TRM Filter®

EN 1822 vs. ISO 29463

Explanation and Position of TRM Filter

The Origin

EN 1822 first came into effect in 1998. It was initially used as a filter efficiency classification standard for HEPA filters, based on “most penetrating particle size” theory (MPPS). In simple terms, this refers to the size of the particles that most easily pass through the filter.

However, this approach has not been taken directly into account in the US. Therefore, to ease the harmonization, the International Organization for Standardization or ISO released the ISO 29463 standards, which are based on EN 1822. Regardless, EN 1822 was decided to continue for performance testing, marking, and classification purposes and was revised accordingly.

Due to the above, there are currently EN 1822 as well as ISO 29463 valid, used and fully conformant to the requirements of the industry.

Comparison Between EN 1822 and ISO 29463

Both standard’s evaluation principles are based on the MPPS principle. Considering some differences in testing and classification, they both provide reliable mean of determining and understanding protection for final user.

However, terminology and classification criteria do deviate between the standards, therefore comparison between the filter classes as shown in the table on the right can be found helpful.

Filter class as per EN 1822	Filter class as per ISO 29463	Efficiency - integral [%]
E10		≥ 85
E11	ISO 15 E	≥ 95
	ISO 20 E	≥ 99
E12	ISO 25 E	≥ 99.5
	ISO 30 E	≥ 99.9
H13	ISO 35 H	≥ 99.95
	ISO 40 H	≥ 99.99
H14	ISO 45 H	≥ 99.995
	ISO 50 U	≥ 99.999
U15	ISO 55 U	≥ 99.9995
	ISO 60 U	≥ 99.9999
U16	ISO 65 U	≥ 99.99995
	ISO 70 U	≥ 99.99999
U17	ISO 75 U	≥ 99.999995

Why to use ISO 29463 anyway?

The biggest benefit of ISO 29463 is the harmonization between the US and Europe. As TRM Filter is a global supplier, it is of significant importance to us to satisfy the needs of our customers on each end of the continent.

Considering the above, TRM Filter has embarked on a journey to reclassify and market its filters under ISO 29463 going forward. We see this as a long-term benefit, however do understand there may still be a lack of clarity on the market. Therefore, we truly hope this short handout will be of benefit to its readers and will help clarify outstanding questions.

In any case, please do not hesitate to reach out to us via LinkedIn or email sales@trm-filter.com for any questions. Our experts will be happy to assist you.

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