

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.

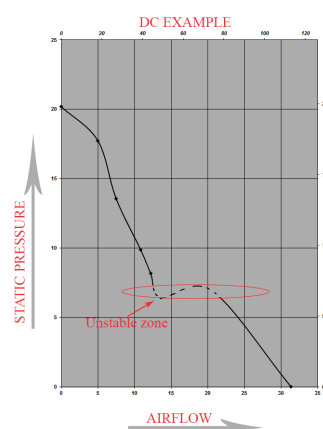
CONDITIONS OF USE OF DC FANS

Unstable zones of use exist for our DC fans.

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.



EXAMPLE OF CODIFICATION OF DC FANS

Series Code	246	DC	1	L	P	1	1	001
Speed (from lower to higher): DL; DM; DH; DS; DX; DZ; DY; DG; DR; DK DW or YW = custom speed								
Voltage: 1 = 12V; 2 = 24V; 3 = 28V; 4 = 48V; 5 = 5V; 7 = 72V; 8 = 110V; 9 = SpecialVoltage								
Connections: L = Leads; T = Terminals								
Housing material: P = plastic; M = metal								
Bearing system: 1 = ball bearings								
1 = no option; 3 = speed sensor; 4 = alarm								
Special features: 500 = TTL output in case of speed sensor option; 510 = rib type; 600 = tropicalization; 601 = IP54; 602 = IP55; other: custom designs								

EXAMPLE OF CODIFICATION OF AC FANS

Series code	125	XR	0	1	81	001
Speed						
Construction code: 0 = ball bearings; 5 = high temperature fan						
1 = standard ; 3 = speed sensor						
Voltage: 81 = 230V ; 82 = 115V ; 8L = 24V						
Design code: 001 = standard version; XXX = option (salt spray protection, tropicalization,...)						

Series code	148	VK	0	2	81	001
Speed						
Construction code: 0 = ball bearings						
1 = standard ; 4 = speed sensor						
Voltage: 81 = 230V ; 82 = 115V ; 8L = 24V						
Design code: 001 = standard version; XXX = option (salt spray protection, tropicalization,...)						

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

Our 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 DC FANS

INDICATIVE VALUES FOR AXIAL SERIES 146D, 99Y, 158D, 121D, 148D

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

INDICATIVE VALUES FOR OTHER DC AXIAL AND CENTRIFUGAL DC

Speed/Airflow	+/-8%
Static pressure	+/-15%
Power	+/-25%

TOLERANCES FOR AC FANS

INDICATIVE VALUES FOR AXIAL SERIES LOW SPEED 126LH, 126LJ, 99XM, 99XW, 146DF, 98XC, 98XY, 141LV, 141LT, 129XR, 125LG, 125XL, 148VE, 148VP

Speed/Airflow	+/-10%
Static pressure	+/-20%
Power	+/-30%
Current	+/-30%
Voltage 208-240 V Other voltages	-10%/+6% +/-10%

INDICATIVE VALUES FOR OTHER AC AXIAL SERIES AND AC CENTRIFUGAL

Speed/Airflow	+/-4%
Static pressure	+/-8%
Power	+/-10%
Current	+/-10%
Voltage 208-240 V Other voltages	-10%/+6% +/-10%

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.