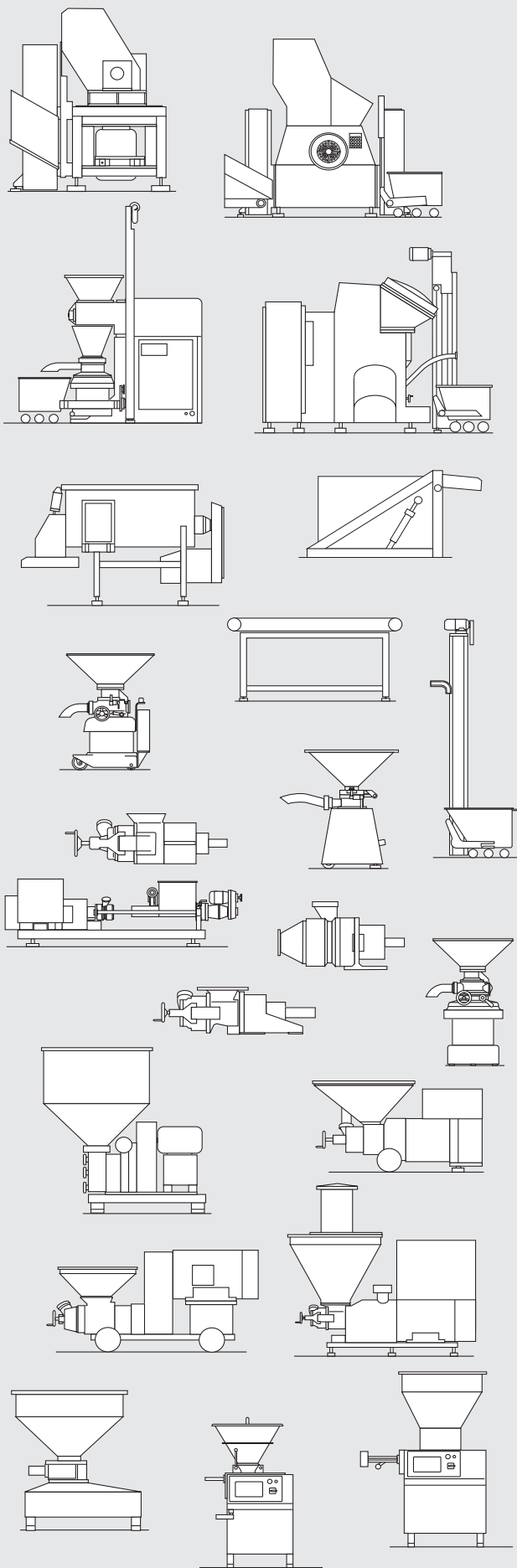




Original Operating manual for a processing line.

Kunde, Vertretung/customer, distributor
KS - Marmoutier
Kommission/consignment
Pannontej ZRT, Ungarn
Hersteller/constructor
Karl Schnell
Pos./Linie Nr.:
09-164-.....
Maschine/machine
processing line
Typ/type
001
Maschinen-Nr./machine-no.
09-164
Projekt-Nr.:/
AK09-02971

Important information

These operating and maintenance instructions are to assist you to start up and operate your machine safely.

These operating and maintenance instructions

contain important information on how to operate the machine safely, appropriately and efficiently.

They help to avoid danger, to reduce down-times and repair costs and to increase the reliability and lifetime of the machine.

They have to be read and applied by each person who is entrusted with the operation, maintenance and/or with the transport of the machine.

They must always be present at the place of use of the machine,

must be read completely before the initial start-up in order for you to become familiar with the machine.

We have endeavoured to explain all important items clearly and unmistakably. Please do not hesitate to contact us if you have any further questions. We will provide quick and comprehensive answers to your questions.

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Note

This machine model can differ from the one described in the operating manual.

We reserve the right to make technical changes.

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Note

The illustrations shown in the operating manual may differ in certain cases from the actual machine design.

We reserve the right to make technical changes.

For reasons of clarity, the operating manual cannot contain all the detailed information regarding possible design variants, and cannot consider every possible case of installation, operation, maintenance or cleaning.

The most important information is therefore contained in the operating manual which is necessary for qualified personnel regarding the use intended for the machine in the industrial range of application for qualified personnel.

1.00... User information	8
1.01.... Purpose of the document.....	8
1.02.... Use as intended	8
1.03.... Foreseeable misuse	8
1.04.... Guarantee and liability	8
1.05.... Fields of application	9
1.06.... Permitted environmental conditions.....	9
1.07.... Design modifications to the machine	9
1.08.... Functional description	9
 2.00... Safety	 10
2.01.... Symbols used	10
2.02.... General safety information.....	11
2.03.... Responsibilities of the operator	12
2.04.... Responsibilities of the personnel	12
2.05.... Training of personnel	12
2.06.... Personal protective kit	12
2.07.... Safety inspector	13
2.08.... Workstation of the personnel	13
2.09.... Safety devices	13
2.0901.. Main switch.....	14
2.0902.. Layout of the EMERGENCY-STOP buttons	16
2.0903.. Residual energy after activating the EMERGENCY STOP button	17
2.10 Hazards when handling the machine.....	18
2.11.... Notes on hazards.....	18
2.1201.. Mechanical dangers	20
2.1202.. Pneumatic dangers.....	20
2.1203.. Electrical dangers	21
2.1204.. Chemical dangers.....	21
2.1205.. Thermal dangers	22
2.13.... Noise emission	22
2.14.... Environment.....	22

Contents	Page
3.00... Machine overview.....	24
4.00... Transport and installation.....	26
4.01.... General safety information.....	26
4.02.... Unloading, loading, transport.....	26
4.03.... Space requirements/place of installation	27
4.04 ... Raise switchbox with a crane	27
4.05.... Transport switchbox.....	28
4.06 ... Install switchbox.....	29
4.07 ... Install platforms.....	29
5.00... Connections.....	30
5.01.... General safety information.....	30
5.02 ... Electrical connection.....	31
5.0201.. Connecting the potential equalisation.....	31
5.0202.. Connecting the machine to the power supply.....	31
5.0203.. Work sequence.....	31
6.00... Commissioning.....	32
6.01.... General safety information.....	32
6.02.... Before startup	32
6.03.... Initial startup	32
6.04.... Training	32
6.05.... Acceptance	33
7.00... Operation.....	34
7.01.... General safety information.....	34
7.02.... Preparation for operating with the product.....	34

8.00... Operation	35
8.01.... PLC control	35
9.00... Cleaning and maintenance	36
9.01.... General safety information.....	36
9.02 ... Cleaning instructions	37
9.03 ... Cleaning sequence by hand	37
9.04.... CIP cleaning	37
9.05.... Daily inspection.....	37
9.06.... Cleaning schedule by hand	38
9.07 ... CIP cleaning sequence.....	39
9.07 ... CIP cleaning scheme	39
10.00 Troubleshooting and remedy	40
10.01... General safety information.....	40
10.02... Requirements for operating personnel	41
10.03... Displaying and eliminating faults	41
10.04... Table of faults.....	41
11.00. Maintenance and inspection	42
11.01... General safety information.....	42
12.00 Maintenance	43
12.01... General safety information.....	43
13.00 Shutting down, storage and disposal.....	44
13.01... General safety information.....	44
13.02... Shutting down the machine	44
13.03... Storing the machine.....	44
13.04... Restarting the machine.....	44
13.05... Disposing of the machine	44

Translation of the original EC Declaration of Conformity	45
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1.0 **User information**

1.01 **Purpose of the document**

This operating manual in hand

- ☐ describes the working method, operation, maintenance and repairing of the machine.
- ☐ gives important information for a safe and efficient handling of the machine.
- ☐ the safety instructions in particular are to be observed by all persons who are working on the machine.
- ☐ moreover, the rules and regulations on accident prevention must be observed.

1.02 **Use as intended**

The operational safety of the processing line is ensured only when it is used as intended.

The processing line must only be used for processing the product described in the order data sheet and the conditions of use indicated there.

The processing line is solely determined for the industrial range.

The processing line is intended for producing pet food.

Improper use or use not as intended may result in personal injury or damage to property.

For damage arising from any use not as intended

- ☐ the operator is solely responsible;
- ☐ the manufacturer bears no liability.

1.03 **Foreseeable misuse**

No metal parts, stones, materials etc. may be processed in the processing line.

