



ELS New Zealand
smarter laundry solutions

MINI GUIDE TO GOOD LAUNDRY PRACTICE



ELSNZ.CO.NZ



INTRODUCTION

A COMPREHENSIVE OVERVIEW OF LAUNDRY PROCEDURES

ELS New Zealand Ltd, NZ's premier supplier of laundry equipment, covering all area's of commercial & industrial laundry. We offer our expertise throughout the purchase and set-up process, with advice on planning, design, specification, installation, commissioning & staff training. Finance packages are available.

ELS have a nationwide service network of over 50 accredited service agents, who continue to provide expert service and promote our equipment, based on their confidence in our product & the support ELS provide.



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HYGIENIC LAUNDRY

Laundry is found throughout Healthcare facilities: uniforms, bed linen, catering articles, surgical dress, cleaning items (i.e. mops), patient clothing, etc. Laundry plays an essential role in patient comfort and health, whilst protecting employees in their place of work.

Laundry is a potential carrier of nosocomial infections. It is therefore vital to control its process. Special measures must be taken to ensure hygiene. The laundry items themselves must not pose a threat to health and remain innocuous at every stage of their use and treatment.

An inherent part of the process is to control the efficiency of washing techniques utilised in laundries whilst identifying the potential for clean laundry to become contaminated. Dirty laundry can spread germs to other areas. This requires an in-depth understanding of laundry flows, the correct use of fabrics suitable to the task and working practices, which ensure the employees are aware of how their every day actions can impact the laundry operation.

Hygiene control is vital in ensuring high quality practices with a systematic approach including processes, risk assessment, preventative measures and quality assurance procedures that are evaluated and measured at regular intervals. In addition, any service provider should be selected according to specifications and defined hygiene standards

In the current climate whereby hospitals and rest homes require proof and must document the quality of the processes used, the laundry flow implemented for assurances of hygiene must ensure permanent control systems are in place to minimise and prevent the risk of nosocomial infections.

With this in mind, please take the time to read this "Mini Guide" to good laundry practices based on the AS/NZS 4146:2000 Australian/New Zealand laundry standard and the vast experience of ELS New Zealand with all things laundry. I trust you will find this of great assistance





DIRTY LINEN HANDLING AND SORTING

The recommended method of soiled linen transfer between the patient/resident and the laundry is generally via a "collection trolley", which provides the user with a one to three bag option. The most efficient method is to pre-sort linen directly into the collection trolley system as it's being collected. With a three bag trolley, the recommendation would be to sort separately:

- Flatworks – bed sheets, pillow cases
- Personals – Patient or resident garments
- Terry Towelling – Bath towels, terry mats, robes, face cloths etc

In general terms, the above categories comprise the majority of laundering requirements in many HealthCare facilities. To facilitate sorting and loading, coloured bags should be used to differentiate between the various linen types, providing fast identification, with red bags being used purely for "at risk linen", which in addition should be suitably impermeable to prevent any leakage of blood or other bodily fluids

Other factors to consider:

- Any system other than dirty laundry collection bags, should be specifically excluded for this purpose (eg bin bags, sheets knotted to form bundles etc)
- Only use textile bags, as they can be emptied and washed with the soiled linen
- For ergonomic reasons, do not fill bags more than two-thirds full.
- If possible, the maximum load should not exceed 10kg

Ultimately, the purpose of sorting is to identify linen types for efficient production, to achieve the correct wash results specific to linen types and to establish the degree of soiling, for effective stain removal. Correctly sorted linen will have a positive flow on effect to all area's of the laundry.

WASHING

RECOMMENDED MEASURES

- Insure correct loading of washers for economy and optimal mechanical action
- Insure appropriate decontamination of washed linen
- Insure the wash program is suitable for the linen type
- Insure that protective garments are worn when handling soiled linen

MACHINE LOADING

The correct loading is critical to providing efficient mechanical action, needed to effectively assist in the removal of soil. Within commercial front loading machines The correct ratio is 1:10 or 1kg of linen to every 10 litres of drum volume (i.e., washer with 240 litre drum = 24kg of linen).

Where it is not practical or possible to weigh linen, the recommended procedure is to load The washer, without "stuffing" linen until a hands vertical width between the top of the inner drum and top of the linen is achieved.



