

Clemas & Co Ltd

**Industrial Cleaning Equipment
Sales – Hire - Service**

CAV 15 - 45

Vacuum

Operator Manual



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IMPORTANT USER INFORMATION

It is most important that this instruction book should be retained with this appliance for future reference. Should this appliance be sold or transferred to another user, always ensure that this book is supplied with this appliance in order that the user can be acquainted with the functioning of this appliance and the relevant warnings. These warnings are provided in the interest of safety. You must read them carefully before installing or using this appliance.

It is dangerous to alter the specification or modify this appliance in any way.

This appliance is a Type H Dry Pick-Up Compressed Air Vacuum Cleaner and is designed for use in five different environments:

- 1) To pick up non-explosive dust and debris in an unzoned atmosphere (no risk of static spark or explosion).
- 2) To pick up non-explosive dust and debris in a Zone 1 atmosphere (Zone 1 atmosphere is where flammable gases, vapours, mists or air/dust mixtures are likely to occur).
- 3) To pick up dust or debris that generates static and/or may also explode if ignited by a static spark (Dust Zone 21) but in an unzoned atmosphere.
- 4) To pick up an explosive dust or debris in a Zone 1 atmosphere.
- 5) To pick up hazardous dust or debris that may form an explosive dust atmosphere in a Zone 1 atmosphere.

CAUTION: This appliance is not suitable for picking up radioactive dusts. See BS EN 60335-2-69 Annex AA32.201.

CAUTION: This appliance is designed for dry use only and should be used with care outdoors. It should not be stored outdoors.

WARNING: The air supply line has a special conductive lining to dissipate any static build up down to earth. The end piece you fit must be metal and your air supply pipe system must be earthed.

WARNING: Prior to putting the machine to use a risk assessment must be carried out by a suitably qualified person to ensure the suitability of the application.

WARNING: If your air supply line is damaged and needs replacing, it **MUST** be replaced by a conductive supply line available from Kerstar. Do not use any other air supply line.

WARNING: It is strongly advised that the earth path continuity between the pick-up nozzle and the earthed air supply system be checked by a competent person at regular intervals and documentary records be kept of these checks.

WARNING: When used in an explosive atmosphere or for picking up explosive dusts, the only plastic nozzles that can be used are the 38 x 300mm nozzle, the 38mm crevice tool or the 38mm dusting brush supplied with this appliance.

WARNING: When picking up swarf and similar metallic parts, the KAV must not be used to pick up potentially explosive dusts or be used in potentially explosive atmospheres.
Note: When rusty steel and aluminium items collide with sufficient energy it is possible to generate a spark.

WARNING: Only use accessories and spare parts approved by the manufacturer.

WARNING: When collecting dust or debris that may ignite or explode, empty the cleaner after every use.

Do not use the appliance for dry vacuuming with the filters and/or paper bag removed.

Never use this appliance without the full filtration system fitted.

Under no circumstances should you attempt to repair the appliance yourself. Repairs undertaken by unauthorised or inexperienced persons may cause injury and/or serious malfunctioning.

This appliance must only be serviced by authorised Kerstar personnel and only genuine Kerstar spare parts should be used.

UNPACKING YOUR KAV VACUUM CLEANER

Unpack the carton and ensure that you have a complete set of accessories as listed below:

- | | |
|--|---|
| 1 KAV Compressed Air Powered Vacuum Cleaner | 2 38mm Stainless Steel Wands |
| 1 Anti-static air supply line, 5 metres long | 1 38 x 300mm Antistatic Floor/Carpet Nozzle |
| 10 Paper Bags to suit your model | 1 38mm Antistatic Crevice Tool |
| 1 Antistatic Filter Assembly | 1 38mm Antistatic Dusting Brush |
| 10 Self-adhesive Sealing Discs for paper bag | 1 Blue Type H Test Certificate |
| 1 38mm x 3m Antistatic Pick-Up Hose Assembly | 1 Yellow Earth Path Continuity Certificate |
| 1 38mm Stainless Steel Bent Hose End | |
- Optional extra:*
Tool Basket (KAV 30H & 45H only)

Models on a caddy (KAV 18, 30 & 45) are packed with the caddy handle removed for transport/packing purposes. Refit handle before use.

