KÄRCHER

WHEN HYGIENE MATTERS MOST

Hygiene concept for the New Normal

PROFESSIONAL

IT'S ALL ABOUT INFECTION PREVENTION

COVID-19 has disrupted the relationship between people and places: the danger of contamination and infection has created insecurity. People no longer feel safe in public and at work. This new attitude to places is the NEW NORMAL – and it will persist, even after the critical phases of the pandemic have ended. It's all about infection prevention now.

01 CRITICAL CHALLENGES IN THE NEW NORMAL

Post-Covid challenges for Facility Service Providers in their daily business

CRITICAL CHALLENGES FOR FACILITY SERVICE PROVIDERS

The pandemic disrupted the relationship between people and places, changing the priorities within the facility services market.

Additional priorities for the New Normal

Cleaning quality
A demand for higher quality after COVID-19 will lead to new standards.

Infection prevention
The need to reduce the risk of cross-infection means new levels of cleaning and disinfection.

Safety
Creating a safe environment for building users through new hygiene standards.

People
Retain employees and get additional, skilled and trained new staff.

General priorities

Sustainability
The triple bottom line about people, planet and profit means more than just “green” solutions.

Operational efficiency
Leaner operations to reduce the overall cost of cleaning from labour to supplies, quality and capital.

Continuous innovation
Moving faster with new ideas and digital solutions to improve and grow business.

Customer experience
Cleanliness and a healthy environment have a high impact on customer satisfaction.

Before the outbreak of COVID-19, Facility Service Providers believed that the key drivers in the segment over the new decade would include sustainability, operational efficiencies, innovative technologies and future-focused workplace strategies, not global health crises. Following the outbreak, these drivers had to take a back seat to make way for more pressing priorities like demand for higher cleaning quality, infection prevention and keeping people safe and healthy.

02

GET READY FOR THE NEW NORMAL

How we will drive value for our customers in post-pandemic times


KÄRCHER
Professional

THE KEY TO SUCCESS: IT'S ALL ABOUT INFECTION PREVENTION

A comprehensive approach to hygiene

High hygiene standards to reduce the risk of cross-infection

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
RISK ASSESSMENT	**PROTECTION**	**ENABLE**	**QUALITY CONTROL AND VISIBILITY TO THE USER**	**OPTIMISATION**
				
Consultancy based on risk assessment	Cleaning and certified disinfection processes, backed up by experts	Influence the right individual behaviour	Get the data to maintain a superior level of hygiene	New workplace technology
EVALUATE risk potential and the need for disinfection	**ENHANCE** cleaning and disinfection tasks to achieve superior hygiene results	**ENABLE** to manage the risk of contamination	**ENSURE** verification through accurate testing of results for real-time feedback	**ENROL** continuous improvement processes

Public authorities drive new hygiene standards

Hygiene concepts from healthcare institutions are being transferred to all kinds of facilities. Recommendations from international health authorities are building the new hygiene standards: Facility Services is now all about infection prevention.

- World Health Organization (WHO)
- Centers for Disease Control and Prevention (CDC)
- Robert Koch Institute (RKI)
- John Hopkins University & Medicine
- Occupational Safety and Health Administration (OSHA)
- Government institutions

PLACES WILL NOT BE THE SAME AGAIN AFTER LOCKDOWNS

How a pandemic influences workplace routines

Workplace routines will have shifted by the time everyone can get back to their workplace after pandemic lockdowns.

Hygiene and safety will be top concerns as employees return to their workplaces.

Companies will need to minimise the number of hand contact surfaces and make sure the workplace environment does not permit cross-infection.

› A **comprehensive site assessment** produces a framework for wellbeing that helps to build occupant trust.

› A **professional hygiene process combined with the right individual behaviour** will have a powerful impact on curbing contamination.

Risk assessment

01

HAZARD IDENTIFICATION

02

ASSESSMENT OF RISKS
associated with the hazards

03

DETERMINE THE EXTENT
of cleaning and disinfection measures

Pre-opening phase

01

PRE-OPENING

ANALYSE, PREPARE & PROTECT

Kärcher will take you through **a clear restart framework** while you prepare to reopen the building.

A **systematic approach,** customised to your unique requirements, to welcome building users back to work – safely and confidently.

(Re)opening phase

02

REOPENING

ENABLE & SUPPORT

It is the day on which the facility is reopened. **People need to be informed** about new behaviour guidelines and be given answers to their questions about new procedures and rules.

Reopening is more than just returning to the way things were. It is **about creating a culture and community** and keeping them connected and productive.

New Normal phase

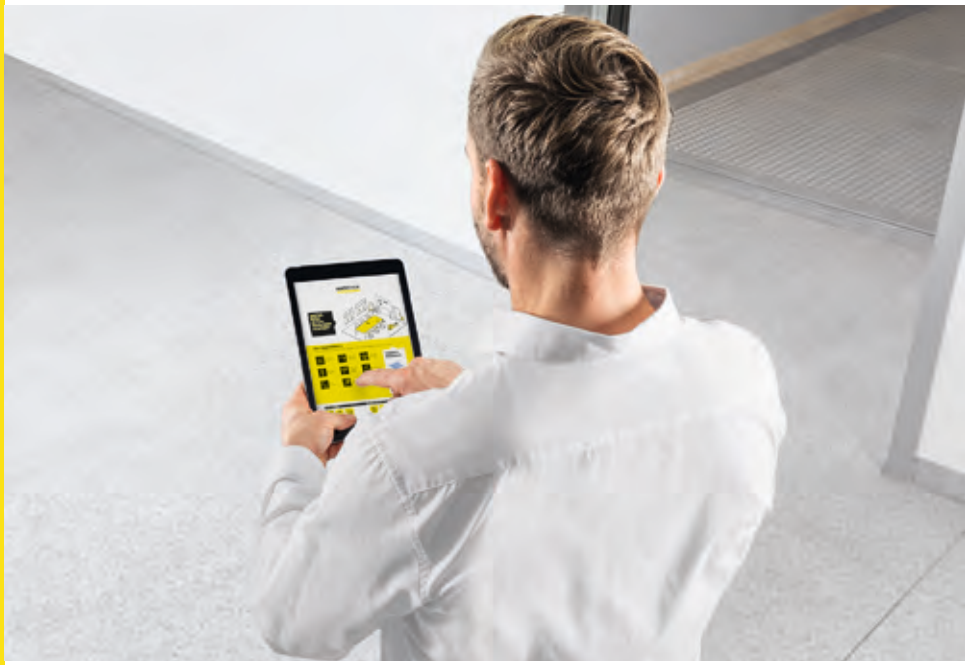
03

NEW NORMAL

OPTIMISE

Whether we face further pandemics or global economic turbulence, **continuous adaptation ensures the long-term success** of your organisation.

From organisational and procedural changes to the optimisation of facilities and working environments, **Kärcher is with you all the way.**



WE ENABLE YOU TO GET READY FOR THE NEW NORMAL

Our knowledge and solutions are reshaping the way you do business

1

IT'S ALL ABOUT INFECTION PREVENTION
Infection prevention is the no. 1 topic for every Facility Service Provider in a pandemic. We support you with the necessary knowledge.

