Part of Absolent Air Care Group

Category 3 (Dust Zone 22 / Gas Zone 2)

UK CA CE Ex II 3 D Ex h IIIC T50°C Dc

Ex II 3 G Ex h IIC T6 Gc

KAV 2 Hand Held Pistol Type Compressed Air Powered Vacuum Cleaner

Original Instructions

KAV 2 | Version 1.0 | Last Updated December 24, 2024

Front cover image: KAV 2 fitted with an optional interceptor tank.

Table of Contents

1. Introduction

Welcome to the user manual for your new Kerstar® KAV 2! This manual refers to the standard, W/D and Type H versions of the KAV 2 product.

This manual should be retained with the product for future reference. Should the product be sold or transferred to another user, always ensure that it is supplied alongside it in order that the new user can be properly acquainted with the functioning of the product, as well as any safety warnings. It is dangerous to alter the specification or modify the product in any way.

Kerstar® products are manufactured by Filtermist International Limited. If you have any enquiries, please do not hesitate to contact our team on (0) 1952 290500 or sales@filtermist.com. Further product information can be found on www.kerstar.com.

The KAV 2 is designed to pick up: inert dust and debris in an inert atmosphere (i.e., one with no risk of static spark or explosion); inert dust and debris, or explosive dust or debris, in a Zone 2 atmosphere (i.e., an atmosphere where flammable gases or vapours may be present for a limited period); and dust or debris in a Zone 22 atmosphere (that is, one that generates static and/or may also explode if ignited by a static spark but in an inert atmosphere).

1.1. ATEX/UKEX Risk Assessment

If this product is used for collecting flammable/explosive materials or within a zoned area classified under the ATEX/UKEX Directive **2014/34/EU** or **Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016: Great Britain**, then a risk assessment must be carried out by a competent person to verify the suitability of the application. This assessment will be the responsibility of the customer/end user. It should take into account, but not be limited to, the characteristics of the material being collected, such as:

- Spark ignition sensitivity (e.g., measured by minimum ignition energy (MIE)).
- Hot surface ignition sensitivity (cloud and layer) (e.g., as a function of fuel–air equivalence ratio (ϕ) and chamber pressure).
- Explosion severity (e.g., with maximum pressure (Pmax) and/or the dust constant (Kst)).
- Burning behaviour (e.g., with a Combustibility Class measurement).
- Thermal and chemical instability (e.g., thermal stability with a thermogravimetric analyzer (TGA), chemical stability using liquid or gas chromatography (HPLC – GC), mass spectrometry (MS), and infrared spectroscopy (FTIR)).
- Static electricity generation (e.g., using an electrostatic sensor).
- The ATEX/UKEX certification code for the appliance being assessed (see Rating Plate).

1.2. Type H Risk Assessment

If this product is used for collecting dust and/or debris which may be hazardous to health if inhaled, ingested or in contact with the skin, then a risk assessment must be carried out by a competent person to verify the suitability of the application. The risk assessment is the responsibility of the customer/end user and should take into account - but not be limited to - the characteristics of the material being collected, such as:

- The occupational exposure limit of the dust and debris being collected (e.g., using the COSHH standard Workplace Exposure Limits (WELs)).
- The particle size of the dust and debris being collected (e.g., using optical and condensation particle counters, and/or photometers / nephelometers).
- The method of disposal.

2. Installation, Commissioning and Handling

2.1. Specific Conditions of Use

- Outdoor use should be avoided. Take care if you use your product outdoors - and it should never be stored outdoors.
- Air compressors used to supply your product must incorporate a filter on the intake system to avoid ingress of dust or foreign material into the parts where compression takes place. They must employ only lubricants which are resistant to ignition or carbonisation within the equipment's operating temperature range.
- During use, the air supply hose should be kept away from heat, oil, sharp edges and rough surfaces. If there is a risk of the air supply hose being severed, an air fuse should be fitted - this fuse can be purchased from Kerstar® if one is required. If your air supply hose is damaged and needs replacing, it must be replaced by a conductive supply hose available from Kerstar® - do not use any other air supply hose. Doing so may invalidate your warranty.
- When collecting dust or debris that may ignite or explode, empty the cleaner after every use.
- Only Type H models are suitable for picking up hazardous dusts[1] that may endanger health.
- W/D models are not suitable for picking up flammable or corrosive liquids; always remove liquids from the container after use. For W/D models, the magnitude of vibration emissions for the machine at the hose end is below $2.5 m/s^2$.
- Dry and Type H models are designed for dry use only. If wet use if required, ensure that you have an appropriate W/D model that it is set appropriatley for wet pickup.

