NICOTRA Gebhardt

Specification of: RZP 11-0225-EC-12

High performance Centrifugal fan Nicotra Gebhardt rotavent
double inlet, direct driven with a brushless DC external rotor motor and including an external commutation unit EKE 10. Lap-jointed scroll housing made from galvanised steel sheet, with screwed brackets for different handings, and flange at discharge. High performance impeller with 11 backward curved laminar blades inclined obliquely to the shaft axis, welded in postion and painted. Cut off plate inclined obliquely in opposition to blade inclination. Inlet cones matched to the impeller to reduce entry losses. Impeller directly mounted on the rotor of the brushless DC motor in IP 54 type protection, completely maintenance free, statically and dynamically balanced to DIN ISO 21940-11, vibration isolated motor mounting. Connecting cable with 1,25m flying leads. Variable speed, optimized and approved for operation with an external control unit. Performance data in according DIN 24166 tolerance class 2 (BS 848 Class "B").

Technical data of the fan: RZP 11-0225-EC-12

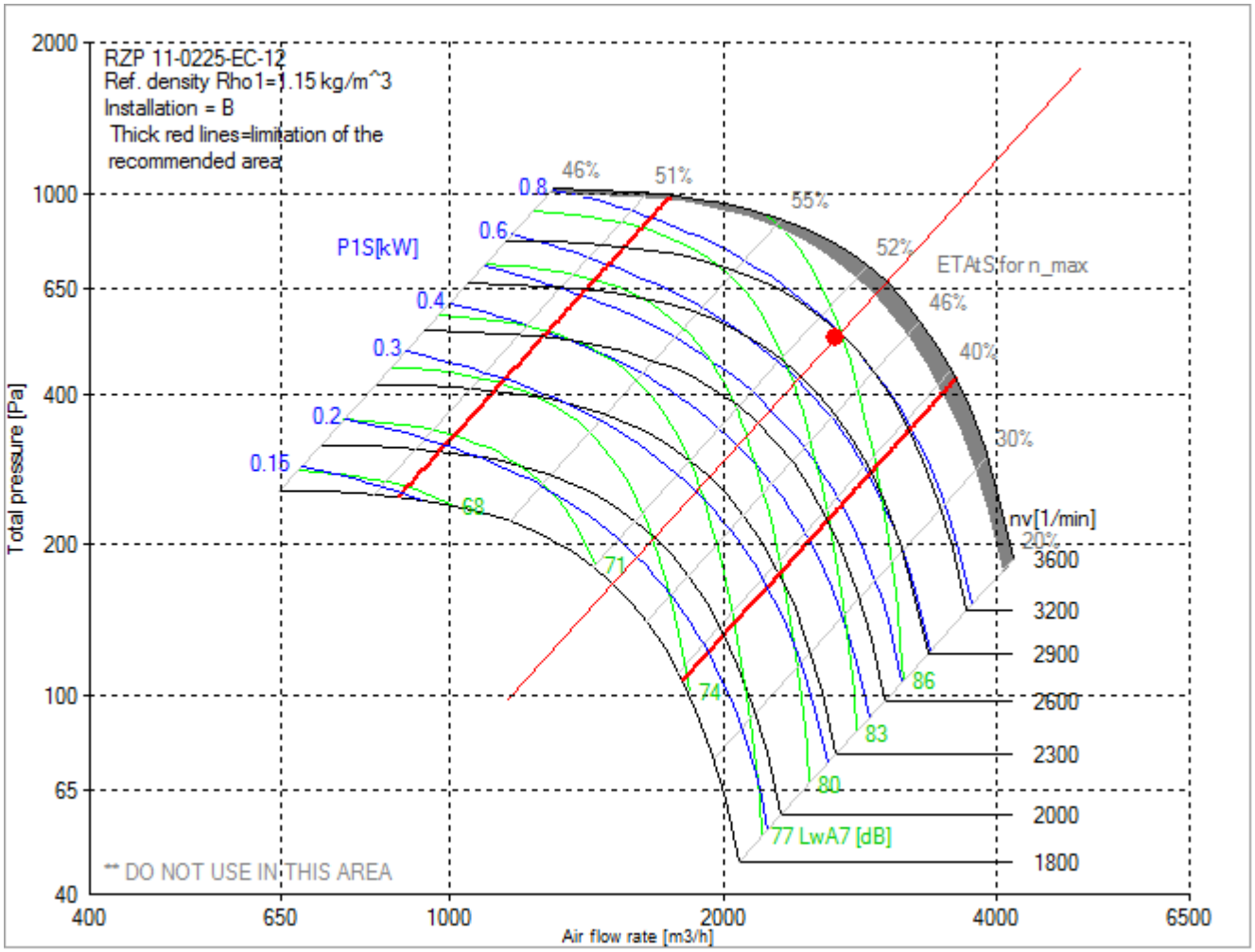
fulfills the ErP requirements 2015

Description	Value	Dimension
Installation acc. DIN 24163 Part 1	B	
Reference density (Rho1)	1.15	kg/m³
Medium temperature (t)	20	C
Air flow rate (V)	2662	m³/h
Total pressure rise (dp_t)	519	Pa
Dynamic pressure at discharge (pd_2)	47	Pa
Static pressure rise (dp_{fa})	472	Pa
Possible increase to max. speed (f_R)	10	%
Fan speed (n_v)	3171	min^{-1}
Absorbed power of fan system (P_{1S})	0.782	kW
max. current at n_v: Inverter out resp. control unit in (I)	3.4	A
System efficiency (ETA $_{faS}$) (over all efficiency of fan (static), motor, and inverter/Controller)	45	%
Specific Fan Power (SFP-factor)	1057	W/(m³/s)
Nozzle calibration factor (K_{10})	107	m^2s/h
Differential pressure on nozzle (dp_D)	356	Pa
Velocity at discharge area (c)	9.0	m/s
Fan weight	20	kg
A-weighted sound power level discharge/intake $LwA_{4/7}$	87/86	dB
Unweighted octave sound power level	Octave mid frequencies [1]	
	63/125/250/500/1k/2k/4k/8k	Hz
	89/86/84/85/82/79/73/60	dB discharge $LwOkt_4$
	74/73/78/80/83/78/73/63	dB intake $LwOkt_7$

[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)	50/60	Hz
Voltage (U_N)	1~ 230	V
operational limits		
Max. fan speed (n_{vmax})	3550	min^{-1}
Max. absorbed power of the system (P_{maxS})	1.05	kW
max. current: Inverter out resp. control unit in (I_{max})	4.6	A
Temperature range for conveying medium (t_{min} ...t_{max})	-10...40	C
ErP-Data at best efficiency and density 1.15 kg/m^3		
measurement- / efficiency category	B / total	
design status of VSD	VSD is integrated	
overall efficiency (ETA_{opt})	59.6	%
achieved efficiency grade (N_{ist})	70.5	
required efficiency grade in 2013 / 2015 (N)	61 / 64	
Air flow rate (V_{opt})	2279	m³/h
pressure rise (dp_{opt})	860	Pa
Fan speed (n_{vopt})	3534	min^{-1}
motor power input (P_{1opt})	0.913	kW
specific ratio (d_{dpopt})	1.009	

Fan curve to RZP 11-0225-EC-12



Dimensions to RZP 11-0225-EC-12

Rotation:	RD
Handing:	90