DRY LINEN LOAD LEVEL



LINEN SOAKED AND
CONDENSED DOWN



ARROW INDICATES LINEN
FALL FOR OPTIMUM
MECHANICAL ACTION

DISADVANTAGES OF INCORRECT LOADING

Overloading severely reduces mechanical action and correspondingly, the level of soil removal is reduced. Rinsing efficiency is also reduced as the rinse water cannot readily penetrate the extra heavy load.

Underloading increases wear on the textiles. Furthermore, as wash programs are calibrated for the correct fill load, utilities such as water, power and chemical are wasted.

ENSURE APPROPRIATE DECONTAMINATION OF LINEN

Soiled linen should be thermically disinfected at a minimum of 65 degree's for no less than 10 minutes, or at a minimum 71 degree's for not less than 3 minutes.

In a commercial front loader with the correct load level, the "mixing factor" must be accounted for by adding an additional 8 minutes. This insures penetration of temperature and the minimum exposure time is achieved. (refer AS/NZ 4146:2000 3.5.2 thermal)

- 65 degree's for minimum 14 minutes, including the mixing factor
- 71 degree's for minumum 7 minutes, including the mixing factor

The maximum temperature used is generally limited to the thermal stability of the textile. If for this reason high temperature is not practical, linen can be washed with an appropriate wash cycle and chemicals, achieving a similar level with chemical disinfection. As a further option, Ozone for laundry application has proven it's worth, not only as a method of driving down laundry utility costs, but also as a very effective method of achieving sanitation in cold water with excellent wash results.

Chemical providers should be consulted and suitable programs achieving the same level of disinfection, as that provided thermically, should be introduced and validated prior to routine use. When programming washing machines, it is advantageous to insure the equipment provides suitable programming flexibility to achieve the desired result. Microprocessors such as the Electrolux Clarus Control allow for complete on site, programming flexibility. Furthermore, to guarantee wash temperature, it is recommended that any new washing machine introduced into a HealthCare laundry, incorporate the ability to self regulate internal water temperature, either with electrical heating element, or alternatively via direct steam injection.

The Clarus Control® microprocessor perfectly combines timing, optimal water levels and temperature to ensure superior performance with minimum consumption.

Clarus Control® monitors all machine functions:9 standard and 192 fully customisable programs.



ENSURE THAT THE WASH PROCESS IS SUITABLE FOR THE LINEN TYPE

In most HealthCare On Premise Laundries (OPL), professional chemical companies are contracted to supply wash chemicals and manage the wash process. Providing proper sorting of linen is achieved by laundry staff, tailor made programs are utilised to optimise wash results and production. Linen sorted correctly also speeds up the production process by offering a consistent load for finishing. For example, pillowcase and sheets may be finished through a roller iron, whereas terry towelling products are finished in tumble dryers. No post sorting of washed linen is then required for different finishing processes.

As a matter of good laundry practice, the laundry should have ongoing programs that record and monitor all key laundry processes, which should include clear procedures for:

- Achieving and maintaining effective washing
- Achieving consistent levels of disinfection, thermically or chemically
- Ensuring the optimisation of linen life
- Complete validation of all laundering processes.

Laundry Management Systems are available to allow for complete management of the wash, dry and ironing process with compatible microprocessors. Electrolux has developed the Certus Management Information System™ (CMIS). Innovative software from Electrolux, that allows you to connect machines to a network and monitor in real time, all operating costs, program & consumption data, also available on a printable receipt allowing for validation of every processed batch.

Alternatively, most professional chemical providers can also provide to varying degree's, similar retrospective data on consumption and program information.