DANGER! This product is not suitable for collecting radioactive dust, dust with an ignition energy of less than 1mJ[2], or pyrophoric[3] or self-reactive dusts.

DANGER! Do not pick up glowing dust or other ignition hazards. When picking up swarf and similar metallic parts, the product must not be used to pick up potentially explosive dusts or be used in potentially explosive atmospheres.

DANGER! Never remove a Type H vacuum cleaner from a contaminated area unless it has been decontaminated in accordance with the "Decontamination" section in this manual.

IMPORTANT! Never use this product without the full filtration system fitted.

IMPORTANT! Do not use the product for dry vacuuming with the filters and/or microfibre bag removed.

2.2. Unpacking

Unpack the carton and ensure that you have a complete set of accessories as listed in the table below, alongside your vacuum cleaner. A/S = Antistatic/Conductive.

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[1]Such dusts are defined as non-radioactive, non-explosive dusts that are hazardous to health if inhaled, ingested or if in contact with the skin. A hazardous dust can be defined as very toxic, harmful, corrosive or irritant; microorganisms may be considered as dusts creating a hazard to the health of a person.

[2]Millijoule, equivalent to one thousandth (10^{-3}) of a joule.

[3]Liable to ignite spontaneously on exposure to air.

Table 1. Components for KAV 2 Series Products

Component Description	Quantity
Anti-Static Air Supply Hose (Four Metres Long)	1
32mm Anti-Static Plastic Crevice Tool	1
32 x 70mm Anti-Static Dusting Brush	1
Yellow Earth Path Continuity Certificate	1

2.3. Electrical Information

In most KAV products, the air supply hose 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 / compressed air connection point must be earthed.

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

2.4. Commissioning

Follow this procedure to commission your KAV Series product. Ensure that you are in possession of a 500-volt megohmmeter[4] prior to commencing.

1. Attach the antistatic air supply hose to the air inlet port on the KAV. Do not over-tighten the connection and do not use any form of liquid thread locker or PTFE[5] tape to seal the thread. The threaded end fitting has its own integral O ring seal. Please note, 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 hose.
2. To the other end of the air supply hose fit a metal (conductive) fitting to suit your air outlet sockets. Make sure the pipework and outlet fittings of your air supply system are constructed entirely of metal pipes and fittings and is earthed to your compressor.
3. Finally, using a 500-volt megohmmeter, measure the resistance between the body of the KAV and the metal air supply pipe. The reading should be no more than 50 Megohm (MΩ) (5 x 107 Ohm).

IMPORTANT! Appropriate Personal Protective Equipment (PPE) in the form of ear defenders should be worn while using this product.

This product is not intended for use by children. Where children are present, they must be supervised at all times to prevent them from playing with or using the machine in any way. Additionally, this appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

2.5. Carrying and Storage

The assembled vacuum cleaner can be moved around either by pulling the 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 power supply cable. Do not tug at the mains supply cable to remove the plug from the wall socket. When not in use, your vacuum should be disconnected from the power supply and stored indoors in a dry environment.

[4]An electrical instrument used to measure the electrical resistance of insulators.

[5]Polytetrafluoroethylene, a fluoropolymer.

3. Operation

To operate your KAV 2:

1. **Connect the KAV 2 to a suitable compressed air supply.**
2. **Attach one of the two nozzles supplied. Using your thumb, depress the lever trigger to activate the unit. The lever trigger is spring-loaded so the KAV 2 will cease to function as soon as it is released.**

3.1. Compressed Air Requirements

The KAV range does not require the air supply to be dried or filtered. However, 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 of the unit is related to the air input - the more pressure and/or volume of air input the more suction and/or induced airflow is generated.

CAUTION! Using excessive air input wastes compressed air, generates unnecessary noise and may cause implosion of the canister and/or bursting of the microfibre bags/filters (where fitted).

