

## TDP T3 – Fire Testing Device for Roofs

Measurement method	Determination the performance of roofs to external fire exposure – Test 3 with exposure to incendiary devices, wind and additional radiant heat according to DIN CEN/TS 1187
Setup	<ul style="list-style-type: none"> <li>▪ Base frame, consists of a base frame and a slide system for the radiant heater panel</li> <li>▪ Sample holder</li> <li>▪ Separate, mobile frame for wind generator and gas hose routing</li> <li>▪ Mobile control unit</li> </ul>
Heating unit	<ul style="list-style-type: none"> <li>▪ Radiant panel, framed by stainless steel; outer dimensions (W x H) 750 mm x 750 mm</li> <li>▪ Consisting of four individual square surface radiant heater elements, each 300 mm x 300 mm, fed with propane</li> <li>▪ Equipped with four ignition electrodes</li> </ul>
Incendiary device*	<ul style="list-style-type: none"> <li>▪ Grids made from wood fiber insulation boards; (W x D x H) 55 mm x 55 mm x 32 mm; nailed</li> <li>▪ Soaked in n-heptane</li> <li>▪ To be lit with a gas burner</li> </ul>
Wind generator	<ul style="list-style-type: none"> <li>▪ Radial fan Elektror Type S-LP 215/92 with frequency converter</li> <li>▪ Height-adjustable fan box, stainless steel with 1.0 m wide nozzle outlet and guide plate; with adjustable angle</li> </ul>
Sample holder	<ul style="list-style-type: none"> <li>▪ Inclined sample frame, stainless steel; (W x H) 1500 mm x 3000 mm</li> <li>▪ Mounted on sample carrier trolley</li> <li>▪ Manually, hydraulically angle-adjustable sample frame for stepless adjustment of the inclination angle of the sample (0-50 °)</li> </ul>
Measuring and control unit	<ul style="list-style-type: none"> <li>▪ Consisting of 3 units</li> <li>▪ Gas mixing system; generate fuel gas/air mixtures; gas supply of radiant panel</li> <li>▪ Electrical control cabinet/gas control panel with touch screen for control of radiant panel and ignition electrodes</li> <li>▪ Electronics box for controlling the wind generator</li> </ul>
Sample dimensions	(W x H) 1200 x 3000 mm
Software	integrated touch panel HMISTU855; Touch panel screen 5 "7 color; analogue; for automatic and manual control of all individual components
Instrument dimensions	<ul style="list-style-type: none"> <li>▪ Measuring and control unit (W x D x H) 1000 x 1000 x 1950 mm<sup>3</sup></li> <li>▪ T3 (W x D x H) 1800 x 5500 x 3000 mm<sup>3</sup></li> <li>▪ Weight: approx. 1700 kg</li> </ul>
Power supply*	<ul style="list-style-type: none"> <li>▪ Input: 3x 400V 50Hz (3,5A/1,5kVA)</li> <li>▪ Supply: 5x 2.5mm<sup>2</sup> (16A)</li> </ul>
Operating materials*	<ul style="list-style-type: none"> <li>▪ Water: for cooling of the Schmidt-Boelter heat flux meter</li> <li>▪ n-heptane: for soaking of the incendiary devices</li> </ul>
Gas supply*	Propane; required pressure: 300 mbar

\* to be provided by the user