

Safe Hospitality





Part 6 - Machinery and Equipment in Larger Premises

SHOULD BE READ IN CONJUNCTION WITH Part 1 - General

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6 Machinery/ Equipment in larger premises

The definition of work equipment ranges from complex machinery to hand tools.

Regulations detail the requirements to ensure work equipment can be used without risk including information and instruction, maintenance, control devices, guarding, Butchers fined after inquiry The managers and owners of a butchers shop have been fined a total of €20,500 after a 15-year-old boy lost part of his

wan and interest rates.

arm in a mincing machine without a guard. His right hand was stuck in the machine at the butchers shop for 2 hours before medics decided to amputate just above his elbow in September.

inspection and examination, vehicle safety, lifting equipment and lifting accessories.

Many machinery accidents are caused by incorrect reassembly of machines and poor maintenance or non-use of guards. A significant number of accidents are due to inadequate isolation of machines.

Safeguards

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- ✓ Where required get equipment that's CE marked
- Keep the manufacturer's instructions/ manual safe and follow the advice given
- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- Have equipment regularly maintained and inspected. Consider a routine inspection of all machines and equipment, e.g. monthly
- Ensure electrical equipment and electrical installations are protected from foreseeable impacts and ingress of moisture or particles
- Ensure electrical equipment is protected from danger from exposure to hazardous environments,
- Ensure proper controls are in place and machines are properly guarded
- Maintain lifting equipment
- Have lifting equipment properly examined and inspected and maintain records.
- Make sure staff receive proper training and instruction



Purchasing/ Hiring Equipment

- Ensure the machine has all required safeguards
- As far as possible get equipment that's CE marked. CE marking is applicable to machinery, electrical equipment, gas appliances and PPE
- Obtain the proper instructions and any training or demonstrations
- Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

Guarding

- Dangerous parts must be guarded. It should be possible to clean guards easily and thoroughly and guards must be put back in place after cleaning. Machines must not be run if any guard has been removed
- Guards should be designed and made only by someone who understands the principles and standards

Drives

 Drives and transmission machinery must be enclosed by a guard or safely situated within the machine body

Feed and delivery openings

 Machine openings must not allow anyone to reach into the dangerous parts of the machine

Fixed guards

 Fixed guards must be secure, tamperproof and removable only with a tool, e.g. bolts. Toggle clamps, wing nuts and quick release catches should not be used

Electrical interlocking

 Guards opened regularly are best fitted with interlocking switches so that the machine cannot start or run unless the guard is in place

Maintenance of guards

- Guarding should be checked and maintained in proper working order. A visual examination should be made and any broken or missing guards repaired or replaced
- Interlock mechanisms should also be checked and tested to ensure they work. Broken interlock mechanisms should be replaced or repaired



6 Machinery/ Equipment in larger premises Cont'd

Machine setting

Some machines have to be adjusted while running. Final settings sometimes have to be made once the actual product can be seen. The controls for running adjustments should be safely positioned. Machines should be set and adjustments made with the guards in position

Machine stability

 Machines should be on a secure base so that they cannot move or vibrate when in use. They may need to be bolted to the floor or worktop

Operator safety

- Machine operators should not wear loose or frayed clothing, or jewellery
- Dangerous machines should not be used if the operator is feeling unwell or drowsy (certain medicines etc carry a warning that they may cause drowsiness)
- Particular precautions may be required to remove the risk of long hair becoming entangled

Warning notices

 Warning notices may be displayed alongside machines to remind operators and others of the



dangers they pose. Many machine suppliers provide suitable notices

No-volt releases

 New machines with exposed blades, such as slicers, are fitted with a no-volt release (NVR). This device

ensures that after a power failure, the machine starts only when the control button is operated and not when it is plugged in or when the electrical power is switched back on



If an existing machine without an NVR is to have a major overhaul it should, if possible, be fitted with a no-volt release at the same time. Consult the manufacturers for advice

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

Full guidance on work equipment at www.hsa.ie

Safety toolkit and short guide to work equipment at www.hsa.ie

6.1 Slicers

Gravity feed slicers have an inclined carriage and are used for slicing cooked meat and other foods. The item to be sliced is placed on the platform and held in place by a last slice guard. The platform is then moved back and forwards pushing the item to be sliced through the rotating blade.