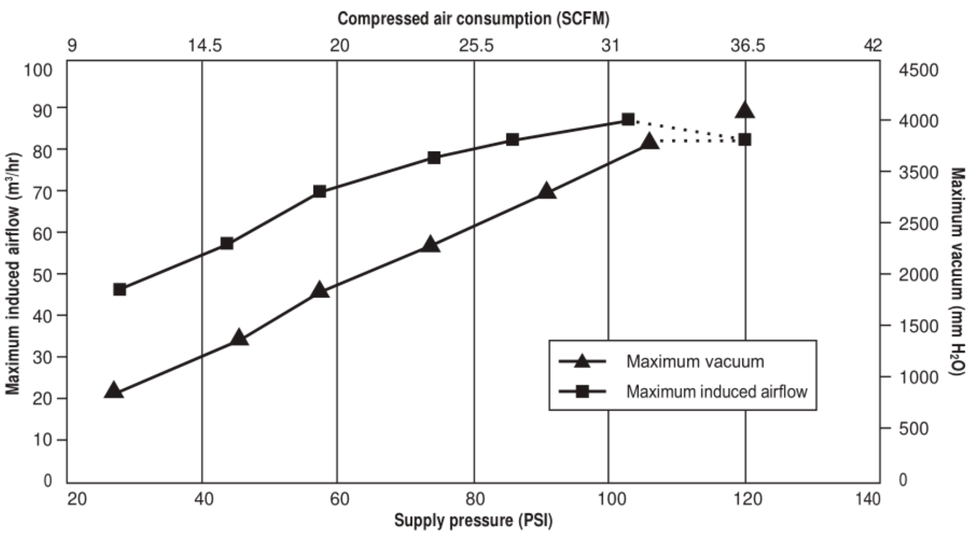


Figure 1. Compressed air consumption (SCFM)[6] in relation to supply pressure, maximum induced airflow and maximum vacuum for the KAV 2.

3.2. Filtration System

The standard KAV 2 is supplied with a single stage of filtration - the cloth bag. It is suitable for handling most particles, granules, chippings etc., that may be encountered. However, if you are picking up fine dust you may observe some leakage of dust through the pores of the cloth bag. It is possible to remove the cloth bag and fit optional hose and collection canisters; these canisters are available in various sizes and capacities. They all have a conductive hose, couplings, canister and cloth filter assembly, and any static build-up is discharged to earth through the air supply hose. Please contact us or your authorised Kerstar® dealer for further information about these items.

It is not possible to fit a paper bag to this model - the induced airflow and the compressed air combine in the outlet port, which would quickly burst a paper bag. If required, a heavy duty cloth bag set is available, which has a larger capacity and is made from a heavier duty material; consult the Spares page in the manual for a part number.

[6]Standard Cubic Feet per Minute

3.3. Operating Noise

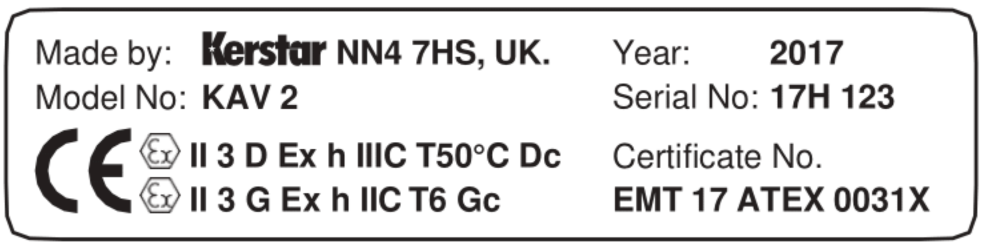
WARNING! The KAV 2 unit produces 91.3–106.2 dBA sound ; ensure all operators use adequate PPE at all times when using this equipment

The KAV 2 unit operates within a specific acoustic range depending on the regulated air pressure, reaching a maximum output of 106.2 dBA at an air input of 5 p.s.i. Conversely, the unit’s noise level drops to a minimum of 91.3 dBA when operating at 1 p.s.i. Given that these levels significantly exceed standard safety thresholds for prolonged exposure, users must take extreme care during operation. It is essential to utilize appropriate hearing protection and adhere to local occupational health and safety guidelines to prevent auditory damage.

