## FANS FOR AERONAUTICS AND DEFENCE APPLICATIONS







## Your powerful business partner ... in the matter of ventilation technology

Air is our element – moving it **intelligently and efficiently** is our passion. Since 1945 we have been developing and producing compact and high performance fans.

**Our Engineering skill** is the basis of our development work and drives our innovation. As a worldwide company we are represented where our customers need us. With production sites and sales offices in more than 45 countries **we are present worldwide** – a strong and reliable partner always within reach of our customers.

Numerous manufacturers and suppliers of the aeronautics and defence industry trust in our fans. Through permanent and logical development we achieve high quality improvements for our products. The continuous exchange of information between customers and factory engineers enables us to develop flexible and reliable system-solutions quickly. Our fans meet norms such as MIL and Navy norms.







## **Options for customer specific developments:**

- Speed sensor
- Alarm
- Specific IP level
- Terminal or wire output
- Salt spray protection
- Protection against shocks and vibrations
- Specific protections for marine applications
- Wide temperature range
- Specific voltage
- Specific speeds
- Centrifugal safety switch







Inerting systems

The principle of inerting is to replace an atmosphere charged with flammable or explosive vapors by injecting inert gas. In aviation, oxygen levels must be kept close to zero in fuel tanks to eliminate the risk of fires and explosions. Our ETRI fans deliver the performance needed to provide the right airflow for inerting systems and guarantee passenger safety.



**Cockpit ventilation** 

Ventilation is essential to provide proper air quality and the requested heating, ventilation and air-conditioning to the pilot. Exhaust and supply fans are used in air conditioning switchboard, condenser, evaporator,... Our ETRI fans High Performance DC fans, 400Hz fans and compact axial DC fans are perfect for these applications. Their optimal airflow is adapted thanks to the control of their speed and their low noise level also improves the well-being of the pilot.



Radars

Exchangers and cooling in antenna, cooling of radar boxes







#### **Military tanks**

Our ETRI High Performance DC fans, 400Hz fans and compact axial DC provide the necessary airflow to cool electronics and ventilate turrets of military tanks. It is essential fort he safety of the militaries and the good working of the tank.

ETRI Fans are reliable, efficient and silent ventilation solutions to cool equipment and ventilate ambient air. ETRI motors are especially designed for aeronautics and defence applications. This reliability ensures a long service life of the installations and reduces maintenance interventions. Our compact ventilation fans are easy to install in any aeronautics application. Our AC motors are available in single and three phase in a wide range of voltages and frequencies. Our DC motors are available in many requested voltages. Most of our catalog fans can be adapted to aeronautics applications with the required voltages.



Optical systems and screen cooling

Displays and optical systems naturally generate heat during operation. Cooling is essential to prevent them from overheating, and to guarantee their good working order and long service life. Our ETRI fans offer the performance and compactness needed to cool this type of system.



**Electronics cooling** 

The technical constructions of planes consist of many electronic components which are often housed in switch gear cabinets. Here too sufficient heat dissipation is required to protect the sensitive electronic components and the entire cabinet system from overheating. Our ETRI high performance fans and compact axial fans are perfectly adapted to this application.



Marine Cabins ventilation, electronics cooling

Ventilation is essential to provide proper air quality and the requested heating, ventilation and air-conditioning to the passengers. The technical constructions of boats consist of many electronic components. The heat of these components need to be dissipated to protect them from overheating. Our ETRI High Performance DC fans, 400Hz fans and compact axial DC fans are perfectly adapted to improve the comfort of the passengers and to make sure all the systems work correctly.

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#### High Performance axial compact fan 106Z

- Dimensions: 66,6x38mm
- Protected against severe environments (high vibration and shocks levels, high humidity level)
- Compact design
- Available in 115 and 200VAC @400Hz
- Airflow up to 27 l/s (57,24 cfm)
- Static pressure increase up to 131 mmH<sub>2</sub>O (5,16 inchH<sub>2</sub>O)
- For curves please see page 14

Fields of application: cockpit ventilation, cooling of inerting systems, optical systems, screens, electronics, radars





#### High Performance axial compact fan 103T

- Dimensions: 80x80x50mm
- Protected against severe environments (high vibration and
- shocks levels, high humidity level)
- Compact design
- Available in 115 and 200VAC @400Hz
- Airflow up to 60 l/s (127,2 cfm)
- Static pressure increase up to 280 mmH<sub>2</sub>O (11,02 inchH<sub>2</sub>O)
- For curves please see page 14

