



To a clean, safe and reliable network, it is necessary to clean the tracks on a regular basis. For over 50 years, **NEU RAILWAYS** has been supplying the **VAKTRAK®** cleaning train across the world. It is based on the patented design of a combined blowing/suction system. The **VAKTRAK®** is designed particularly for underground metro network but can also be adapted to railway or LRV networks. Daily use will increase safety and hygiene in the tunnels. It will also protect equipment and rolling stock.

CONCEPT

A **NEU VAKTRAK®** is mainly composed of :

- **Two Filter Cars**, each equipped with a maintenance-free filter, which has a large filtering surface. We can guarantee a dust emission level of less than **1 mg/m³** thanks to a filtration efficiency of **95 %** for airborne particles of greater than **0.1 µm** in size. The Filter Cars are fitted with a preseparator at the inlet (for the largest waste) and with storage bins located in the wagon frame (for the other waste). The waste and dust are then discharged by gravity into containers located in pits.
- **One Central Suction Car** is the main equipment of the cleaning process. Blowing is done across the track with one or several fans. The suction catches the cloud of dust and collects the waste disturbed by the blowing. Blowing and suction flows are adjusted and directed to ensure the optimum cleaning efficiency whatever the track configuration (track bed, under platforms, trenches)
- **One or two Traction Units** are mainly composed of a traction engine (diesel or electric), a power unit for the cleaning process (diesel or electric), a dashboard for driving the train and a control panel for the cleaning process (touch screen, video monitoring, fire control and extinguishing system). The railway characteristics are adapted to each network's requirements (ramp, speed, brakes, etc.)





CHARACTERISTICS

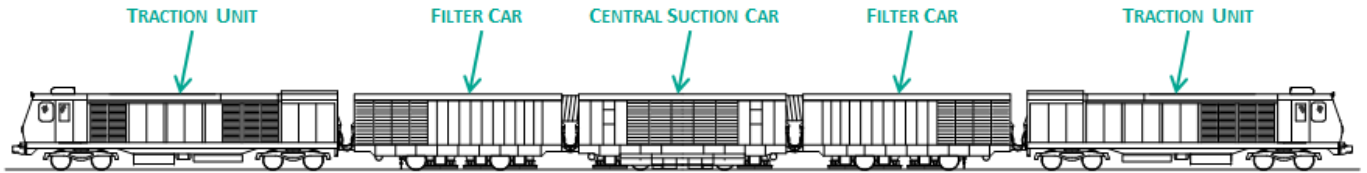
- ✓ Cleaning in **station**, in **tunnel**, on both sides of the track, under the platform, in trenches, on ballast or on concrete,
- ✓ **Guaranteed efficiency** of the hood (always 30mm above the track), whatever the configuration and obstacles (turning points, track sensors, etc.),
- ✓ Waste **storage bin capacity** provides significant operational independence (up to one week for 15m³ of storage),
- ✓ Diesel or electric **traction** available,
- ✓ Average working **speed**: 4km/h in station and 10km/h over 2.5m width in a single pass between stations,
- ✓ **Railway characteristics** adapted to the requirements of each network,
- ✓ **Efficient** on all types of rubbish and waste (cigarette ends, paper, boxes, cardboard) and dust particles (metal or organic),
- ✓ Possible **operation** with the 3rd rail live,
- ✓ **Adjustable cleaning heads** (patented) for cleaning under platform up to 2.5m from track center line,
- ✓ **Train** ready for operation as soon as it is on the track,
- ✓ **No manual operation** requiring staff on track,
- ✓ **Reduction** of maintenance costs,
- ✓ **Available option**: wall cleaning.