5

5 E'S – EVALUATE, ENHANCE, ENABLE, ENSURE, ENROL
The five E's describe the essence of the new cleaning concepts and standards.

80%

MANUAL CLEANING IS THE KEY DRIVER FOR THE NEW NORMAL
80% of all processes to ensure infection prevention are based on manual cleaning. A holistic approach is necessary to meet the new standards.

03

SOLUTIONS FOR THE NEW NORMAL

Kärcher takes a holistic approach to meet the new standards.

GENERAL CLEANING DEFINITIONS, RULES AND CONSIDERATIONS

What is what and what does what.

01
AIR QUALITY

Air quality describes the degree of contamination of the air. In a pandemic, it is very clear that indoor air and its contaminants can play a decisive role in the spread of infectious diseases. Airborne pathogens can easily spread through indoor air and infect people.

How best to curb this route of infection? The aim is to dilute the concentration of potentially infectious aerosols in the indoor air as quickly as possible and to keep their concentration at a low level. The best and easiest way is to open windows and doors, to let fresh outdoor air flow in to dilute the indoor air while the aerosols are carried out by the resulting air flow. Unfortunately this is not always possible.

Some premises have a ventilation system which also helps to dilute the concentration of aerosols, but might not be capable of diluting the indoor air enough, or even worse, just circulates the air and distributes aerosols to the whole area.

Air purifiers are an excellent, easy way of lowering the aerosol concentration in a room quickly and to keep it low constantly.

When using air purifiers, three things matter most:

- Air flow rate – how much clean air can be distributed into the room
- Filtration efficiency – how efficient the filter medium in the machine is
- Noise emission – the lower the better

02
CLEANING

Cleaning is the removal or reduction of undesired substances or foreign matter such as dirt or soil from a surface, object or environment. The objective of building cleaning is mainly to have visually clean and well maintained floors and surfaces.

Cleaning does not kill or inactivate microorganisms, and that is not the intention of this process. But by removing them, cleaning lowers their numbers and the risk of spreading infection.

Daily cleaning (also called maintenance cleaning) is the most frequently performed cleaning. This includes the regular removal of dirt and litter, as well as the continuous maintenance of the floor coverings and other surfaces.

Interim cleaning (also called periodic cleaning) is a more intensive, less frequent process that reaches beyond daily cleaning to keep floors and surfaces looking great and to postpone the need for a deep (also called basic or restorative) cleaning cycle.

Basic cleaning is thorough cleaning that goes right down to the “base”. Basic cleaning involves the removal of old, worn maintenance films and all soiling residues.

03
SANITATION

Sanitation is a process to reduce the volume of contaminants such as bacteria and viruses on a surface to levels deemed safe in accordance with public health requirements. A sanitiser tends to be faster and safer for the user than a disinfectant, but disinfectants usually have a broader kill range.

Sanitation is sometimes also referred to as “routine disinfection” – but please note the difference between sanitation and disinfection.

Examples: using a steam cleaner in a defined way or using a two-in-one product such as a “disinfection cleaner” which is used for cleaning, but also has disinfection properties and thus lowers the number of pathogens on surfaces, but not to the level achieved by a regular disinfectant after a separate cleaning process.

04
DISINFECTION

Disinfection is a process to reduce the number of viable microorganisms by destruction/inactivation. The aim is to restore an object/area to a state in which it no longer represents an infection hazard.

Disinfection is sometimes also referred to as “targeted disinfection”, as opposed to “routine disinfection” (see sanitation). A disinfectant is a substance or mixture of substances that destroys or irreversibly inactivates bacteria, fungi and viruses, but not necessarily bacterial spores, in the inanimate environment.

By definition, the aim of the disinfection is not to eliminate environmental germs, which are not infection-relevant, but the defined reduction of the number of pathogenic or facultative pathogenic microorganisms.

Time is of the essence here – disinfectants need contact time to work properly.

05

GENERAL SUGGESTIONS TO REDUCE RISK

- Areas with a risk of infection (frequently touched surfaces) need to be cleaned or sanitised on a regular basis to prevent the spread of germs and reduce the number of germs.
- In situations with a known presence of pathogenic microorganisms, or on areas with a particular risk of infection, disinfection is necessary after cleaning. Without prior cleaning, disinfection is not efficient.
- Maintaining excellent hand hygiene and hand protection is essential during an outbreak and all cleaning, sanitation and disinfection operations.
- When using a dry vacuum cleaner (tub or upright) try to equip them with HEPA filters and fleece filter bags so the exhaust air is as clean as possible.
- Try using microfibre tools for both manual and machine cleaning (colour-coded and pre-conditioned microfibre cloths, rollers, pads, etc.).
- When using wet cleaning methods, try using as little moisture as possible, to avoid creating feeding or living grounds for pathogens. Ideally, cloths for manual cleaning are pre-conditioned, and cleaning machines have a drying function (scrubber driers, steam vacuum cleaner, etc.)
- “Disinfectant cleaner” product put in scrubber driers is for large area sanitation. For disinfection, a proper “disinfectant” needs to be applied, not a “disinfectant cleaner”.
- Correct dosing of cleaning detergent, disinfectant cleaners and disinfection agents is key. Our DOSE Systems support correct processes and avoid cleaning and sanitation mistakes.
- Wear appropriate PPE, especially when using disinfectants.

06

RISK ASSESSMENT – WHAT NEEDS TO BE DONE WHERE?

Areas with no risk of infection	
All surfaces	Cleaning

Areas with a possible risk of infection	
Hand / skin contact areas	Cleaning or sanitation
Floors	Cleaning
Other surfaces	Cleaning

Areas with a particular risk of infection	
Hand / skin contact areas	Cleaning, followed by disinfection
Floors	Cleaning or sanitation
Other surfaces	Cleaning

BEFORE CLEANING – PREPARATION AND PRECAUTIONS

Before your workforce returns, prepare a pandemic-specific workplace plan that outlines strategies to minimise the danger of spreading the virus.

Begin this process by taking into account your revised workplace routine and the latest government guidelines. Prepare workspace cleaning and disinfection requirements based on these new plans. Distribute information to your workforce about new cleaning measures. Place signage in workspaces and common areas to promote worker safety by emphasising basic infection prevention measures, including handwashing. Encourage good personal hygiene such as turning away from others when coughing or sneezing.

Safety first – Personal Protection

- Check all material your staff may use for the job
- Ensure your staff use all relevant PPE (personal protective equipment) for respective pandemic.
- Check and clean cleaners' rooms, infrastructure, cleaning materials and machines
- Fully clean/sanitise the cleaners' equipment

Clean hands

- Wash hands with soap and water. Traditional handwashing is very effective at removing dirt and germs.
- If hand washing is not possible, sanitise hands with an alcohol hand rub.

Choice of products

- Before using disinfection products and disinfection cleaners make sure the products are effective against the pandemic, for example SARS-CoV-2, according to European test EN 14476 or other relevant local requirements.
- Disinfection cleaners like RM 732 from Kärcher have passed the EN 16615 test as well.
- EN 16615 tests prove not only germ reduction on a test sample but also the reduction in possible spreading when wiping over further test fields.

AIR QUALITY, AIR PURIFIER, VENTILATION

How do you ensure infection control in indoor air?

