Air Moving Solutions Driven by Innovation

E FLOW TECHNOLOGIES
STARTS WITH YOUR APPLICATION PERFORMANCE.

WE ALSO ENSURE:

CONFORMITY & COMPLIANCE

E FLOW SMARTPACK™ is designed to meet current and foreseeable European and International compliance and conformity requirements.

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Actively Involved Worldwide with Standard Bodies and New Legal Measures.

- ISO
- CEN
- DS
- EUROVENT
- EVIA
- AMCA
- CTI
- AHR
- EMSA
- EU Commission
- US - DOE
- CN – SAC & CNIS
- UAE - ESMA
- SAUDI - SASO
- Ind –BIS
- SG - Spring
- Malaysia - Kettha
- AUS – Expert Group
- UL
- OSHA
- Danish Institute of Technology

Design Requirements E FLOW Evaluates When Desining Fan-Pack To Ensure The Highest EU Quality and More:

- Mechanical Harzards
- Electrical Harzards
- Thermal Hazards
- Noise Hazards
- Vibration Hazards
- Radiation Hazards
- Material/Substance H.
- Ergonomic Hazards
- Environment in which the machine is used
- Combination of Hazards
- Electronic Equipment disturbances
- Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS 2)
- Risks that can be posed by chemicals
- Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- End-of-Life Disposal
- Conflict Minerals Reg. (3TG)
- EcoDesign Requirements
- Customer Requirements

E FLOW involves acknowledged third parties in the efforts with both Fan Design and Fan Performance. For example, The Danish Instiutute of Technology was engaged in our endeavor with CE Marking, and UL was engaged in several regions and Fan Peformance data is based on measurements taken in a third party accredited lab! We start with you and we ensure close attention is paid design & performance details. Bonus info: The design has even taken into account an unpublished ISO and CEN standards on Fan Safety and Fan Efficiency and Performance Testing.

Compliance with Existing and Foreseeable Global Efficiency Requirements

SMARTPACK™ even reaches ambitious efficiency levels of expected ErP future requirements.

ERP READY

An ever-changing world requires both profound solutions today for tomorrow's operational demands, as well as minimum efficiency requirements. At E FLOW we leverage higher performance that conforms with both current and forseeable regulations worldwide. For example:

EXISTING REQUIREMENTS	FORSEEABLE REQUIREMENTS	SMARTPACK™ COMPLIANCE STATUS
EU		
Commission Regulaton (EU) 327/2011. Stage II has been in effect since Janary 2015. The efficiency metric is application independent based on the Fan-Pack's best efficiency point and is a wire-to-air-metric. Depending on the supply situation, Fan-Pack may be declared in compliance, based on either a non-final or final assembly method.	Both Commission Regulaton (EU) 327/2011 and ISO 12759 are currently undergoing reviews. A draft by the EU Commission is undergoing an impact assessment. A released draft indicates future stage III requirements, and a significant increase in minimum efficiency requirements. It also states that the fan definition for declaration will be determined based on installation, and that only direct testing will be applied by the testing authorities (ie. a Non-Final Assembly method is removed).	YES!
The United States of Amercia		
None.	The State of California is currently considering a new minimum fan efficiency metric proposed by AMCA, together with reference levels. The US Department of Energy in October 2016 released a Third Noda based on the same metric that analysed 6 levels, with level 3 as a reference. However, progress on a national regulation has been frozen since President Trump was elected. The efficiency metric called FEI (Fan Energy Index) is application dependent based on a defined operating point. Requirements change with flow and pressure requirements and its wire-to-air metric. FEI substitutes an FEG (Fan efficiency Grade) metric in the building codes.	YES!
China		
GB19761 expresses mandatory minimum allowable values. Tube axial fans are within the sope of GB19761 while Panel fans are not. Energy efficiency grades for axial-flow fans take into consideration the boss ratio.	GB19761 is currently undergoing revision and China has become very active in ISO TC 156 and the revision of ISO 12759.	YES!
Other		
In Malaysia and Thailand FEMG (Similar to EU) and / or FEG (similar to the US in the past) are voluntary. However, Thailand Department of Energy has communicated that they will consider FMEG as mandatory in the future. In India FEG has become part of the National Building code of practice. FEG is an application independent metric, based on shaft-to-air and only suitable for ducted applications. The Australian government has been assessing the opportunity to implement the same requirements as in EU for some time.		

AFFILIATED MANUFACTURER EUROVENT

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