



Specification of: RLM 56-7180-6W-26-58

Direct driven high-performance centrifugal fan RLM with external HIGH EFFICIENCY motor in efficiency class IE 2 (IEC 60034-30)

Centrifugal fan, specially designed for operation w/o casing, with motor & PTC-Thermistors For installation horizontally. Motor impeller with inlet cone, bearing unit, motor base and basic frame manufactured as a module and adjusted. Backward curved impeller of welded, coated sheet steel construction, impeller mounted directly on the motor rotor, statically and dynamically balanced in accordance with DIN ISO 21940-11, quality level G 2,5. For measuring the flow rate the fans are equipped with volumeter. At intake a square flexible connection can be fitted. Performance data (w/o drive) according to tolerance

class 1 to DIN 24 166. NOTE: FROM 2015 ONWARDS, STANDARD MOTORS WITH 2, 4 AND 6 POLES IN EUROPE WITH PERFORMANCES $\geq 7,5$ kW MUST ACCOMPLISH AT LEAST THE EFFICIENCY CLASS IE3. ALTERNATIVELY, MOTORS IN EFFICIENCY CLASS IE2 ARE ALSO ADMISSIBLE WHILE USING WITH DRIVE (VFD).

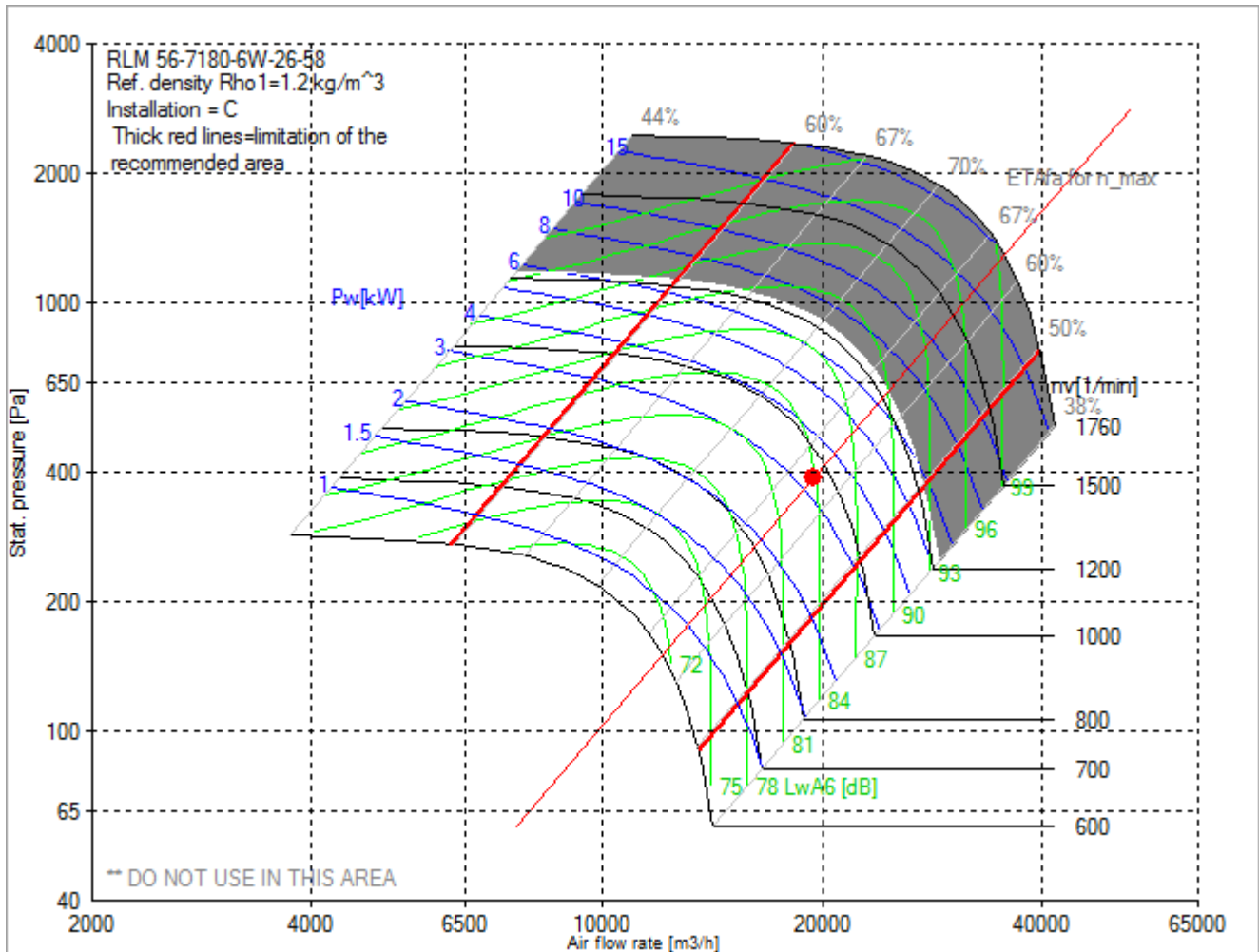
Technical data of the fan: RLM 56-7180-6W-26-58

