

SELECT - Performance curves

Selected by Paul Jindra, Jindra Energy Conversions Pty.Ltd

02/12/2010

Impeller description:

Diameter: 400 mm
 No. of blades: 6
 Hub size: 6
 Blade profile: S1H
 Rotation direction: L
 Pitch angle: 45°
 Blade material: PAG

General:

Application: Mobile cooler
 Drive type: Combustion engine
 Simulation: none

Application data:

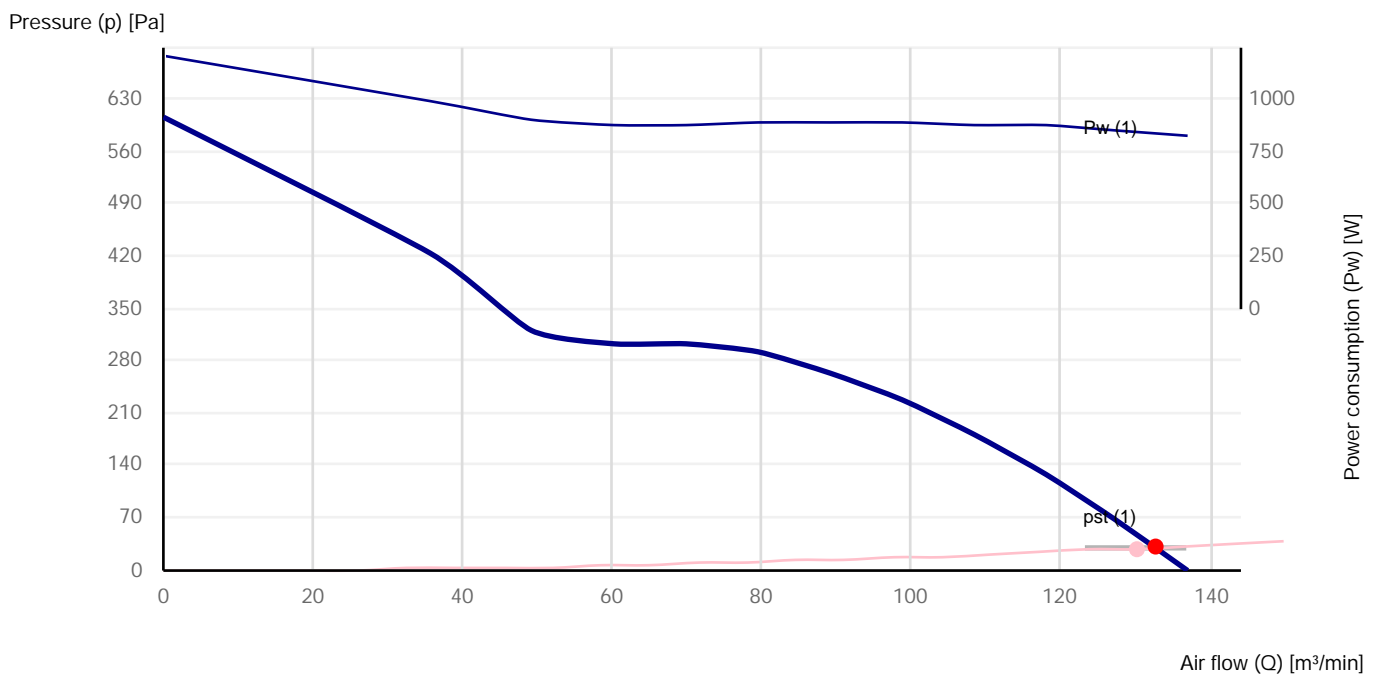
Installation: Nozzle
 Tip clearance: 1 %
 Rpm: 2.100 min⁻¹
 Temperature: 20 °C
 Altitude: 0 m
 Air density: 1,2 kg/m³

Impellers:

No. 1: 400/6-6/S1HL/45/PAG @ 2.100 min⁻¹

● Operating point impeller No. 1 :

Air flow: 132,5 m³/min
 Static pressure: 31,49 Pa
 Power: 834,2 W
 Efficiency: 58 %



pst=Static pressure Pw=Power consumption

WingFan SELECT 6 - version 1.2.5.1

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Remarks:

Direct assembly on the crank shaft is not admissible. An appropriate isolation is to be provided.