TRANSFERRING BETWEEN WASHING AND DRYING

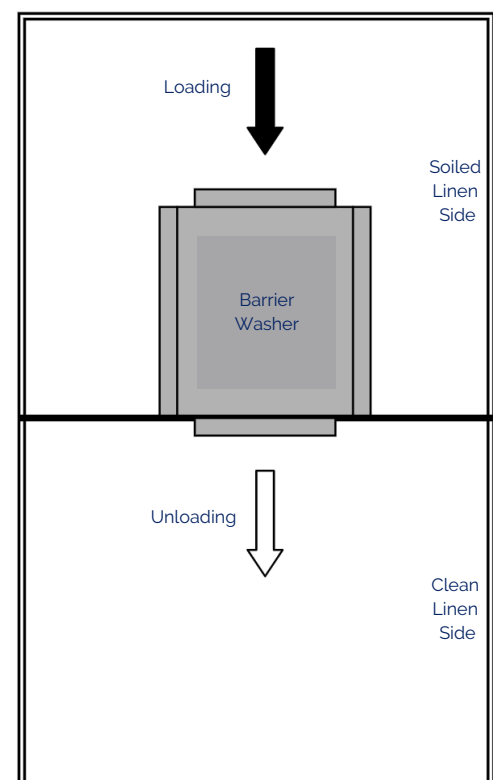
RECOMMENDED MEASURES

- Ensure that the laundry design is such that any possibility of cross contamination is minimised.
- Ensure that the correct equipment is provided to facilitate unloading / transferring of linen between washing and drying.



WASHING IN A BARRIER CONFIGURATION

Negative Air-Flow



Positive Air-Flow

LAUNDRY DESIGN AND LINEN TRANSFER

Ideally laundry with a barrier configuration , whereby the soiled and clean side are completely separate, offers the most in the way of preventing cross contamination. Where practically possible, consideration should be given to the establishment of Barrier laundries.

Alternatively, in a standard laundry design, approximately a 1 metre transit area between soiled and clean side of the laundry should be provided and marked clearly to aide in preventing any crossover of soiled laundry equipment into the clean area, or visa versa.

PROVIDING FOR THE CORRECT EQUIPMENT FOR LINEN TRANSFER

Laundry trolleys can be colour coded, to designate them specifically for either soiled linen, or clean linen and should never be crossed over. Traditionally, with the older plastic bucket type trolley, they can be supplied in black and white, with black representing the soiled linen and white representing the clean linen. Laundry trolley's such as these are designed in such a way as to provide easy cleaning and identification

Due to the large capacities of commercial washer extractors, the more ergonomic, spring loaded trolleys have become very popular, facilitating the unloading by bringing the trolley floor up to the operator, as it is being unloaded and thus reducing the risk of any back injuries to the operator.

Linen should be unloaded promptly at the end of the wash process into a designated "clean" laundry trolley, for immediate transfer to the item of finishing, be it drying through a tumble dryer or ironing. If at any stage the clean linen comes into contact with the floor, the item in question should be considered contaminated and re-washed. Ideally,

the finishing (drying, ironing and folding) should be done promptly, as the opportunity for contamination increases over time, particularly, with warm wet linen sitting around for overly long periods.



**Suspended
Floor Trolley**



**Laundry Bucket
Trolley**



**Suspended
Floor Trolley**



DRYING AND FINISHING

RECOMMENDED MEASURES

- Ensure correct and consistent operating procedures are in place
- Minimise contact with clean linen to prevent recontamination

OPERATING PROCEDURES & CONSISTENCY

Consistency is key in any laundry operation. Correct filling of a washer extractor will roll on to the drying process, providing consistent load sizes and linen types, with uncomplicated dryer operation. Dryer or ironer operating procedures should be set and followed accordingly, depending on the linen type to be processed. Test each item's drying time and set a reference in the laundry, for the operator.

TEMPERATURE

High	Non-Iron / Normal Wash	Cotton
Medium	Non-Iron / Normal Wash	Cotton & Mixed Fabrics
Low	Fine Wash / Mild Wash	Delicate Fabrics
No Heat	Airing Bedspreads	Duvets & Woollen items

DRYER LOADING

Full loads are recommended in order to achieve the best result. Full load is indicated in kilos of dry textile

Dryer Type 4290	290lt @ 1:20 = 14.5kg
Dryer Type 4530	530lt @ 1:20 = 26kg
Dryer Type 4650	650lt @1:20 = 33kg

IMPORTANT

Always allow the dryer to reach the end of cycle, for it to achieve programmed cool down. Alternatively provide a manual cool down. Never leave linen in the dryer unattended, particularly overnight, as spontaneous combustion may result in a dryer fire



IRONING

Prior to commencement of ironing, we recommend correct sorting of sheets, table linen and pillow cases, to allow the operator to process by item type. This will simplify the feeding method, which will be explained further down the page.

