

TIGER-VAC • 3D PRINTING / ADDITIVE MANUFACTURING

EXP1-20 DT (PRS-HEC)

Electric PRS vacuum with integrated high-efficiency cyclone for recovery and reuse of unsintered metal powder from powder bed fusion printers. Third-party certified for Zone 21 and Zone 22 (ATEX II 2GD). TEFC motor. HEPA H14. Stainless steel SAE 304.

- Integrated HEC cyclone — separates up to 98 % of the powder
- ATEX II 2GD — Zone 21 and Zone 22, LCIE 03 ATEX 6297
- TEFC motor — fully enclosed, externally cooled
- Detachable SS 304 recovery tank — 25 L
- HEPA H14 as secondary safety barrier
- ESD-safe accessories included



Tiger-Vac EXP1-20 DT (PRS-HEC) – electric PRS powder recovery system

ATEX II 2GD — Zone 21 and Zone 22 · LCIE 03 ATEX 6297 · HEPA H14 — EN 1822 · EN 17348 — combustible dust · CE — ATEX Directive 2014/34/EU

Quick facts	
Drive type	Electric — TEFC
ATEX	II 2GD, Zone 21/22
Certificate	LCIE 03 ATEX 6297
Cyclone	HEC, up to 98 %
Filter	HEPA H14
Tank	25 L, detachable, SS 304
Airflow	224 m³/h
Noise	78/85 dB(A)
Weight	98 kg
Cord	15 m

Powder that would otherwise go to waste

The EXP1-20 DT (PRS-HEC) is Tiger-Vac's electric powder recovery system for metal powder 3D printing. The integrated high-efficiency cyclone (HEC) separates up to 98 % of the recovered powder from the airstream and collects it in the detachable stainless steel SAE 304 recovery tank — before the air ever reaches the HEPA H14 filter. The powder remains clean, ready for sieving and direct reuse.

The TEFC motor (Totally Enclosed Fan Cooled) is sealed and cooled externally, meaning it draws no ambient air into the motor housing — a prerequisite for safe operation in rooms where explosive dust is present. The unit is third-party certified for Zone 21 and Zone 22 by notified body LCIE (LCIE 03 ATEX 6297).

The entire contact surface is constructed in stainless steel SAE 304, CE marked in accordance with EN 17348. All included accessories are ESD-safe and approved for use in ATEX-classified areas.

Technical specifications

Parameter	Value
Filter class	HEPA H14 (EN 1822)
Filter efficiency	99.995 % at 0.3 µm
Cyclone separation	Up to 98 % (before filter)
Motor type	TEFC (Totally Enclosed Fan Cooled)
Power	1 kW / 1,000 W
Voltage	230 V, 50 Hz, single phase
Current	4.5 A
Airflow	224 m³/h
Vacuum pressure	1,550 mmH²O
Noise level	78/85 dB(A)
Suction inlet	Ø50 mm (2" camlock)
Recovery tank	25 L — detachable, SS 304
Weight (without accessories)	98 kg
Dimensions	H 135 × W 56 × L 112 cm
Cord length	15 m
Recovery type	Dry only

Compliance standards: EN 17348 • EN ISO 80079-36:2016. Specifications subject to change without notice.

Included accessories



3D Tool Kit for EXP1-20 – hose and nozzles

3D Tool Kit

Static conductive crushproof hose Ø38 mm × 3 m with 2" camlock. Conical nozzle, round brush and crevice tool (ESD-safe).



Wand set and floor tool for EXP1-20 (optional)

Wand set and floor tool

Optional. Double-bend wands in chrome (2 pcs) with conductive floor tool.



Extra recovery tank with lid, Part# 223001-ASM1 (optional)

Extra recovery tank

Optional. Tank with closing lid and 4 conductive wheels (Part# 223001-ASM1).



EXP1-20 DT (PRS-HEC) side view 1

Side view 1



EXP1-20 DT (PRS-HEC) side view 2

Side view 2

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