Fields of application: cockpit ventilation, cooling of inerting systems, optical systems, screens, electronics, radars



#### **Compact axial fan 110VU**

- Dimensions: 88x88x25mm
- Compact design
- Available in 115VAC and 200 VAC @400 Hz
- Airflow up to 25,9 l/s (54,91 cfm)
- Static pressure increase up to 8,7 mmH<sub>2</sub>O (0,34 inchH<sub>2</sub>O)
- For curves please see pages 14

Fields of application: electronics cooling



ETRI







#### **High Performance DC fan 103D**

- Dimensions: 80x117x50mm
- Protected against severe environments (high vibration and shocks levels, high humidity level)
- Available in 28DC
- Available in 28DC
- Airflow up to 128 l/s (271,19 cfm)
- Static pressure increase up to 80 mmH<sub>2</sub>O (3,15 inchH<sub>2</sub>O)
- For curves please see page 15

Fields of application: cockpit ventilation, cooling of inerting systems, optical systems, screens, electronics, radars





#### **High Performance DC fan 80D**

- Dimensions: 113x153x88,5mm
- Protected against severe environments (high vibration and
- shocks levels, high humidity level)
- Available in 28DC
- Airflow up to 60 l/s (127,12 cfm)
- Static pressure increase up to 203 mmH<sub>2</sub>O (7,99 inchH<sub>2</sub>O)
- For curves please see page 15

Fields of application: cockpit ventilation, cooling of inerting systems, optical systems, screens, electronics, radars



#### **High Performance DC fan 137D**

- Dimensions: 95,25x65mm
- Protected against severe environments (high vibration and shocks levels, high humidity level)
- Available in 28DC
- Airflow up to 96,3 l/s (204,03 cfm)
- Static pressure increase up to 144,5 mmH<sub>2</sub>O (5,69 inchH<sub>2</sub>O)
- For curves please see page 15

Fields of application: ventilation in military tanks



TRI







## High Performance AC fan 62G

- Dimensions: 239,5x85mm
- Protected against severe environments (high vibration and shocks levels, high humidity level)
- Available in 1~ 230VAC and 3~ 400VA @50 and 60Hz
- Airflow up to 230 l/s (487,6 cfm)
- Static pressure increase up to 42,83 mmH<sub>2</sub>O (1,69 inchH<sub>2</sub>O)
- For curves please see page 15

Fields of application: electronics cooling



# High Performance AC fan 60CF

- Dimensions: 350x158mm
- Protected against severe environments (high vibration and shocks levels, high humidity level)
- Available in 1~ 220VAC and 3~ 380VAC @50 and 60Hz
- Airflow up to 480 l/s (1017,60 cfm)
- Static pressure increase up to 20 mmH<sub>2</sub>O (0,79 inchH<sub>2</sub>O)
- For curves please see page 15

Fields of application: electronics cooling



#### **Compact axial fan 126L**

- Dimensions: 80x80x38mm
- Compact design
- Available in 115 and 220VAC @50 and 60Hz
- Airflow up to 15 l/s (31,8 cfm)
- Static pressure increase up to 7 mmH<sub>2</sub>O (0,28 inchH<sub>2</sub>O)
- For curves please see page 16-17

Fields of application: electronics cooling





#### **Compact axial fan 113XN**

- Dimensions: 92x92x38mm
- Compact design
- Available in 115 and 220VAC @t50 and 60Hz
- Airflow up to 25 l/s (53 cfm)
- Static pressure increase up to 9 mmH<sub>2</sub>0 (0,35 inchH<sub>2</sub>0)
- For curves please see page 16-17

Fields of application: electronics cooling



#### Compact axial fan 98XC-Y-H

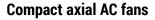
- Dimensions: 120x120x25mm
- Compact design
- Available in 115VAC and 220 VAC @400 Hz
- Airflow up to 31 l/s (65,72 cfm)
- Static pressure increase up to 6 mmH<sub>2</sub>O (0,24 inchH<sub>2</sub>O)
- For curves please see page 16-17

Fields of application: electronics cooling



ETRI









#### **Compact axial fan 146D**

- Dimensions: 80x80x25mm
- Compact design
- Available in 12, 24 and 48VDC
- Airflow up to 22 l/s (46,64 cfm)
- Static pressure increase up to 10,89 mmH<sub>2</sub>O (0,43 inchH<sub>2</sub>O)
- For curves please see pages 16-17

Fields of application: cockpit ventilation, cooling of inerting systems, optical systems, screens, electronics, radars