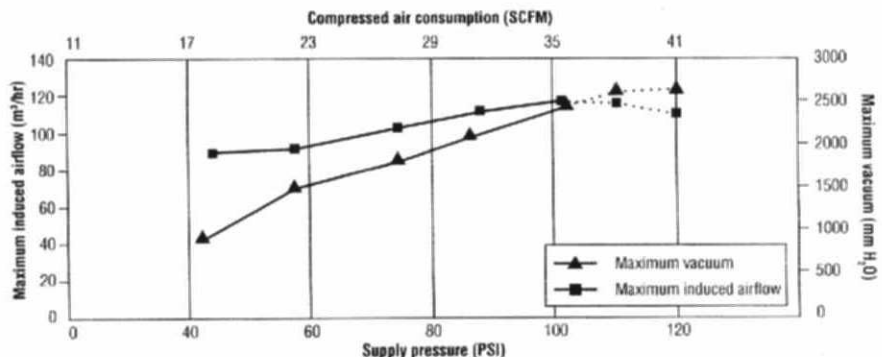
COMMISSIONING YOUR KAV VACUUM CLEANER

Attach the anti-static air supply line to the air inlet port on the control valve. Do not over-tighten the connection. Do not use any form of liquid thread locker or PTFE tape to seal the thread. The threaded end fitting has its own integral O ring seal. If you use liquid thread sealer or PTFE tape, you may create an insulated barrier so that any static build up cannot dissipate to earth down the air supply.

To the other end of the air supply line, fit a metal (conductive) fitting to suit your air outlet sockets. Make sure the pipework and outlet fittings of your air supply system is constructed entirely of metal pipes and fittings and is suitably earthed. Finally, using a 500 volt megohmmeter, measure the resistance between the body of the vacuum cleaner and the metal air supply pipe. The reading must be no more than 5 Megohm (5×10^6 Ohm).

The KAV range does not require the air supply to be dried, filtered or to have oil mist removed. It is advisable to use an air supply that can be regulated so that the performance of the unit can be adjusted to suit the operator. The performance is related to the air input. The more pressure/volume of air input, the more suction/induced airflow is generated. However, using excessive air input wastes compressed air, generates unnecessary noise, may cause implosion of the canister and/or **bursting of the paper bags/filters**.

PERFORMANCE/COMPRESSED AIR REQUIREMENTS



Note: Optimum performance is achieved at an air input pressure of 100psi

OPERATING INSTRUCTIONS

Connect the KAV to a suitable compressed air supply. Attach the antistatic hose assembly to the canister, connect the stainless steel bent hose end and wands. Choose and attach one of the antistatic nozzles supplied. To activate the KAV, turn the lever on the control valve through 90°. The performance of the vacuum cleaner can be controlled with the control valve, but it is advisable to fit a regulator and pressure gauge at the air outlet point of your compressed air supply. The maximum pressure must be no more than 100psi.

CARRYING & STORAGE

The assembled cleaner can be moved around by pulling the vacuum hose, using the flip/flop handle on the motor head or by means of the tubular handle (*models on caddy only*). **It must NOT be dragged around by means of the air supply hose.**

When not in use this vacuum cleaner should be disconnected from the compressed air supply. This vacuum cleaner should be stored indoors in a dry environment.

OPTIONAL EXTRA

Tool Basket – zinc plated tool basket to prevent a build up of static. It can be fitted by hanging from the two horizontal crossbars on the rear of the caddy. Suitable for models KAV 30H and KAV 45H only.

FILTRATION SYSTEM

This compressed air powered Type H vacuum cleaner is fitted with 3 stages of filtration on the negative pressure side of the air motor. That is, before the air motor, so that the air motor always receives clean filtered air.

1st Stage: K1 Disposable Paper Bag – KAV 15H
K3 Disposable Paper Bag – KAV 18H and KAV 20H
K4 Disposable Paper Bag – KAV 30H and KAV 45H

2nd Stage: Antistatic Cloth Filter Assembly

A conductive carbon impregnated needlefelt cloth filtration media attached to a conductive rubber sealing ring and supported by a conductive plastic rigid filter frame.

3rd Stage: Type H HEPA (High Efficiency Particulate Air) Cartridge Filter

Note: The HEPA cartridge filter fitted to models KAV 20, 30 & 45 Type H has a very large surface area compared to other models available and will therefore give improved performance and greatly increased filter life.

Note: The inner and outer metal mesh support and the conductive metal end caps of the HEPA cartridge filter are earthed to the body of the vacuum cleaner to dissipate any static build up in the cartridge filter.

WARNING

The appliance may contain dust hazardous to health. Emptying and maintenance operations including removal and renewal of dust collection bag must only be carried out by authorised personnel wearing suitable approved personal protection.

