TIGER-VAC · II 1/2GD EX DB H IIB T4 GB / EX H TB IIIC T135°C DB IP65 -- INTERN: EX H IIC T6 GA / EX H IIIC T50°C DA -- LCIE 03 ATEX 6295 X -- IECEX LCI 10.0040X -- EN 17348 DT

Tiger-Vac CD-36L EX DT (MRP) ULPA WITH SS CART 1/2GD

The Tiger-Vac CD-36L EX DT (MRP) ULPA WITH SS CART 1/2GD is the fully combined-certified variant of the series -- marked II 1/2GD to EN 17348 DT, i.e. category 1/2 for both dust (internal Zone 20, external Zone 21) and gas (internal Zone 0, external Zone 1). Hardware is identical to the 2D variant on all physical points (chassis, tank, filters, cleaning system) -- only the certification scope and motor rating differentiate them. On 1/2GD the three-phase TEFC motor is 2.2 kW standard (versus 1.5 kW on 2D) to ensure robust performance under continuous duty in the stricter zones. Manual Reverse Purge (MRP) cleans the static-dissipative filter cartridge without opening the machine, the ULPA U15 final filter is ISO Class 4 (former Class 10) compatible, and the entire housing is SS304 / IP65. Typically used where the vacuum is tightly coupled to process equipment that itself maintains Zone 0/20 internally (reactors, mixers, tablet presses with active ventilation) in pharma and chemical process production.

APPLICATIONS

- Close-coupled process extraction on reactors and mixers where Zone 0/20 is maintained internally
- Pharmaceutical solid-form production (tablet presses, granulation equipment) in Zone 1/21
- Chemical process plants where gas and dust atmospheres occur simultaneously
- Cleanrooms ISO Class 4 (former Class 10) with combined ATEX risk
- Mobile applications requiring full 1/2GD coverage without switching to the stationary CD-230V

Technical specifications

ATEX marking	II 1/2GD Ex db h IIB T4 Gb / Ex h tb IIIC T135°C Db IP65 -- Intern: Ex h IIC T6 Ga / Ex h IIIC T50°C Da -- LCIE 03 ATEX 6295 X -- IECEx LCI 10.0040X -- EN 17348 DT
Internal / external zone	20 / 21
Motor type	3-faset TEFC-motor (standard), eksplosionssikret (Ex db h IIB T4 Gb / Ex h tb IIIC T135°C Db), 2,2 kW / 4,8 A, 400 V / 50 Hz
Airflow	212 m³/h
Vacuum	249 mbar (2540 mmH_2O)
Container	36 L
Sound pressure	72 dB(A)
Filter class	H class
Filter type	ULPA U15 (EN 1822, 99,999 % @ 0,12 µm MPPS / 99,9995 % @ 0,18 µm IEST-RP-CC001), part 211027, aerosol-leak-testet
Primary filter	Statisk ledende aluminized spun bond polyester reverse-purge patron (214181A), 16" x 3,63" ID x 7,932" OD
Cleaning system	Manual Reverse Purge (MRP) med statisk ledende reverse-purge patron -- manuel omvending af luftstroemmen uden aabning
Collection system	Detachable container
Material	AISI 304 rustfri staal
IP class	IP65
Power	2.2 kW
Current	4.8 A
Voltage	400 V / 50 Hz / 3~ (standard) -- 230 V / 50 Hz / 1~ option
Inlet	Diameter 50 mm
Dimensions (L x W x H)	780 x 560 x 1780 mm
Weight	99 kg

Questions and answers

What does II 1/2GD mean, and how is it different from II 2D?

II 1/2GD means the unit is category 1 internally and category 2 externally -- for both gas (G) and dust (D). In practice: the inside of the vacuum (filter chamber, suction hose, tank) may be exposed to Zone 0 for gas or Zone 20 for dust, where explosive atmospheres are continuously or long-term present. The surrounding environment may be Zone 1 for gas or Zone 21 for dust, where explosive atmospheres occur occasionally under normal operation. This makes the model suitable for piped recovery from process equipment that itself maintains Zone 0/20 internally (reactors, tablet presses with active ventilation). II 2D is the reduced certification without internal Zone 20 and without gas coverage -- suited for pure Zone 21 dust environments where the process itself does not generate an explosive atmosphere inside the vacuum.

Why is the three-phase motor 2.2 kW on 1/2GD but only 1.5 kW on 2D?

Because the continuous-duty requirements in the 1/2GD zones are stricter than in Zone 21 dust alone. The higher 2.2 kW rating provides substantial reserve at high vacuum over long periods without overheating, important when the machine is expected to run continuously on process extraction. On the 2D variant, where the duty profile is often more intermittent (cleaning tasks and batch operation), 1.5 kW is sufficient. Performance in m3/h and mmH2O is the same on both -- it is the motor margin that differentiates them.

How does the operator perform an MRP cleaning?

MRP is manual, not automatic. The operator shuts down suction, activates the cleaning lever on the side of the filter housing (typically 3-5 strokes back and forth), which reverses airflow through the reverse-purge cartridge and shakes dust down into the detachable tank. The procedure takes under a minute and is usually performed after each shift or when vacuum drops. Because it is manual, there is no automatic timer and no electronic valves to certify -- this keeps ATEX safety simple and maintenance low. Note that the downstream ULPA U15 final filter is not cleaned by MRP -- it must be replaced when restricted (typically annually under normal duty).

Why not just use CD-230V EX MRPFT HEPA for all 1/2GD tasks?

The CD-230V EX MRPFT HEPA is stationary, 50 L tank and HEPA H14 final filter (not ULPA). It is optimised for permanent installation on process equipment and has Manual Reverse Purge with Filter Tubes (MRPFT, a bag-less variant of cleaning with filter tubes). The CD-36L EX DT MRP ULPA 1/2GD, in contrast, is mobile on an SS304 cart with conductive wheels and has a detachable tank (DT) -- ideal where the operator must move the machine between process equipment or perform mobile cleaning tasks in 1/2GD zones. ULPA filtration is one step up from HEPA and is required in ISO Class 4 cleanrooms. Choose CD-230V if the task is permanent stationary with large volume; choose CD-36L MRP ULPA 1/2GD if mobility and cleanroom compatibility are important.

Contact and advisory

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