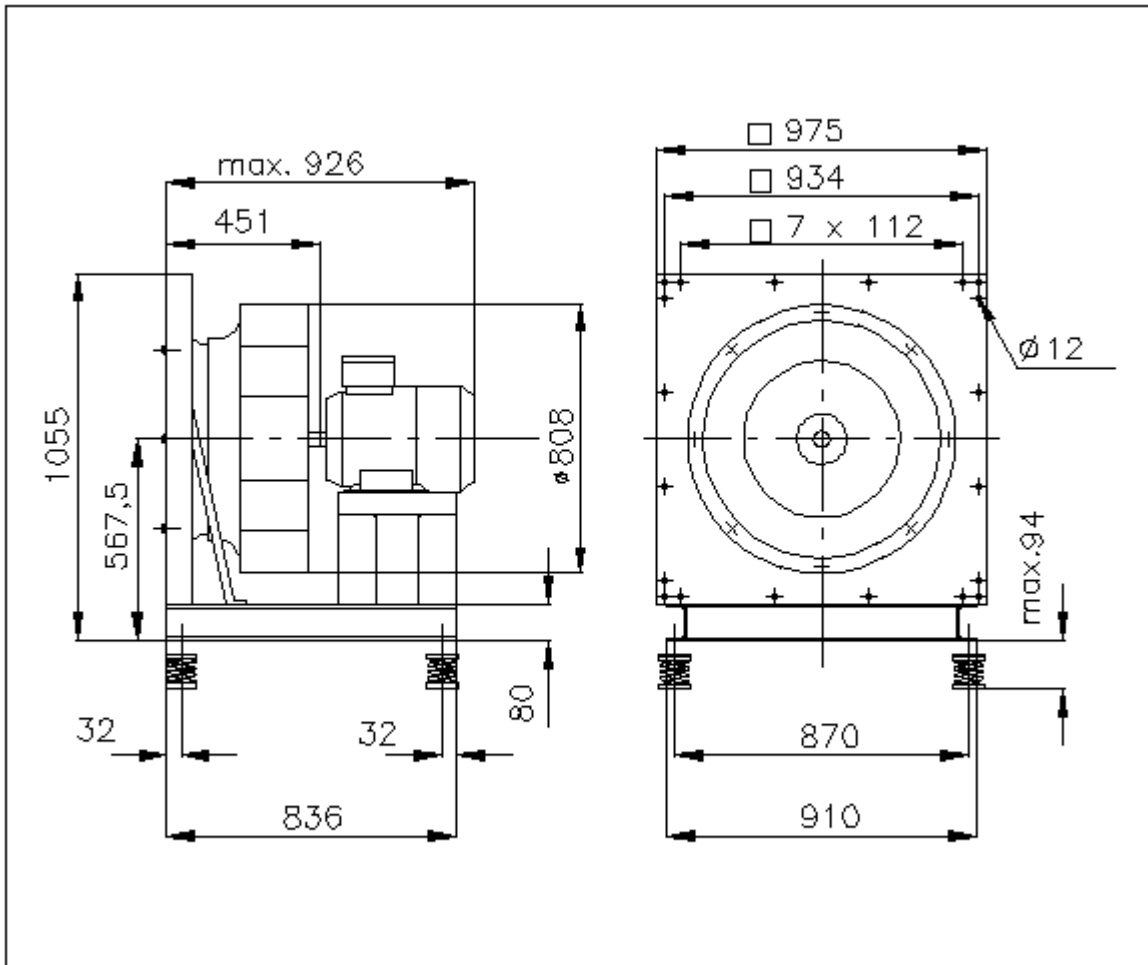
fulfills the ErP requirements 2015

Description	Value Dimension
Specified duty point	
Air flow rate (V)	19458 m ³ /h
Static pressure rise (dp _{ra})	388 Pa
Design duty point	
Installation acc. DIN 24163 Part 1	C
Reference density (Rho1)	1.20 kg/m ³
Medium temperature (t)	20 C
Air flow rate (V)	19458 m ³ /h
Total pressure rise (dp _t)	441 Pa
Dynamic pressure at discharge (pd ₂)	53 Pa
Static pressure rise (dp _{ra})	388 Pa
Possible increase to max. speed (f _R)	26 %
Fan speed (n _v)	965 min ⁻¹
Frequency (f)	49 Hz
Power on fan shaft (P _w)	3.28 kW
Absorbed power of fan system (P _{1s})	3.96 kW
Total efficiency (ETA _t)	73 %
Static efficiency (ETA _{ra})	64 %
System efficiency (ETA _{fas}) (over all efficiency of fan (static), motor, and inverter/Controller)	53 %
Specific Fan Power (SFP-factor)	734 W/(m ³ /s)
Nozzle calibration factor (K ₁₀)	485 m ² /h
Differential pressure on nozzle (dp _D)	798 Pa
Velocity at discharge area (c)	9.4 m/s
Fan weight	203 kg
A-weighted sound power level discharge/intake LwA _{6/3}	84/80 dB