4. Rating Plate

Every Kerstar® product is fitted with a Rating Plate that contains important information pertaining to your product. The rating plate may contain the following information:

Information	Meaning
Manufacturer Name and Address	The details of the manufacturer of the product.
Model or Type Number	The specific model of your product (e.g., KAV 20H).
Year of Manufacture, Assembly or Construction	The year that your product was manufactured.
CE	A mark certifying compliance with European Union regulations, standing for "Conformité Européenne".
UK CA	A mark certifying compliance with United Kingdom regulations, standing for "United Kingdom Conformity Assessed".
Ex	The distinctive community mark showing a product is suitable for use in an explosive dust and/or gas atmosphere.
II	Equipment Group II (Surface Industries)
3	Category 3 product
2	Category 2 product
G	Explosive gas, vapour or mist atmosphere
h	Mechanical equipment according to EN 80079-36
Tc	Level of protection for electrical equipment (for EPL Dc)
IIIC	Conductive dusts
T100°C	Surface temperature less than 100°C for dust evaluation
D	Explosive dust atmosphere
Dc	IECEx Equipment Protection Level
Ta = 0ºC to +30ºC	Suitable for use in an ambient temperature range of 0ºC to +30ºC
IP6X Dust tight (electrical compart-ment)	No ingress of dust
Weight	Weight of the unit
KEVA	Acronym for "Kerstar Electric Vac Atex"
Ex h	Protection concept – constructional safety (applies to the mechanical parts of the vacuum cleaner)
IIIC T50°C Dc	IIIC dust group – conductive dust (T50°C surface temperature for dust evaluation less than 50°C) (Dc dust atmosphere EPL (Equipment Protection Level) Zone 22)
IIC T6 Gc	IIC gas group. Suitable for group II gases, vapours and mists (e.g., Hydrogen). T6 surface temperature classification for gases, vapours and mists less than 85°C. Gc gas atmosphere EPL (Equipment Protection Level) Zone 2.
Serial Number	For example 17H 123 – made in August 2017 number 123
X	Refer to instruction book for special operating or user information
ATEX Cert No. EMT17ATEX0050X	The product has been tested and approved by an independent test house.
UKEX Cert No. EMA21UKEX0068X	The product has been tested and approved by an independent test house.
Technical File Ref KAV15 – 45	The technical file is lodged at Element Materials Technology Ltd.



5. Guarantee and Servicing

5.1. Guarantee

All Kerstar® products are guaranteed for 12 months against defective parts and workmanship, excluding parts subject to normal wear and tear. Please note that there are certain conditions that may invalidate this guarantee:

- Not adhering to the instructions provided in this manual. This appliance must be correctly installed and used in accordance with these instructions.
- The use of unauthorised personnel for servicing, repair or modification of the appliance.

WARNING! Under no circumstances should you attempt to repair this 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 or distributors. Only genuine Kerstar® spare parts should be used.

We may introduce modifications to our products from time to time and consequently the details given in this user manual are subject to alteration without notice.

5.2. Servicing

Should your Kerstar® product require servicing, spares or repairs, please contact us on (+44) 1952 290500. Please make a note of the model and serial number before contacting us.

Before attempting any servicing of Type H appliances, decontaminate as described in this user manual 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.

Ensure that only the hose and accessories provided with the product are used. For ATEX rated products these have been ATEX/UKEX tested and assessed as suitable for use with the product. A wider range of ATEX/UKEX approved nozzles is available from Kerstar®. Disconnect all models from the electrical supply before carrying out maintenance.

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6. Spares

The following schematic diagram and table provides information pertaining to spare parts. If you require any assistance selecting the correct part, or have any queries pertaining to spare parts, do not hesitate to contact our team.