#### **Compact axial fan 99Y**

- Dimensions: 92x92x38mm
- Compact design
- Available in 24VDC
- Airflow up to 35,3 l/s (74,84 cfm)
- Static pressure increase up to 23,96 mmH<sub>2</sub>O (0,94 inchH<sub>2</sub>O)
- For curves please see pages 16-17

Fields of application: ventilation and systems cooling in marine applications



#### **Compact axial fan 158D**

- Dimensions: 120x120x32mm
- Compact design
- Available in 12, 24 and 48VDC
- Airflow up to 55,9 l/s (118,51 cfm)
- Static pressure increase up to 9,69 mmH<sub>2</sub>O (0,38 inchH<sub>2</sub>O)
- For curves please see pages 16-17

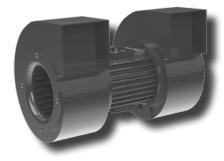
Fields of application: electronics cooling



TRI







### **R** Centrifugal fan 625CHK

- Dimensions: 200x222,5x331mm
- $\bullet$  Available in 1~230 and 380VAC, 3~230 and 380VAC @50 and 60Hz
- Airflow up to 320 l/s (678,4 cfm)
- Static pressure increase up to 66 mmH<sub>2</sub>O (2,6 inchH<sub>2</sub>O)
- For curves please see page 18

Fields of application: ventilation and systems cooling in military tanks and marine



# Centrifugal fan 694CHM

- Dimensions: 268x300x254,5mm
- Available in 1~230 and 380VAC, 3~230 and 380VAC @50 and 60Hz
- Airflow up to 175 l/s (371 cfm)
- Static pressure increase up to 120 mmH<sub>2</sub>O (4,72 inchH<sub>2</sub>O)
- For curves please see page 18

Fields of application: ventilation and systems cooling in military tanks and marine



#### ETRI

#### **Centrifugal fan 711CHB**

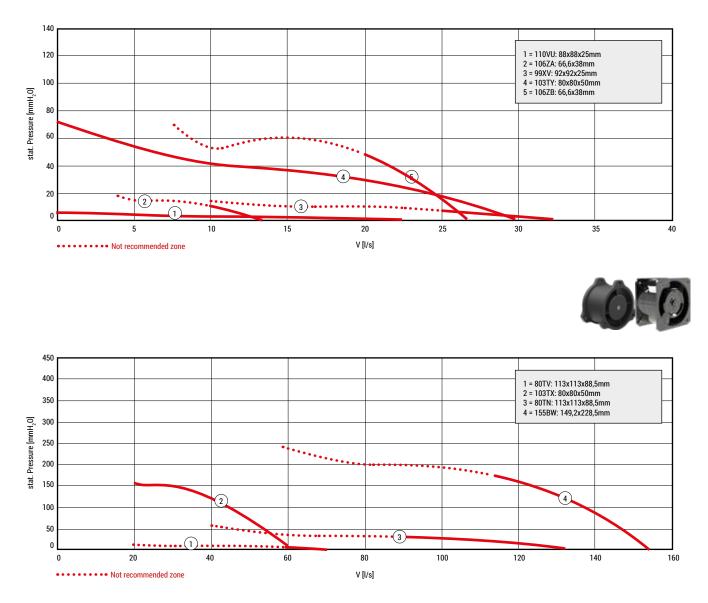
- Dimensions: 302x334x298mm
- Available in 3~ 220VAC and 380VAC @50 and 60Hz
- Airflow up to 420 l/s (890,4 cfm)
- Static pressure increase up to 190 mmH<sub>2</sub>O (7,48 inchH<sub>2</sub>O)
- For curves please see page 18

Fields of application: ventilation and systems cooling in military tanks and marine

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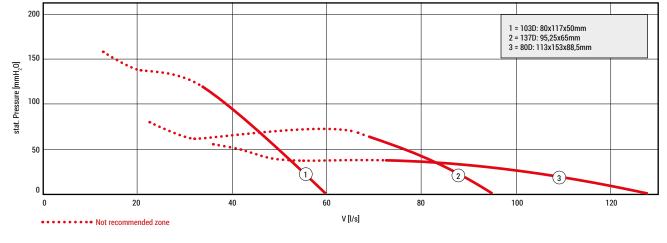