SELECT - Mechanical data

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Impeller: 400/6-6/S1HL/45/PAG

● Operating point:

Air flow: 132,5 m³/min
 Static pressure: 31,49 Pa
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 Efficiency: 58 %

Impeller

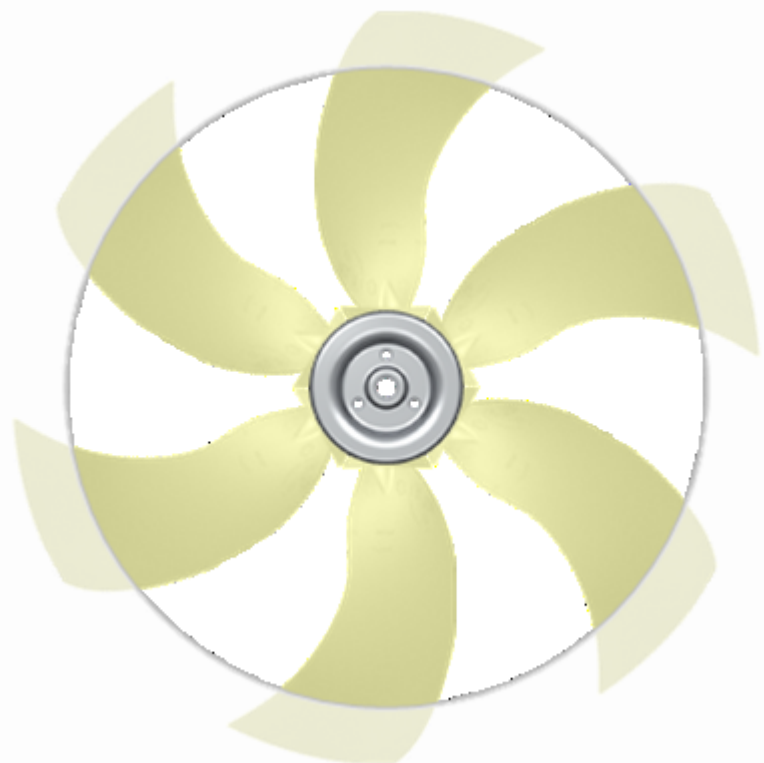
Diameter range: 187 - 469 mm
 Temperature range: -40 - 110 °C
 Tip-speed: 44 m/s
 Max. tip-speed (20 °C): 120 m/s
 Air velocity: 17,2 m/s
 Torque: 3,79 Nm
 Moment of inertia: 0,0063 kgm²
 Axial thrust: 52,6 N
 Performance/blade: 139,04 W
 Weight (approx.): 0,7 kg

Hub

Bearing surface Ø: 50 mm
 Total thickness: 6 mm
 Outer diameter: 97 mm

Blade

v: 18 mm
 h: 50 mm
 v1: 36 mm
 h1: 29 mm



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SELECT - Sound data

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Application: Mobile cooler
Drive type: Combustion engine

Simulation: none

Application data:

Installation: Nozzle
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Rpm: 2.100 min⁻¹
Temperature: 20 °C
Altitude: 0 m
Air density: 1,2 kg/m³

Impeller: 400/6-6/S1HL/45/PAG

Number of impellers: 1
Distance to sound source: 1 m
Number of reflectors: 1

● Operating point:

Air flow: 132,5 m³/min
Static pressure: 31,49 Pa
Power: 834,2 W
Efficiency: 58 %

Octave band [Hz]	63	125	250	500	1k	2k	4k	8k	Lin
Sound power LW [dB]	80	81	89	82	80	77	74	71	91
Sound power LWA [dB]	54	65	80	79	80	78	75	70	85
Attenuation [dB]	-2	-2	-2	-2	-2	-2	-2	-2	
Sound pressure Lp [dB]	78	79	87	80	78	75	72	69	89
Sound pressure LpA [dB]	52	63	78	77	78	76	73	68	83

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The obtained sound values are to be regarded as a guideline. They are based on aerodynamic ideal conditions and free sound propagation. The values are not transferrable to entire facilities with additional noise sources caused by drive or structure-borne noise.