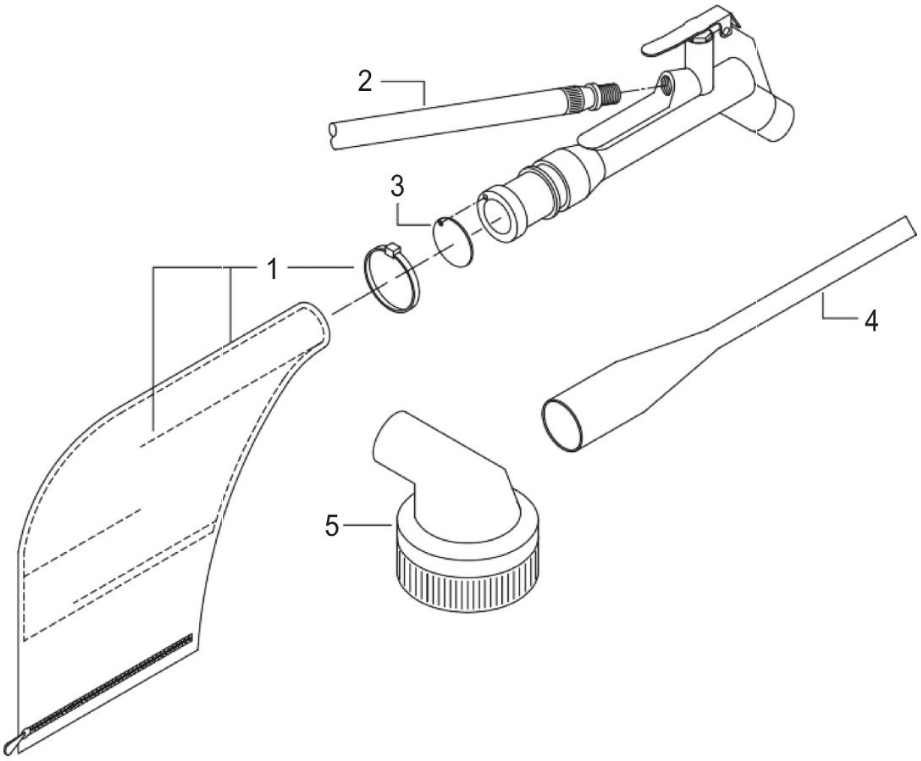

Table 2. Spare Parts for the KAV 2 Model

Item Number	Part Number	Description
1	25-712-10-013	KAV 2 Cloth Bag Set (Inner/Outer Bag and Plastic Tie)
	25-712-10-014	KAV 2 Heavy Duty Cloth Bag Set (Inner/Outer Bag and Plastic Tie)
2	25-204-10-489	Air Supply Hose A/S 4 metre
3	25-204-20-875	KAV 2 Flap Valve, Screw and Washer
4	25-204-10-056	32mm A/S Crevice Tool A/S Plastic Wand Fit
5	25-204-10-061	32 x 70mm A/S Dusting Brush

7. EU Declaration of Conformity (Machinery)

EC DECLARATION OF CONFORMITY		FILTERMIST	
Manufacturer's name:	Filtermist Limited	**Machinery covered by this declaration:**	
Full address:	Telford 54 Business Park, Nedge Hill, Telford Shropshire TF3 3AL	Description:	Industrial Vacuum Cleaner
		Function:	To be used in a dust producing workstation environment to remove potentially hazardous dust from surface and the air
		Type:	KAV 2 Series
		Model:	KAV 2 , KAV 2 H & KAV 2 WD
		Serial No.:	Year-Unit Produced - e.g. 25 001 is the first unit made in 2025
The machinery conforms to all the requirements of the Machinery Directive 2006/42/EC.			
The following standards have been used:	EN12100:2010, EN 60204-1:2018, EN ISO 14120:2015, EN ISO 13857:2019		
The technical file is compiled in accordance with part A of Annex VII of the Machinery Directive 2006/42/EC.			
Person authorised to compile the technical file (based in the European Community):	Name:	**Absolent AB**	
	Address:	Staplaregatan 1SE-531 40 LidköpingSweden	
The relevant authorised person undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the machinery. This information will be transmitted by: (email, post)			
Person authorised to make this declaration:	Name:	Mark Newman	
	Position in company:	Operations Director	
	Signature:		
	Place of Declaration:	Filtermist Limited, Telford 54 Business Park, Nedge Hill, Telford, Shropshire, TF3 3AL	
	Date of Declaration:	1st June 2026	

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8. EU Declaration of Conformity (ATEX)

EU Declaration of Conformity (DOC)

We

Company name:	Filtermist Limited
Postal address:	Telford 54 Business Park, Nedge Hill
City	Telford
Postcode:	TF3 3AL
Telephone number:	01952 290500
E-Mail address:	sales@filtermist.com

Declare that this DOC is issued under the sole responsibility of the manufacturer.