A recommendation by the Federal Government of Germany for “ventilation suitable for infection control” sees consistent, intensive and regular free ventilation through windows and doors, as well as adjustments to the AC ventilation of buildings as first measures.

If, due to the outside air conditions (temperature / pollution) or the exclusively circulating air function of the AC ventilation or insufficient supply of fresh air through AC ventilation, a sufficient reduction in the concentration of aerosols cannot be guaranteed, air purifiers can help in a very simple and effective way.

What are aerosols?

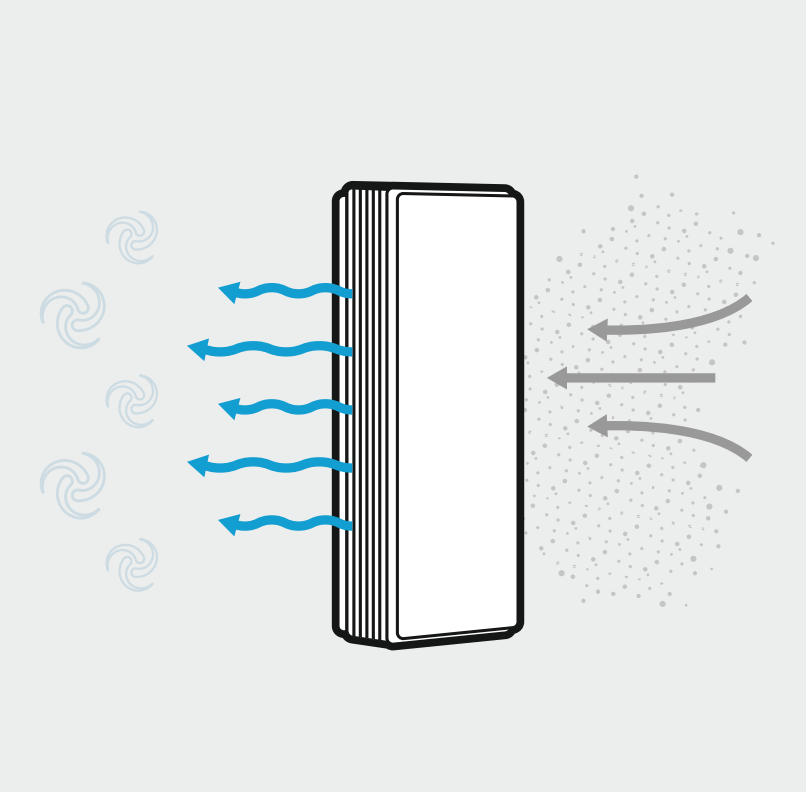
Aerosols are very small suspended particles that are so light that they can remain in the air for a long time without falling to the ground. They occur either in solid form or in a fine mist-like liquid variant. Usually, these particles are only between 1 and 10 micrometres in size, making them invisible to the naked eye. Examples of aerosols include particulate matter, smog, fog and viruses such as SARS-CoV-2.

During normal exhalation or exhalation with more force, as is the case when speaking or singing, viruses can enter the immediate environment as aerosols and thus suspended particles and remain in the air there for a long time.

What makes aerosols so dangerous?

While larger particles are still filtered by the body in the respiratory tract, very small particles and viruses reach the bronchial area of the lungs almost without resistance and from there enter the bloodstream. The same problem exists with ultrafine dust and smoke. Both cannot be filtered by the body itself and therefore enter the blood relatively easily and from there reach the organs and even the brain, where the harmful particles are blamed for many forms of long-term damage.

Outdoors, aerosols scatter quickly due to wind and air movement. The risk of infection outdoors is therefore quite low, if the recommended minimum distance is maintained. The situation is different in closed rooms and facilities. Infectious aerosols remain in the air in dangerous concentrations for much longer and can lead to infection.



How does filtration work?

All of our air purifier HEPA filters are made from ultrafine polypropylene fibres. The deep structure of the filters ensures huge capability to filter and safely hold contaminants.

Several physical effects in these particle filters, such as the electrostatic effect, inertia, interception and diffusion, as well as the sieve effect, lead to the grade of efficiency that represents the ability to hold back particles of a certain size.

How do you equip a room with air purifiers to keep the aerosol concentration low?

Our recommendation is to purify the air in a room a minimum of 3 times per hour, up to 6 times per hour.

Example: a 100 m^2 office with a ceiling height of 3 metres needs to be equipped with air purifiers that can clean the air up to 6 times per hour with H13 filtration.

How do you calculate the number of machines needed?

- 100 m^2 area with 3 m height means 300 m^3
- 300 m^3 with an air exchange rate of 6 means 300 m^3 × 6/h = **1,800 m^3/h**
- 3 × AF 100 H13 = **1,950 m^3/h** is sufficient.
- The solution here is to evenly place 3 × AF 100 H13 Air Purifiers in the room.

AF 100 filtration and air flow

AF 100 Filter Type	Max air flow	Filtration efficiency*	Max noise emission	Min noise emission
Standard filter	750 m^3/h	99.5%	50.6 dB(A)	26.4 dB(A)
H13 type filter	650 m^3/h	99.95%	49.5 dB(A)	25.3 dB(A)
HEPA14** filter	550 m^3/h	99.995%	44.4 dB(A)	22.6 dB(A)

* on particles of 0.1 µm to 0.3 µm in diameter
** according to EN1822, individually tested

CLEANING AND DISINFECTION PROGRAMME

Good standards of infection prevention and monitoring ensure a safe New Normal.

The overall quality of cleaning, sanitation and disinfection measures promotes confidence for all people who live, work, relax, eat, learn and heal in different building types.

Cleaning, sanitation and disinfection procedures per area provide clear guidance on infection prevention.

We distinguish between:

- **Touch point treatment**
- **Hygienic cleaning**
- **Outbreak situation**
- **Deep cleaning and reopening**

Touch point treatment
- Sanitation of all frequently touched surfaces

Hygienic cleaning
- Cleaning programme to maintain a good appearance and superior hygiene level.

Outbreak situation
- During a specific outbreak such as COVID-19 or when ordered by legal authorities, the facility may need to adopt a higher standard of hygiene measures. This enhanced cleaning standard, including disinfection, would be executed for a certain time or until the outbreak ends.

