

USER & INSTALLATION MANUAL

Green Line cabinets

Paint-mixing and washing cabinets



Subject to printing and translation errors and technical changes. Stated values are for guidance only and may vary with design and use.

ABOUT THIS MANUAL

This user and installation manual is common to the paint-mixing and washing cabinets in the Green Line range. Read it carefully before installation and use. Depending on the cabinet's configuration, additional manuals may be included (see **Appendices** below). This manual applies to the following products:

- Green Line Kombi
- Green Line Clean
- Green Line Systemtvätt
- Green Line Mix
- Green Line Midimix
- Green Line Miljö
- Green Line Store
- Green Line Tiro

CONTENTS

1	Goods receipt	3
2	Fitting the parts & gun kit	4
3	Care instructions	6
4	Technical data – Green Line cabinets	7
5	Installing ventilation for Green Line cabinets	8
6	Green Line Systemtvätt	10
7	Checklist	13

APPENDICES – ACCOMPANYING DOCUMENTS

- **Drester 1000** – Water wash (supplied with Green Line Systemtvätt)
- **Drester 8000** – Gun wash (supplied with Green Line Systemtvätt)

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1 Goods receipt

On delivery, immediately check for any damage that may have occurred during transport. If you find any, it must be inspected together with the carrier immediately and noted on the consignment note. Then contact the seller as soon as possible.

- Use a pallet truck to move the cabinet – the plinth is designed for this.
- The cabinet must be placed straight and stable. Adjust with small metal shims if needed to get the cabinet fully level. Check that the cabinet doors are aligned with each other.
- Most cabinets are 225 cm tall. If door openings and beams make the cabinets difficult to get into place, there are a few options:
 - Lay the cabinet on its side and carry it into the room where it is to stand. Remember that there must be enough height inside the destination room to tip the cabinet upright again (between 2.4–3 m ceiling height depending on how it is tipped up).
 - Remove the light-fitting box.
 - Remove both the light-fitting box and the supply-air unit in the cabinet front. With both parts the cabinet height is 2250 mm; without them the height is approx. 2090 mm.
 - You can also temporarily remove the door frame to the paint room.
- To ease the connection of ventilation, a ceiling height of at least 2.70 m is recommended for new builds.

Read the instructions carefully before installation and use. Depending on the cabinet's configuration, additional manuals may be included, such as the **Drester 1000 Water wash** and **Drester 8000 Gun wash** (both supplied with the Systemtvätt).

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2 Fitting the parts

- 1 Remove the metal cover for the **fluorescent light fitting** and fit it. (The fitting is connected to the surrounding general lighting. No switch for the fitting is supplied.) NOTE that fitting the luminaire is only done from the top of the cabinet – this is so that solvent vapours cannot reach the fitting directly from below. The fitting is separated from the cabinet by a glass pane and a special glass strip. Replacing the tubes is also done from the top. Therefore plan the ventilation ducts so that they do not block future tube changes.
- 2 Fit the supplied **handles** for the doors.
- 3 **EARTHING:** At the top of the cabinet front there are earth screws. The cabinets must be interconnected with an earthing cable and connected to an earth point.
- 4 **Drip strip:** A drip strip is supplied with all cabinets (except Midimix and Store). It is found at the very back of the lower cabinets. Take it out and clip it onto the front of the workbench. The drip strip protects the lower doors from paint spillage and keeps them clean longer.
- 5 **Anti-tip fixing:** The Tiro storage cabinet must be fixed to a rear wall or to an adjacent cabinet to prevent it tipping forward.
- 6 On the right end panel of the cabinet there are two holes for the **air regulator**. Fit it with the supplied M6 screw and nut. The pressure for the wash gun should be at least 1.5 bar and no higher than 3 bar.
- 7 The wash gun's black **hose** is to be connected to the purple hose and the copper pipe that are fitted from inside the cabinet and out.
- 8 The **copper pipe** on the inside of the cabinet should be placed in e.g. a 5-litre thinner can. This way there is always clean thinner in the wash gun.
- 9 Place empty 5-litre cans with funnels under the wash sink. Leftover paint residue is poured there.
- 10 On the right end panel of the cabinet, approx. 150 cm from the floor, a **bracket** (sheet-metal angle) is to be placed on the inside or outside of the end panel. The bracket is in the bag with the handles. The coupling body for the hose used to connect the customer's own spray gun for spraying in the cabinet is placed there.

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FITTING THE GUN KIT – ART. 2-9017B

The following applies only to the Clean, Kombi and Systemtvätt cabinets.

