TIGER-VAC · II 2GD EX H IIC T6 GB / EX H IIIC T85°C DB -- LCIE 03 ATEX 6310 X -- IECEX LCIE 17.0076 X -- EN 17348 LC

Tiger-Vac SS-55 (TC) TE

The Tiger-Vac SS-55 (TC) TE is the largest in single-venturi configuration in pneumatic explosion-proof vacuum for the recovery of fuel and flammable liquids in ATEX Zone 1 (gas) and Zone 21 (dust). Driven exclusively by compressed air through a single venturi unit -- no electrical components, no ignition risk, and ATEX T6 class (max 85 °C surface temperature). Certified to EN 17348 LC (flammable + non-flammable liquids) and dual-certified under ATEX (LCIE 03 ATEX 6310 X) and IECEx (LCIE 17.0076 X) for international defense procurement. The Tilt Cart (TC) construction tips the entire tank for emptying without lifting, a real ergonomic and safety advantage for a 170 litre full liquid tank. 204 m3/h airflow, 5080 mmH2O vacuum at 5.5 bar supply pressure. AISI 304 stainless construction, activated carbon filter optional for VOC vapours, only 75 dB(A) sound level. Requires a 15 HP compressor with 21.2 L/s capacity.

APPLICATIONS

• Defueling and depuddling of military aircraft (F-35, legacy fighters) in hangars -- zero electrical ignition risk
• Depot work and field operations where compressed air is more readily available than 230V
• Recovery of JP-8 and Jet A-1 in areas with high vapour concentration
• Continuous process extraction without motor overheating (24/7 operation possible)
• Chemical industry with flammable solvents (toluene, acetone, MEK) in Zone 1/21 where T6 rating is required

Technical specifications

ATEX marking	II 2GD Ex h IIC T6 Gb / Ex h IIIC T85°C Db -- LCIE 03 ATEX 6310 X -- IECEx LCIE 17.0076 X -- EN 17348 LC
Internal / external zone	-- / 21
Motor type	Pneumatisk venturi-aggregat (single venturi, 6 mm), ingen elektriske komponenter -- ATEX T6 klasse (Tmax 85 °C)
Airflow	204 m³/h
Vacuum	498 mbar (5080 mmH_2O)
Container	151 L
Sound pressure	75 dB(A)
Filter class	Stainless steel mesh filter
Filter type	Rustfri staal mesh-filter med clamp (part 213433) -- aktivt kulfilter (211045) som tilvalg for VOC/dampe
Primary filter	Rustfri staal mesh-filter (213433). Strainer basket inkluderet. Statisk ledende konstruktion (< 10 ohm resistivitet).
Cleaning system	Ingen (manuel) -- mesh-filter aftages og skylles rent
Collection system	Detachable container
Material	AISI 304 rustfri staal (undtagen vogn)
Air consumption	1272 nl/min
Supply pressure	5.5 bar
Air supply hose	Diameter 12.7 mm
Venturi units	1 pcs
Inlet	Diameter 50 mm
Dimensions (L x W x H)	1020 x 710 x 1170 mm
Weight	60 kg

Questions and answers

What's the advantage of pneumatic venturi over an electric TEFC motor?

Zero electrical ignition risk. A pneumatic vacuum is driven exclusively by compressed air passing through a venturi nozzle system that creates negative pressure by aerodynamic effect. No motor, no sparks, no hot electrical component -- only mechanical airflow. This qualifies the unit for T6 class (max 85 °C surface temperature), while an electric TEFC motor can only achieve T3 (200 °C). T6 is required in certain high-risk applications such as F-35 fuel tanks or hydrogen areas where even a 100 °C surface can ignite flammable vapours. The downside is the compressor requirement (minimum 15 HP + 21.2 L/s air at 5.5 bar) -- in the field, compressed air can be the limiting factor.

What compressor do I need?

Minimum 15 HP (11 kW) compressor delivering 21.2 L/s (1272 NL/min) at 5.5 bar continuously. This corresponds to a mid-scale industrial compressor -- e.g. Atlas Copco GA11, Kaeser AirTower 11 or equivalent. You also need a 1/2" (12.7 mm) hose from the compressor to the unit, and the unit can be operated continuously as long as the compressor maintains pressure. For field work, a mobile compressor (e.g. Atlas Copco XAS 97) can be used -- be aware of the compressor's own fuel; a diesel compressor can become an ignition source inside an ATEX zone and should be placed outside the zone with the air hose run in.

Why T6 instead of T3 -- what does it mean in practice?

T6 is ATEX's strictest temperature class: maximum surface temperature 85 °C. T3 is 200 °C. For most fuels such as diesel or Jet A-1, T3 is sufficient because auto-ignition temperature is 210-230 °C. But for hydrogen, acetylene, and certain aerosolised aromatics (such as benzene vapours at high concentration), even 90-120 °C surface temperature can trigger ignition. T6 is also required in many newer defense specifications (NATO STANAG, US Air Force TO-0 series) where a single worst-case class is chosen for all tasks. SS-TE models are built to T6 because the pneumatic construction makes it physically impossible to exceed 85 °C.

What's the difference between the SS (pneumatic) and EXP1 (electric) TE series?

Same chassis family, same Tilt Cart, same filtration (stainless mesh + activated carbon optional), same EN 17348 LC certification. But the motor is fundamentally different: EXP1 is single-phase TEFC electric (230V), SS is pneumatic venturi (compressed air). Choice depends on available energy and risk level: When you have 230V and T3 is sufficient -- choose EXP1 (lighter, no compressor requirement, longer hose reach via cable). When you have compressed air and T6 is required, or you work in ultra-high-risk areas (hydrogen, F-35, rocket fuel) -- choose SS. In practice, many defense units choose SS models because NATO/US Air Force specifications typically require T6.

Contact and advisory

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