Unweighted octave sound power level	Octave mid frequencies ¹⁾ 63/125/250/500/1k/2k/4k/8k Hz 85/87/81/80/80/77/69/65 dB discharge LwOkt ₆ 90/89/81/76/74/71/66/60 dB intake LwOkt ₃
¹⁾ The octave sound power levels can be higher at octave bands at or close to blade passing frequency.	
Feed data	
Main's frequency (f _N)	50 Hz
Voltage (U _N)	400 V
Rated motor data	
Phases-Voltage-Frequency	3-400 D-50 V-Hz
Frame size-No of poles:	160M / IE2-6
Power (P _N)	7.50 kW
Speed (n _N)	975 min ⁻¹
Current (I _N)	16,2 A
operational limits	
Max. fan speed (n _{vmax})	1220 min ⁻¹

Max. operating frequency (f_{\max})	62 Hz
Temperature range for conveying medium ($t_{\min} \dots t_{\max}$)	-20...40 C
ErP-Data at best efficiency and density 1.20 kg/m³	
measurement- / efficiency category	A / static
design status of VSD	has to be installed
overall efficiency (ETA_{opt})	61.9 %
achieved efficiency grade (N_{ist})	62.9
required efficiency grade in 2013 / 2015 (N)	58 / 62
Air flow rate (V_{opt})	20008 m ³ /h
pressure rise (dp_{opt})	904 Pa
Fan speed (n_{vopt})	1220 min ⁻¹
motor power input ($P_{1\text{opt}}$)	8.12 kW
specific ratio (d_{dpopt})	1.009

Fan curve to RLM 56-7180-6W-26-58





Rotation: RD
Handing: 90