The main danger on these machines is the exposed cutting edge of the blade, which can cause serious cuts and even amputation.

The carriage guard (sometimes called a finger guard) is often a clear plastic guard. It's frequently removed for cleaning and either broken, lost or not replaced.

Safeguards

HEALTH AND SAFETY

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- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- The edge of the blade must be guarded (blade guard) except at the cutting section
- A thumb guard should be provided at the operator's side of the carriage
- The carriage should have a last slice device or meat pusher to prevent the operator's hand slipping onto the blade

Risk of cuts

- Keep the blade sharp. The operator has to use more force with a blunt blade
- The slice thickness plate should be at zero when not in use
- On gravity feed slicers a suitable carriage guard should be fitted at the operator's side of the carriage

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

EN 1974:1998 Foodprocessing machinery — Slicing machines — Safety and hygiene requirements

See the other relevant sections of "Health and Safety in Hotels, Restaurants, Catering and Bars" (this document), e.g. machinery/ equipment in larger premises.



Last slice

Pusher devices

Feed chute

6.2 Food Processors

Food processors consist of a motor drive base to which various bowls, cutter plates or mixing blades can be fitted. They can be used for slicing, grating, mixing and liquidising.

The cutter plates and mixing

blade rotate at high speeds and can cause severe injury to the fingers. Also, hot ingredients may be ejected from the bowl and cause scalding.

Safeguards

 Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.

Slicing, dicing, grating and chipping devices

- Feed chutes and pusher devices should prevent access to the cutter. Pushers should be connected to the machine by a fixed linkage. Loose pushers tend to get lost
- Machines are usually designed so that cutter plates can be changed quickly. The blade cover should interlock the power supply. A time-delay interlock may be needed to prevent access to the cutter before it has stopped

 Access to the underside of the moving cutter must be prevented. This may be achieved by an elbow in the delivery chute or a smooth plate below the cutter plate which throws the cut material into the delivery chute

Mixing and liquidising bowls

Mixing and liquidising bowls must be fitted with a lid to prevent material being ejected or fingers reaching the moving mixing blades. The lid should interlock Feed chute to the drive motor. The feed chute should be designed to prevent Delivery chute fingers touching the blades

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

EN 1974:1998 Food-processing machinery — Slicing machines — Safety and hygiene requirements

See the other relevant sections of "Health and Safety in Hotels, Restaurants, Catering and Bars" (this document), e.g. machinery/ equipment in larger premises

Motor

Slicing, dicing, grating and chipping machine



6.3 Planetary Mixers

This widely used mixer has a single beater that moves around the stationary bowl. The beater may be a metal grid, a hook or a whisk. The mixing bowl moves up and down to meet the beater. The larger the machine the greater the hazard. These mixers are commonly used in food preparation.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- Recipes and working methods should avoid operators putting hands in bowl
- Only one person at a time should operate the machine. This is to avoid the mixer being started when someone has their hand(s) in the bowl
- A bowl guard must be used to prevent access to the beater when the machine is running

- Bowl extension rings are NOT recommended as they mainly be used to increase capacity
- Make sure the gear or clutch lever cannot fall or be knocked into gear
- ✓ Always isolate from power supply when not in use
- Do not wear loose clothing, or have cloths that could get caught in moving parts

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

Body part or clothing could get caught









6.3 Planetary Mixers Cont'd



Bowl guard

For Further Information

See the other relevant sections of "Health and Safety in Hotels, Restaurants, Catering and Bars" (this document), e.g. Kitchen machinery/ equipment in larger premises.

