

CATALOGUE DATA

We offer models which are in general use. Our standard product range includes many other versions with variations in supply voltage and speed.

Specific fans are available and can be made to customers specifications. Our application engineers work constantly with our customers specification to offer the best fan selection. In this way, many special units are produced both for commercial and military applications. Our test laboratories in Vendôme (France) are available for customers to test their prototypes equipment in order to determine the optimum cooling solution. Web data sheets of standard products are available in «download» on this web site.

ELECTRICAL, AERODYNAMIC, AND INDUSTRIAL DATA

The following information can be found in the data tables:

- Nominal voltages and frequency
- Rated speed which is an approximate value of the fan speed operating at free air
- Power consumption and line current for maximum output
- Maximum static pressure corresponding to the pressure at no flow condition
- Maximum air delivery corresponding to airflow at no static pressure value
- Total noise level in decibels from the equilibrium curve A measured 1 meter from the air inlet, the fan operating in free air.

CONDITIONS OF USE

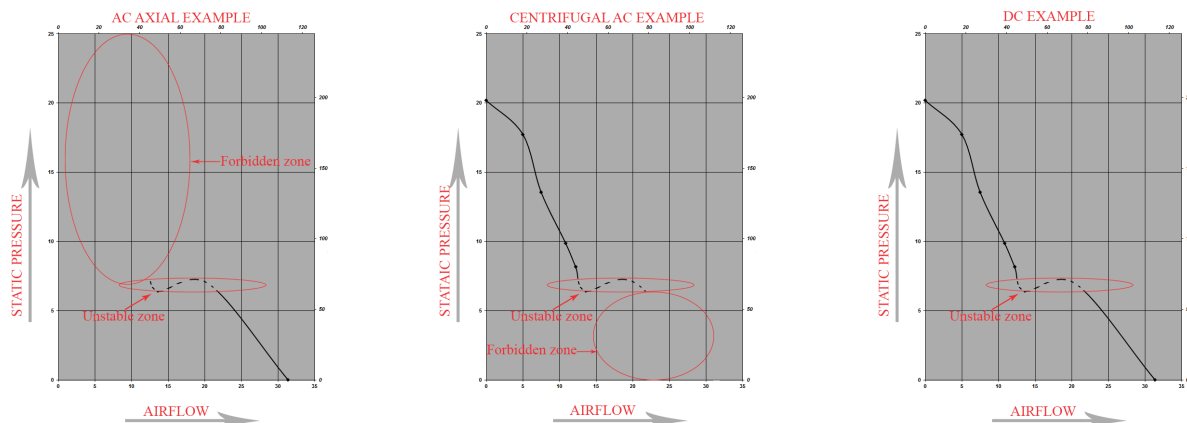
Unstable and forbidden zones of use exist for our fans.

The forbidden zones are not drawn on our curves.

Many axial flow fan characteristics have a «stall point», also referred to as «unstable zone» or «pumping zone». This zone is dashed on our curves. It is recommended that the fan should not be allowed to operate around the fan stall point otherwise there are serious risks of:

- impeller speed fluctuation causing mechanical instability
- increased motor temperature rise, especially on the bearings
- increase noise and vibration levels
- destruction of the motor mountings, motor bearings, and the fan impeller.

Some small diameter fans may be operated around the stall point, or at higher pressure and lower flow rates, but strictly with the written approval of manufacturer ECOFIT&ETRI Products.



CODIFICATION EXAMPLE OF 400HZ FANS

Series codes	106 ZA 05 60 XXX
Speed	
Mechanical (flange position)	
Voltage: 60 = 200V 400Hz ; 62 = 115V 400Hz	
Standard or specific definition	

CODIFICATION EXAMPLE OF HIGH PERFORMANCE FANS

Series codes	62 GP 01 6D XXX
Speed	
Mechanical	
Voltage: AC : 6D = 220 - 380VAC ; 61 = 220VAC ; 62 = 115VAC ; 6Y = 440VAC	
DC : C6 = 24VDC ; E6 = 28VDC ; F6 = 48VDC ; G6 = 72VDC ; H6 = 110VDC	
Standard or specific definition	

OPTIONS

DEGREES OF PROTECTION - IP

ETRI supplies a full range of AC and BDC fans offering high level of protection against dust or water. Most of our standard models, and all our high performance fans are available with protection for use in specific conditions, up to IP55 environments.

SPEED SENSORS AND ALARMS

Most ETRI DC and AC fans feature a speed sensor signals which determines rotating speed, or a rotation detector (on/off signal) which indicates if the fan works or not.

ETRI also provides a full range of alarm boxes (relay and dry contact) to read directly the signal of the speed sensor.

ROHS

All our 400Hz fans are not RoHS compliant except on demand.

All other fans are RoHS compliant except on demand.



TOLERANCES

The values shown in the data tables and the various curves have been measured from standard design equipment and should be considered as nominal. Without particular specifications, we accept the tolerances given at the beginning of each chapter. Drawings: without particular specifications, we accept a tolerance of $\pm 1\text{mm}$.

TOLERANCES FOR 400Hz FANS

INDICATIVE VALUES

Speed/Airflow	+/-4%
Static pressure	+/-8%
Power	+/-10%
Current	+/-10%
Voltage	+/-5%

TOLERANCES FOR HIGH PERFORMANCE FANS

INDICATIVE VALUES FOR AC FANS

Speed/Airflow	+/-4%
Static pressure	+/-8%
Power	+/-10%
Current	+/-10%
Voltage	+/-10%

INDICATIVE VALUES FOR DC FANS

Speed/Airflow	+/-6%
Static pressure	+/-12%
Power	+/-15%
Voltage	To be checked on each data sheet

DESIGN CODES

Our fans can be made in accordance with four internal manufacturing codes which are identified as follows:

- according to the maximum air temperature at the inlet of the fan
- according to the climatic environment (humidity, tropical surroundings, etc...)

The manufacturing methods are coded as follows:

C11: suitable for fans to operate in an atmosphere without special humidity conditions.

C13: suitable for fans to operate in an atmosphere between -10°C and +70°C in humid tropical environment. In particular, protection against humidity complies with norm NFC 20703 (test 3B 21 days) # MIL STD 202* method 103B.

C14: the reference is followed with 3 digits. They are allocated to each individual case. This requirement is always produced to customer's specification. It is suitable for fans to operate in temperatures lower than -10°C and higher than +70°C or in special environmental conditions.

C17: this manufacturing method could apply to marine specifications.

- Salt spray protection (non operating) E 507 specification issued by RCPM. Paragraph 3-21. Severity 6.
- Dry heat (non operating) E 507 specification issued by RCPM. Paragraph 3-21. Severity 5.
- Damp heat (operating) NFC 20703 specification (severity 5 Ref.3B) # MIL STD 202* method 103B.
- Shocks (operating) NFC 20727 specification (test 8B. Severity 30 A / 30g - 11ms) #MIL STD 202* method 213B.
- Vibrations (operating) E 508 specification issued by RCPM. paragraph 2-32 (23Hz;+- 1 mm, 1 hour)

This manufacturing method applies to most of ball bearing fan versions.