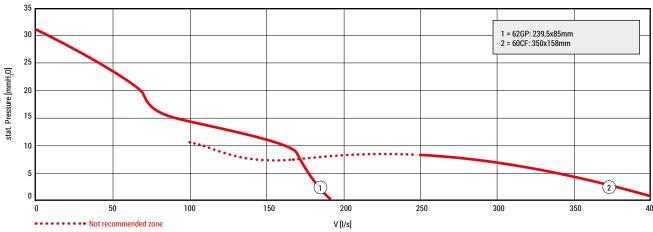


## **High Performance fans**

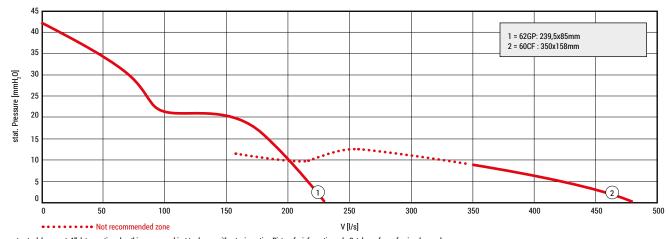
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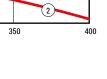
AC Fans VAC @ 60Hz





#### DC fans

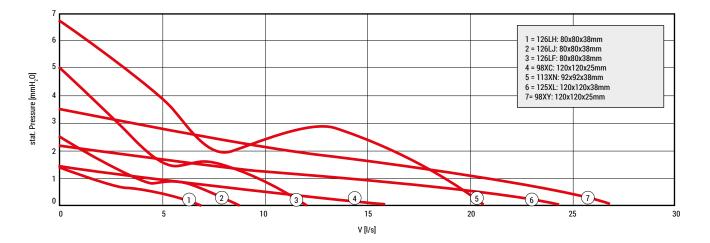






**Compact axial fans** 

#### AC @ 50Hz

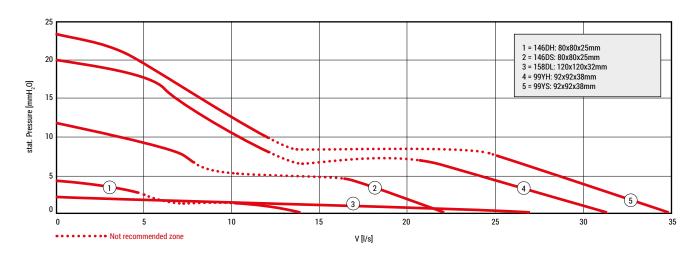


AC @ 50Hz

1 = 98XH: 120x120x25mm 2 = 125LG: 120x120x38mm 3 = 125XR: 120x120x38mm 4 = 148VE: 172x150x38mm 5 = 148VP: 172x150x38mm 6 = 148VK: 172x150x38mm stat. Pressure [mmH<sub>2</sub>0] (4) (5) 1 2 V [l/s]

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DC











### **Compact axial fans**

q 1 = 126LH: 80x80x38mm 2 = 126LJ: 80x80x38mm 3 = 126LF: 80x80x38mm 4 = 98XC: 120x120x25mm 5 = 113XN: 92x92x38mm stat. Pressure [mmH<sub>2</sub>0] 6 = 125XL: 120x120x38mm 7= 98XY: 120x120x25mm (4)  $\overline{7}$ (1)V [l/s]

AC @ 60Hz

1 = 98XH: 120x120x25mm 2 = 125LG: 120x120x38mm 3 = 125XR: 120x120x38mm 4 = 148VE: 172x150x38mm 5 = 148VP: 172x150x38mm 6 = 148VK: 172x150x38mm stat. Pressure [mmH<sub>2</sub>0] (4)(2)(1)V [l/s]

DC 1 = 158DM: 120x120x32mm 2 = 158DH: 120x120x32mm 3 = 158DS: 120x120x32mm stat. Pressure [mmH<sub>2</sub>0] V [l/s]

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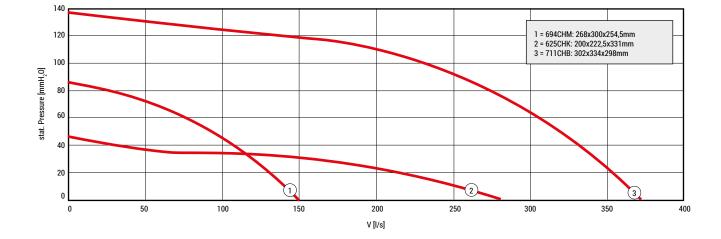






### **Centrifugal AC fans**

#### AC @ 50Hz



AC @ 60Hz

1 = 694CHM: 268x300x254,5mm 2 = 625CHK: 200x222,5x331mm 3 = 711CHB: 302x334x298mm stat. Pressure [mmH<sub>2</sub>0] (1)3) V [l/s]







## Contact us from the begining of your projet:

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