



## Specification of: RHM 31-4550-4W-14-J

### Centrifugal roof fan RHM 31 with HIGH EFFICIENCY motor in efficiency class IE 2 (IEC 60034-30)

suitable for media temperatures of - 20 °C up to + 40 °C. Well-shaped fan cowl of galvanized sheet steel for weather protection. With horizontal air discharge. Base frame of galvanised sheet steel for fitting to upstand, projecting well beyond the upstand in order to increase weatherproofing. Flange connection at intake acc. to DIN 24155-2 Protection grid at discharge High performance centrifugal impeller with backward curved blades fitted to the shaft of a standard motor, B5, IP 55, maintenance free.. statically and dynamically balanced in accordance to DIN ISO

21940-11. The motor is equipped with PTC Thermistors as a standard. Meets the efficiency requirements of Regulation EU1253/2014 for ventilation units. Operation directly from the mains is not allowed in Europe. It is recommended to use a Danfoss-VFD drive of series FC-102. Fitted service switch with shielded motor cable, suitable for use with drives (VFD), available as an accessory Performance data in according DIN 24166 tolerance class 2 (BS 848 Class "B").

#### Technical data of the fan: RHM 31-4550-4W-14-J

fulfills the ErP requirements 2018 at BEP

Description	Value Dimension
<b>Specified duty point</b>	
Air flow rate (V)	9912 m <sup>3</sup> /h
Static pressure rise (dp <sub>ra</sub> )	73 Pa
<b>Actual duty point</b>	
Installation acc. DIN 24163 Part 1	A
Reference density (Rho1)	1.20 kg/m <sup>3</sup>
Medium temperature (t)	20 C
Air flow rate (V)	9959 m <sup>3</sup> /h
Static pressure increase (dp <sub>ra</sub> )	74 Pa
Absorbed power (P <sub>1</sub> )	1.31 kW
Static system efficiency (ETA <sub>raS</sub> )	16 %
Velocity at discharge area (c)	9.1 m/s
Fan weight	67 kg
A-weighted sound power level discharge/intake LwA <sub>3/3</sub>	89/89 dB
Unweighted octave sound power level	Octave mid frequencies <sup>1)</sup> 63/125/250/500/1k/2k/4k/8k Hz 83/91/87/87/84/80/75/74 dB discharge LwOkt <sub>3</sub> 95/97/92/87/81/75/74/77 dB intake LwOkt <sub>3</sub>

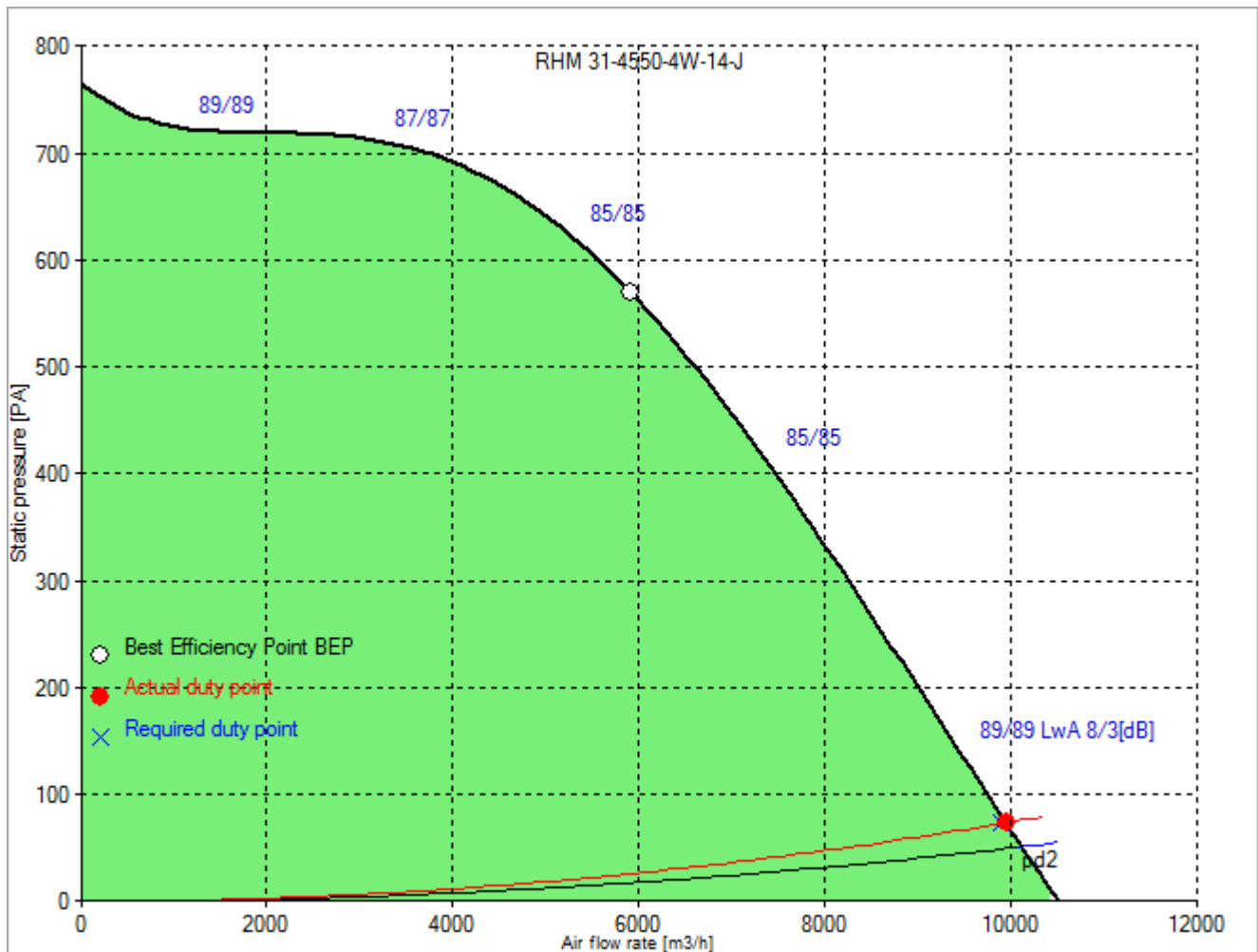
SOUND PRESSURE levels at 1/2/3 m distance can be calculated with free sound propagation approximately by reducing the SOUND POWER level by 11/17/20 dB !