The gun kit connects a spray gun to the cabinet with clean thinner from a can. Connect the hoses as follows:

- 1 Thread the coupling onto the **black hose** that comes from the double hoses (black/blue) and pass the coupling through the hole in the wall.
- 2 The **green hose** is connected to compressed air.
- 3 On the inside: connect the loose black hose to the fitting you passed through the wall and tighten. The **copper pipe** is threaded onto the other end of the hose and fed down into a thinner can. This way there is always clean thinner in the gun.



Outside (steps 1–2): black hose through the wall, green hose to compressed air. Red marking = coupling.



Inside (step 3): black hose connected to the fitting, copper pipe fed down into the thinner can.

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3 Care instructions

VENTILATION

The lower section of the cabinet has good exhaust ventilation, partly through a large intake opening beneath the doors and because the doors have “gills”. This effectively ventilates away solvents from cans and containers in this space. Both the workbench and the lower shelf have a spill edge in accordance with the Fire and Rescue Service's requirements.

PROTECTING WORK SURFACES

The best protection for benches and work surfaces is **Colad Stick & Go** (article no. 7-676025) – a thick, white, self-adhesive film of 220 microns that is resistant to solvents and paint products. No adhesive residue remains when the film is removed.

WASH SINK

The wash sink under the lid on the bench holds 12 litres in its larger compartment. Washed parts such as nozzles etc. can be placed on the sloping surface under the lid to dry.

CHANGING THE THINNER

The interval for changing the thinner varies with the degree of contamination. A rule of thumb is that the thinner must be so clean that a white cloth dipped in the liquid is only slightly discoloured. We recommend changing the thinner **2–4 times per month**.

PAINT TRAPS – SPRAY STOP CASSETTE

A cassette with a paint trap is placed above the wash sink, in front of the perforated double plate. All paint and thinner is sprayed against this filter. The filter therefore quickly becomes clogged and expands to up to double its thickness, whereupon the paint mist takes other routes, e.g. towards the cabinet wall. Change it regularly – **1–2 times a month** or as needed. The filter can be ordered either in a roll or pre-cut.

SPRAY-GUN HOLDERS

- Spray guns with a suction cup are placed on a bar above the wash sink.
- Spray guns with an overhead cup are placed in holders on the cabinet's inner end panels.
- Additional holders can be purchased from your supplier.

PAINT RESIDUE

Paint residue should be poured into e.g. a 5-litre can with a funnel inside the right-hand door. Pour 2K products into a separate container so that they cure. Pour residue from base-metallic paints into another container – these can be distilled.

With the Perpetuum Solventum system: never pump this paint residue; pour it by hand directly into the distiller.

PAINT TRAP IN THE CEILING

In the cabinet there is a paint trap placed horizontally along the entire width of the cabinet. It should be changed **once a month** or as needed. The paint trap cleans the air of spray mist inside the duct, as well as the air supplied from the workshop. The position of the extraction outlet increases the airflow across the face zone, which greatly contributes to an improved working environment. Check at regular intervals that the perforated plate of the supply-air box is clean. If needed, a duct filter can be fitted on the intake before the supply fan.

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4 Technical data – Green Line cabinets

Green Line	Width (mm)	Height (mm)	Depth (mm)	Exhaust air req. (m³/h)	Exhaust conn. (mm)	Supply air req. (m³/h)	Supply conn. (mm)	Luminaire
Clean 100R	1000	2250	800	1900	1×250	350	1×160	2×18 W
Kombi 150R	1500	2250	800	2900	2×250	525	1×160	2×18 W
Kombi 195R	1950	2250	800	4100	2×250	700	2×160	2×36 W
Systemtvätt 195	1950	2250	800	4100	2×250	700	2×160	2×36 W
Midimix 195	1950	1700	795	3600	2×200	–	–	2×36 W
Mix 100	1000	2250	570	900	2×160	350	1×160	2×18 W
Mix 150	1500	2250	570	1150	3×160	525	1×160	2×18 W
Mix 195	1950	2250	570	1750	3×160	700	2×160	2×36 W
Miljö 100	1000	2250	800	750	1×160	350	1×160	2×18 W
Miljö 100S	1000	2225	1200	750	1×160	350	1×160	2×18 W
Tiro	400	2120	570	750	1×160	–	–	–
Store 100	1000	2120	570	200–500	2×100	–	–	–
Store 150	1500	2120	570	200–500	3×100	–	–	–
Store 195	1950	2120	570	200–500	4×100	–	–	–

The ventilation values are guidance figures only and are based on the information available when this manual is written. Always follow applicable legal requirements and the area classification plan drawn up. Exhaust and supply air requirements are the minimum recommended volumes and are stated in m³/h at the connection points. The length, dimension and number of bends of the ventilation ducts can affect the capacity requirement of the fan installation; dirty filters increase the requirement considerably. For supply air we recommend 350 m³/h per metre of supply-air box to provide sufficient air when working in the cabinet. NOTE that the above supply-air volumes give a ventilation deficit, which must be provided from the surrounding premises.