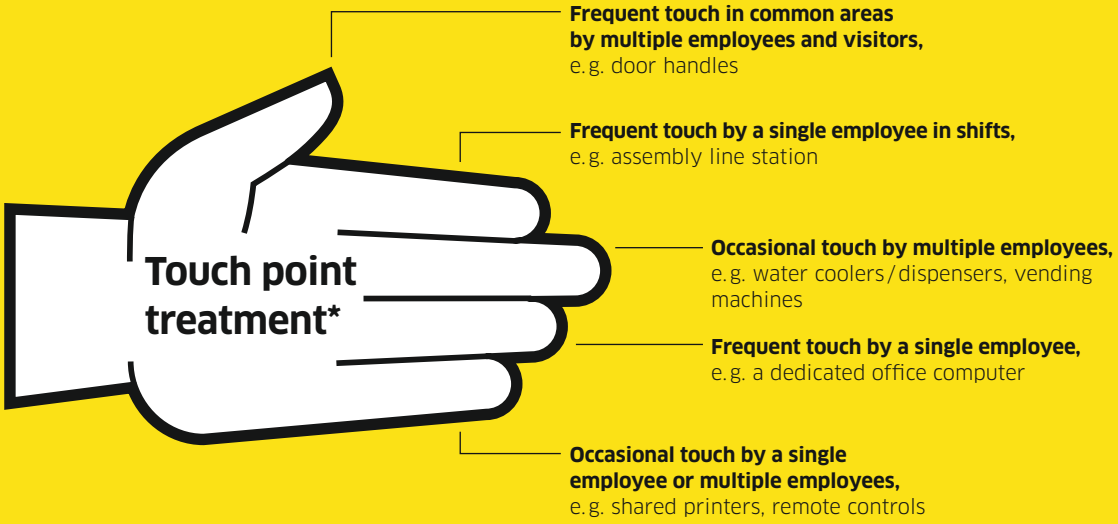
Deep cleaning and reopening
- After the temporary closure of a facility or part of a facility or at the end of a pandemic outbreak in general, the facility may need to be deep cleaned before reopening. After deep cleaning, the site will be cleaned using standard cleaning procedures and routines, depending on local requirements and regulations.

TOUCH POINT TREATMENT

Focus on points that are frequently touched by several people throughout the day

WHAT DO WE MEAN BY TOUCH POINT TREATMENT?

Cleaning and disinfecting touch points correctly



- **A touch point is an area or location frequently touched or contacted by people as they go about their daily (business) life.**
- **During the cleaning and disinfection of your facility, specific attention should be paid to areas referred to as "touch points".**
- **We recommend routine sanitation of frequently touched surfaces.**

* https://assuredbio.com/covid-19-touch-point/

TOUCH POINT WALLCHART

Example of a meeting room touch point wallchart

Why touch point treatment?

- We touch multiple surfaces every minute! If someone near you is infected then you can imagine how easy it is for germs to spread through every touch point and ultimately infect everyone touching these surfaces as well.
- Therefore, to reduce the risk of germ transfer or disease spreading and to ensure those around us are safe, it is essential to regularly sanitise and/or disinfect these touch points.

How do you perform touch point treatment?

- Use a disinfection cleaner in combination with a fresh cleaning textile
- The product is applied to the textile and the touch point is treated (sanitised) in one step
- Two step treatment may be required in certain situations (clean first and disinfect second). Where and when is defined using a risk assessment.

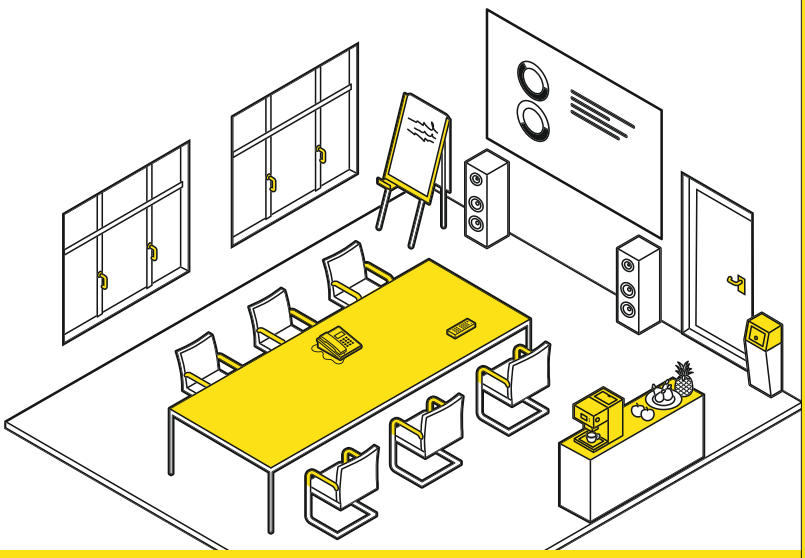
Hygiene plans for your building areas

Different wallcharts are available for different areas of your business.

Please contact your Kärcher Sales Representative for further details and options.

KÄRCHER

MEETING ROOM: CRITICAL TOUCH POINT TREATMENT



KEY TOUCH POINTS

Focus on points that are touched frequently by several people throughout the day.

- Flipchart tray
- Desks and sideboards
- Arm rests of chairs
- Remote controls
- Door and window handles
- Waste bins
- Desk phones
- Switches
- Food counter

PRODUCT REFERENCE

Microfibre

RM 735

Before cleaning → **After cleaning**

Read the product information sheet and the safety instructions before using detergents or machines.

Example of a wallchart for a meeting room
Critical touch point treatment

HYGIENIC CLEANING

Product recommendation and schedule for superior cleaning results

WHAT DO WE MEAN BY HYGIENIC CLEANING?

Hygienic cleaning is more than touch point treatment. It is a daily or routine cleaning programme (including product recommendations, cleaning schedules and processes) to maintain the appearance of surfaces and ensure a superior hygiene level.

Hygienic process and results

- **All facilities should have standard cleaning practices that include schedules, procedures and detailed tasks to perform.**
- **These practices outline in detail the materials needed and the optimum cleaning methods.**
- **The hygienic cleaning programme states which surfaces, floors or installations to clean.**

HYGIENIC CLEANING WALLCHART

Example of a meeting room hygienic cleaning wallchart

Why hygienic cleaning?

- The frequent hygienic cleaning programme ensures a visually clean and well maintained building.
- Maintaining good hygiene standards is the foundation of wellbeing. Cleaning helps improve properties such as slip resistance or odour control.
- Hygienic cleaning is part of the value preservation of infrastructure as it protects against environmental, biological and mechanical influences.

How do you perform hygienic cleaning?

- The cleaning and disinfection methods must prevent the spread of germs using cleaning and disinfecting solutions, appliances, utensils, cloths, wipes and mop heads.
- Cleaning solutions – in particular those into which a cloth is re-immersed after surfaces have been wiped – soon become contaminated with pathogens.
- Cleaning and disinfection procedures must therefore be organised and performed in such a way that the bacterial count is not increased and that facultative-pathogenic or pathogenic microorganisms are not distributed.

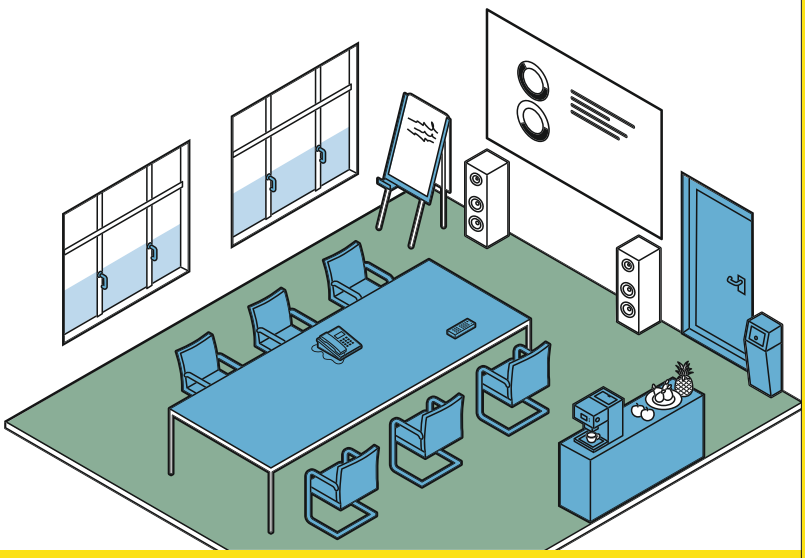
Hygiene plans for your building areas

Different wallcharts are available for different areas of your business.