The processing line may be operated only in a technical proper condition. The protective devices which are installed by KS must be available, installed properly and fully operational unless it is not purposeful for the maintenance and repair. They must not be modified, avoided or made ineffective in their position. Safety components like limit switches, valves and other control components must not be put out of service.

Persons, who are on alcohol, drugs or medicaments which influence the reactivity, are not allowed to operate or install the machine.

1.04 **Guarantee and liability**

Principally our "General sales- and delivery conditions" apply. These are available at the latest to the operator on the conclusion of the agreement. Warranty and liability claims for damage to persons and property are excluded if they are attributable to one or more of the following causes.

- ☐ Non-intended use of the processing line.
- ☐ Improper mounting, start-up, operation and maintenance of the processing line
- ☐ Operating the processing line with defective safety devices or safety devices that are not properly fitted or are not operable.
- ☐ Non-observance of the information in the operating manual in respect of transport, storage, assembly, commissioning, operation, maintenance and repair of the machine in the processing line.
- ☐ Unauthorised constructional alterations to the machines of the processing line

- ☐ Unauthorised changing of the
(e.g. drive ratios: capacity and revolutions).
- ☐ Inadequate monitoring of machine sections which are subject to wear.
- ☐ Repairs that are executed improperly.
- ☐ Emergency cases by foreign-body influences and force majeure.

The following details are necessary to check any warranty claims:

- ⇒ Machine type and serial number
- ⇒ Date and handover of the machine
- ⇒ Type of fault/defect

The same delivery conditions apply for a warranty as already agreed in the contract for the machine supply.

1.05 _____ **Fields of application**

The machine is designed for the use in the foodstuff-/pet food sector.

Manufacturing _____ cheese
 Processing goods _____ processed cheese
 Grain size _____ liquid
 Temperature range _____ +5° - 145°C



Caution:

All materials in use, when inserted into the machine, must be free of hard parts and foreign bodies (e.g.: metal parts, wood, earth, plastics).

Please contact us if you have any questions concerning the products to be processed.

1.06 _____ **Permitted environmental conditions**

The machine may only be operated in the temperature range from 0°C to 20°C.
 Relative air humidity in all situations 80%.

1.07 _____ **Design modifications to the machine**

No modifications to, attachments to or conversions of the machine may be made without approval.

All conversion measures require the written approval of KS.

All machine parts not in proper working condition must be replaced without delay.

Use only original spare parts and wearing parts.

- ☐ With bought-in parts it is not ensured that they are constructed and manufactured according to stress and safety standards.

1.08 _____ **Function description**

The process line consists of several machines.

The uncooked cheese is pre-crushed with a customer-provided grinder and is ground to max. 8 mm. Over a 200 litres lifting device the product is conveyed into the downstream connected 2000 litres blender. The product is mixed in the blender and is discharged over the discharge flap into the feeding bin placed underneath. The connected product pump pumps the product into the preheating, where the product is preheated to approx. 85°C. The product is conveyed over a pipeline into a storage bin and from there into a UHT system. In the UHT system the product can be heated up to max. 145°C. From the UHT system the product is pumped over a pipeline into a creaming tank and from there it is pumped over a pipeline to the packing machines.

2.00 **Safety**

2.01 **Symbols used**

Danger!

Direct danger for the life and limb of persons (severe injuries or death).



Warning!

Possible danger to the life and health of persons (severe injuries or death).

Caution!

Possibly dangerous situation (slight personal injury or damage to property).



Risk of dangerous electrical voltage!

Direct danger for the life and limb of persons (severe injuries or death).



Beware of swinging loads!



Beware of hot surfaces!

Danger of the hands being burnt when touching.



Warning of hand injuries!

Danger of the fingers/hands being crushed.



Information!

Tips that can be used and special useful information.



Rule!

Obligation to behave in a special way to carry out an activity for to ensure a safe handling of the machine.

2.02 **General safety information**

This operating manual contains the basic information which must be observed during transportation, installation, commissioning, operation, maintenance and repair.

While operating the machine, the following safety information must be observed:



- ☐ The operating manual must be read by the specialists/operator responsible and must be continuously available at the place of the machine or plant.
- ☐ The functional performance of the safety devices must be checked before starting work. Report defects immediately to a supervisor.
- ☐ Replace or repair defective safety devices immediately.
The working rules for safe operation must be stated.
- ☐ The technical condition of the machine must be checked by a safety inspector/specialist (at least once a month).
- ☐ Process only those products which are suitable for the machine.
- ☐ The cleaning method described in the operating manual is to be observed.
- ☐ The machine should only be operated by trained operators.
Operators should be provided with regular retraining.
- ☐ The local safety and accident prevention rules must be adhered to.
- ☐ Use only original spare parts and accessories.
- ☐ Modifying the machine is not permitted, and if performed, all warranty claims become null and void.
- ☐ Include the operating manual in the handover if you resell the machine.

2.03 _____ Responsibilities of the operator

The operator is obliged to ensure that only those people may work on the machine who

- ☐ are familiar with the basic regulations governing safety in the workplace and accident prevention;
- ☐ have been given instructions in how to work with the machine;
- ☐ have read and understood this operating manual.

2.04 _____ Responsibilities of the personnel

All persons who are assigned with work at the machine are obligated before starting with work

- ☐ to observe the principle regulations on safety at work and accident prevention;
- ☐ to read and adhere to this operating manual.

Please direct any unanswered questions to the manufacturer.

2.05 _____ Training of personnel

Only fully trained personnel are permitted to work with the machine. Personnel still undergoing training may work with the machine only when supervised.

Transport and installation, connection of the supply lines, commissioning as well as maintenance- and repair work may be executed only by qualified specialist personnel who have had instruction specific to the machine.

Qualified personnel are people who, as a result of their training, experience and instruction, as well as their knowledge of the relevant standards, regulations, accident prevention rules and working conditions, have been authorised by the plant safety supervisor to perform the respective activities required, and are therefore able to recognize and prevent possible dangers.

This includes the need to have knowledge of first-aid measures and the local emergency services.

2.06 _____ Personal protective kit

No personal protective clothing is necessary to operate this machine. For transportation, cleaning and maintenance, repair and fault elimination, the operator must provide the following personal protection equipment.

- ☐ Heat-resistant protective gloves;
- ☐ Protective goggles;
- ☐ Safety shoes;
- ☐ Protective helmet;
- ☐ Skin protection agent.

2.07 **Safety inspector**

A safety inspector must be appointed and instructed by the operator for normal operation to constantly check the operational safety and the maintenance of the safety devices on this machine.

Responsibilities of the safety inspector:

- ⇒ Safety devices must be checked daily/per shift as to their function and proper working order.
- ⇒ Instruction of the operator on the functions and safety devices of the processing line.
- ⇒ Instruction of the maintenance personnel on the proper maintenance and safe repair of the machine and the safety measures to be taken before performing maintenance and inspection work on the machine.
- ⇒ Acceptance of the machine and its safety devices during new set-up and during operation.



An inspection in accordance with BGV-A3 must be carried out at the machine and recorded at regular intervals. It is recommendable for reasons of proof to establish and to keep a record on the follow-up checking of the operational safety.

2.08 **Workstation of the personnel**

The processing line is controlled via several control panels.



It must be observed that the workstation of the operator is kept clear of objects which could represent a danger.

In respect of cleaning, maintenance- and repair work on the processing line by several persons, the competence and responsibilities are to be determined before starting with work.