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SELECT - Sound power LW [dB]

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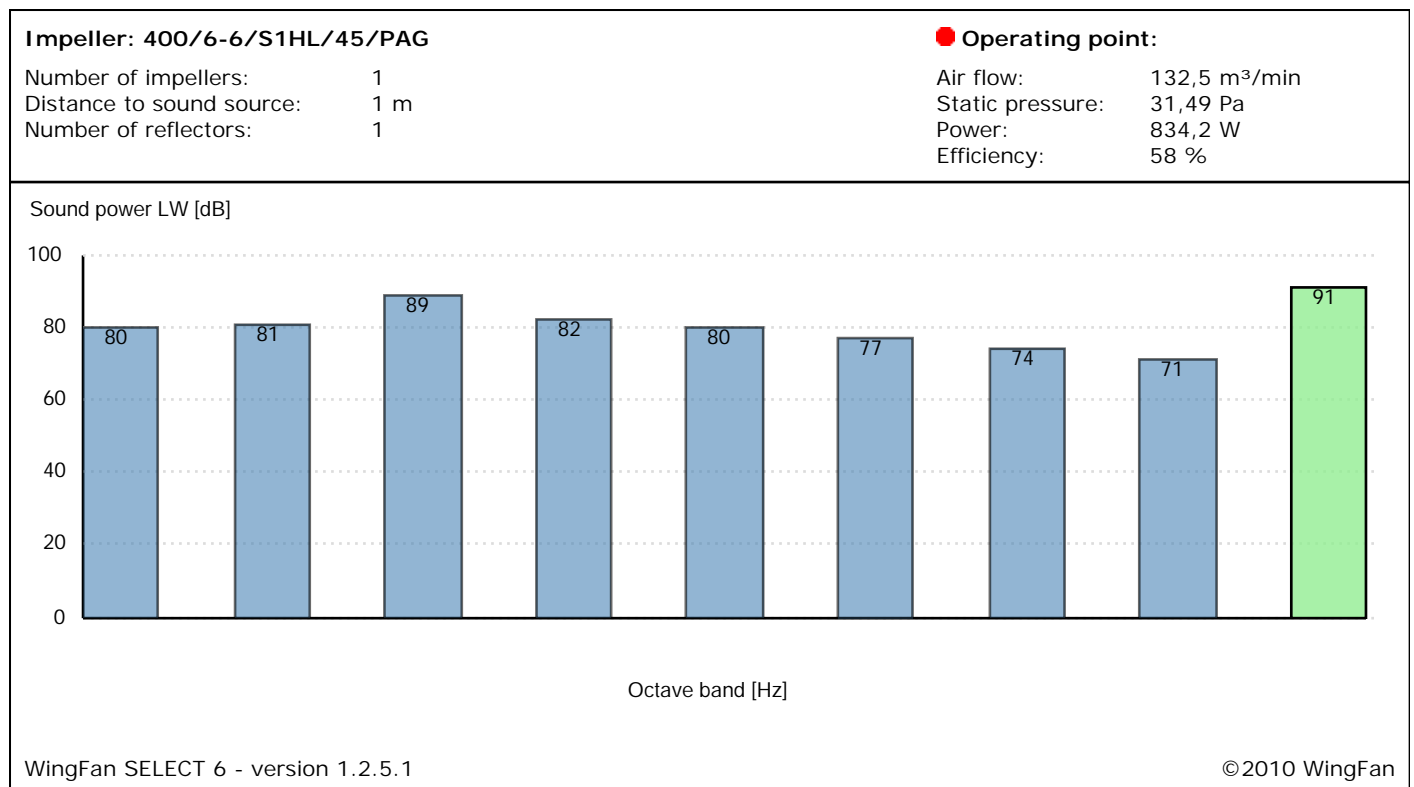
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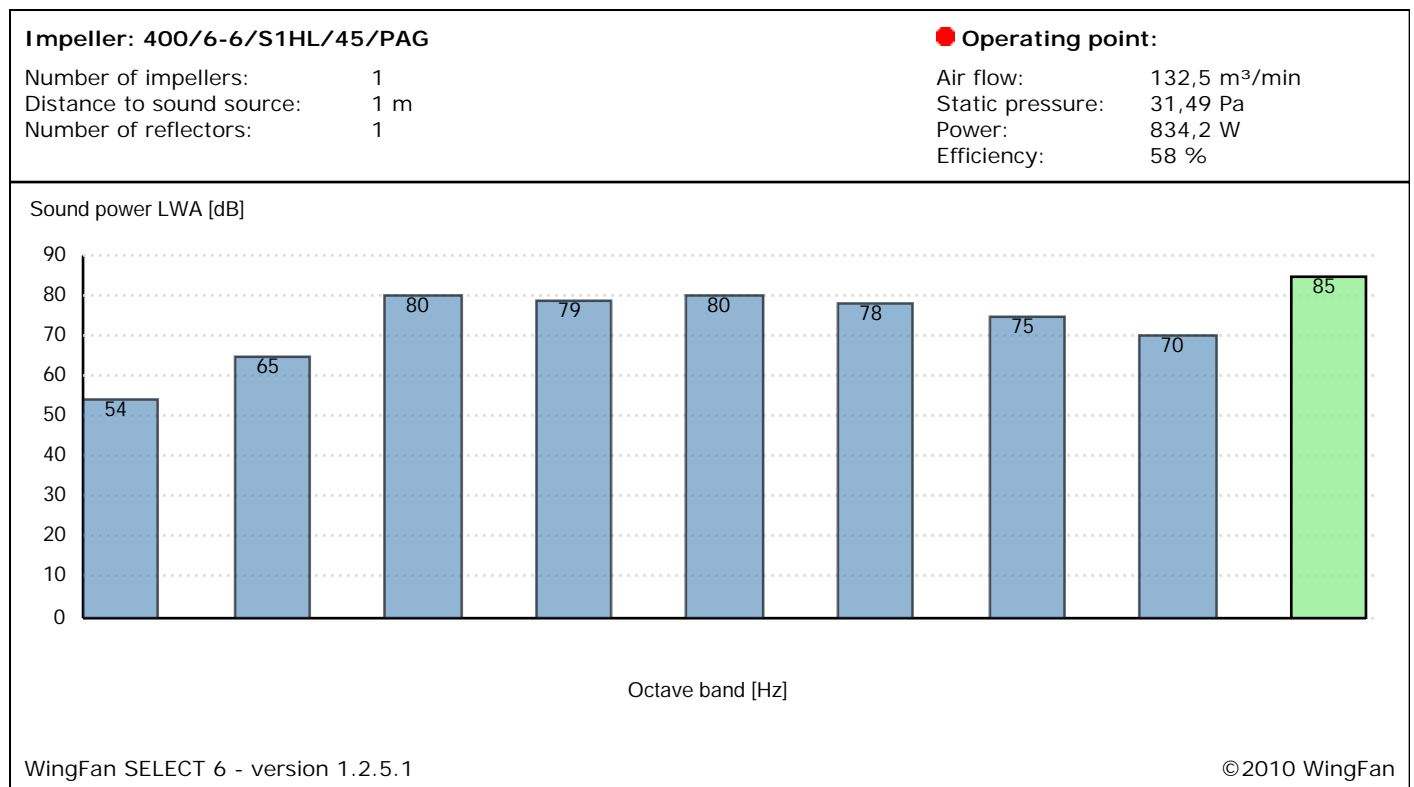
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