EN 454:2000 Food-processing machinery — Planetary mixers — Safety and hygiene requirements

EN 953:1997 Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards

EN 1037:1995 + A1:2008 Safety of machinery — Prevention of unexpected start-up

EN 12851:2005 Food-processing machinery — Catering attachments for machines having an auxiliary drive hub — Safety and hygiene requirements

EN 13570:2005 Food-processing machinery — Mixing machines — Safety and hygiene requirements



6.4 Mincers

Mincers are used in butchers. They may also be found in food preparation and manufacture. Hands and/or arms can be trapped around the worm/ screw often resulting in severe injuries. Young people may be at greater risk.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- The operator must not be able to touch the worm through the feed throat
- Either the feed throat should be long and narrow or a restrictor plate must be securely fixed over the top of it
- Holes in the restrictor plate should be small enough to prevent any operator reaching the worm
- A push stick should always be provided to force meat down the feed throat. Fingers must never be used
- As far as possible do not allow people people under 18 years of age to use mincers unless they are under close direct supervision
- Do not wear loose clothing, or have cloths that could get caught in moving parts

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information





6.5 Low-height Cookers

Low-height cooker may pose several hazards. They may be in danger of getting knocked over if they are not put in a safe area. Transport of containers to or from the cooker may pose dangers as the load may be heavy, hot and unstable and likely to move while being transported.



Safeguards

- It's important that low level cookers are placed in a safe place where they cannot be knocked over
- Low level cookers should not be placed near a main passageway
- Where necessary protective barriers should be placed around low-height cookers
- Properly planned arrangements must be in place for transporting containers from low-level cookers
- Provision of a water supply and proper drainage near the low-height cooker may be safer
- Ensure clothing is not flammable

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information





6.6 Steaming Ovens

The hazards associated with steaming ovens are scalds, particularly when opening the door, and burns from touching the hot outer casing.

Safeguards

 Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.



- ✓ Before using the oven check that
 - The electric heating elements are completely covered with water or that the sump is filled to the correct level
 - The ball float regulating the water level is operational
- Do not use the steamer if the steam vent is obstructed or not working
- Open the door just a little at first to let the excess steam escape
- Report any steam leakage around the door seal to your supervisor

- Keep the drip tray in position
- Clean daily or after use
- Ensure steam safety valves vent away from the operator in a safe direction

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information





6.7 Grills

The three basic types of griller: griddles, grillers and salamanders, may be heated by gas or electricity.

The main hazard is burns from the gas burners or heaters, from hot trays and food or from a gas flashback. There is



also a danger of the brander plate or shelf unit being pulled out, falling and injuring fingers or toes.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- ✓ Check that all the gas burners have lit
- Take special care to avoid burns to the eyes and face
- Use an oven cloth or oven gloves to handle hot trays
- Clean and remove carbonised fat regularly
- Keep gas jets clear by normal cleaning procedures. If they do get blocked, call a gas service engineer







6.7 Grills Cont'd



Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information



6.8 Multi-purpose Cooking Pans (Brat Pans)

Multi-purpose cooking pans, more commonly called brat pans can be used for shallow frying, stewing, braising, poaching, boiling and as a griddle. They can be power or manually tilted to pour out the contents.

The main hazards are burns from hot fat and scalds from liquids or steam.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- Brat pans may have a pouring arc of up to one metre in front. Therefore to prevent spilled liquid creating a slipping hazard, suitable floor drainage channels should be provided beneath the discharge point. The manufacturer's installation handbook should provide details
- ✓ Never use a brat pan for deep fat frying
- Do not stand in the way of the steam when you open the lid
- Clean up spilled liquid immediately

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

Brat pan





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6.9 Bulk Boiling Pans & Tilting Kettles

Pans and kettles are used for cooking sauces, soups, stocks, meats, vegetables and similar foods. The term applies to both large and small cooking pots installed on a worktop or the floor. They may be fixed, with a draw off tap near the bottom, or tilting, in which case the contents are poured. They may be heated by electricity, gas or steam, directly, or via a water or steam jacket.

The main hazard from these appliances is scalding from steam or hot liquid splashes. The hob is often very hot and can burn if touched.