EXHAUST AIR VELOCITY

- In cabinets where solvents are sprayed, the air velocity must be **0.5 m/s** across the entire opening.
- In cabinets where only paint mixing takes place, we recommend **0.2 m/s**.
- The pressure drop in the exhaust filter cassettes is 5 mm w.g.

FILTER, CEILING FILTER, ATEX & WARRANTY

Spray Stop Cassette filter: The washing cabinets Systemtvätt, Kombi and Clean have a filter for the paint trap in a metal cassette – “Spray Stop Cassette” – measuring 530 × 450 × 25 mm. The filter is available ready-made or can be cut from paint-trap filter of 530 × 450 mm.

Ceiling filter for washing cabinets: Clean 100R 950 × 350 mm · Kombi 150R 1420 × 350 mm · Kombi 195R 1880 × 350 mm · Systemtvätt 195 1880 × 350 mm.

ATEX and electrical classification: For equipment to be placed in an Ex (hazardous) area, we refer to Classification Handbook SEK 426 ed. 3, appendix NE, and the ATEX Directive.

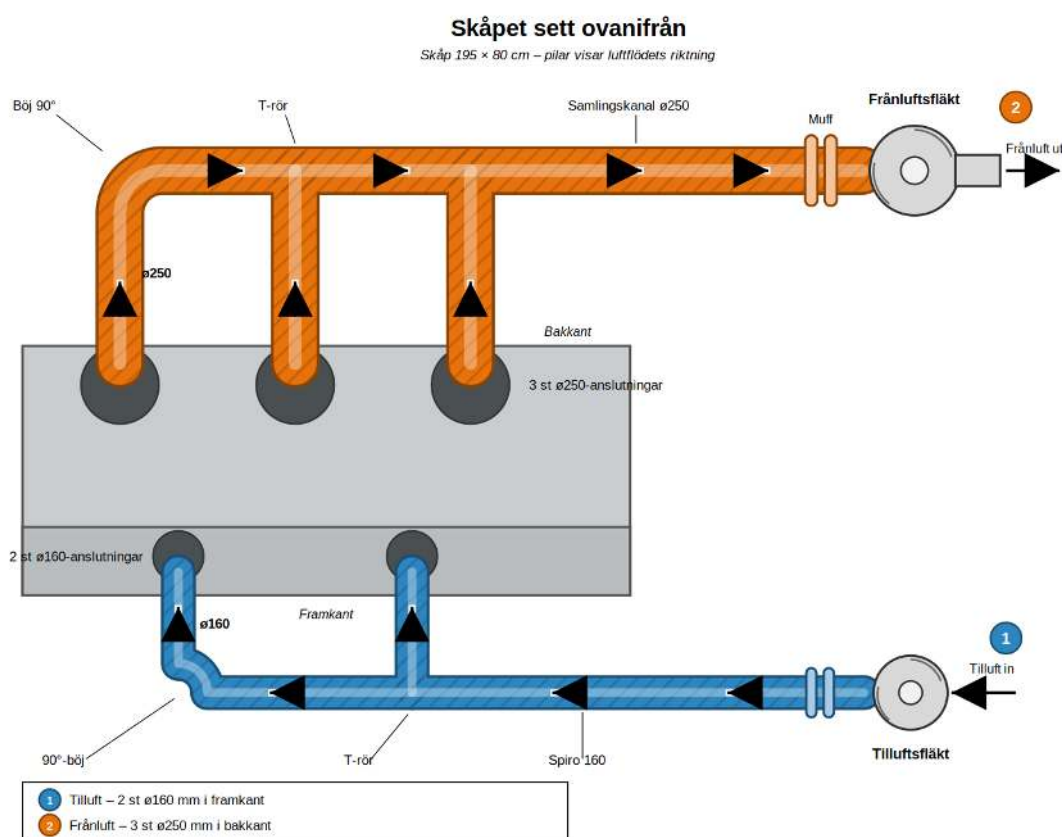
Warranty: Green Line cabinets have a 1-year warranty against manufacturing defects. NOTE that the above dimensions and volumes may change without notice.