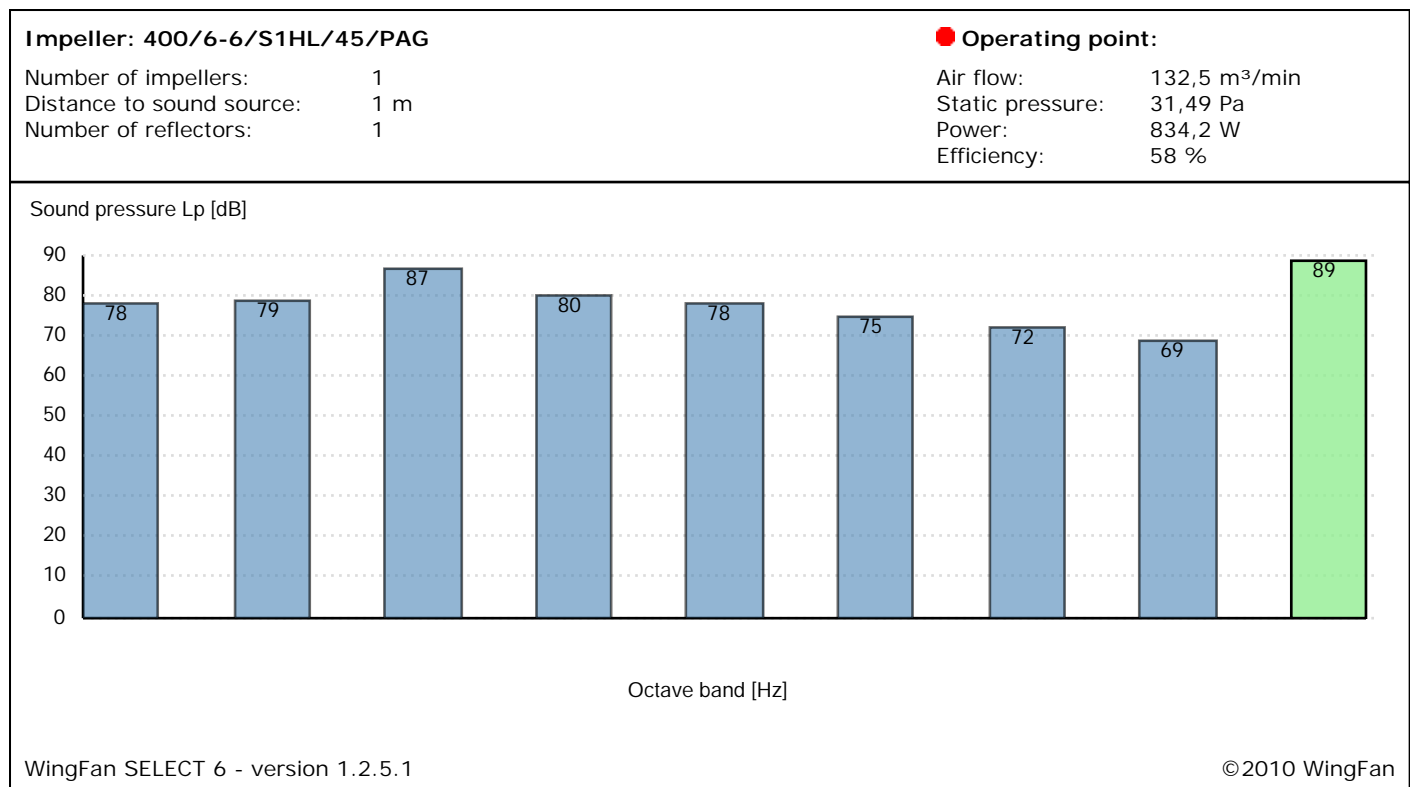
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SELECT - Sound pressure LpA [dB]

