Soler & Palau Research S.L.U.
LABORATORIO DE AEROTÉCNICA
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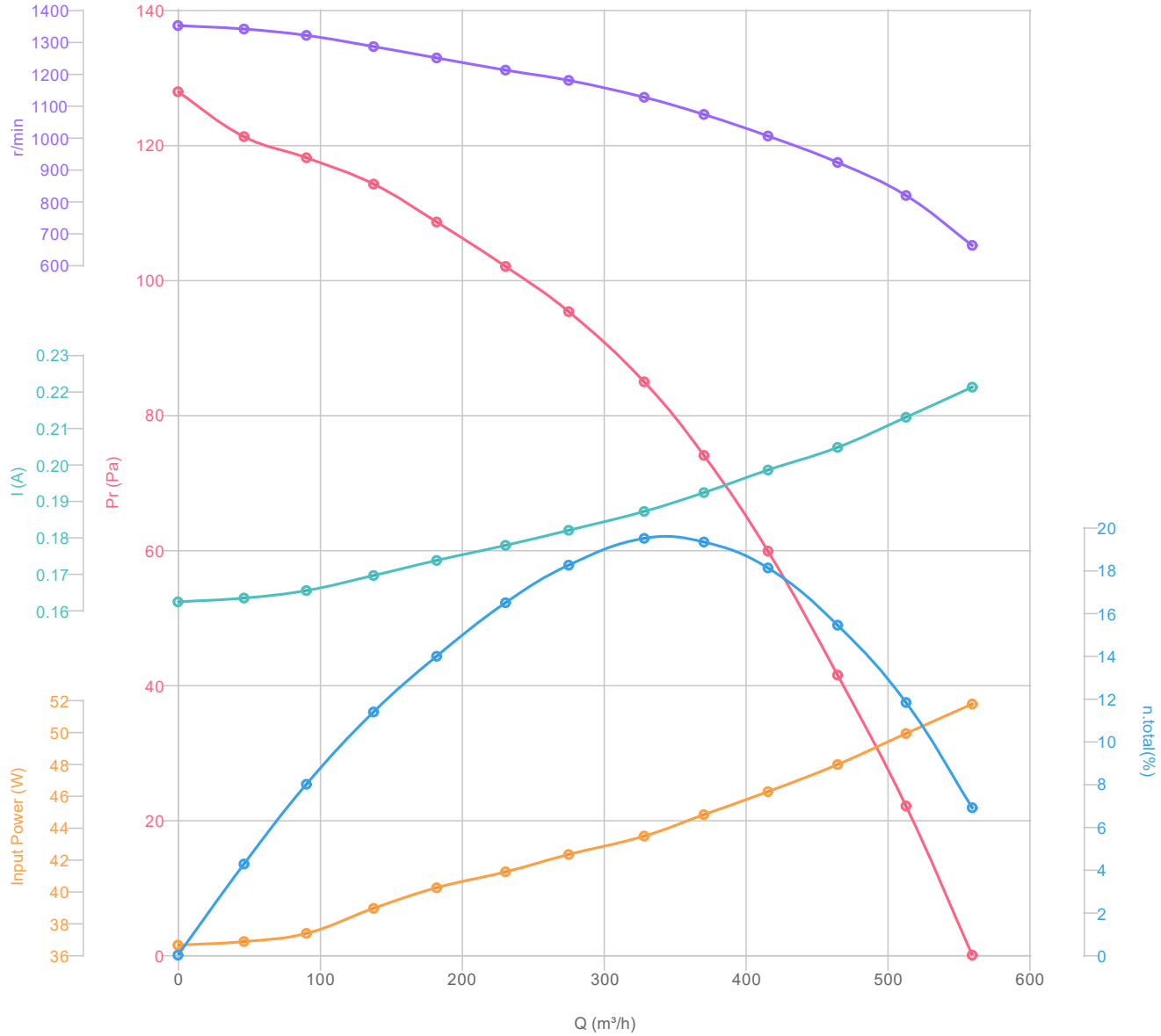
Test Number	6A15-014.L0063	**Project**	TECHNICAL EQUIPMENTS	**Analyst**	Jordi Serra Gascons