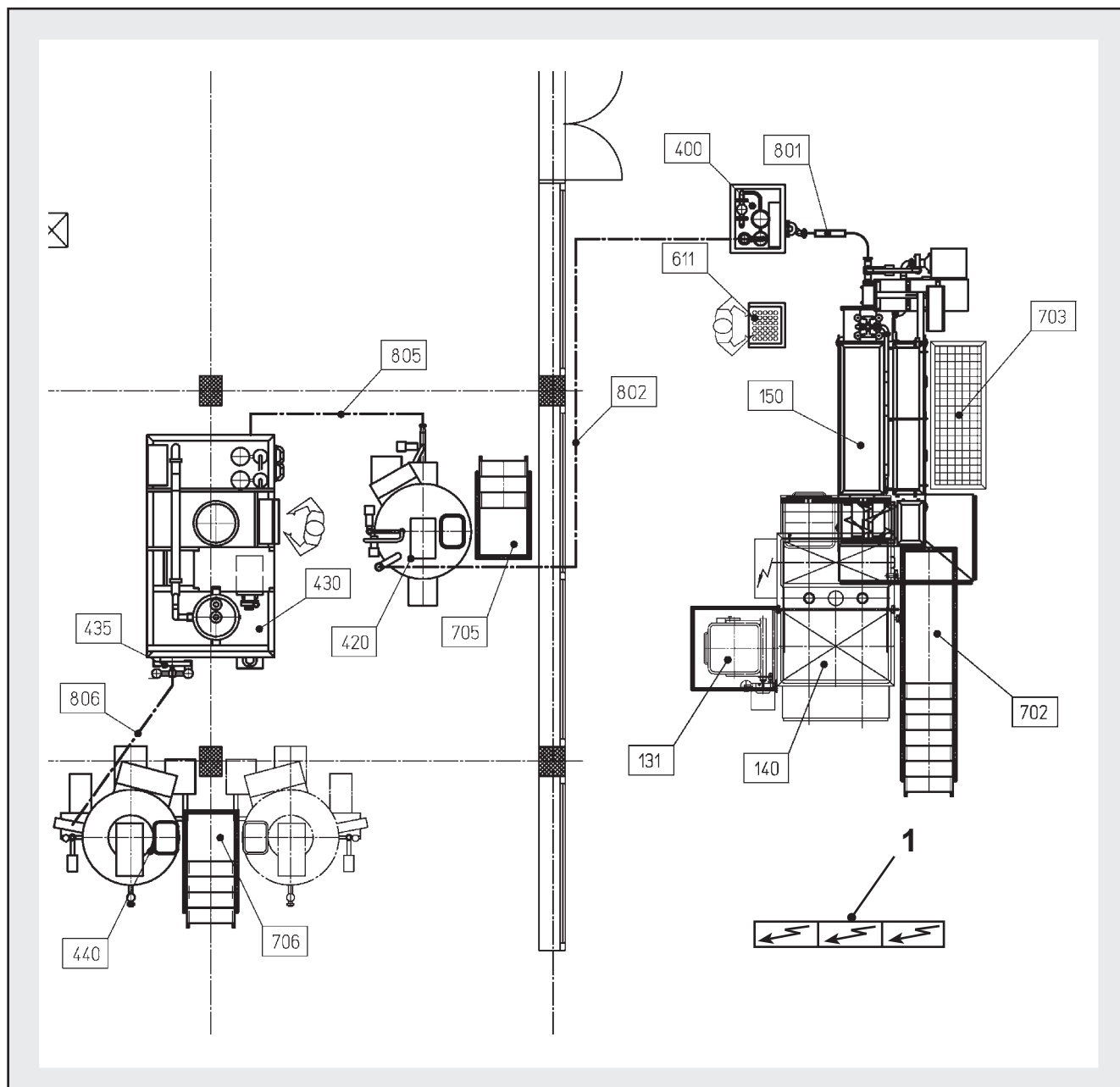
2.09 **Safety devices**

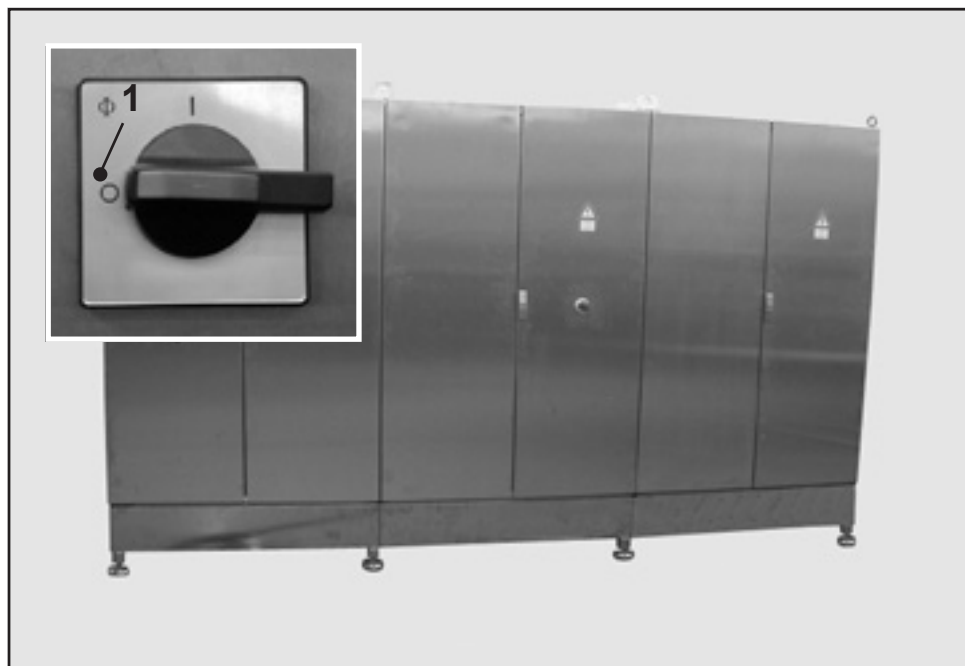
The machines of the processing line are equipped with several safety devices which are described in the respective assembly and operating manuals.



All safety- and protective devices have to be checked on their functioning before starting with work. The safety switches must be checked with the utmost caution and care.

- ☐ Only authorised and instructed personnel are allowed to perform the safety control.
- ☐ Do not start up the processing line if it has defective safety devices. They must be repaired before starting up.





1 Main switch

During maintenance-/repair work on the machine set the main switch always to position 0 and protect against unauthorised restarting.

Observe circuit diagram no.: 287041 (628122-...)



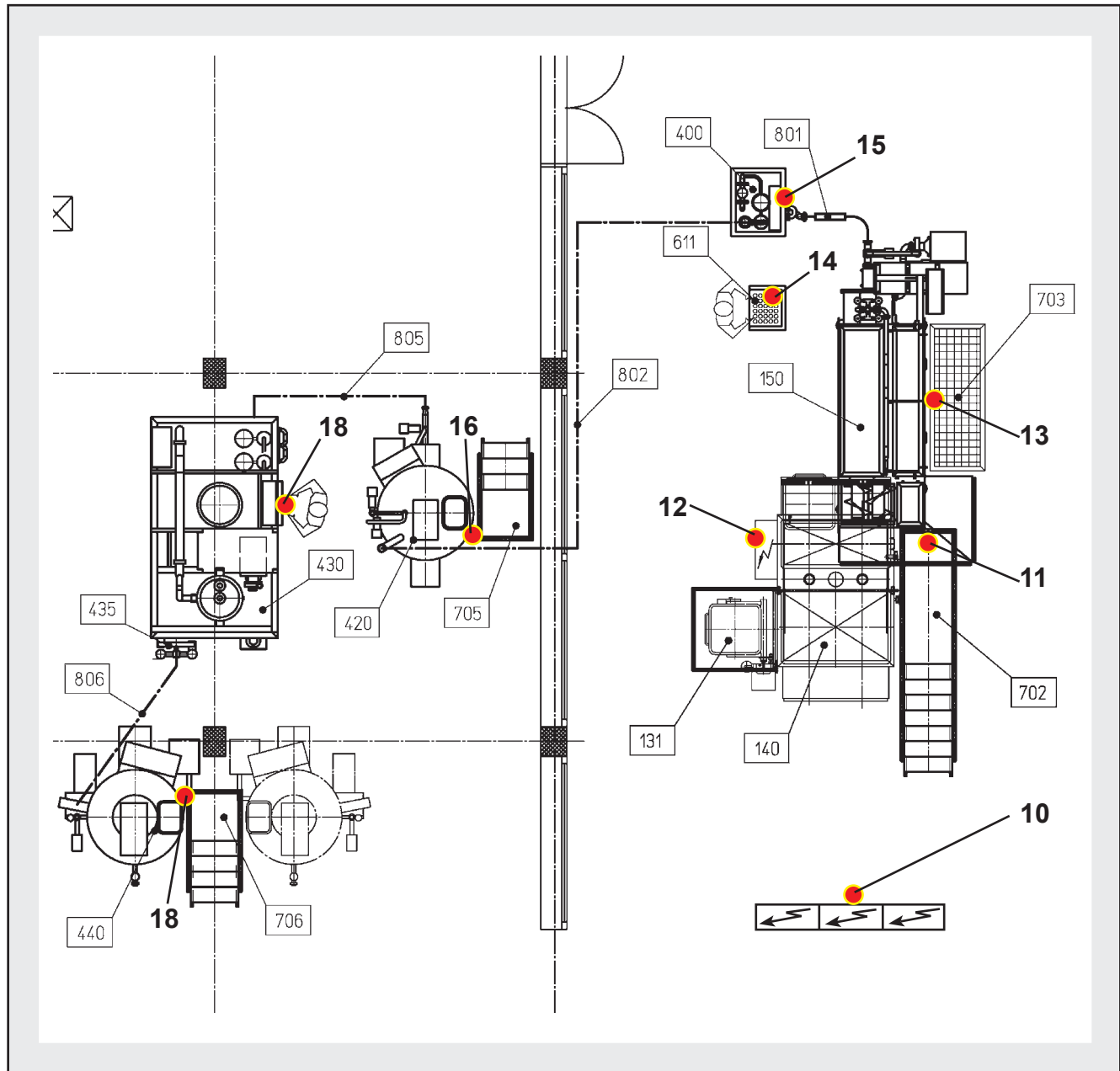
Danger to life by electric shock!