WARNING

Do not use the appliance unless the full filtration system is fitted – Type H cartridge, antistatic high efficiency cloth filter and paper bag. Failure to fit the complete system may cause premature clogging of the Type H cartridge and may also endanger health.

IMPORTANT

The vacuum unit is designed to collect hazardous dusts: Therefore any dust found within the machine or on its filters may be dangerous to your health. Always take precautions.

GUARANTEE


Kerstar products are guaranteed for 12 months against defective parts and workmanship. There are certain conditions that may invalidate this guarantee.

- This appliance must be correctly installed and used in accordance with these instructions.
- Servicing must be carried out by Kerstar authorised personnel only.
- The guarantee may be invalidated by unauthorised repair or modification to the appliance.

KERSTAR LIMITED may introduce modifications to their products from time to time and consequently the details given in this instruction book are subject to alteration without notice.

RATING PLATE

The rating plate gives the precise information about this product. A full explanation is given below.

- Name and address of manufacturer
- Manufacturers model or type number
- Year of manufacture, assembly or construction
- The **CE** mark
-  symbol. The distinctive community mark showing a product is suitable for use in a potentially explosive dust and/or gas atmosphere.
- II** – equipment group II (surface industries)
- 2** – Category 2 product
- G** – explosive gas, vapour or mist atmosphere (Zone 1)
- D** – explosive dust atmosphere (Zone 21)
- c** – constructional safety concept (applies to the mechanical parts of the vacuum cleaner)
- IIC 50°C (T6)** – **II** equipment group II (surface industries)
 - C** group II subdivision (suitable for all group II gases, vapours & mists)
 - 50°C** surface temperature for dust evaluation is less than 50°C
 - T6** surface temperature classification for gases, vapours and mists (less than 85°C)
- The serial no.
For example 05B 123 – made in February 2005 number 123
- X** – refer to instruction book for special operating or user information



LOSS OF SUCTION

If your cleaner loses suction power, first check that the hose and other accessories in use are not blocked. Then check that the filtration system is not blocked. The filtration system can be serviced as follows:

Paper bags – If full, replace (if burst, empty out canister)

Cloth Filter Assembly – This filter will become contaminated with dust during normal use and/or if the paper bag is holed or burst. The dust must be removed either by brushing off or by vacuuming with another Type H vacuum cleaner. It is advisable to use the spare filter supplied so that one filter can be used in the machine and then the machine itself can be used to vacuum the dust off the contaminated spare filter.

If any of the filters or paper bags are damaged or holed they must be replaced with new items.

EMPTYING AND DISPOSAL

When emptying always wear suitable approved personal protection. The paper bag should be carefully removed and sealed into a non-porous bag, e.g. a polythene bag. Airborne hazardous dust may be created during dust bag or filter changing. The person who carries out these operations should be provided with approved respiratory protective equipment and suitable protective clothing, and be clearly instructed in the hazards associated with the works and safety procedures to be followed. Portable equipment should preferably be taken away from occupied area for dust bag or filter changing.

DECONTAMINATION

For ease of maintenance we recommend that a stock of paper bags and a second stage filter should be held in stock at all times so that the appliance can be used to clean itself and also the spare antistatic filter. *(Note: Ten paper bags and a spare second stage antistatic filter assembly are supplied from new with this model).*

Always clean the outside of the machine before removing from a contaminated area or for storage, using the suction hose provided.

SERVICING & SPARES

Should your KERSTAR VACUUM CLEANER need any servicing, repair or spares please contact your nearest KERSTAR dealer or contact KERSTAR directly:

Tel: +44 (0)1604 760455

Fax: +44 (0)1604 701022

Please make a note of the model and serial number before contacting Kerstar.

Before attempting any servicing of this appliance, decontaminate as described above and make sure you are protected from any dust which may still be present on or around the machine or any dust which may have collected on internal components.

