



TSA Good Practice Guidance

Cabinet Roller Towels & Dispensers Installation, Use, Laundering and Servicing

Originally Produced in consultation with the Health & Safety Executive

Foreword

This industry guide was first published by the TSA in 2003 in consultation with the HSE and revised in 2021.

It has since been updated and this issue at March 2021 takes into account the various questions raised during the Covid-19 pandemic in order to advise service providers and their customers of the hygienic advantages of drying hands using a Cabinet Roller Towel, as well as the many other environmental, sustainable and energy saving benefits compared to disposable paper towels and air dryers (warm air and jet).

The TSA has already published via its website information specific to 'Managing Risks related to Covid-19', which includes reference to Cabinet Roller Towels along with relevant links to gov.uk advice and this is now included within Annex B of this guide.

Brief reference is also made to the changes in product liability regulations effective from January 2021 as a result of Brexit.

Whilst it is not possible to include such market sensitive information within this generic guide, the various service providers and textile service/rental companies may be referenced via their websites to see the different models available and their advantages, along with marketing material deployed.

This code of practice describes the responsibilities of the textile rental company or service provider and customer in respect of the provision of a cabinet roller towel service. It incorporates the guidance given in the informative Annexes of BS EN 13569:2000 Cabinet roller towels – Performance requirements and processing. In addition, it includes the level and quality of information and training, which should be given by the service provider to their staff to ensure a satisfactory service and to be able to demonstrate that all reasonable steps have been taken to make that service as safe and as efficient as possible.

Customers also need to understand their responsibilities for the correct operation and supervision of the service, including the storage and possibly changing the roller towel.

Product liability conformance, previously governed by the 85/374/EEC directive has changed and the link below is typical of advice provided relevant to the post-Brexit requirements concerning product liability, referencing CPA, GPSR and UKCA implications.

<https://www.gov.uk/guidance/product-safety-advice-for-businesses>

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1. Key stages in establishing the rental service agreement

The textile rental company should ensure the following:

1. A site survey, in consultation with the customer, is carried out by competent staff to identify the position and nature of wall locations and types of roller towel and dispenser to be put in service. Particular attention should be paid
 - a. to usage levels to determine the number of dispensers needed in individual locations, the probable frequency of towel change and frequency of delivery of replacement towels
 - b. the type of soiling to be expected e.g. oil in engineering workshops, in order to determine the type of roller towel required e.g. blue
2. The correct installation of the dispenser for the specific wall construction. (See Annex A)
3. An explanation of the customer's responsibilities is given verbally and in writing. The provision of training of the customer (including relevant contracted personnel) to allow them to meet these responsibilities, especially in respect of
 - a. the maintenance of the wall location, checking the integrity of fixings
 - b. the maintenance of the dispenser, to ensure cleanliness and good operation
 - c. subsequent towel replacement
 - d. adjustment of the roller towel
 - e. correct loop length and use of safety features (see section 4.2.3)
 - f. storage of towels before and after use
4. The establishment of an agreed frequency of delivery i.e. for delivery of clean roller towels and collection of soiled.
5. The correct initial loading of the roller towel in its dispenser by textile rental company staff and the subsequent checking of the operation of the dispenser and the integrity of its fixings at each delivery.
6. The provision of information to the customer relating to the criteria for the withdrawal of the towel service.
7. A procedure for handling customer complaints forms part of any quality system and it is particularly important to include a frequent review for the roller towel service, making sure that specific cases are notified to the legal department or representative.

2. Key stages and recommendations in care, use and transportation

The roller towel should normally pass through the following key stages.

1. Collection (soiled) from the customer's premises in an appropriate storage system and transport to the laundry. During transport clean roller towels should be stored separately from soiled rolls.
2. Processing in accordance with the service provider's documented methods (e.g. EN 13569:2000); sensibly dried and wound before storage/despatch. During winding checks on the integrity of the towel (e.g., tears, condition of repairs, frequency of repairs) should be carried out and unsatisfactory towels sent for repair or removed from service.
3. Handling and/or otherwise conveying into an appropriate storage system. Handling equipment, containers and vehicles should be maintained in a clean condition.
4. Container-loading onto a vehicle and delivery to the customer. Drivers and other service employees should pay close attention to personal hygiene and should ensure that towels remain dry and clean whilst in transit.
5. Delivery to the customer's premises with due care to maintain cleanliness, for placement into storage or loading into a dispenser, in accordance with instructions. The customer should be encouraged to provide storage facilities where appropriate to maintain towels in a clean and dry condition.