Safeguards

AUTHORITY

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- Stand to one side when lifting the lid of a heated pan or kettle
- Do not touch the hob it may be hot
- ✓ Tilt the kettle carefully, do not over-tilt
- Isolate the pan or kettle from the electricity supply and allow the it to cool before you start to clean it
- If a drain tap is fitted and it feels loose, report it immediately
- Ensure steam safety valves vent away from the operator in a safe direction

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information



6.10 Urns

Urns provide hot or boiling liquids such as water, milk or coffee in limited quantities. They are fitted with taps near the bottom to draw off the contents. Portable urns, and jacketed urns which have separate containers immersed in water for heating beverages, are also available. They may be heated by electricity, gas or steam.



The main hazards are scalds and burns.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- ✓ Never heat other liquids in a hot water urn
- Do not tilt an urn to draw off hot liquid from below the level of the tap
- Do not let an urn boil dry



- ✓ Do not let an urn boil over
- Always use the shortest possible pour to minimise splashing
- ✓ Keep the drip tray in position
- Ensure steam safety valves where fitted vent away from the operator in a safe direction
- Always use the tap to draw off liquid never pour liquid from a tilted urn

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

6.11 Flambé Lamps

Flambé lamps are used in restaurants to cook food at the customer's table. They may be fuelled by methylated spirits (meths) or by butane gas from a disposable cartridge.

The main hazard associated with flambé lamps is one of fire or explosion during refuelling (for meths fuelled lamp), or while changing the cartridge.



Safeguards

- Extinguish any source of ignition in the vicinity before refuelling a flambé lamp
- ✓ Do not smoke near or whilst using this lamp
- Do not refill a flambé lamp in a restaurant or kitchen
- Do not change a butane cartridge in the restaurant or kitchen
- ✓ Always refill, or change cartridges, in the open air

- Keep the flambé lamp upright when changing the cartridge
- ✓ Do not over-tighten the butane cartridge
- ✓ Let the lamp cool before refuelling with meths
- Store spare butane cartridges and meths in a safe place
- Ensure correct PPE is worn, e.g. flame proof chefs apparel

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information



6.12 Dishwashing Machines

Using a pot or dishwasher can create a number of hazards. Most types use very hot water which will scald. In some machines the water heating elements inside the dishwasher are within reach and capable of burning anyone who touches them.

Moving parts, such as the conveyor, can cause serious injuries. Broken crockery and glass can cause cuts. Because dishwashers use large amounts of water extra care is needed to make sure that no water or moisture gets into the electrical circuitry.

Some chemical detergents are hazardous if not used and stored properly.

On some machines the side panels enclosing the final rinse can get very hot and may burn anyone touching or brushing against them.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- Always wear rubber gloves when working with very hot water
- Make sure all guards provided are in position before you start the dishwasher



- Never put your hands in the dishwasher while it is running
- Never try to adjust or repair any part of the dishwasher unless you have been trained to
- Never let the water level go over the maximum for the dishwasher
- Concentrated detergent can burn skin and eyes.
 Always wear the protective clothing provided when handling, diluting or cleaning up spilled detergent
- ✓ The side panels by the final rinse may be very hot
- Do not wear loose clothing, or have cloths that could get caught in moving parts



6.12 Dishwashing Machines Cont'd



Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

See the other relevant sections of "Health and Safety in Hotels, Restaurants, Catering and Bars" (this document), e.g. machinery/ equipment in larger premises.

EN 953:1997 Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards.



6.13 Waste Disposal Units

Waste disposal units dispose of food waste by mechanically grinding it up and then flushing it into a waste drain or other suitable outlet. They are usually fixed installations, either built in or freestanding units.

The main hazard from waste disposers is possibly severe injury if a hand or handheld implement is put into the feed hopper and comes into contact with the cutters while the machine is switched on.