Please contact your Kärcher Sales Representative for further details and options.

KÄRCHER

MEETING ROOM: HYGIENIC CLEANING



CLEANING SCOPE

Product recommendation and schedule for superior cleaning results.

Surfaces

CA 30 C | Microfibre

Mon	Tue	Wed	Thu	Fri	Sat	Sun	as required

Glass / mirrors / displays

CA 40 R | Microfibre glass | WVP 10 | Bottle set

Mon	Tue	Wed	Thu	Fri	Sat	Sun	as required

Hard floor manual

Dust mop | ECO!Mop | CA 50 C | Wet mop

Mon	Tue	Wed	Thu	Fri	Sat	Sun	as required

Hard floor mechanical

CA 50 C | BR 30/4 | BR 35/12 | BR 45/22

Mon	Tue	Wed	Thu	Fri	Sat	Sun	as required

Before cleaning → **After cleaning**

Read the product information sheet and the safety instructions before using detergents or machines.

Example of a wallchart for a meeting room
Hygienic cleaning

CLEANING BEST PRACTICE

Kärcher provides a set of standard best practice guidelines to help decision makers to choose the best cleaning practice for non-healthcare facilities.

Cleaning with detergents using hygienic methods and processes is fundamental in the fight against pathogens. One single cleaning process can lead to a reduction in microorganisms of approximately 50 – 80%.* Disinfection of a visually dirty surface often has less effect on the reduction of microorganisms than cleaning with hygienic methods and stable cleaning processes.

Cleaning practice

- Appropriate Personal Protective Equipment (PPE) and cleaning equipment
- Clean as if it were for a friend or member of your family
- Top to bottom
- Clean to dirty
- Space to space (adopting a systematic approach)
- Taps before sink
- If the mop or cloth is dirty, change it!
- Focus on critical touch points for sanitation and disinfection.

The cleaning and disinfection methods must …

- … prevent the spread of germs
- … reduce the volume of germs

Cleaning should include standard recommendations such as:

- Maintain a constant flow in a room to avoid contamination of already cleaned surfaces
- Perform hand hygiene before and after cleaning a room

* Source: Robert Koch Institute (RKI)

Choose the appropriate and recommended cleaning solution and materials for the job to be done.

1. Based on the risk assessment, decide on the appropriate and recommended manual cleaning methods

2. Define reach per mop/cloth, for example:

- 30 – 40 m² per mop or one mop per room
- 1 green cloth per small tea and coffee kitchen/corner
- 1 blue cloth for 8 workspaces or 1 blue cloth per office/meeting room
- 1 red cloth per 4 toilets or urinals
- 1 yellow cloth per washroom containing 4 vanity tops and dispensers

3. Agree on the level of mechanisation (machine cleaning), depending, for example, on machine availability, area size, cleaning frequency (touch-up cleaning or only cleaning cycle of the day) and floor/surface condition

4. Ensure proper instruction on how to maintain and disinfect the manual tools and the machines and how to properly dispose of the disposable materials used in the process

MANUAL SURFACE CLEANING METHODS AND SYSTEMS

Germ reduction and prevention of germ spread

Dust removal on surfaces

Dry removal of loose dirt with a textile

- The dust particles adhere to the cleaning textile without getting airborne
- To prevent cross-contamination use a disposable cloth in outbreak situations
- Reusable tools like feather dusters may be used in areas without risk

Spray cleaning – damp wipe with trigger sprayer & cloth

- Very efficient method for regular surface cleaning
- Surface is dry immediately after cleaning
- Use a microfibre cloth (extra mechanical action and absorption)
- Product use is limited to the amount sprayed onto the cloth

Damp wiping with pre-conditioned cloth

- Increased productivity – by removal of water management tasks
- Increased hygiene – one cloth per area/room
- Better ergonomics – no need for carrying and lifting heavy buckets of water

You will find details of the proper methods on **our method cards and in our short videos,** which are available for download on request. Please contact your local Kärcher Sales Representative for further information and details.

MACHINE HARD SURFACE CLEANING METHODS AND SYSTEMS

Germ reduction and prevention of germ spread

Steam cleaners and steam vacuum cleaners

When cleaning floors, walls or furniture, dirt, germs, bacteria and viruses can be effectively controlled with professional steam cleaners.

- Professional steam cleaners clean all hard surfaces without the use of chemical cleaning agents. With the appropriate accessories, targeted cleaning is possible.
- Professional steam vacuum cleaners also offer the possibility of using chemicals for pre-treatment in the case of heavy soiling and to take in the dirt solution with suction power.

Window and surface cleaning

Removal of adhesive dirt on smooth, hard surface walls, windows and surfaces with a wet vacuum unit.

- A modern solution for all smooth surfaces.
- The surfaces are cleaned thoroughly with a hand-held spray bottle kit and dried with a window and surface vacuum cleaner.
- The advantage of a surface vacuum cleaner is that germs are permanently removed, for example by absorbing the dirty water, and cannot accumulate in a manual cleaning textile. This minimises the risk of recontamination.

MANUAL FLOOR CLEANING METHODS AND SYSTEMS

Germ reduction and prevention of germ spread

Dust mopping on floors

Dry removal of loose dirt with a textile

- The dust particles adhere to the cleaning textile without getting airborne
- To prevent cross-contamination use a single use cloth in outbreak situations
- Reusable textiles like cotton mops may be used in areas without risk

Damp mopping with a spray mop system

A modern cleaning system for small to medium-sized areas and quick cleaning of soiled floors (e.g. entry areas, receptions)

- The water is carried in a tank attached to the handle of the mop – no bucket needed!
- Water is released in front of the mop and recovered with the dry textile. Multiple mops are needed for larger areas.
- Dirty mops are sent to the laundry, or use a single use mop where a laundry facility is not available.
- Easy storage due to compact size – ready at any time!

Wet mopping with a pre-conditioned flat mop

The cleaning textiles are pre-conditioned before the cleaning operation starts. They are transported in boxes on a trolley. Once the cleaning textile is saturated with dirt it is replaced.

- Applicable on all smooth and slightly structured hard floors.
- Very high m² performance as no mop rinsing is required.
- Floor is dry immediately after application.
- Can also be used on more water-sensitive hard floors, as no water spillage or dripping is possible.

MACHINE FLOOR CLEANING METHODS AND SYSTEMS

Germ reduction and prevention of germ spread

Carpet cleaning

Vacuuming carpets is about dust control and indoor air quality. With concerns that vacuuming could aerosolise bacteria and viruses such as coronavirus that might have settled onto the carpet, cleaning experts must examine the existing grade of filtration in their vacuum cleaners.

- For the rapidly rising hygiene standards in building cleaning, upgrade dry vacuum cleaners with HEPA-14 filters. Additionally, use fleece filter bags in the vacuum cleaners to further increase fine dust retention.
- These “upgraded” vacuum cleaners are suitable for use in hygiene-sensitive areas such as hospitals, preschools and nursing/retirement homes.