3. Key safety characteristics for dispensers and roller towels

1. Dispensers should:
 - a. be of a robust construction
 - b. have no sharp protrusions on the exterior
 - c. provide four fixing points, not accessible to users, for fixing to the wall
 - d. be installed on the wall using the appropriate fixings (See Annex A.)
 - e. have a locking device, if installed where the public has access
 - f. be easy to clean and disinfect, both inside and out
2. Roller towels should:
 - a. have dimensions (length and width) appropriate to the dispenser in which it will be used in order to facilitate its proper operation
 - b. have sufficient strength to withstand the force exerted when the towel is pulled down, or used for wiping and drying
 - c. have selvedge edges designed to limit the lateral movement of the material when the roll is pulled down or taken up

- d. be correctly wound to facilitate loading in the dispenser and to avoid jamming of the dispenser mechanism in use

4. Key safety requirements for the use of dispensers and roller towels

1. Dispensers

- 1.1. Installation: The safe operation and use of the dispensers relies on the quality and maintenance of the installation fixing. The dispenser must be able to withstand repeated pulling down on the roller towel, especially allowing for the additional force that may be applied in the event of a towel jam. There is a risk that vigorous pulling can cause the detachment of the dispenser from the wall during that or subsequent actions, resulting in injury to the user. Annex A provides advice and recommendations on dispenser installation. Textile rental staff should be properly trained for installation.
- 1.2. Abuse: Dispensers in certain locations can be subject to abuse. The key safety characteristics for dispensers are listed in section 3.1. In such locations it may become necessary for the customer to increase their vigilance and the frequency of their checks (section 1.3 a). This should be included in their training and written notification of responsibilities.

2. Roller towels

- 2.1. Strength: This has already been referred to in section 3.2.2. Injury to the user can arise if the towel breaks unexpectedly, especially during pulling down. Breaking can occur because of chemical damage caused by bleaching over the lifetime of the towel or it can be due to a defective repair. Either occurrence will be exacerbated by the jamming of the dispenser mechanism.
- 2.2. Repairs: Well-made repairs are acceptable, but these should be to a standard and monitored during the life of the towel. Too many or badly made repairs will contribute to the risk of jamming, the breaking of older towels in service and an increase in the forces exerted on the dispenser and its fixings.
- 2.3. Misuse: In certain locations e.g. schools, a safety feature (integral to the dispenser or a bar fitted to the wall) should be fitted to prevent misuse of the towel loop.

It is strongly recommended that such precautions be taken where children will be the predominant users of the towel and dispenser.

Annex A. Guidance on the installation of dispensers

It is usual for suppliers to provide fixing instructions with their dispensers. Where the textile rental company/service provider uses a contractor, or agrees with customers for them to fix their own dispensers, those instructions should be shared. The purpose of this Annex is to give guidance on methods of identifying wall constructions, hidden hazards such as buried pipes and cables, and guidance on the selection of suitable fixings. It may also be part of the information passed on to contractors and customers.

1. General

The sighting of dispensers should be agreed with the customer (see section 1.1), observing the following points:

- a) the location should be convenient for the user
- b) the dispenser should not impede the use of other equipment or facilities, e.g. opening doors, nor should the operation of the dispenser be impeded
- c) the construction of the wall should be suitable for the safe installation of the dispenser (see Table A1.)
- d) beware of concealed services such as electrical cables, burglar alarm wiring, gas, water and steam piping. (For advice on detectors see A3.)

2. A2. Standard fitting instructions

- e) Mark the position of the required fixing points on the wall such that the bottom of the dispenser will be about 1.4 m above the floor. In some locations e.g. schools this may need to be lower
- f) Drill holes to a depth of 3.8 cm using a bit which corresponds in size to the wall plug to be used. Plugs **MUST** always be used other than for wood structures (3.8 cm No. 12 round head or cross-head wood screws are recommended).
- g) The round-head wood screws which should be used are screwed in to about 3/4_ of their length. The dispenser is then offered up onto the screws which should be fully tightened.
- h) The screws and plugs provided by the dispenser supplier may not be suitable for the wall construction and must be replaced by the correct parts (see Table A1.)
- i) The specified number of fixings must always be used to secure the dispenser correctly.
- j) Consult supplier's instructions where special safety features (see section
- k) 4.2.3) are required

Table A1. Precautions for different wall types

Type of wall	Precautions	Fixings *
Brick – 11.4cm or 22.9cm thick	Standard fitting instructions normally apply	Nylon wall plug – type S
Brick plaster faced (depth 1.6cm)	Standard fitting instructions normally apply – allowing for depth of plaster	Nylon wall plug – type S
Plaster faced breeze	Drilled hole may be uneven because of the structure of the block	Universal nylon anchor – type FU
Cavity wall, plaster board nailed to wood frame	Plaster can break away the drilled hole on the from inside of the wall, weakening wall	Wood screws into wood frame
Concrete, often with plaster Granite or granite-faced Marble/porcelain/vitrolite/glass	Extremely hard, drill 2.5cm with masonry bit, but allow for depth of plaster The drilling of these materials should only be undertaken by an expert	Nylon wall plug – type S Nylon wall plug – type S
Plaster on lathe	Plaster, reinforced with hair, screed over wood lathes	Unsuitable for installation
Plastic/laminate battened over brick or breeze	Facings fixed to a wood framework	Fix to wood frame, may need extra battens. Refer to customer before modifying
Terrazzo	Flintstone, even harder than granite. Drill slowly and carefully to 2.5cm to avoid expensive damage. Do not use an impact drill	Nylon wall plug – type S
Tiled, usually plastered to brick or breeze	Use a tile/glass bit and drill slowly as near to tile centre as possible (never in grouting or with impact drill)	Nylon wall plug – type S
Wood	Test structure/partition is sound	Use wood screws directly into the structure