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- Remove all unsuitable material, such as plastic and metal, from waste
- Switch on the water supply and the disposer before feeding waste in
- Feed the waste at an even rate
- Always isolate or unplug the waste unit from the power supply if it becomes blocked
- Never, even if the machine has stopped, put your hand or any implement you are holding inside the feed hopper while the machine is switched on
- The machine must never be operated without the feed hopper guard in place. It must always be isolated before the feed hopper guard is removed

 Do not wear loose clothing, or have cloths that could get caught in moving parts

Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

See the other relevant sections of "Health and Safety in Hotels, Restaurants, Catering and Bars" (this document), e.g. machinery/ equipment in larger premises. EN 953:1997 Safety of machinery — Guards — General

requirements for the design and construction of fixed and movable guards

EN 1037:1995 + A1:2008 Safety of machinery — Prevention of unexpected start-up





6.14 Waste Compactors, Balers

These machines are widely used to compress refuse for disposal. They can be large, high headroom, free standing, or smaller cabinet style fitted under counters and worktops.

The main hazards arising from the use of high headroom machines are: Firmation of the second second

penalty after a 17year-old broke two bones in his arm when he became trapped in a cardboard

compactor. He was trapped for an hour and a half and was taken to hospital where he received several operations, including a bone graft.

- Injury to fingers and hands from the trap created by the moving compactor plate and the rim of the compacting chamber
- Injuries to the toes and feet from the trap created between the descending chamber and the base plate
- Glass in bags can cut operator's hands after compaction

Safeguards

- Ensure all machines are isolated from power when not in use and especially before cleaning, maintenance, etc.
- ✓ Consider restricting use to over-18's
- Consider physically restricting use, e.g. fit a locked cage around the unit
- ✓ Do not use if the guard is broken or not fitted
- Do not use the compactor if the safety switches do not work or cannot be safely operated
- Report to the supervisor immediately if any of the controls or safety devices do not work properly
- Do not put sharp or pointed waste objects into the compactor unless suitably wrapped
- Wear protective gloves when handling bagged waste
- Do not wear loose clothing, or have cloths that could get caught in moving parts





6.14 Waste Compactors, Balers Cont'd



Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

See the other relevant sections of "Health and Safety in Hotels, Restaurants, Catering and Bars" (this document), e.g. machinery/ equipment in larger premises.

EN 953:1997 Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards

EN 1037:1995 + A1:2008 Safety of machinery — Prevention of unexpected start-up



6.15 Lifts

Legally all lifts require sixmonthly inspection by a competent person. This person must provide a report to the lift owner regarding its condition and the need for any remedial work required in



on and interest rates.

A nightclub was ordered to pay €80,000 after a woman fell 9m down an unguarded lift shaft..

order of priority. The required works must receive prompt attention.

The lift should also be regularly serviced by a maintenance company

Safeguards

- Ensure lifts are isolated from power, if necessary before cleaning, maintenance, etc.
- Ensure lifts are thoroughly examined every six months by a competent person
- Ensure any works required are safely completed

- If the thorough examination shows that a lift poses an immediate danger; it should be taken out of use until it can be properly repaired and made safe
- ✓ Take all necessary steps to ensure people never travel in goods lifts. (unless they meet all the requirements for passenger lifts)
- All employees should be clearly instructed on the dangers of inappropriate use of goods lifts. Lifts which are not designed for lifting persons shall be clearly marked to this effect
- Ensure the lift is regularly serviced by a reputable company. The maintenance contract should include removal of rubbish and debris to minimise the risk of fire
- All servicing and repairs to lifts must also be carried out by competent persons who are experienced in dealing with this type of equipment
- Reports of such examinations shall be kept available for inspection by a HSA inspector
- Ensure the lift plant room door is kept locked to prevent unauthorised access. A warning notice restricting access should be placed on the door
- Inform people not to use the lifts during a fire evacuation e.g. by placing conspicuous notices outside lift landing doors and by public address system announcements



Part 6 - Machinery in Larger Premises

6.15 Lifts Cont'd



Checklist

Use the checklist in the Safety toolkit and short guide to work equipment regulations at www.hsa.ie

For Further Information