- ⇒ ***Have works on the electrical system only be done by an authorised electrician.***
- ⇒ ***Before all work on the electrical system disconnect the system and protect against unauthorised restarting.***



***Operate the processing line only with operable main switches.
The main switches must be freely accessible at any time.
Attach warning sign "Caution repair work" when doing repair work.***

2.0902 _____ Layout of the EMERGENCY-STOP buttons



The processing line with no.: 10-066-G/0 has an EMERGENCY-STOP circuit.

EMERGENCY-STOP circuit

- 10 EMERGENCY STOP button - switchbox
- 11 **EMERGENCY STOP** button platform - mixer
- 12 **EMERGENCY STOP** button - control panel mixer
- 13 **EMERGENCY STOP** button of platform - feeding bin
- 14 **EMERGENCY-STOP** button - control panel
- 15 **EMERGENCY-STOP** button - preheating system
- 16 **EMERGENCY-STOP** button - silo
- 17 **EMERGENCY-STOP** button - UHT konti system
- 18 **EMERGENCY-STOP** button - creaming tank

When activating an **EMERGENCY-STOP** button (10-18), all machines in the **EMERGENCY-STOP** circuit are switched off.



*Operate the processing line only with operable **EMERGENCY-STOP** buttons.*

During maintenance-/repair work on the machine set the main switch always to position 0 and protect against unauthorised restarting.

2.0903 _____ **Residual energy after activating the EMERGENCY-STOP buttons**

The **EMERGENCY-STOP** device stops all dangerous movements and conditions in time, without creating further danger.
After-running time: 4 seconds



The following are not switched off:

- ☐ *heating units;*
- ☐ *indicator lights;*
- ☐ *limit switch with guard locking, especially the guard locking;*
- ☐ *all connection lines (e.g. compressed-air, CIP, steam, product lines are pressurised.)*

Before starting work on the connection lines, open the aeration / manual shutoff valves and depressurise the connection lines.

2.10 _____ **Danger when handling the machine**

Danger and impairments can occur when operating the processing line

- ☐ including dangers to life and limb of the operator or third parties;
- ☐ risks to the processing line itself;
- ☐ and risk of damage to other property.

The basis of the safe handling and trouble-free operation of this machine is a thorough knowledge of the safety and user information contained in this manual.

Serious injuries to people and damage to property are possible with

- ☐ improper installation and setup,
- ☐ improper use,
- ☐ unauthorised removal of covers or safety devices.



Important!

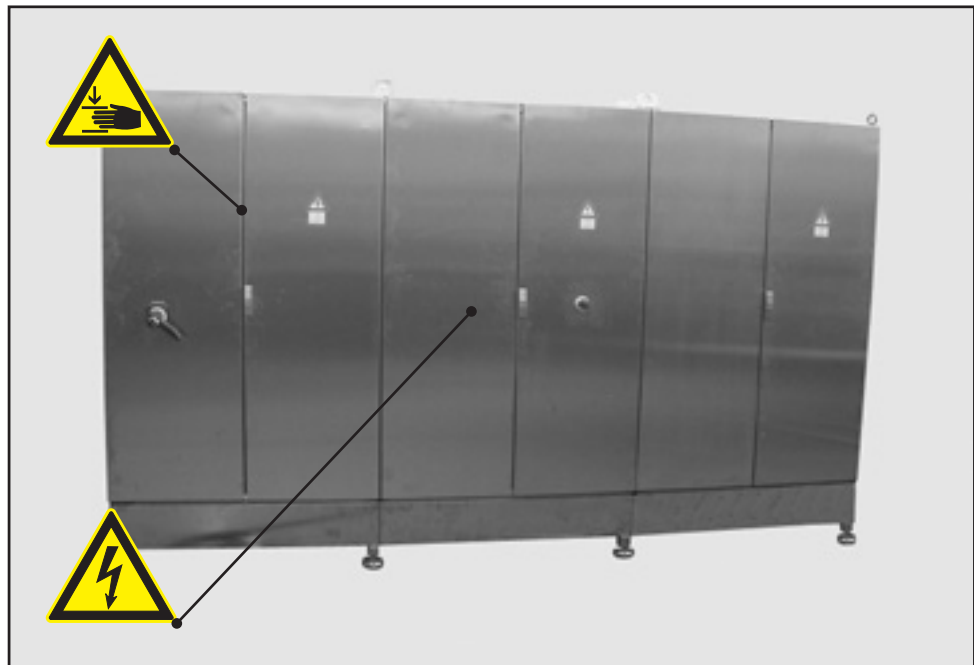
Keep the operating manual and user manual always at the place of work of the machine!

The assembly and operating manual must be readily available for the operator and the maintenance personnel.

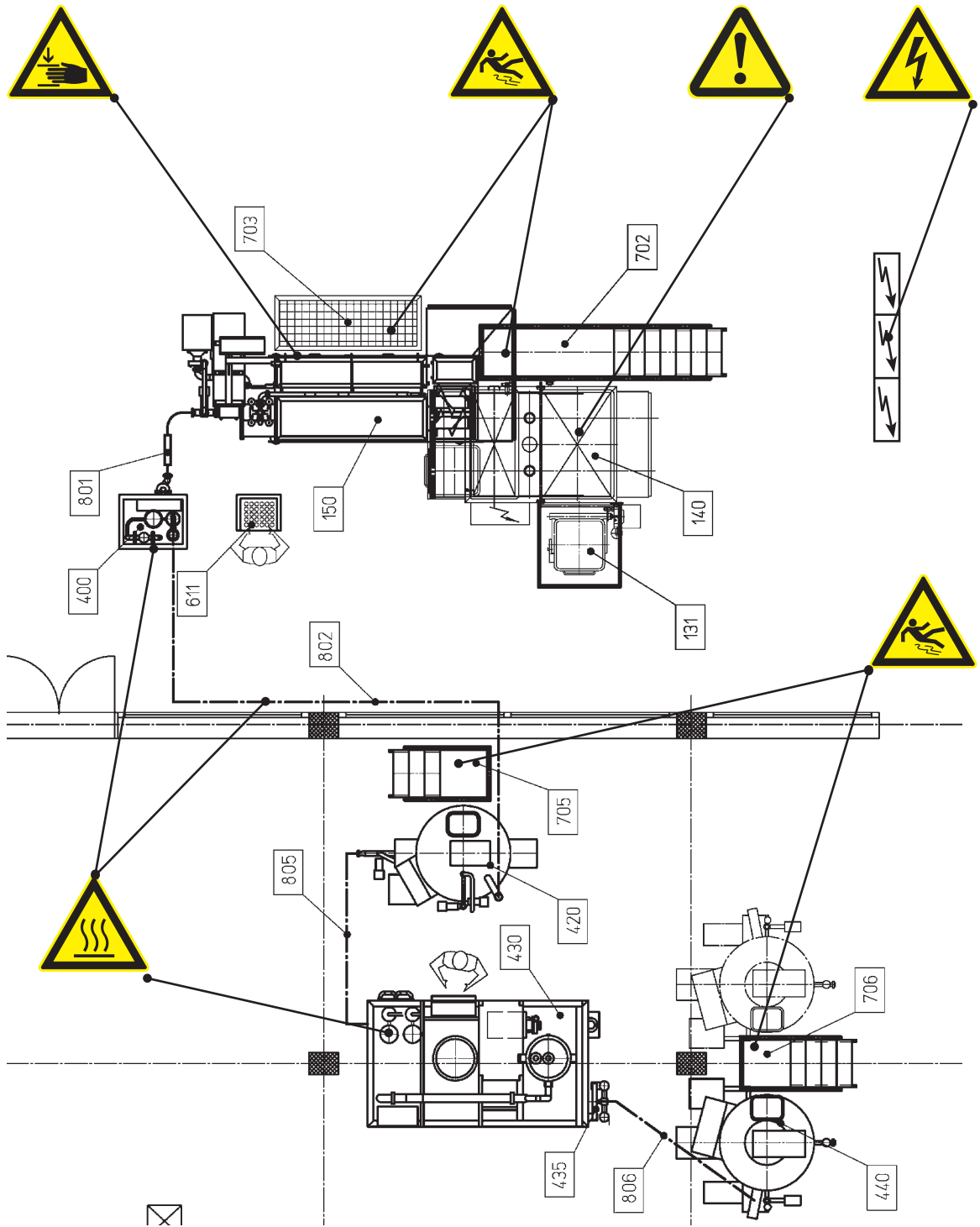
In addition, the following must be observed:

- ☐ General and local regulations on accident prevention and environmental protection.
- ☐ Harmonized standards and guidelines.
- ☐ The requirements of the EC guideline on the use of working resources 89/655/EEC.

2.11 _____ **Notes on hazards**



Observe chapter Notes on hazards in the individual assembly instructions in the document folder.



2.1101 _____ Mechanical dangers

For all parts which move in relation to each other, there is a personal danger of cutting, crushing or being caught and pulled into the machine. Special attention must be given to power-driven machine sections, despite their special protection.

Danger sign	Danger location	Type of danger	Reduction of danger
	Trolley take-up/tilting frame	Danger to life ! Danger of being crushed at floor level during lowering process	Staying within the drive and tilting area of the lifting device is strictly prohibited
	Mixing shafts in the blender	Danger to life! Danger of being caught into the blender bin	protected through bin lid
	Discharge screws in the feeding bin	Danger to life! Danger of being caught into the feeding bin	Protected by machine and bin grating
	Ascent assistance/ladder	Falling down/slipping on the ascent assistance/ladder	Use suitable ascent assistances
	Cleaning platform	Falling down/slipping on the cleaning platform	The cleaning platform must be set up with anti-slip knobs

2.1202 _____ Pneumatic dangers

During normal operation, there is no danger resulting from pneumatic components on the machine. Only in the following conditions may dangers arise from the pneumatics.

Danger sign	Danger location	Type of danger	Reduction of danger
	Compressed air-lines burst	Injuries caused by compressed-air hose Malfunction caused by a quick drop in air pressure uncontrolled cylinder movement	Special care to be taken during preventive and regular maintenance

2.1103 _____ Electrical dangers

During normal operation no danger occurs as a result from the electrical equipment of the machine. Only in the following conditions may dangers arise from the electrical equipment.

Danger sign	Danger location	Type of danger	Reduction of danger
	Injury from cables Injection of water into the opened control cabinet resp. terminal box	Danger to life! Electric shock 230/400V caused by electrical voltage	Do not overrun cable Always keep the control cabinet and terminal box closed Always switch the voltage supply off and protect against unauthorised restarting during maintenance and repair work
	Touching live parts	Danger to life! Electric shock 230/400V caused by electrical voltage	Connect protective conductor system Live parts must not be accessible Regularly check continuous protective conductor systems
	voltage-storage components installed (frequency converter)	Dangerous residual voltage	Pay attention to discharging time Check clamping points on residual voltage (Observe 5 safety rules according to BGV A3).
	Cable being burnt in the control cabinet	Danger of being burnt	extinguish with suitable powder fire extinguisher
	Motor	Danger due to overload	Overload protection is control-technically integrated

2.1204 _____ Chemical dangers

During normal operation no chemical danger occurs as a result from the machine. Only in the following conditions may chemical dangers arise.

Danger sign	Danger location	Type of danger	Reduction of danger
	Entire machine cleaning Using detergents	Danger through contact with or inhalation of dangerous liquids, gases, mists, steam or dust	Wear personal protective clothing / gloves, protective goggles, protective suit when cleaning. Observe the safety data sheet of the detergent manufacturer

2.1205 _____ Thermal dangers

During normal operation no danger occurs as a result of vaporising and CIP-cleaning of the machine. Only in the following conditions may dangers arise from vaporisation and CIP cleaning.

Danger sign	Danger location	Type of danger	Reduction of danger
	Remove pump assembly of the product pump.	Burns through escape of hot product	Discharge machine completely. Main switch – position 0. Open pump lid carefully
	Vaporisation	Burns through escape of hot steam Steam temperature max. 170°C or product max 145°C	Pipelines covered through protective grating. Avoid touching the pipelines Check the pipeline screwings regularly for tightness
		Danger of receiving burns when touching the coupling bows, steam-/product pipelines	Always wear heat-resistant protective gloves during maintenance and repair work.
	CIP cleaning	Burns through escape of hot cleaning water and detergents CIP temperature max 85°C	Wait for the cool down. Always wear heat-resistant protective gloves during maintenance and repair work. Wait for the cool down.

2.13 _____ Noise emission

With an optimally adjusted machine a noise level of 75 db (A) is not exceeded.

2.14 _____ Environment

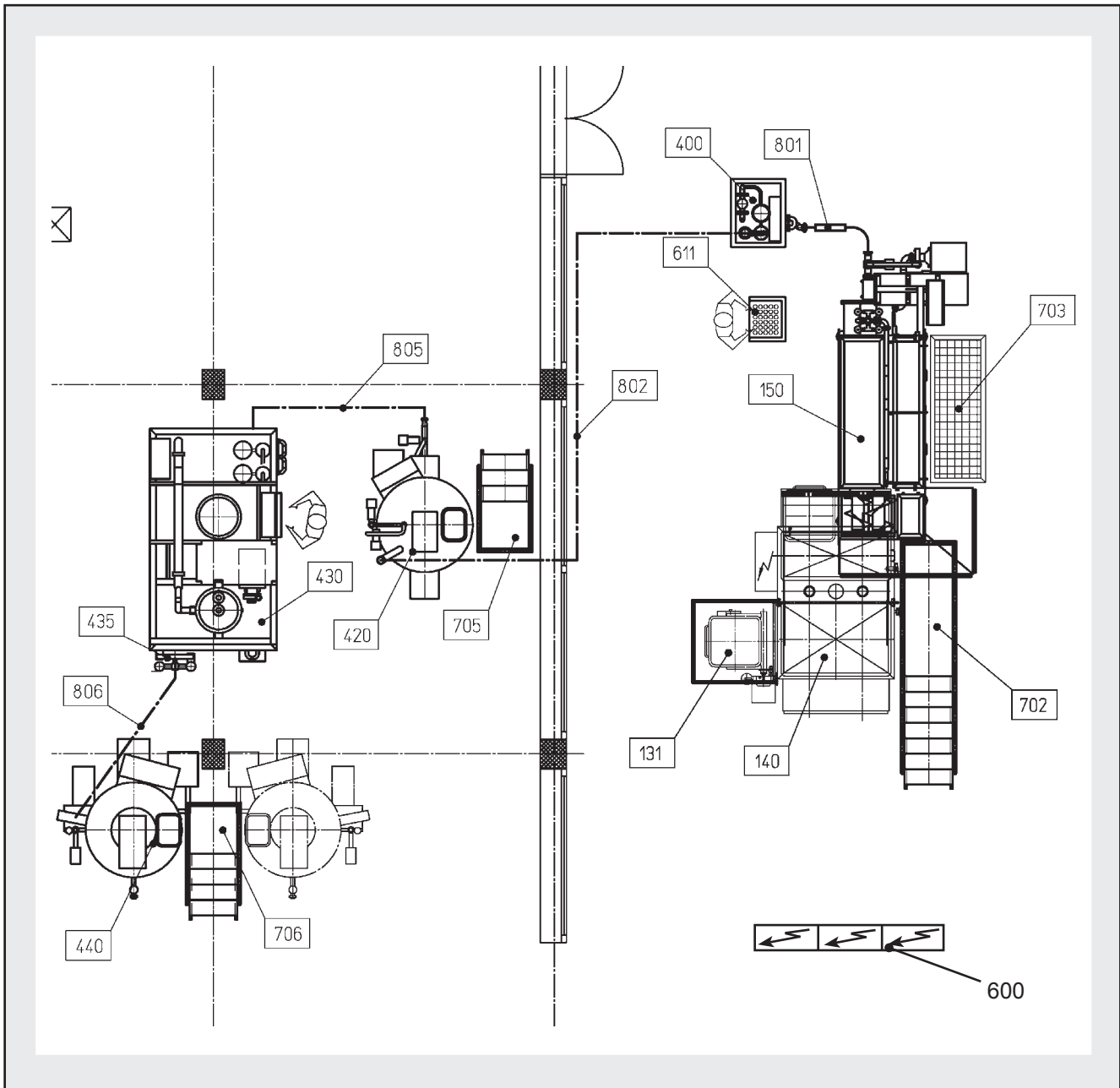
With the exception of noise the machine does not develop any further machine-related emissions during the normal operation.