Product:	Industrial Vacuum Cleaner
Type:	KAV 2 Series
Batch:	N/A
Serial number:	Year-Unit Produced - e.g. 25 001 is the first unit made in 2025
Brand Name:	Kerstar (a subsidiary of Filtermist)

Object of the declaration

To be used in a dust producing workstation environment to remove potentially hazardous dust from surface and the air	

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

EMC Directive 2014/30/EC

RoHS Directive 2015/863/EU
ATEX 2014/34/EU
II 2 D Ex h IIIC T50°C Db II 2 G Ex h IIC T6 Gb **ATEX Cert No:** EMT17ATEX0050X
Pressure Equipment Directive (PED) 2014/68/EU

The following harmonised standards and technical specifications have been applied:

Title, Date of standard/specification:

EN IEC 60079-0, EN ISO 80079-36:2016, EN ISO 80079-37:2016, EN 1127-1:2019, EN 14491:2012, EN 61000-6-2:2019, EN 61000-6-4:2019, EN 13445-1:2021, EN 13445-2:2021, EN 13445-3:2021, EN 13445-4:2021, EN 13445-5:2021, EN 13445-6:2021, EN IEC 63000:2018

Additional information:

The relevant authorised person undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the machinery. This information will be transmitted by: (email, post).
Person authorised to compile the technical file, based in the European Community is: Absolent AB
Address: Staplaregatan 1, SE-531 40 Lidköping, Sweden

Signed for and on behalf of:

Place of issue	yyyy-mm-dd	Name, function, signature
Filtermist Limited, Telford 54 Business Park, Nedge Hill, Telford, Shropshire, TF3 3AL, England	2026-06-01	Mark Newman Operations Director

9. EU Declaration of Conformity (NON-ATEX)

EU Declaration of Conformity (DOC)

We

Company name:	Filtermist Limited
Postal address:	Telford 54 Business Park, Nedge Hill
City	Telford
Postcode:	TF3 3AL
Telephone number:	01952 290500
E-Mail address:	sales@filtermist.com

Declare that this DOC is issued under the sole responsibility of the manufacturer.

Product:	Industrial Vacuum Cleaner
Type:	KAV 2 Series
Batch:	N/A
Serial number:	Year-Unit Produced - e.g. 25 001 is the first unit made in 2025
Brand Name:	Kerstar (a subsidiary of Filtermist)

Object of the declaration

To be used in a dust producing workstation environment to remove potentially hazardous dust from surface and the air	

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

EMC Directive 2014/30/EC

RoHS Directive 2015/863/EU

Pressure Equipment Directive (PED) 2014/68/EU

The following harmonised standards and technical specifications have been applied:

Title, Date of standard/specification:

EN 61000-6-2:2019,EN 61000-6-4:2019,EN 13445-1:2021,EN 13445-2:2021,EN 13445-3:2021,EN 13445-4:2021,EN 13445-5:2021,EN 13445-6:2021, EN IEC 63000:2018

Additional information:

The relevant authorised person undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the machinery. This information will be transmitted by: (email, post).

Person authorised to compile the technical file, based in the European Community is: Absolent AB

Address: Staplaregatan 1, SE-531 40 Lidköping, Sweden

Signed for and on behalf of:

Place of issue	**yyyy-mm-dd**	**Name, function, signature**
Filtermist Limited, Telford 54 Business Park, Nedge Hill, Telford, Shropshire, TF3 3AL, England	2026-06-01	Mark Newman Operations Director

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Protecting the Environment: Disposal

When this product has reached the end of its useful life it must be recycled in an environmentally friendly manner. It must not be disposed of with normal household waste.

This product is likely to contain or be contaminated with dust hazardous to health. It must be thoroughly decontaminated in accordance with best practice before recycling

www.kerstar.com

Kerstar® products are manufactured by Filtermist Limited, based at Telford 54 Business Park, Nedge Hill, Telford, Shropshire, TF3 3AL, England.

(+44) 1952 290500 | **sales@filtermist.com** | **www.filtermist.com**

Supplied by:

Certificate Number 1122
ISO 9001
ISO 14001