# **TFS-T Motor-Side Filters (Revision 4)**

### Combined common-mode and sinus filtering for spindle motors



Motor-side filters of the T-series are single-axis filters with combined common-mode and sinus filter stages.

Common-mode filters are designed to suppress common-mode voltage oscillations, protecting motor bearings and tools from electro-erosion. Furthermore, the suppression of common-mode fluctuations reduces electromagnetic interference, which is key to achieving highest EMC standards.

The sinus filter stage attenuates PWM switching effects in the differentialmode, which helps to protect sensitive motors.

T-series filters are optimized for low-inductance motors, such as spindles. For high-inductance motors, please refer to the C-series.

### Properties

- Combined sinus and common-mode filter
- Optimized for low-inductance motors
- Designed for 50 to 100 kHz PWM frequencies

### Applications

- Protect motor, tools, and workpieces from elctrical arcing and electrochemical erosion
- Meet the highest EMC standards
- Reduce thermal issues at the rotor and protect sensitive motors through the sinus filter stage



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## **Schematic Illustration**



## Specifications

	TFS-T-80-15-50	TFS-T-130-15-50	TFS-T-350-15-50	TFS-T-700-10-50
Max Voltage	$80+10\% V_{DC}$	$130+10\% V_{DC}$	$350+10\% V_{DC}$	700+10% $V_{DC}$
Continuous Current	15 A <sub>rms</sub>	15 A <sub>rms</sub>	15 A <sub>rms</sub>	10 A <sub>rms</sub>
Min PWM Frequency	50 – 100 kHz			
Dimensions W×H×D	83 × 175 × 250 mm			
Weight	2.90 kg			

Subject to change without notice.

Datasheet
TFS-T

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#### **Triamec Motion AG**

Lindenstrasse 16 CH-6340 Baar Switzerland Tel. +41 41 747 4040 info@triamec.com www.triamec.com