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5 Installing ventilation for Green Line cabinets

Here is an example of how the ventilation can be installed. Every installation is adapted to the premises' conditions and the number of units. Installation directives are to be provided from the user/owner to the installer. Each unit's ventilation requirement is stated in the technical specification for the respective cabinet.

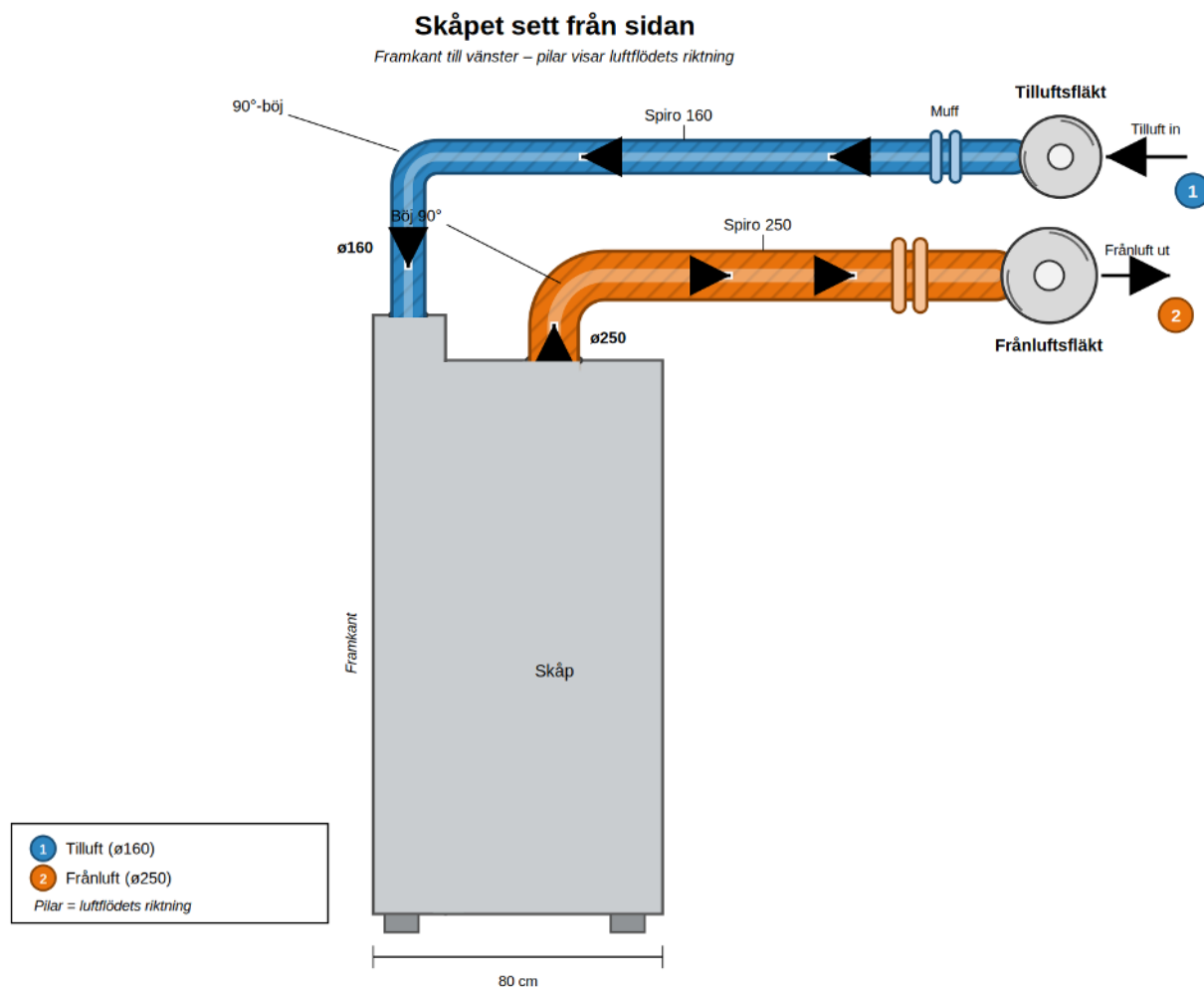
- Place the fans in a suitable location. The exhaust fan must also have a duct for the exhaust air out through the wall or roof.
- When interconnecting several cabinets, the 90° bends can be replaced with a T-piece over each spigot, interconnected by a duct of suitable dimension. The final T-piece can be closed with a purpose-made cap.
- When connecting several cabinets to the same duct, dampers must be fitted in the ducts to distribute the air correctly.
- Silencers are recommended for both the supply and exhaust fans.



