disable	3.3V	-

### DIMENSIONS

Property	Value	Remark
Controller	86mm x 50mm x 21 mm	≈ Matchbox size 

## HOUSING FOR MTB100 AND MTB60

### Housing for testing



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**Demcon macawi respiratory systems**

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