Forward-curved centrifgual fan
RF4C-146/220 K323 S-2079
ELECTROMECANICAS MC, S.A. K323
230 V 50 Hz W A
6A15-014.L0063 02/07/2021

Soler & Palau
Determinar prestacions RF4C-146/220 K323 S-2079 a la velocitat alta a 230V~50Hz. Cap 1uF
TEST APPLICATION : 5926299600
TESTED TO : 230 V - 50 Hz - AC-I
ANSI/AMCA 210-16 Fig 12 INSTALLATION TYPE B

ØD2 = 127 mm
ØD1 = 146 mm
z = 48
β2= 220 °
Jordi Serra Gascons

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General Information

Test request number	5926299600	Project	TECHNICAL EQUIPMENTS
Date	02/07/2021	Purpose	Determinar prestacions RF4C-146/220 K323 S-2079 a la velocitat alta a 230V~50Hz. Cap 1uF
Calculated with version	2021.6.30.24188		

Product

Brand	EMC	Model	RF4C-146/220 K323 S-2079
Code	-		
Dual purpose - (F400°C)	False	Tested with VSD	False

Voltage (V)	230	Power (W)	-	Current (A)	-
Frequency (Hz)	50	Speed (Rpm)	-	Capacitance (µF)	1

Motor Data

Brand	ELECTROMECANICAS MC, S.A.	Model	K323	Motor Plate Number	-
TestMotor	Global				

Voltage (V)	230	Power (W)	-	Current (A)	-
Frequency (Hz)	50	Speed (Rpm)	-	Capacitance (µF)	1

Test Conditions

Identifier Chamber	AMCA-1				
Installation Type	B		Standard		ANSI/AMCA 210-16 Fig 12
Large Nozzle	0	Medium Nozzle	1	Small Nozzle	0
Temperature (°C)	24 (±1.7e-01)	Humidity (%)	56.2 (±1.4e+00)	Inlet Area (m^2)	0
Atm. Pressure (mmHg)	726.2 (±1.3e+00)	Density (Kg/m^3)	1.1278 (±5.8e-03)	Outlet Area (m^2)	0.0252
Connection Type	AC-I	Voltage (V)	230 (±7.7e-02)	Frequency (Hz)	50

Equipment of measure

Speed	RM-SILS1	(16/11/2020 - 16/08/2021)
Nozzle Pressure	MI-1201174	(16/11/2020 - 16/08/2021)
Chamber Pressure	MI-1201175	(16/11/2020 - 16/08/2021)
Electric	AP-230/S1	(16/11/2020 - 16/08/2021)
Dry Temperature	N-SILS-T	(16/11/2020 - 16/08/2021)
Humidity	N-SILS-T	(16/11/2020 - 16/08/2021)
Atmospheric Pressure	BA-SILS	(16/11/2020 - 16/08/2021)

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Measured data

#	Nozzle P. (Pa)	Chamber P. (Pa)	Speed (rpm)	Abs. Pow. (W)	Current (A)
1	9.506e+01	0.000e+00	6.617e+02 (±1.1e+01)	4.863e+01	2.144e-01
2	8.001e+01	2.076e+01	8.181e+02 (±1.3e+01)	4.690e+01	2.064e-01
3	6.581e+01	3.898e+01	9.218e+02 (±1.5e+01)	4.507e+01	1.984e-01
4	5.278e+01	5.624e+01	1.005e+03 (±1.6e+01)	4.347e+01	1.924e-01
5	4.205e+01	6.957e+01	1.072e+03 (±1.7e+01)	4.212e+01	1.864e-01
6	3.314e+01	7.980e+01	1.126e+03 (±1.8e+01)	4.085e+01	1.814e-01
7	2.338e+01	8.958e+01	1.179e+03 (±1.9e+01)	3.977e+01	1.763e-01
8	1.651e+01	9.588e+01	1.211e+03 (±2.0e+01)	3.874e+01	1.723e-01
9	1.037e+01	1.021e+02	1.250e+03 (±2.0e+01)	3.781e+01	1.683e-01
10	5.983e+00	1.073e+02	1.285e+03 (±2.1e+01)	3.659e+01	1.643e-01
11	2.620e+00	1.110e+02	1.320e+03 (±2.1e+01)	3.512e+01	1.603e-01
12	7.127e-01	1.139e+02	1.340e+03 (±2.2e+01)	3.463e+01	1.583e-01
13	0.000e+00	1.202e+02	1.351e+03 (±2.2e+01)	3.442e+01	1.573e-01