Example of ventilation installation – the cabinet seen from above. Exhaust air ø250 at the rear, supply air ø160 at the front.

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INSTALLING VENTILATION – CONT.



Example of ventilation installation – the cabinet seen from the side. The arrows show the direction of airflow.

How to read the drawings: 1 = supply air (blue, ø160) supplied at the cabinet's front edge, 2 = exhaust air (orange, ø250) extracted at the rear. The number of connections and dimensions per model are shown in the **Technical data** table (page 7). The coupling and spiral duct are dimensioned according to the chosen duct routing; bends and T-pieces as in the examples above.

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6 Green Line Systemtvätt

Green Line Systemtvätt is a washing cabinet with three washes in one:

- A manual solvent wash sink
- An automatic wash – **Drester 8000**
- A water wash with coagulation – **Drester 1000**

A person within the company should be appointed **responsible supervisor** for the Systemtvätt, including the care and maintenance of the pumps and ongoing coagulation.

CONNECTIONS

The Systemtvätt must be supplied with compressed air from both the left and the right. Connect compressed air on the right side to the automatic gun wash and the manual wash gun. Also connect compressed air on the left side to the water wash. Clean water and a drain are also connected to the water wash on the left side of the cabinet.

THE AUTOMATIC GUN WASH – DRESTER 8000

The automatic gun wash (Drester 8000) is controlled by three pedals at the bottom of the cabinet:

- 1 The right pedal starts the wash, which rinses the gun with circulating thinner for approx. 2 min.
- 2 The middle pedal is for clean rinsing with fresh thinner and rinses for as long as the pedal is held down.
- 3 The left pedal is used when the lid is open; under the edge is a nozzle that blows air mixed with thinner.

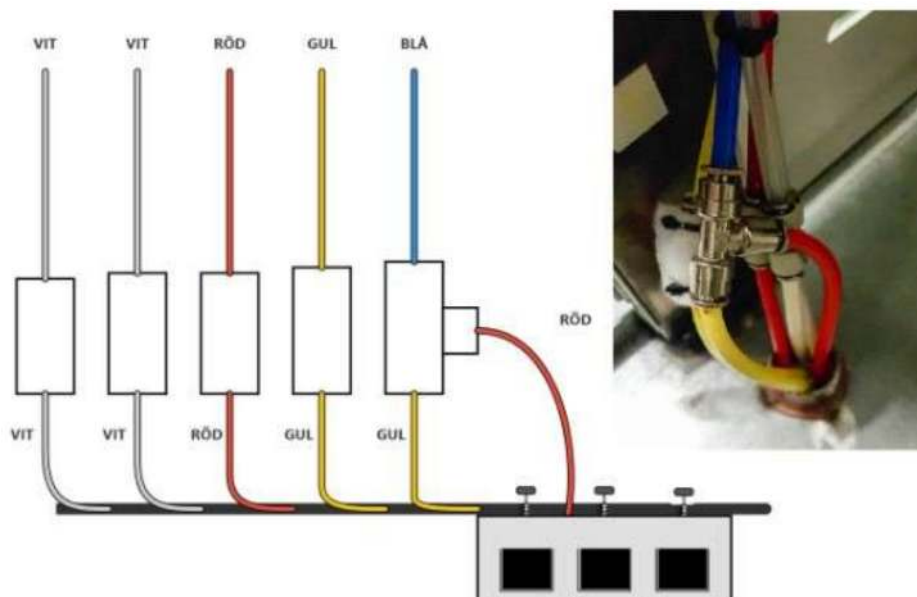
See also the separate manual for the **Drester 8000** supplied with the cabinet.

In the cabinet under the wash there are two cans: one for **clean thinner** and one for **recirculating thinner**. Fill approx. 4 litres into the container for circulating thinner and then approx. 8 litres into the one for clean rinsing. Following this reduces the risk of overfilling.

CONNECTING THE PEDALS – SYSTEMTVÄTT ONLY (2-3195R2HDA)

Connect the pedals according to the diagram below. Let the hose colours (white, red, yellow, blue) follow the markings at each valve and pedal unit.

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Connection diagram for the pedals with colour-coded hoses. The photo on the right shows the completed connection.