Always insure that the items to be ironed are not wider than the feeding width of the ironer. With some items, one fold is acceptable, but any more than this will hinder the quality of production and drying consistently.

When processing new linen types for the first time, insure that tests have been carried out to determine the correct setting of temperature, speed relevant to linen residual moisture levels and that these settings are clearly displayed for the operator. Doing this initially will facilitate the ironing process and minimise the potential for damaging linen, or having to re-introduce linen back through the ironer, due to inadequate drying in the first pass through.

In cases where high spin washers are available, subject to the ironers capabilities, linen can be direct fed to the ironer after a high spin extract. Alternatively, linen may require pre-conditioning in a tumble dryer for five or ten minutes, prior to ironing.

Importantly, linen being processed through a heated roll ironer, as a recommendation should not be starched, as there is a likely hood that starch will be deposited on the ironing cylinder, which may result in inconsistent heating and poor quality production. Alternatively, if starching is a requirement, daily ironer cleaning procedures need to be implemented. Productivity and quality of ironing is also dependant on wash quality, always insure that your main chemical provider is aware of your requirement to process through an ironer

FEEDING LINEN THROUGH THE IRONER

If small items, such as single sheets, pillowcases or table linen are to be fed through the ironer, always insure that these items are fed alternatively from left to right of the heating cylinder (See diagram on the following page). This is important to maintain consistent heating of the ironing roll and prevent hot spots, which may cause the ironer thermostat to trip out, delaying production.



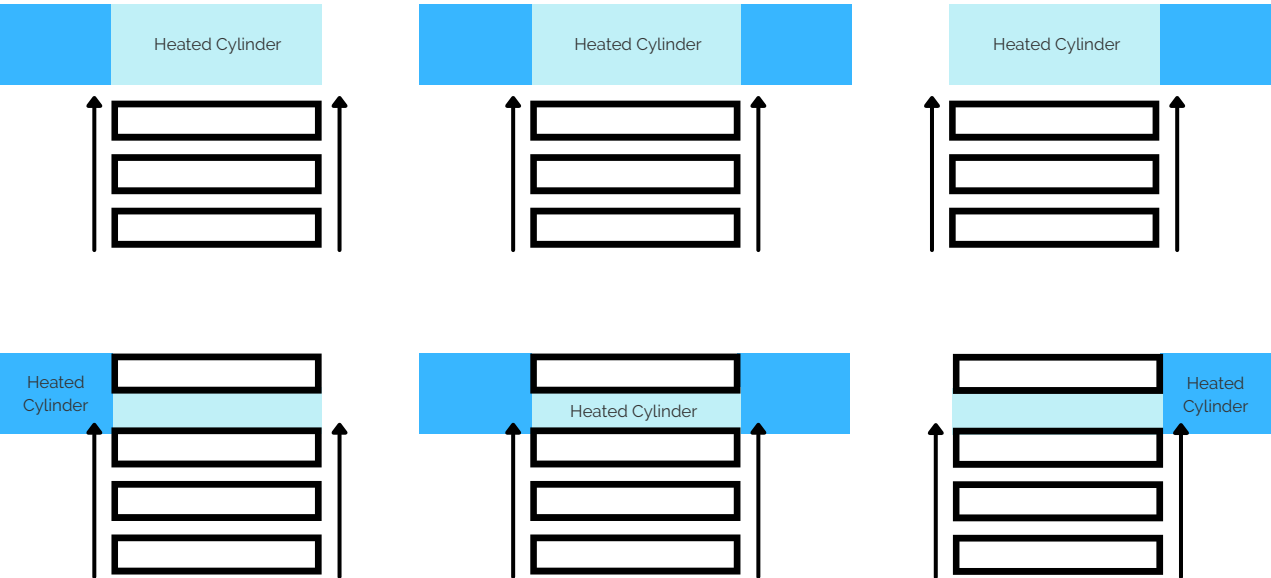
IRONER FEEDING DIAGRAM

KEY:

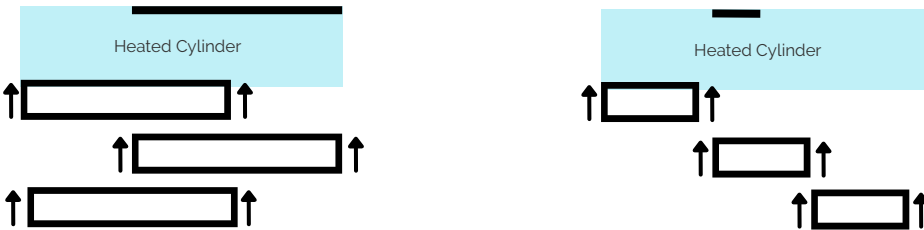
Unutilised area of heated roll

Utilised area of heated roll

INCORRECT:



CORRECT:



HANDLING OF CLEAN LINEN

Minimise the re-handling of clean linen to reduce the risk of re-contamination. It is recommended that after the drying process, that linen is removed from the dryer, folded immediately and placed in a mobile unit ready for transport to the appropriate department. The dryer door should be closed after unloading, prior to the next drying cycle to prevent further heat loss, as 10 degree of heat is lost for every one minute the door is left open.

Once again, having the correct equipment is imperative, modern laundry distribution trolleys also provide sealable rain covers or doors, which also assist in the prevention of contamination of laundered goods through aerosol, dust, moisture or vermin.

In the event that fixed shelving storage is used, clean laundered linen should be stored on clean shelves.



**Sealable
Distribution
Trolley**



OPERATOR MAINTENANCE OF THE TUMBLE DRY

It is imperative that the lint screen in the tumble dryer, which collects the lint is cleaned on a regular basis. Failure to comply with the manufacturers recommendations to regularly clean the lint filter can result in disruption to the air flow, which may extend out the drying times and ultimately shut the dryer down.

Lint screen should be cleaned using a soft brush or vacuum head on at least a daily basis. If new linen is being processed, lint screen should be cleaned after every four dryer loads.



LAUNDRY SAFETY AND MAINTENANCE

Experienced equipment suppliers, such as ELS New Zealand generally provide a wide range of reference material supplied with new machinery, that specifically details all operator Health and Safety procedures, as well as maintenance procedures for equipment usage.

Detailed training is provided on installation of any new equipment, including health and safety instruction. Laminated instructions are also provided as further reference in the laundry and should be located in a visible, accessible area for all staff. In cases of staffing changes, ELS New Zealand, in conjunction with the laundry chemical provider are always happy to provide follow up training, by arrangement.

Importantly before leaving the Laundry, staff should ensure that:

- All equipment has stopped operation. It is not necessary to turn the power off.
- There is no tell tale leaking from any water or chemical hoses and the floor is dry.
- Dryers have been unloaded, as linen sitting in a dryer all night can potentially ignite, due to Spontaneous Combustion.
- Linen has been folded and stored, as linen sitting in a bucket like laundry trolley, or alternatively heaped on a sorting/folding table can also be at risk of Spontaneous Combustion.

Providing the machines have undergone regular preventative maintenance by an approved and certified ELS New Zealand service agent, the Electrolux range of machines will prove to be extremely reliable and long lasting. In the event however that an error does occur, always insure laundry staff have recorded the error code, which appears on the digital display, prior to calling ELS New Zealand for service. This will pinpoint the error and facilitate repair of the machine.

FREE LAUNDRY ANALYSIS

For your free Laundry Analysis, please fill out the attached Laundry analysis registration form and return to ELS New Zealand Ltd

Success in any laundry starts with identifying the requirements and meeting them in the most efficient way possible. To do this, you need a supplier that does more than simply sells laundry equipment.

When you choose ELS New Zealand Ltd, you get a partner committed to providing hands on support throughout every phase of your laundry operation.

Renting linen?
Have old, worn out laundry equipment? Replace it now and begin saving straight away.

Contact our sales staff at ELS New Zealand and we will show you how we can lower your costs, improve the quality of your laundry and supply a solution for all your laundry requirements.

CUT HERE

Name

Title

Company Name

Type of Business

Company Address

Region / City

Telephone

Facsimile

Email

Best Time to Call

What is your current laundry solution?

- ☐ Outsourced or rented
- ☐ In-house laundry
- ☐ Combination

Further Comments



ELS New Zealand

smarter laundry solutions

Contact us if you need more help

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