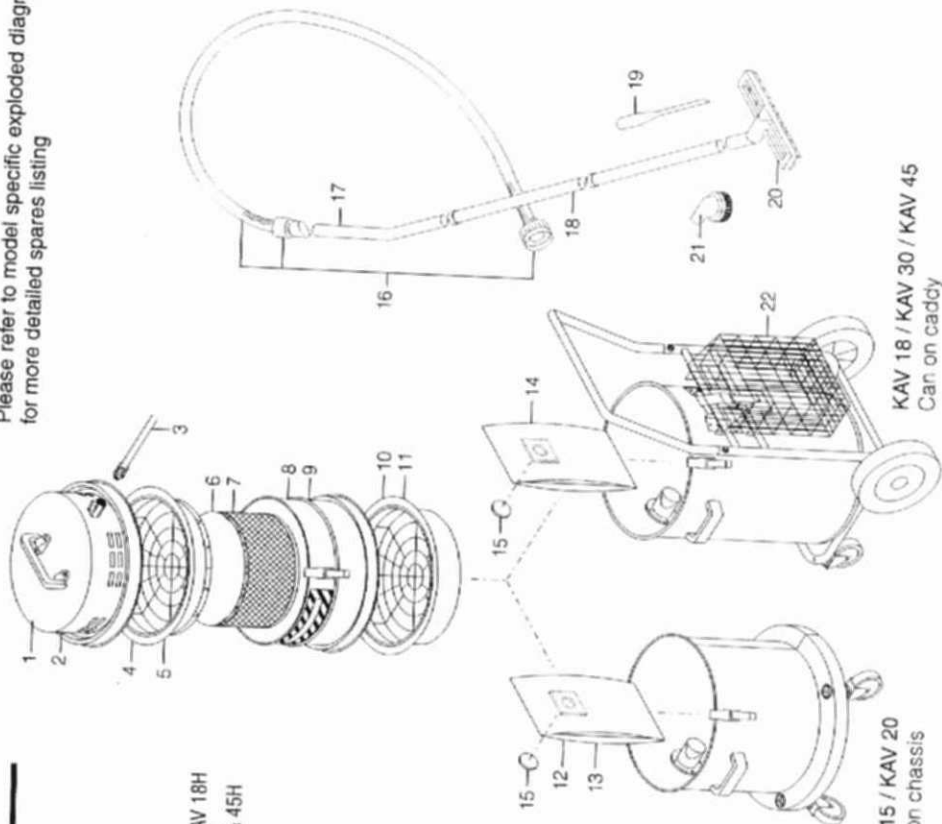
The Type H cartridge filter is not reusable or cleanable and should be disposed of safely. When it becomes excessively clogged and the vacuum performance of the appliance suffers or is no longer acceptable fit a new unit. Be careful when handling and fitting Type H cartridges as damage to the pleated element will affect the performance and may cause a leakage through the filter of unfiltered air.

SPARE PARTS

Item Qty Description

- | | | |
|----|---|---|
| 1 | 1 | 12" KAV Motor Head for KAV 15H and KAV 18H |
| 2 | 1 | 14" KAV Motor Head for KAV 20H, 30H & 45H |
| 3 | 1 | Antistatic Air Supply Line, 5 metres long |
| 4 | 1 | 12" Antistatic Sealing Ring and Frame for KAV 15H and KAV 18H |
| 5 | 1 | 14" Antistatic Sealing Ring and Frame for KAV 20H, 30H & 45H |
| 6 | 1 | HEPA Filter for KAV 15H & 18H |
| 7 | 1 | HEPA Filter for KAV 20H, 30H & 45H |
| 8 | 1 | Complete HEPA Cartridge Unit for KAV 15H & 18H
(inc. items 4 & 6) |
| 9 | 1 | Complete HEPA Cartridge Unit for KAV 20H, 30H & 45H
(inc. items 5 & 7) |
| 10 | 1 | 12" Antistatic Filter Assembly for KAV 15H & 18H |
| 11 | 1 | 14" Antistatic Filter Assembly for KAV 20H, 30H & 45H |
| 12 | 1 | K1 Paper Bags for KAV 15H (packet of 10) |
| 13 | 1 | K3 Paper Bags for KAV 18H & 20H (packet of 10) |
| 14 | 1 | K4 Paper Bags for KAV 30H & 45H (packet of 10) |
| 15 | 1 | Sealing Disc for paper bag (packet of 50) |
| 16 | 1 | 38mm x 3 metre Antistatic Hose Assembly |
| 17 | 1 | 38mm Stainless Steel Bent Hose End |
| 18 | 2 | 38mm Stainless Steel Extension Wand |
| 19 | 1 | 38mm Antistatic Plastic Crevice Tool |
| 20 | 1 | 38 x 300mm Antistatic Floor/Carpet
Dry Pick-Up Nozzle |
| 21 | 1 | 38mm Antistatic Dusting Brush |
| 22 | 1 | Tool Basket - Antistatic (KY30 & 45 only) |

Please refer to model specific exploded diagrams for more detailed spares listing



KAV 18 / KAV 30 / KAV 45
Can on caddy

KAV 15 / KAV 20
Can on chassis