THE WATER WASH – DRESTER 1000

The water wash has two knobs plus a brush and a wash gun.

- 1 The large knob selects the function.
- 2 The small knob starts the pump.
- 3 The brush uses water from the container with the coagulated water.
- 4 The gun is used for clean rinsing and must be connected to clean water.

COAGULATION IN THE WATER WASH

When the water in the wash sink reaches the perforated plate, it is time to coagulate.

- 1 Lift out the perforated plate.
- 2 Turn the large knob to the bubbles position (stir with a stick or similar if you like).
- 3 Under the workbench: lift the hose for recirculating water out of the container. (If the hose is not lifted, it draws in water instead of air, and additional water is then pumped in during the coagulation process.)
- 4 Start the pump.
- 5 Sprinkle in approx. 1–2 dl of coagulant a little at a time.
- 6 After approx. 5 min. you can see that the water and paint residue have separated. Stop the pump and drain the water into the filter container.
- 7 When the container under the wash sink is full, turn the knob to the drain symbol and pump the water to a can or a drain (in accordance with local regulations).
- 8 Empty the thin filter of paint residue and send the residue for destruction, or dispose of it (in accordance with local regulations).

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TROUBLESHOOTING – WATER WASH

If something does not work as intended, check the following:

- 1 Clean the hoses.
- 2 Check that there is no blockage in the Multivalve (located behind the knob).
- 3 Check that all hoses are intact and that air is not being drawn in instead of water.
- 4 If the wash performance is poor, use warm water instead of cold.
- 5 See more information in the manual for the **Drester 1000** water wash (supplied with the cabinet).

TIP – HEDSON PUMP PLAYING UP

The pump normally lasts a long time on these washes and is rarely worn out. If it does not start, try the following in order:

- First check that the hoses are not blocked anywhere.
- Manually fill the hose that goes into the pump with a little thinner.
- Blow gently with compressed air into the hose while starting the pump – this draws solvent into the pump and it usually starts.
- Then run clean thinner around in a cycle for approx. 5–10 minutes so that any small particles are flushed out. The pump usually becomes like new again.

If this does not help, the pump may need to be removed, taken apart and cleaned.

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7 Checklist

Mix, Kombi, Clean and Systemtvätt can be installed either as fume cabinets or as ventilated workbenches. Depending on the installation type, different requirements may apply. Requirements may also change over time – it is therefore important, in connection with the annual review, to also ensure that the regulations are current.

Review carried out by: _____

Date of review: _____

Safety officer: _____

Has the area classification plan changed? _____ ☐ Yes ☐ No

NUMBER OF CABINETS / TYPE

Mix 100/150/195 (flat bench): _____

Kombi 150/195 (with 1 wash basin): _____

Systemtvätt (2–3 washes): _____

Miljö 100 / 100S: _____

Tiro (pull-out): _____

Store 100/150/195: _____

INSPECTION

Are control measurements of ventilation & fume cabinets carried out at least once a year? ☐ Yes ☐ No

Is there a control system for ventilation? ☐ Yes ☐ No

Is there an alarm in the control system? ☐ Yes ☐ No

Any built-in washes – do they work as they should (Kombi, System, Clean)? ☐ Yes ☐ No

Have all hoses been checked for leakage and wear? ☐ Yes ☐ No

Do the light fittings work as they should? ☐ Yes ☐ No

Has the ceiling filter been changed? ☐ Yes ☐ No

Has the paint-trap filter been changed? ☐ Yes ☐ No

Are rules for handling hazardous substances documented? ☐ Yes ☐ No

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ACTIONS

Action type: **1** = Shutdown · **2** = Rectify as soon as possible · **3** = When convenient / before next inspection

Type	Activity

Date

Signature

ABOUT INSPECTION

Information at the creation of this checklist (2011-03-18): Rules on supervision and inspection of fume cabinets are defined in the Swedish Work Environment Authority's regulations on the design of workplaces (AFS 2009:2), sections 25 and 28. For fume cabinets, the average velocity across the working opening of the hatch must be at least 0.5 m/s (0.2 m/s where only mixing takes place). There is currently no requirement for inspection, but we nevertheless recommend including all paint-mixing/washing cabinets in the annual inspection. However, it is the employer's responsibility to check that the product functions as intended. Section 28 states that a fume cabinet's ventilation, including any control systems, must be checked at least once a year to ensure it works as intended. Suitable measurement methods are found in the standard SS-EN 14175-4 (Swedish Standards Institute).

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