During inspection and maintenance work, it must be ensured that no oil and grease residues reach the drainage system.

With repair work exchanged used parts must be properly disposed off if necessary.

The local regulations on waste disposal have to be observed.

3.00 Machine overview



Legend

KS no.:	Description	Type	Serial no.:
131	Lifting device 200 litres	601	11901
140	Mixer 1500 litres	740	13482
150	2,000 litres Feeding bin	675	14376
400	Preheating system	261	14377
420	ilo 300 Liter 253	14378	
430	UHT konti system 200-700 Liter	260	14379
435	Double filter unit		2-00003427
440	Creamoing bin	254	14380
600	switchbox*		828069-01
611	control panel		828069-02
702	Cleaning platform		137415
703	Cleaning platform		2-00004537
705	Cleaning platform		2-00004736
706	Cleaning platform		2-00005409
801	Pipeline		137472-01
802	Pipeline		137472-02
805	Pipeline		137472-03
806	Pipeline		137472-04

For the installation and commissioning observe the separate assembly instructions of the individual machines, filed in the document folder.

4.00 _____ **Transport and installation**

4.01 _____ **General safety information**



Danger!
Keep off the switchbox in all situations.

Warning!
Use suitable ascent assistances when installing/assembling the switchbox and performing maintenance and inspection work.

Warning!
Close the installation area of the machine against unauthorised access.

Warning!
Wear personal protective-clothing such as a protective helmet, safety shoes and gloves during the installation, maintenance and inspection work on the machine.



Danger!
Keep well clear of the load being raised during transportation.
Danger due to mass, shape and weight of machine sections.
Transport and installation only to be carried out by authorised personnel.



Warning!
Use suitable ascent assistances.
Danger of slipping and falling down from the walking surface/platform!

4.02 _____ **Unloading, loading, transport**

The following has to be observed during unloading/loading/transporting:

- ☐ Only forklifts, crane equipment and hoists with sufficient load-bearing capacity and stability and further auxiliary means must be provided by the operator for the unloading, loading and transportation.
- ☐ The transport and assembly works must be done only by qualified persons.
- ☐ It is essential to follow the safety regulations for the lifting and transporting of loads.



The delivery scope should be checked by the operator for completeness.
Possible damage during transport must be documented and reported immediately.

Observe the assembly instruction of the individual machines in the document folder.

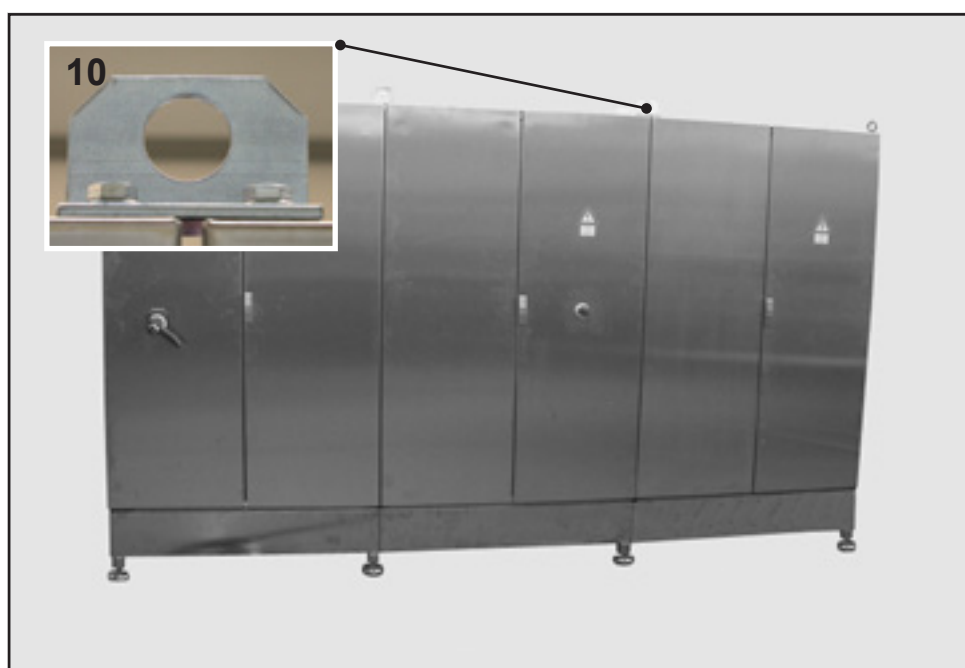
4.03 **Space requirements/place of installation**

The following must be observed for the installation location:

- ☐ The installation location must be selected in such a way that during the operation around the machine a minimum distance of approx. 1000 mm is kept between the machine section projecting furthest and the next obstacle.
- ☐ In the case of travel and transport paths, larger distances apply according to the appropriate standards.
- ☐ There must be a minimum of 1 m of space at the control cabinet doors for servicing purposes
- ☐ The operator must provide an adequate light source of min. 500 lux within the area of the switchbox.

The installation must be performed according to Installation schedule no.: 09-164-..

4.04 **Raise switchbox with a crane**



The weight of the switchbox amounts to approx. 2000 kg.

The following points must be observed:

- ☐ Hoist must be admissible for the weight.
- ☐ It is essential to follow the safety regulations for the lifting and transporting of loads.
- ☐ Attach rope to the transport eyes (1).
- ☐ Pay attention to the balance of the centre of gravity! Adjust rope lengths, if necessary, in such a way that the switchbox hangs straight on the crane.
- ☐ Raise switchbox carefully and only a little.
- ☐ Design modifications which are necessary to bring the switchbox to the installation location in the workshop must only be performed at the expense of the operator.
- ☐ We do not accept any liability for damages during installation of the machine or to the building itself.



***Danger due to the mass, shape and weight of the machine components.
Keep away from the load being lifted during the transport.
Transport the load close to the floor.***

4.05 _____ *Transport switchbox*



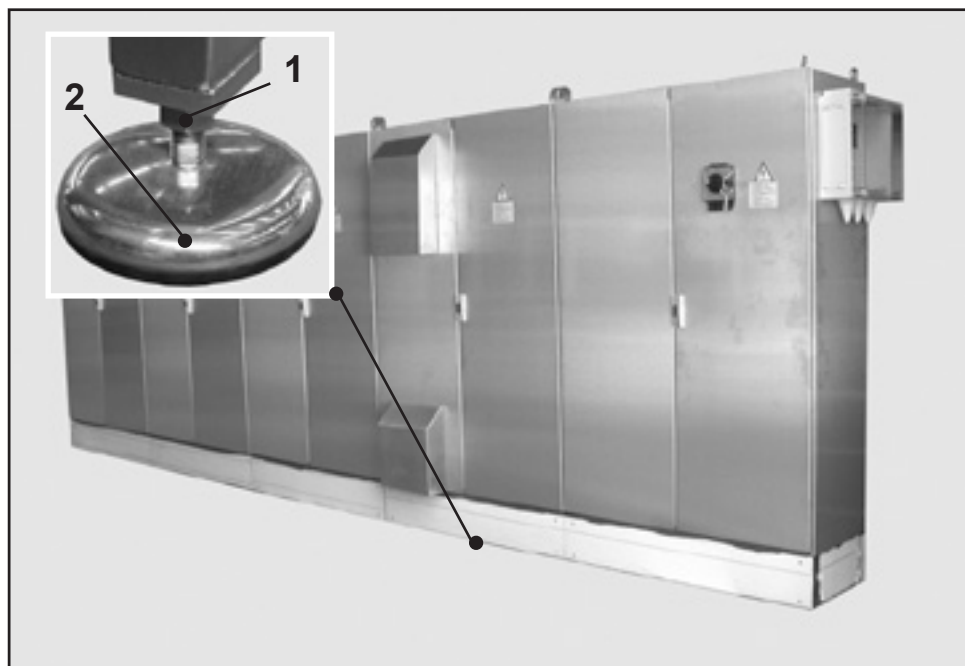
The weight of the switchbox amounts to approx. 2000 kg.
The following points must be observed:

- ☐ Hoist must be admissible for the weight.
- ☐ It is essential to follow the safety regulations for the lifting and transporting of loads.
- ☐ The switchbox may be transported only on suitable transport pallets
- ☐ Protect the switchbox against falling over during transportation.
- ☐ Pay attention to the balance of the centre of gravity!
- ☐ Move switchbox carefully and slowly to the intended installation place.
- ☐ Raise switchbox carefully and slowly with a crane from the transport pallets.
- ☐ Design modifications which are necessary to bring the switchbox to the installation location in the workshop must only be performed at the expense of the operator .
- ☐ We do not accept any liability for damages during installation of the machine or to the building itself.



