

Safety at indoor firing ranges



What are the requirements here?

Indoor firing ranges can be cleaned by brushing, washing or vacuuming. The most efficient and cost-effective method is to vacuum up propellant powder residues using a suitable industrial vacuum cleaner.

Using an unsuitable vacuum cleaner in these circumstances can be dangerous. Vacuumed propellant powder residues can ignite causing fires and explosions.

Only regular cleaning can prevent serious accidents.

RUWAC industrial vacuum cleaners offer the following safety features:

- ❑ Safe separation to dust class M / H (EN 60 335-2-69 App. AA) depending on the characteristics of the dust that is vacuumed up. The exhaust air can be returned to the surrounding environment.
- ❑ The leakage resistance for electrostatic charges is less than 10^6 Ohm. (IFA* tested). Electrostatic charges are safely suppressed.
- ❑ The body of the vacuum cleaner is made of glass-fibre reinforced plastic (GRP) which conducts static electricity. Friction and impact by vacuumed particles generate electrical charges which are safely suppressed without any sparks.
- ❑ The three-phase AC motor, the motor protection switch and the electrical equipment are mounted outside the vacuum air flow. They are mounted on the outside of the vacuum cleaner and offer IP65 protection class protection against dust and sprayed water.
- ❑ Large signs warn that hot items such as lighted cigarette ends and hot welding spatter must not be vacuumed up by the unit.
- ❑ The inside surfaces of the vacuum unit and the vacuum hose are smooth to prevent any build up of dust deposits. During vacuuming, the air speed inside the hose (50 mm Ø) ranges between a minimum of 20 m/sec and a maximum of 35 m/sec.
- ❑ The motor and the blower bearings are dustproof.



Industrial vacuum cleaner type DS 1220, dust class H

- ⇒ Ruwac - industrial vacuum cleaners are **ignition source-free**. This ensures compliance with the IFA* 1 zone 22 (formerly B1) test certification.
- ⇒ Ruwac - industrial vacuum cleaners are **safe**. Explosion tests by the BICT* have proved that 150 g of propellant dust residues or 125 g of black powder residues in a RUWAC vacuum cleaner do not constitute an acute hazard.
- ⇒ Ruwac - industrial vacuum cleaners are **good value for money**. Vacuuming is five to ten times quicker than brushing or washing.
- ⇒ No dust clouds. No dirty water!
Saves much valuable time. **It pays for itself..**

Dust separation specification:

Dust class	Suitable for dry non-flammable dusts which are hazardous to health	Abscheidegrad (%)
M	with WEL > 0.1 [mgm ⁻³]	99,9
H	with WEL ≥ 0,1 [mgm ⁻³]	99,995

Type tested industrial vacuum cleaner, ignition-source-free type (B1 / B22)

1) IFA = Institute für Health and Safety



*2) BICT = Federal Government Chemical-Technical Research Institute at the Federal Office for Weapons Technology and Procurement