Steam cleaners and steam vacuum cleaners

When cleaning hard floors, walls or furniture, dirt, germs, bacteria and viruses can be effectively controlled with professional steam cleaners. Please note that surfaces and furniture need to be insensitive to steam.

- Professional steam cleaners clean all hard surfaces without the use of chemical cleaning agents. With the appropriate accessories, targeted cleaning is possible.
- Professional steam vacuum cleaners also offer the possibility of using chemicals for pre-treatment in the case of heavy soiling and to take in the dirt solution with suction power.

Wet cleaning with scrubber driers

Floors cleaned with scrubber driers are hygienically clean and spotless. These all-rounders complete all kinds of floor cleaning tasks quickly and economically, providing a number of advantages over mop cleaning:

- Mechanical cleaning with scrubber driers permanently removes germs by absorbing the dirty water. This minimises the risk of cross-contamination and recontamination.
- Cleaning machines also increase efficiency. Thanks to their higher area output, a larger area can be cleaned in a shorter time.
- Detergent can be added precisely in the correct quantity thanks to dosing systems.
- Scrubber driers apply a much higher contact pressure to the surface to be cleaned. This also increases the cleaning performance.

OUTBREAK SITUATION

Cleaning and disinfection after notification of a confirmed case of infection

HOW TO REACT IN AN OUTBREAK SITUATION

In a confirmed outbreak situation it is essential to clean and disinfect using a 2-step method.

Disinfection involves the following steps:

01 Cleaning & drying

02 Disinfection & drying (reaction time)

Enhanced cleaning and disinfection after notification of a confirmed case of COVID-19 or a similar infectious disease

- Buildings and/or specific rooms and areas where an infected person spent time should be assessed on a case-by-case basis.
- The scope of cleaning and disinfection will be established based on the risk of potential contamination.
- The facility adopts a higher standard of hygiene measures. This higher cleaning standard is applied for a certain time or until the outbreak ends.
- Follow the local authorities' guidelines.

The cleaning crew wear the required personal protective equipment (PPE) during cleaning and disinfection:

- Disposable gloves, gowns or a lab coat to protect contamination of clothing
- Safety glasses/goggles when there is the potential for splashing/spraying the disinfectant
- All staff must be fully trained in putting on and taking off the necessary PPE to prevent cross-contamination


KÄRCHER
Professional

DISINFECTION WITH CHEMICALS

What you choose depends on the application area and risk assessment.

WIPE DISINFECTION

Disinfection with a wet cloth or wet mop

SPRAY DISINFECTION

Applying disinfectant on surfaces, floors

MISTING (SPRAY DISINFECTION)

Spraying and misting are very alike and not equal to fogging or evaporation

EVAPORATION OR FOGGING

Comprehensive simultaneous disinfection of all surfaces in an enclosed room

FOAM DISINFECTION

The surface disinfectant is applied in the form of a foam with low aerosol creation

WIPE DISINFECTION

Disinfection with a wet cloth or wet mop

Wipe disinfection*

- A sufficient quantity of active substance must reach the surface for satisfactory disinfection.
- The surface to be disinfected must be wiped with a sufficient quantity of the agent by exercising light pressure. The surface needs to be evenly covered with the disinfectant.
- Wiping with a slightly damp, well wrung-out mop does not result in satisfactory moistening of the surface.

Key points

- Simple to use
- Low material costs
- Zero aerosol
- Rinsing needed for food contact areas
- Low requirements for personal protection

Disinfectants

- QAC (quaternary ammonium compounds)
- Aldehydes, e. g. formaldehyde, glutaraldehyde**
- Phenol, phenol derivative**
- Alcohol, alkylamine

Recommended Personal Protective Equipment (PPE)

- Protective gloves
- Safety goggles

* Source: Robert Koch Institute (RKI)
** Pungent, unpleasant smell, highly toxic, environmentally critical, respiratory protection recommended

SPRAY DISINFECTION

Spraying, misting

Spray disinfection

- Spray and misting are very alike and not equal to fogging or evaporation.
- Spraying disinfectant on a large scale can put the user at risk and has an unreliable effect on surfaces that have not been cleaned beforehand. It should thus be limited solely to areas which cannot be reached through wipe disinfection.*
- Spray and wipe disinfection is very often used for touch point treatments. This is often called routine disinfection or sanitation. Keep in mind that sanitising is not equal to targeted disinfection.

Key points

- Simple to use, high area coverage
- Suitable for surfaces where wipe disinfection is not possible
- Can be used with many disinfection chemicals**
- Formation of aerosol
- High requirements for personal protection

Disinfectants

- QAC (quaternary ammonium compounds)
- Oxidising agents, oxygen compounds
- Alcohol, e.g. ethanol, n-propanol, isopropanol**

Recommended Personal Protective Equipment (PPE)

- Protective gloves
- Safety goggles
- Protective suit (depending on the disinfectant used)
- Respiratory protection in case of insufficient ventilation

* Source: Robert Koch Institute (RKI)
** With regard to alcohol-based disinfectants, it is important to consider explosion and fire hazards, which exist with large-scale utilisation and when using electric sprayers or misters.

EVAPORATION OR FOGGING – ROOM DISINFECTION

Evaporation is different from misting – misting is part of spray disinfection

Room disinfection trough evaporation or fogging of a disinfectant*

- Includes comprehensive simultaneous disinfection of all surfaces in an enclosed room.
- In addition to fogging the room, previous surface disinfection by wiping is required.
- Fogging should only be used if there is a particular risk of infection and/or it can be assumed that wipe disinfection alone could be insufficient.

Key points

- Fogging can be done warm or cold
- Fogging of peroxide is done through "cold fogging"
- Ideal for hard-to-reach places
- Only suitable for indoor use

Disinfectants

- Hydrogen peroxide process*
  - Fogging processes with hydrogen peroxide can only be used on optically clean surfaces
- Evaporation of dilute formaldehyde solutions*
  - Formaldehyde has long been considered carcinogenic by the WHO. The use of formaldehyde requires expert knowledge.

Recommended Personal Protective Equipment (PPE)

- Protective gloves
- Safety goggles
- Protective suit and NBC protective mask if disinfector needs to be in room during fogging, e.g. using a handheld device

* Source: Robert Koch Institute (RKI)

FOAM DISINFECTION

High area coverage with low formation of aerosol

Foam disinfection

- When using liquid cleaning or disinfection methods, the efficacy of the product always depends on the interaction between the application time and the concentration of the chemical.

- With foam as a cleaning or disinfection method we influence the application time.

Key points

- The adhesiveness of foam prevents it from being washed away fast, which makes foam more suitable for disinfecting vertical surfaces
- Fewer aerosols are formed using foam
- Good wetting control
- High m^2 performance
- Please note that foam in the sewage system may present some challenges

Disinfectants

- High foaming products based on QAC
- High foaming products based on oxidising agents

Recommended Personal Protective Equipment (PPE)

- Protective gloves
- Safety goggles
- Protective suit
- Respiratory protection in case of insufficient ventilation

THERMAL DISINFECTION

What you choose depends on the application area and risk assessment.

HOT WATER

Inactivation of an enveloped virus such as SARS-CoV-2 by heat. Effectively using hot water for virus inactivation.

