

Fan designation: DN90V-6DF.H7.19.G9

**General information:**

Customer:	Ventos
Customer project:	-
Date:	16-jun-2017
Contact ZIEHL-ABEGG:	Romain BIGNOLLES
Subsidiary:	Ziehl-Abegg Germany
ZIEHL-ABEGG reference number:	M14-429

**Technical data:****Requirement:**

Airflow:	30000 m3/h
Pressure:	300 Pa
Pressure type:	static
Temperature:	20 °C
Altitude:	0 m
Humidity:	0 %
Humidity abs.:	0 g/kg dry air
Air Density:	1,2 kg/m3
Measuring category (ISO 5801):	D (ducted)

**Fan characteristics:**

Design:	F (long casing)
Diameter:	900 mm
Temp. range:	-20/50 °C
ATEX range:	none
Casing finish:	G - hot dip galv. steel
Bellmouth:	no

**Impeller data:**

Airflow direction:	V (impeller -> motor)
Nb of blades:	9
Blade setting:	19°
Blade Material:	PP
Impeller bolting:	A2
Hub hard anodization:	no
Hub cover:	yes
Counter rotation:	no

**Achieved duty point:**

Airflow:	29424 m3/h
Static Pressure:	289 Pa
Shaft power (P2):	4,82 kW
Total Pressure:	388 Pa
Dynamic pressure:	99,4 Pa
Input power (P1):	5,39 kW
Imp. static eff.:	48,9 %
Current max. (D480 V):	9,75/5,64 A

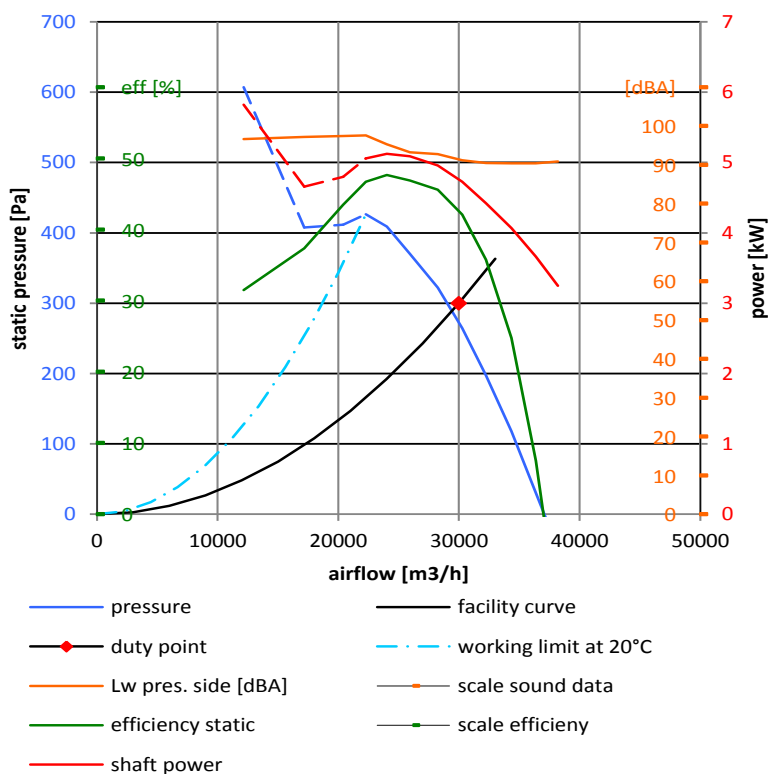
Disclaimer: Load factors are not taken into account in Optimiser.

Electrical data may change. Rated current could vary +/-10%.

The motor data in the operating point of the fan may vary.

Max current is informative, and should be use as a guideline only. Calculated at min. temperature -20°C

Our motors meet or exceed the efficiency levels defined by the EISA of 2007 in the USA, NRC in Canada and IEC 60034-30 in Europe.

**Performance curve:****Motor information - Rating plate data:**

Brand:	SIEMENS
ATEX range:	none
Size:	132MA
Shaft power (P2):	4,55 kW
Supply:	D480 V   3~   60Hz
Design:	IM B3
Current:	8,00 A
Eff. (100%):	0,895 (IE3)
Power factor:	0,77
Rated speed:	1175 /min (6 pole)
Deg. of protection:	IP55
Thermal class:	THCL 155
Temp.range:	-20/40 °C
Motor protection:	PTC

**Sound data:****A weighted sound power Lw (dBA):**

Suction side:	90,9
Pressure side:	91,9

**Sound pressure (dBA):**

At 3 m, half sphere configuration:

Suction side:	73,4
Pressure side:	74,3

**Sound power levels:**

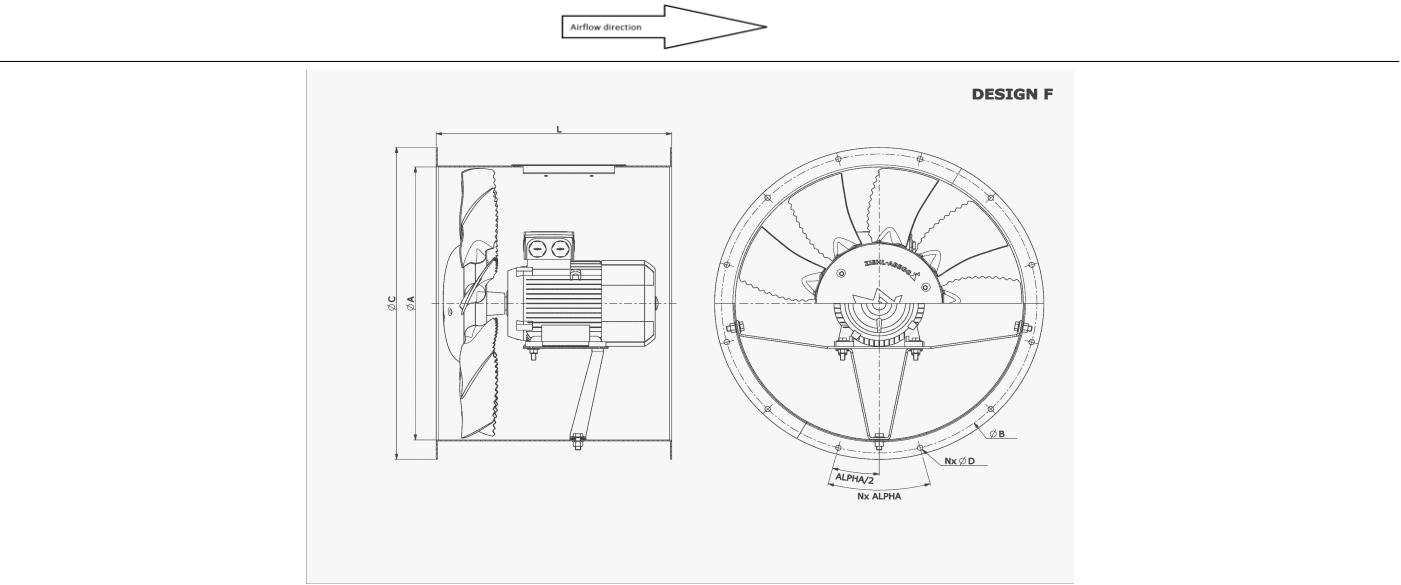
Octaves (Hz)	63	125	250	500	1k	2k	4k	8k	16k
Suction side (dBA)	52	78	79,6	85,6	85,3	84,4	79,2	69,1	60,6
Pressure side (dBA)	52,2	78,3	77,8	87,3	85,7	85,1	81,3	72,7	62,4
Suction side (dBL)	75,8	92,4	86,9	88,6	85,3	83,2	78,1	69,9	66,3
Pressure side (dBL)	76,4	92,7	85,1	90,2	85,8	84	80,3	73,5	68,1

Noise calculation are at actual duty point.

Disclaimer: Sound data is calculated and should be used as a guideline only.

Fan description:

Circular axial fan, made of a casing, 2 motor support brackets, an impeller and a motor. Casing long manufactured from galvanized steel. The brackets and motor supports are in the same material, and have the same finish as the casing. This finish corresponds to our level of corrosion protection standard which is equivalent to a protection C3-L according to the norm ISO 12944. This classification is given as a guide only as it is intended for structural steel and cannot apply to fans. The fan incorporates inlet and outlet flanges with pre-drilled bolt holes, conform to Eurovent. The impeller is made of 9 blades of PP mounted on an aluminum hub. Bolting of the impeller is in stainless steel A2.



ØA	ØB	ØC	Ød	L	N	ALPHA
900	970	1000	12	650	16	22,5

Drawing is showing standard configuration. Possible deviations are:  
number of blades, position of terminal box, hub cover, blade orientation, (non exhaustive list).

Fan additional data:	
Use of VSD:	no
Painting:	no
External term. box:	no
Brass ring:	no
Holes(s):	no
Cable gland(s):	no
Cutted flange:	no
Fan bolting:	standard
Stainless st. plate:	no
Second nameplate:	no
Certificate:	none
Other:	-

Motor additional data:	
Pre-heater:	no
Tropicalisation:	no
Drain-holes:	no
Stainless st. plate:	no
Canopy cover:	no
Regreas.nipple:	no
Second nameplate:	no
Self-ventilation:	yes
Located bearings:	no
Material:	-
Certificate:	none
UL-CSA:	UL/CSA
Option 1:	-
Option 2:	-

ErP 327-2011 for selected curve:	
Frequency:	60 Hz
Efficiency class:	IE3
Motor size:	132MA
Motor rated power:	4,55
Motor polarity:	6
Overall fan eff. (%):	46,1
Target efficiency grade:	40
Nominal grade (without VSD):	48,9
Measurement cat.:	A
Efficiency category:	static
Variable speed drive:	no
Input power at BEP:	5,59 kW
Airflow at BEP:	23382 m3/h
Stat. pressure at BEP:	397 Pa

Guard grills influence:	
Mesh grill impeller side:	10mm
Mesh grill motor side:	20mm
Pressure loss imp. side:	24,8 Pa
Pressure loss mot. side:	24,8 Pa
Influence on sound power, both sides:	+1dB