* Types of fixings refer to the Fischer fixing range, but equivalent products are available – see NOTE on final page

A3. Hidden services detectors

A multi-use detector for metal, voltage and wood framing is the most useful and cost-effective equipment for surveying the installation point of wall mounted equipment including towel dispensers. It will locate a range of items to avoid including buried water pipes and live or dead electrical cables. However it will not necessarily detect armoured cable or interference suppressed cable so it is worthwhile consulting the customer for local knowledge.

It will also detect Stud Partition walls (so that tiled walls should always be surveyed before drilling). The vertical and horizontal studs will be detected and can be used to assist fixing.

Some skill is required in interpreting the operation of these detectors to avoid, for example, spurious results from plaster board nails.

NOTE: The use of proprietary names throughout this document should not be taken as an endorsement of the product by TSA. It does not imply that there are no other products of equal or better worth available on the market.

Annex B – TSA Briefing on Cabinet Roller Towels during Covid-19 Pandemic

The use of a cabinet roller towel service reduces the risk of spreading of infections in Washrooms. Every household and business in the UK has been advised on measures for restricting the spread of the Coronavirus. Central to this advice is the need for frequent and correct hand washing as the virus can be readily spread by contact with contaminated surfaces.

Over the years, we have seen reliable evidence of the effectiveness of cabinet roller towels in hygienically providing hand drying solutions to millions of users. Especially, at a time when we are fighting a high consequence air borne disease, it is vital to restrict the spread of infection to the individual, to surrounding objects/surfaces and to other people.

Cabinet roller towels are the most hygienic and sustainable solution when it comes to design and use for the following main reasons:

1. The Cabinet Roller Towel system is so designed as to dispense a fresh, hygienically clean/disinfected towel portion on demand and automatically stores the used portion of the towel roll safely away from contact with the next user.
2. The positioning of the locked and secure cabinet and the length of towel dispensed means that it is far less open to abuse or contamination from alternative use such as wiping down surfaces, discarding after catching sneezes, etc.
3. Commercial laundries process the cabinet roller towels as per BS EN13569 (Performance requirements and processing). This standard covers the following key points:
 1. Process validation procedures to ensure that cabinet towels achieve the condition of hygienic cleanliness in processing.
 2. Example specifications for suitable fabric structure to ensure efficient drying of hands by combined wicking and wiping.
 3. Recommendations for the care, use and transportation of cabinet towels after processing
 4. Examples of key process variables to achieve disinfection
 5. The preparation and application of bioindicators for the validation of the laundering process to achieve hygienic cleanliness.
 6. The colour fastness of the towel fabric.
 7. The Textile Services industry also provides an industry Code of Practice with which Cabinet Roller Towel suppliers must comply.
 8. Textiles (porous surfaces) have been proven much more resilient against coronavirus (SARS COV-2) compared to non-porous surfaces such as disposable gowns, paper, plastic etc. (Reference: Lai et al., 2005).

On the other hand,

1. Warm air driers draw air in from the washroom environment and thus potentially recirculate contaminated or infective air.

2. Paper towels often get jammed in or fall out of the dispenser and end up in a pile on the vanity surround, resulting in potential cross infection.
3. Stacks of individual terry towels give the appearance of quality, but they are seldom wrapped or protected from contamination.
4. The University of Westminster undertook a study comparing Cabinet Roller Towels, Warm air dryers and Paper, from which the general conclusions were:
5. On average warm air dryers do not perform as well as paper or cotton towels with any of the assessments of hand drying efficiency that were tested, i.e.
 1. speed (warm air dryers are slower than towels at drying the hands)
 2. drying efficiency (in normal usage warm air dryers do not dry the hands as well as towels)
 3. hand hygiene (in normal usage the number of bacteria on the hands is
 4. increased by warm air dryers but reduced by towels)
 5. environmental contamination (bacteria are emitted in the air flow of warm air dryers)

References

- Working safely Government Guidance - <https://www.gov.uk/guidance/working-safely-during-coronavirus-covid-19/factories-plants-and-warehouses>
- Find your local Health Protection Team - <https://www.gov.uk/health-protection-team>
- The United Kingdom Government Advice - <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control>
- Public Health England - <https://www.gov.uk/government/collections/coronavirus-covid-19-list-of-guidance>
- The Advisory, Conciliation and Arbitration Service - ACAS - [Coronavirus: advice for employers and employees](#)



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