NEU RAILWAYS REFERENCES

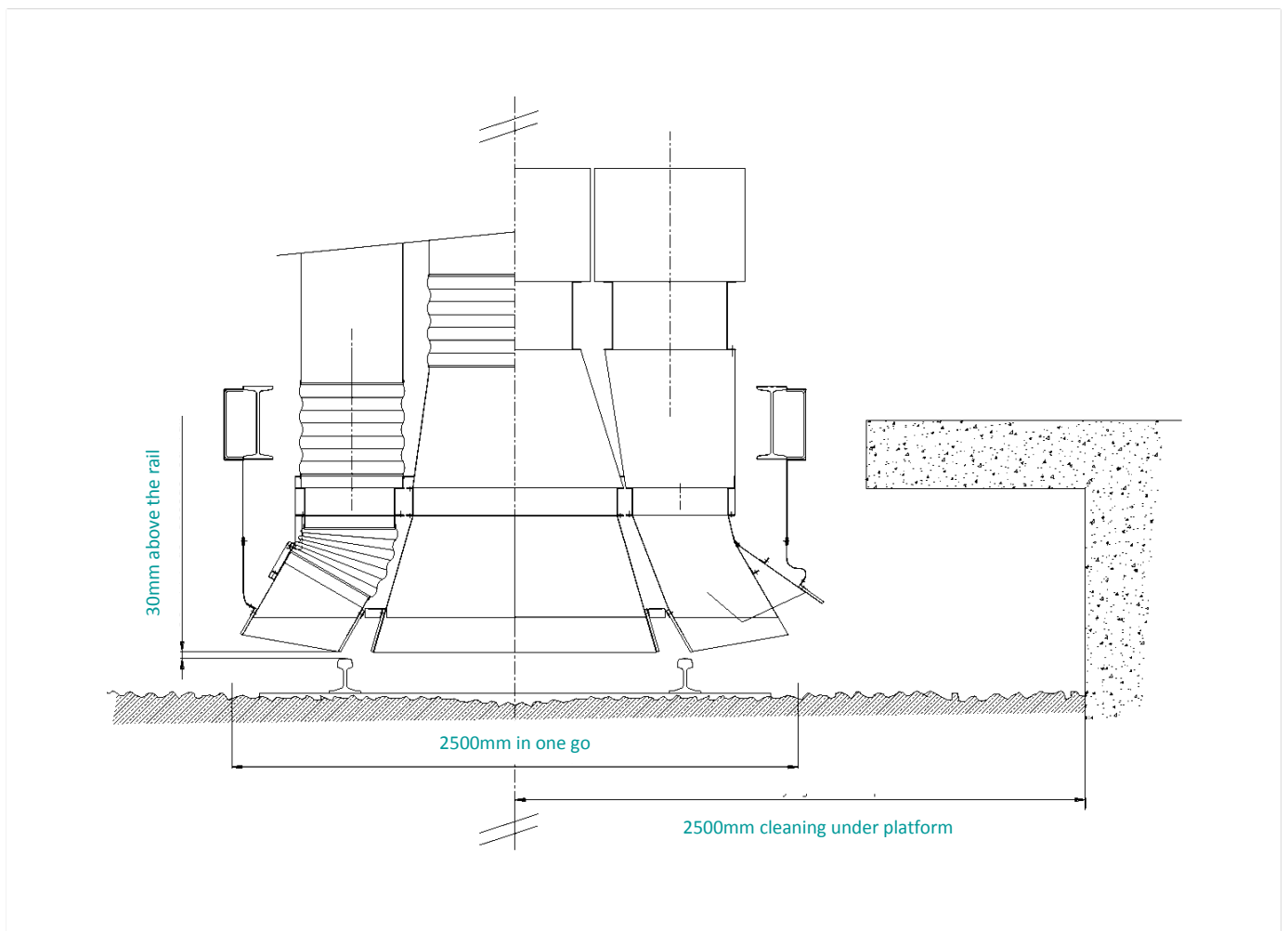
Among the largest metropolitan networks :

- Montreal,
- Lyon,
- Paris (3 trains),
- Seoul,
- Milan,
- Rome,
- London,
- New York (2 trains + 3 on-going trains),
- Santiago,
- Munich,
- Brussels.

VAKTRAK® TRACK CLEANING TRAIN – PRINCIPLE DIAGRAM



VAKTRAK® TRACK CLEANING TRAIN – CLEANING PRINCIPLE



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