***Danger due to the mass, shape and weight of the machine components.
Keep away from the load being lifted during the transport.
Transport the load close to the floor.***

4.06 _____ **Install switchbox**



- ☐ Floor base must be permitted for the weight of the switchbox weight.
- ☐ The floor base must be horizontal and level.
- ☐ Switchbox must be on a firm position on all rubber feet.
- ☐ Align switchbox with a spirit level.
- ☐ Retighten the lock nuts (2) of the rubber feet (1) after the adjustment.



Danger due to the mass, shape and weight of the machine components.

4.10 _____ **Installing cleaning platform**

The following points must be observed when installing:

- ☐ The operator must fit a cleaning platform/ascent before the initial start-up which corresponds to the valid safety regulations.

For the installation of the cleaning platform/ascent, all valid regulations and rules according to DIN 14122-1 to 14122-3 must be adhered to.

The safety distances according to DIN/EN 13857 must be observed when installing and fitting the installation platform/ascent.

Install cleaning platforms according to the installation plan no.: 09-164-...

The crossing area from the cleaning ascent to the floor must be made anti-slip by the operator.

Always clean the walking surface of the cleaning ascent thoroughly to remove water and grease. Danger of slipping!



Wear personal protective clothing such as a safety helmet, safety shoes and gloves during installation, cleaning, maintenance and inspection work on the machine.

Due to the strong vibrations all fastening screws and screw connections have to be checked at regular intervals (monthly).

5.00 Connections

5.01 General safety information



Danger to life by electric shock!

- ⇒ Have works on the electrical system only be done by an authorised electrician.
- ⇒ Before all work on the electrical system disconnect the system and protect against unauthorised restarting.

Danger!

High body current-flows and burns by direct or indirect touching of live sections are possible.

Before starting work on the machine, particularly before opening covers of live or moving sections, the machine must be disconnected.

In addition to the main circuits, possibly existing additional or auxiliary circuits particularly stand-by heaters are to be also observed.

Wait for the machine to come to a stop (after-running subject to rating oscillating weight).

(See Notes on hazards, Chapter 2.12)

The usual safety rules according to DIN VDE 0105 are as follows:

- ⇒ disconnect,
- ⇒ protect against restarting.
- ⇒ Determine that the circuit is voltage-free, cover neighbouring energized parts or lock
- ⇒ short-circuit.

Connection of the machine

- ☐ according to the valid regulations and rules,
- ☐ as well as the indications on the name plate and in the circuit diagram.

Attach the danger sign "Caution: repair work".



Danger!

Keep off the processing line outside the platform surfaces in all situations.

Caution!

Before starting with maintenance work it must be ensured that all connection lines are depressurised and cooled down and cannot be restarted during the maintenance work.



Warning!

Use suitable ascent assistances.

Danger of slipping and falling down from the walking surface/platform!



The screw connections at the connection lines have to be checked at regular intervals (monthly) for tightness and firm seat.

5.02 _____ **Electrical connection**

5.0201 _____ **Connecting the potential equalisation**



The operator must connect a cable to the potential equalisation before the first start-up according to the terminal assignment plan. Regular checking of the protective conductor system according to EN 60204-1 must be carried out and documented.

Observe the operating manual of the individual machines!

5.0202 _____ **Connecting the machine to the power supply**

The processing line may only be connected by an **authorised electrician**. The valid regulations and rules for the connection according to EN 60204-1 must be observed.



Before all work on the electrical system disconnect the system and protect against unauthorised restarting.

Connecting data according to circuit diagram/machine master card.

- ☐ Use only delay-action fuses.
- ☐ We recommend the use of larger wire cross-sections for larger line lengths or with unfavourable voltage conditions.

5.0203 _____ **Work sequence**

- ☐ Connect the connecting cables in the terminal box of the individual machines, for this the respective electrical regulations are valid.
- ☐ Pay attention to the pull-relief of the connection cable.
- ☐ Check the rotation direction of the motors

Observe the operating manual of the individual machines!

6.00 **Commissioning**

6.01 **General safety information**



Danger!
Keep off the processing line outside the platform surfaces in all situations.



Danger of quickly falling/falling down from the cleaning platform.
Always clean the walking surface of the cleaning platform thoroughly of water and grease.



Clean all parts coming into contact with foodstuffs before the initial start-up.

The initial start-up of the machine must only be performed by specially trained personnel.

Observe the operating manual of the individual machines!

6.02 **Before starting up the processing line**

The following points must be observed before starting up the processing line with product:

- ☐ Check all the functions of the machine
- ☐ Check all the safety devices.
- ☐ Check all supply connections.
- ☐ Clean the entire processing line.
- ☐ Train the operating personnel.



Caution:
To avoid damages through contaminations on the product the complete processing line should be cleaned thoroughly, disinfected and rinsed (approx. 5 min) to remove any present contamination.

6.03 **Initial startup**

The processing line has been set by the factory, afterwards the machine can be checked for proper function after implemented connection and a test-run can be carried out after connection is made and completion of all prework.

- ☐ Switch on main switch.
- ☐ Activate key switch.
- ☐ Start production process.



The processing line must be started up only with the specified machines according to Layout no.: 09-164-..

6.04 **Training**

Train/instruct the operating and maintenance personnel fully before starting up the processing line for the first time.

6.05 _____ **Acceptance**

A handover and acceptance record must be created for the processing line. The handover and acceptance record contains the efficiency of the safety devices; the machine functions checked and the names of the persons who received an instruction on the machine.

The handover and acceptance record, as well as the test record, must be signed by the safety inspector and the operator.

The acceptance records must be returned to the factory and filed in the machine documents.

7.00 _____ **Operation**

7.01 _____ **General safety information**



Danger!

Keep off the processing line outside the platform surfaces in all situations.



Danger of quickly falling/falling down from the cleaning platform.

Always clean the walking surface of the cleaning platform thoroughly of water and grease.



Caution!

Danger of the fingers/hands being crushed when closing the protective covers and the maintenance doors.



Important!

Operate the processing line only with assembled and operable protection and safety devices.

7.02 _____ **Preparation for operating with the product**

The following points must be observed when operating with product:

- ☐ Switch on main switch.
- ☐ Activate key switch.
- ☐ Start production process.

8.00 _____ ***Operation***

8.01 _____ ***PLC -control***

Observe sep. operating manual.

9.00 _____ **Cleaning**

9.01 _____ **General safety information**



Danger!

Keep off the processing line outside the platform surfaces in all situations.



Danger of quickly falling/falling down from the cleaning platform.

Always clean the walking surface of the cleaning platform thoroughly of water and grease.



Caution!

Danger of the fingers/hands being crushed when closing the protective covers and the maintenance doors.



Caution!

In respect of cleaning, maintenance- and repair work on the machine, wear personal protective clothing such as a protective helmet, safety shoes, goggles and gloves.

Caution!

Damage at the operating unit is possible.

Clean the foil keyboard only with a damp cloth !

Do not use a high-pressure cleaner or steam jet.

9.02 _____ **Cleaning instructions**

Clean the processing line after the end of work, at least once a day.

Use detergents approved for the foodstuff sector.

Please consult the manufacturers of the detergents. We are unable to make any definitive recommendations in respect of this.

Only use detergents which do not corrode metal, rubber or plastic parts.



Dried-on dirt makes cleaning difficult.