Comments

-

Calculated data to 1.20 Kg/m³

#	Airflow (m³/h)	Static P. (Pa)	Dynamic P. (Pa)	Total P. (Pa)	Absorbed Pow. (W)	Current (A)	Total Eff. (%)
1 i (k=2)	5.598e+2 (±8.3e+0)	0.000e+0 (±4.8e+0)	2.293e+1 (±3.4e+0)	2.293e+1 (±3.4e+0)	5.174e+1 (±2.6e+0)	2.212e-1 (±1.2e-2)	6.893e+0 (±1.1e+0)
2 i (k=2)	5.131e+2 (±8.0e+0)	2.209e+1 (±4.1e+0)	1.927e+1 (±2.8e+0)	4.136e+1 (±2.9e+0)	4.990e+1 (±2.5e+0)	2.129e-1 (±1.1e-2)	1.181e+1 (±1.0e+0)
3 i (k=2)	4.649e+2 (±7.8e+0)	4.147e+1 (±3.4e+0)	1.582e+1 (±2.3e+0)	5.729e+1 (±2.4e+0)	4.795e+1 (±2.4e+0)	2.046e-1 (±1.1e-2)	1.543e+1 (±1.0e+0)
4 i (k=2)	4.158e+2 (±7.7e+0)	5.984e+1 (±2.7e+0)	1.265e+1 (±1.9e+0)	7.250e+1 (±2.0e+0)	4.625e+1 (±2.3e+0)	1.984e-1 (±1.0e-2)	1.811e+1 (±1.1e+0)
5 i (k=2)	3.707e+2 (±7.8e+0)	7.402e+1 (±2.2e+0)	1.006e+1 (±1.5e+0)	8.407e+1 (±1.7e+0)	4.481e+1 (±2.2e+0)	1.922e-1 (±1.0e-2)	1.932e+1 (±1.1e+0)
6 i (k=2)	3.286e+2 (±8.1e+0)	8.491e+1 (±1.8e+0)	7.901e+0 (±1.2e+0)	9.281e+1 (±1.4e+0)	4.346e+1 (±2.2e+0)	1.871e-1 (±9.8e-3)	1.949e+1 (±1.1e+0)
7 i (k=2)	2.754e+2 (±9.0e+0)	9.531e+1 (±1.4e+0)	5.549e+0 (±8.8e-1)	1.009e+2 (±1.1e+0)	4.231e+1 (±2.1e+0)	1.819e-1 (±9.6e-3)	1.824e+1 (±1.1e+0)
8 i (k=2)	2.309e+2 (±1.0e+1)	1.020e+2 (±1.2e+0)	3.901e+0 (±6.6e-1)	1.059e+2 (±1.0e+0)	4.122e+1 (±2.0e+0)	1.778e-1 (±9.4e-3)	1.648e+1 (±1.1e+0)
9 i (k=2)	1.823e+2 (±1.3e+1)	1.086e+2 (±1.0e+0)	2.432e+0 (±4.8e-1)	1.110e+2 (±9.2e-1)	4.023e+1 (±2.0e+0)	1.736e-1 (±9.1e-3)	1.398e+1 (±1.2e+0)
10 i (k=2)	1.379e+2 (±1.6e+1)	1.142e+2 (±9.6e-1)	1.391e+0 (±3.8e-1)	1.156e+2 (±8.8e-1)	3.893e+1 (±1.9e+0)	1.695e-1 (±8.9e-3)	1.137e+1 (±1.5e+0)
11 i (k=2)	9.052e+1 (±2.4e+1)	1.181e+2 (±9.3e-1)	5.997e-1 (±3.3e-1)	1.187e+2 (±8.7e-1)	3.736e+1 (±1.9e+0)	1.654e-1 (±8.7e-3)	7.989e+0 (±2.2e+0)
12 i (k=2)	4.655e+1 (±4.6e+1)	1.212e+2 (±9.3e-1)	1.585e-1 (±3.1e-1)	1.214e+2 (±8.7e-1)	3.685e+1 (±1.8e+0)	1.633e-1 (±8.6e-3)	4.259e+0 (±4.2e+0)
13 i (k=2)	0.000e+0 (±0.0e+0)	1.279e+2 (±8.4e-1)	0.000e+0 (±0.0e+0)	1.279e+2 (±8.4e-1)	3.663e+1 (±1.8e+0)	1.623e-1 (±8.5e-3)	0.000e+0 (±0.0e+0)