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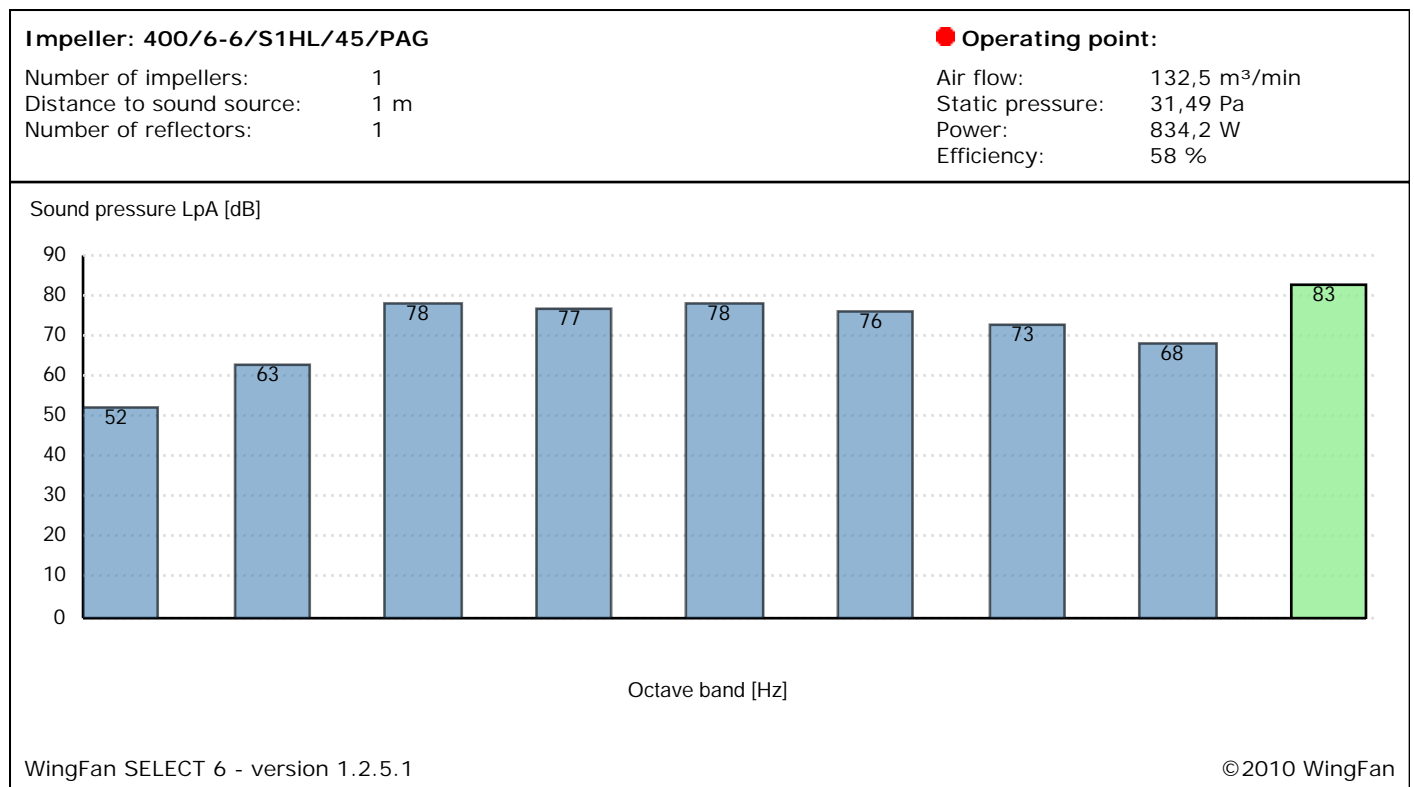
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