STEAM

Steam is proven able to inactivate germs and bacteria. Kärcher steam cleaners are tested against enveloped viruses, such as SARS-CoV-2 - Coronavirus, among many others.

DISINFECTION IN THE LAUNDRY PROCESS

Effective and hygienic laundry service is critical for cleaning and washing textiles, especially in a pandemic.

CERTIFIED VIRUS REDUCTION WITH HOT WATER

Efficient surface disinfection

How does it work?

With a water temperature of 65°C or more and a contact time of the water with the contaminated surface of less than one minute, hot water high-pressure cleaners effectively eliminate enveloped viruses. From 75°C, non-enveloped viruses are also effectively reduced. This makes these cleaners particularly suitable for use in outdoor areas, as well as on large surfaces.

Laboratory test with an independent institute:

Validation of the disinfecting performance of a high pressure cleaner with hot water function in a simulated temperature profile.

❯ The certificate is valid for all hot water high pressure cleaners with temperatures over 80°C (enough virus reduction impact).

CERTIFIED VIRUS DISINFECTION

Advantages of hot water disinfection

- Accelerates cleaning by up to 40% compared to using cold water, with an additional germ reduction effect
- Environmentally friendly as it is completely free of chemical additives
- No (product) residues on treated surfaces
- There is no need for time-consuming rinsing
- Tolerance formation of the exciter is avoided
- Ideal for sanitising outdoor areas
- Faster drying time
- Particularly effective against soiling that contains protein

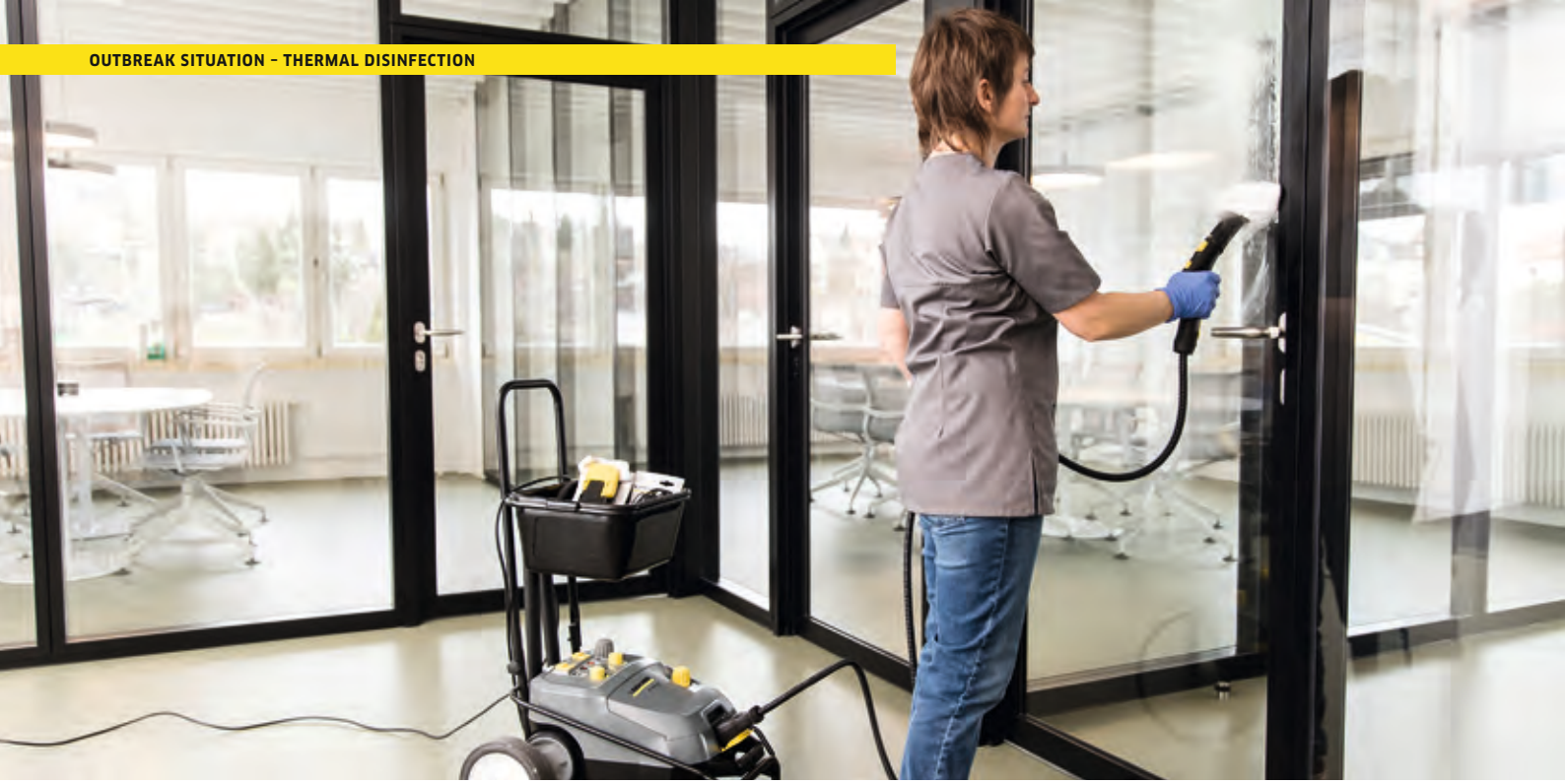
Application areas of hot water sanitation and disinfection

- Preferably for large surfaces in indoor areas and especially outdoor areas, where the use of cleaning and disinfecting chemicals is not desired or is prohibited, such as bus stops, train stations, playgrounds, park benches, stadiums, swimming pools, etc.
- For service providers to clean and disinfect outside surfaces in locations such as hotels, hostels, campsites, cruise ships, etc.
- In the agriculture business to help fight African swine fever and bird flu
- Wherever cleaning and disinfection chemicals must not get into the environment or waste water

	Virus	Temperature*	Contact Time*
Level 1	Human coronavirus (hCoV) 229 E	65°C	< 1 min.
	Modified Vaccinia Virus Ankara (MVA)	65°C	< 1 min.
	Murine norovirus strain S99	75°C	< 1 min.
Level 2	Adenovirus type 5, strain Adenoid 75	75°C	< 5 min.

* Minimum temperature & minimum contact time at which the virus is effectively reduced

Further possibility to reduce the contact time by using higher temperature than the measured minimum temperature from the table on the left



DISINFECTION WITH A STEAM CLEANER OR STEAM VACUUM CLEANER

Virus inactivation without detergents

Kärcher steam cleaners are tested against endemic viruses such as influenca viruses and coronaviruses (SARS-CoV-2), as well as bacteria.

- Tested according to European standard EN 16615 by an external independent laboratory.
- Hard surface treatment with the lamella floor nozzle and a speed of 30 cm/s inactivates certain viruses and bacteria to a degree of disinfection.
- Endemic waves of diseases as flu, gastric flu or conjunctivitis can be limited efficiently.
- Due to the shock-like high temperature treatment, germs are not only removed, but inactivated.