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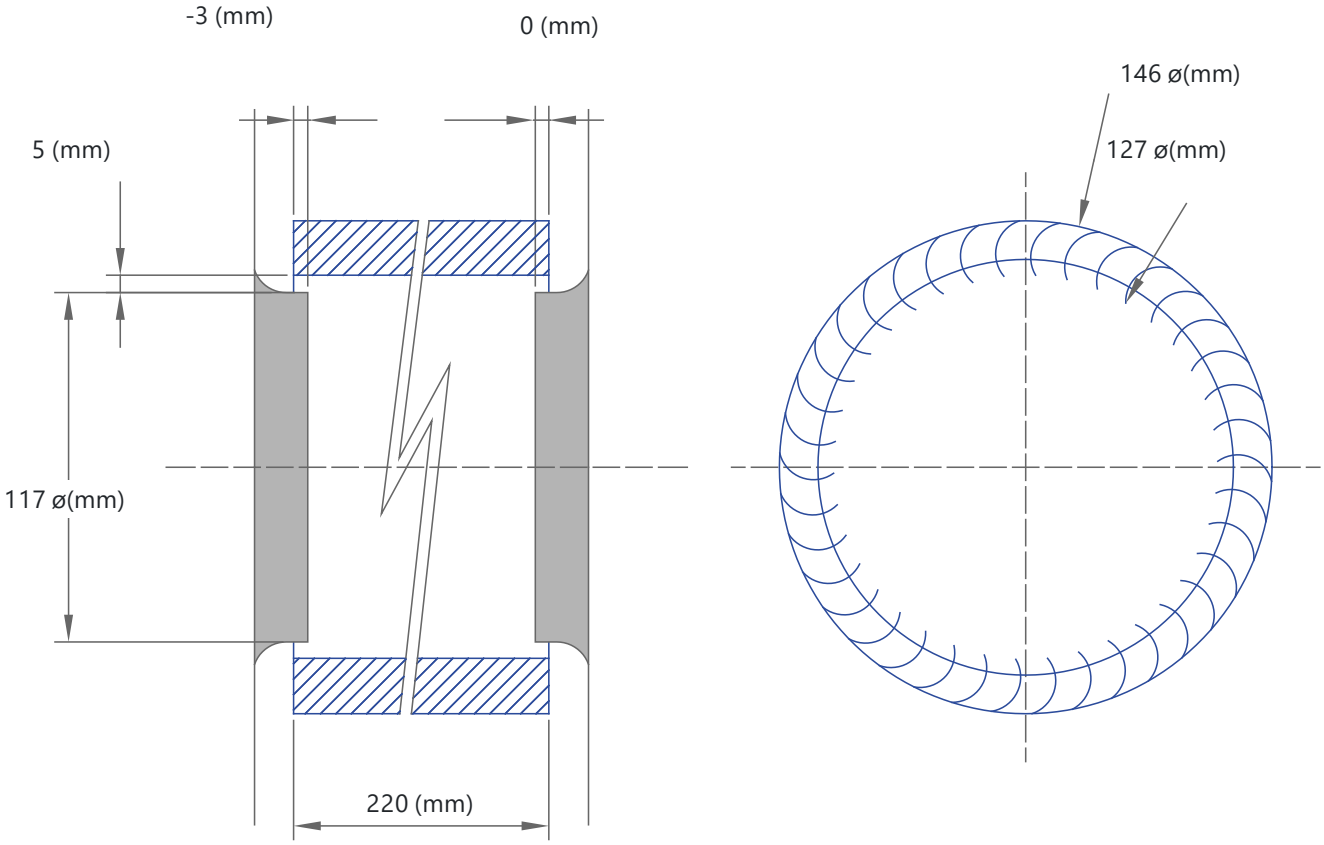

Number of blades 48