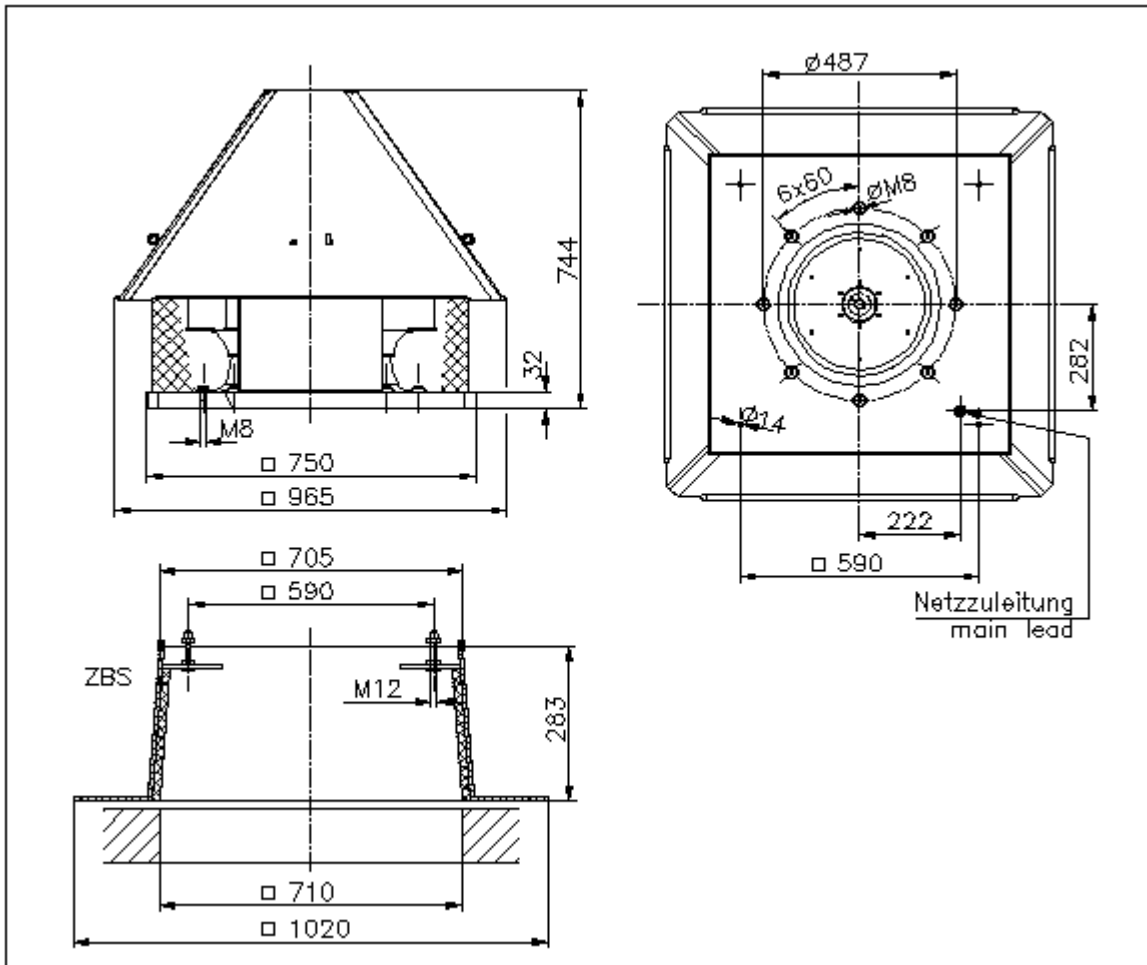
<sup>1)</sup> The octave sound power levels can be higher at octave bands at or close to blade passing frequency.

#### Rated data

Phases-Voltage-Frequency	3~230/400-50 V-Hz
Frame size-poles:	90L / IE2-4
Motor rating (P <sub>N</sub> )	1.5 kW
Rated motor speed (n <sub>N</sub> )	1430 min <sup>-1</sup>
Rated motor current (I <sub>N</sub> )	6, 1/3, 5 A
<b>operational limits</b>	
Max. absorbed power (P <sub>1max</sub> )	1.686 kW
Max. fan speed (n <sub>vmax</sub> )	1500 min <sup>-1</sup>
Max. operating frequency (f <sub>max</sub> )	50 Hz
Temperature range of conveying medium (t <sub>min</sub> ...t <sub>max</sub> )	-20...40 C

## Fan curve to RHM 31-4550-4W-14-J





Rotation: RD  
Handing: 90