CERTIFIED VIRUS DISINFECTION

Recommended Personal Protective Equipment (PPE)

- Safety goggles
- Protective gloves

DISINFECTION IN THE LAUNDRY PROCESS

Influencing factors

A hygienic wash process depends on four factors:

- Time
- Temperature
- Laundry detergent
- Water level and water hardness

Wash cycles which are neither hot nor long enough will not be able to fully destroy or inactivate the potentially infectious bacteria/viruses.

Consult your supplier for best practices with your washing machine.

Guidelines are available here:

- https://www.schulthess.ch/en_int/business-and-industry/desinfection
- https://www.electroluxprofessional.com/gb/thermal-disinfection-guide/
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6600116/
- etc.

DEEP CLEANING AND REOPENING

Where to begin and what to do

REOPENING REQUIRES REINVENTION

What should you do when reopening a building after a prolonged period of reduced activity or closure?

Basic cleaning is a thorough cleaning process that goes right down to the "base". With basic cleaning, old and worn maintenance films and all soiling residues are removed from hard floors. Carpets are cleaned down to the backing and soil is removed from deep within the fibres.

Reopening process

01

TOP-TO-BOTTOM BUILDING CHECK, evaluate cleaning need, identify potential hazard areas

02

DEFINE AND CARRY OUT cleaning and deep cleaning tasks

03

REVIEW STANDARD CLEANING PROGRAMME, adapt to new circumstances

DEEP CLEANING AND REOPENING

The temporary shutdown or reduced operation of a building can create hazards for returning occupants. It is imperative to check on these hazards before reopening after a prolonged period of building inactivity.

Guidelines in the context of SARS-CoV-2 or other pandemics concentrate on preventing the risk of having any contaminated areas. Guidelines ensure people can safely enter the building and start their normal routines at work or leisure, as they did before the pandemic. Besides dirt and dust affecting the wellbeing of people, hazards include hidden elements such as mould, legionella or lead and copper contamination from corroded plumbing in water systems.

Reopen with confidence

Kärcher will take you through a clear restart framework while you prepare to reopen your facility. See also the details in Chapter 2 of this brochure, “Get ready for the New Normal”.

DEEP CLEANING

What needs to be deep cleaned?

There no standard definition of the term “deep cleaning”. However, a facility needs to undergo a thorough top-to-bottom check and cleaning before it reopens.

- Indoor areas unoccupied for up to approx. 14 days need only routine cleaning. Maintain good cleaning practices for outdoor areas.
- Areas unoccupied for a longer period of time need an assessment to determine which floors and surfaces need to be treated with a deep cleaning programme and to what extent.
- Review the current quality assurance programme, adapt to the new circumstances and carry out frequent checks.

Water systems after prolonged shutdown

Water quality within commercial buildings that have been vacant or have seen little use during pandemic restrictions may be impacted as a result of low water flow or stagnant water in pipes. Building owners or tenants should take the following actions to reduce risks relating to the water system:

- Thorougly and repeatedly flush the water pipes. The goal is to refresh all the water in the building pipes with fresh water from the water mains underneath the street.
- Check your hot water system. Set your hot water heater to >60°C. When flushing hot water taps, run the water until it reaches its highest temperature.

Startup of water dispensers, coffee / tea makers and other vending machines

The pandemic-related precautions have resulted in lower usage or temporary switch-off of water coolers, coffee/tea makers and other vending machines while workplaces were closed down.

To ensure optimum water, coffee and tea quality, the operator should follow the startup steps as described in the user manuals of the equipment, cleaning the equipment, flushing the machines, always using fresh water in the process.

To learn more, please visit
https://www.kaercher.com/int/disinfectant-and-hygiene-solutions.html

or write an e-mail to
FAQ.Corona@de.kaercher.com

CONTACT US

KÄRCHER

makes a difference

Please contact us for more information:

Head Office Germany

Alfred Kärcher SE & Co. KG
Alfred-Kärcher-Straße 28–40
71364 Winnenden

Phone +49 7195-14-0
Fax +49 7195-14-2212

www.kaercher.com

USA

Kärcher North America
6398 N. Karcher Way
Aurora, CO 80019

Phone +1 800-444-7654
Fax +1 866-271-0520

www.karcherna.com

Canada

Kärcher Canada Inc.
275 Pendant Drive
Mississauga, Ontario L5T 2W9

Phone +1 905-364-5006
Fax +1 905-672-3155

www.karcher.ca

United Kingdom

Kärcher (UK) Ltd
Kärcher House
Brookhill Way
Banbury
Oxon OX16 3ED

Phone +44 1295-752-000
Fax +44 1295-752-103

www.karcher.co.uk

Ireland

Kärcher Ltd (Ireland)
Unit 3, Redcow Retail Centre
Robinhood Road
Ballymount, Dublin 22
D22 PY03

Phone +353 1-409-7777
Fax +353 1-409-7775

www.karcher.ie

South East Asia

Regional Head Office
South East Asia

Karcher South East Asia Pte Ltd
3 Depot Close #05-01
Singapore 109840

Phone +65 6897-1811
Fax +65 6897-1611

www.karcher.com.sg

Hong Kong

Kärcher Limited
Unit 01, 22/F, Westley Square
48 Hoi Yuen Road
Kwun Tong, Kowloon

Phone +852 2-357-5863
Fax +852 2-357-5632

www.karcher.com.hk

Australia

Karcher Pty Ltd
385 Ferntree Gully Road
Mount Waverley
Victoria, AU 3149

Phone 1800 675-714
(Free Call)

www.karcher.com.au

New Zealand

Karcher Ltd
66 Allens Road
East Tamaki
Auckland 2013

Phone +64 9-274-4603
Fax +64 9-274-6932

www.karcher.co.nz

North Africa

Kärcher SARL
Immeuble Yasmine Tower
Bloc A 6ème étage, bureau A 6.6
Centre Urbain Nord
1082 Tunis
Tunisia

Phone +216 36339020

info@tn.kaercher.com
www.kaercher.tn

East Africa

Karcher Limited
Regus Fortis Office Park
P. O. Box 66488-00800
Block C, Ground floor
Muthangari Drive
Westlands, Nairobi
Kenya

Phone +254 205148145

info@ke.kaercher.com
www.kaercher.com/ke

South Africa

Kärcher (Pty) Ltd
Cnr Mount Joy &
George Allen Rd
Wilbart Ext. 2
PO Box 11818
Vorna Valley, 1686

Phone +27 11-657-7300
Fax +27 11-657-7440

www.karcher.co.za

Middle East

Karcher FZE
Quality Cleaning Systems
Jebel Ali Free Zone
Plot No. S-10104 South Zone
RA 08, XB 1, Jebel Ali
Dubai

Phone +971 4-886-1177
Fax +971 4-886-1575

customercare@ae.kaercher.com
www.karcher.ae

Qatar

Karcher LLC
Office No 133, Regus Building
D Ring Road
PO Box 35176

Phone +974 4-423-1319

customercare@ae.kaercher.com
www.kaercher.ae

Caribbean

Karcher S.R.L.
Calle 5ta, esq. Calle 18, Nave 1
Villa Aura
Santo Domingo Oeste
Dominican Republic

Phone +1 809-379-3700
Fax +1 809-379-3777

info@do.kaercher.com
www.kaercher.com/do

MI/Po · 08/2021 · Order no. 0.028-444.0 ·