Therefore we recommend to keep the time between the end-production until the start cleaning as short as possible.

The safety data sheets and product data sheets of the cleaning and disinfection agents must be observed.

Note

Depending on the application range of the processing line, other cleaning methods than those described may be used.

Observe the operating manual of the individual machines!

9.03 **Cleaning sequence by hand**

- ☐ Clean machines outside.
- ☐ Remove coarse dirt.
- ☐ Pre-rinse carefully with hot water (60° C).
- ☐ Check for cleanliness (visual inspection).
- ☐ Foam up with an appropriate detergent.
- ☐ Wait the stipulated time for the disinfectant to take effect.
- ☐ Rinse carefully with warm water (60°).
- ☐ Check critical points and problem areas.
- ☐ Disinfect before starting production.
- ☐ Wait the stipulated time for the disinfectant to take effect.
- ☐ Rinse with drinking water.



***When cleaning, do not climb onto the machines.
Do not clean the bottom surface at the control panel with high pressure.
Wear protective goggles when working with high-pressure cleaners.***

Remark:

The specified cleaning plan was derived in co-operation with the ECOLAB company.

9.04 **CIP cleaning**

The connections for water, lye, acids and other cleaning- and disinfection agents must be provided by the customer.

The cleaning duration is approx 40 min (plus inlet time of water and discharge into the gully) when cleaning with acid depending on the procedure.

The cleaning duration is approx. 20 min (plus inlet time of water and discharge into the gully) when cleaning without acid additives.

We cannot give any binding statements concerning the required water amount, as this is dependent on different factors as e.g. size of the bins being cleaned, numbers of bins, length of the pipeline etc.).



An insufficient cleaning of the machine can cause impurities of the product.

9.05 **Daily inspection**

- ☐ Check pipelines.
- ☐ Check state of the danger information sign and replace if necessary.



All safety devices must be checked daily before starting work for functionality and repaired if necessary.

9.06 _____ *Cleaning schedule by hand*

Working steps	Cleaning agent	Procedure	Devices	Notes
Course cleaning after product rests if necessary after disassembly of the small parts		By hand, mechanically	Filler, scraper	Start immediately after end of production
Disassembly and cleaning of the small parts	1% ECOLAB P3-topax 99	After thoroughly pre-rinsing with water max. 60°, (acc. to fat softening point) foam or manually, for approx. 15 min	Low-pressure foaming device, brush, tub	Lay the parts on the grating
Pre-rinse thoroughly	Drinking water	Low-pressure up to 30 bar Temp. 60° (acc. to fat softening point)	Low-pressure device water-hose	All small parts included
Control on optical cleanliness		Visual, take care with problem areas		
Alkaline cleaning	2-5% ECOLAB P3-topax 19 chlorine-free P3-topax 66	Foam or manual, approx. 15 min time of effect	Low-pressure foaming device, brush, tub	Daily also the small parts
Acid cleaning acc. to requirement instead of alkaline cleaning	2-5% ECOLAB P3-topax 56	Foam or manual, approx. 15 min time of effect	Low-pressure foaming device, hand-spray device brush for removing lime deposits	At least 1x week
Rinse	Drinking water	Low-pressure up to 30 bar Temp. 50-60°C	Low-pressure device water-hose	Complete plant and small parts
Disinfect	1% ECOLAB P3-topax 91	Spray, foam time of effect according to product datasheet		Complete plant and small parts After conclusion of all cleaning measures to be done in the room
Rinse	Drinking water	Low-pressure up to 30 bar	Low-pressure device water-hose	Rinse process from up to down
Dry				
Servicing	E.g. servicing oil suitable for foodstuff sector	Spray	Spray-gun	Only on non-product-leading system parts

The illustrated cleaning and disinfection recommendation was created in cooperation with the ECOLAB company.

Due to the variety of different materials and processing procedures, the information mentioned below can be considered only as indicative and not binding.

9.07 _____ CIP cleaning sequence

The illustrated cleaning and disinfection recommendation was created in cooperation with the ECOLAB company.

Due to the variety of different materials and processing procedures, the information mentioned below can be considered only as indicative and not binding.



Cleaning & disinfection recommendation

Application range

(stainless steel and alkali-acid-resistant plastics and seals)

Typical residues

Mixtures of greases, protein, lactose residues can be burnt in parts.

Cleaning interval: according to system default, pressure, temperature

Cleaning procedure & chemistry	%	°C	min	Remark
 Pre-rinse Water	---	cold	5-8	Rinse until clear water is visible Rinse to the drain.
 Alkaline cleaning P3-mip LF	2.5-3	80-90	40	P3-mip LF as alkaline cleaning evenly manual or via dosing pump Rinse to the drain
 Rinse again Warm water	-	60-65	5-8	Rinse for 5-8 minutes Rinse to the drain.
 If required, acid cleaning P3-horolith CIP	1.2	70	20	P3-horolith CIP for acid cleaning manual or add via dosing pump Rinse for 5-8 minutes Rinse to the drain.
 Rinse again Fresh water	-	cold	5-8	Rinse again free of residues Rinse to the drain.

9.08 _____ CIP cleaning scheme

Observe cleaning plan no.: 09-164-M-CIP

10.00 _____ Troubleshooting and remedy

10.01 _____ General safety information



Danger to life by electric shock!

- ⇒ Have works on the electrical system only be done by an authorised electrician.
- ⇒ Before all work on the electrical system disconnect the system and protect against unauthorised restarting.

Danger!

High body current-flows and burns by direct or indirect touching of live sections are possible.

Before starting work on the machine, particularly before opening covers of live or moving sections, the machine must be disconnected. In addition to the main circuits, possibly existing additional or auxiliary circuits particularly stand-by heaters are to be also observed. Wait for the machine to come to a stop (after-running subject to rating oscillating weight).
(See Notes on hazards, Chapter 2.12)

The usual safety rules according to DIN VDE 0105 are as follows:

- ⇒ disconnect,
- ⇒ protect against restarting.
- ⇒ Determine that the circuit is voltage-free, cover neighbouring energized parts or lock
- ⇒ short-circuit.

Attach the danger sign "Caution: repair work".



Danger!

Keep off the processing line outside the platform surfaces in all situations.



Caution!

Danger of the fingers/hands being crushed when closing the protective covers and the maintenance doors.



Danger of quickly falling/falling down from the cleaning platform.

Always clean the walking surface of the cleaning platform thoroughly of water and grease.



Caution!

Before starting with maintenance work it must be ensured that all connection lines are depressurised and cooled down and cannot be restarted during the maintenance work.

Caution!

In respect of cleaning, maintenance- and repair work on the processing line, wear personal protective clothing such as a protective helmet, safety shoes, goggles and gloves.

10.02 _____ Requirements on the personnel to be implemented

Details on the qualification and competences of the personnel in relation to troubleshooting and fault elimination, (See Chapter 2.04).

10.03 _____ Displaying and eliminating faults

Elimination by the user means that the troubleshooting or elimination must be performed by the user, which requires that the machine operator has the necessary know-how to detect faults and eliminate them, or call for help. An instruction of the operator on the machine is carried out for work which the user may do. All other faults must be remedied by **authorised** personnel. (See Chapter 2.04).

10.04 _____ Troubleshooting table

For the troubleshooting and eliminating faults observe the operating manual of the individual machines in the document folder.

A fault may have various different causes, and one cause may lead to different faults

General note

The machines in the processing line were tested thoroughly before delivery. If the machines in the processing line are used according to the order data as well as treated according to our lubrication- and maintenance instructions, then a satisfactory operation is to be expected over a longer period of time.

11.00 Maintenance and inspection

11.01 General safety information



Danger to life by electric shock!

- ⇒ Have works on the electrical system only be done by an authorised electrician.
- ⇒ Before all work on the electrical system disconnect the system and protect against unauthorised restarting.

Danger!

High body current-flows and burns by direct or indirect touching of live sections are possible.

Before starting work on the machine, particularly before opening covers of live or moving sections, the machine must be disconnected.

In addition to the main circuits, possibly existing additional or auxiliary circuits particularly stand-by heaters are to be also observed.

Wait for the machine to come to a stop (after-running subject to rating oscillating weight).

(See Notes on hazards, Chapter 2.12)

The usual safety rules according to DIN VDE 0105 are as follows:

- ⇒ disconnect,
- ⇒ protect against restarting.
- ⇒ Determine that the circuit is voltage-free,
- cover neighbouring energized parts or lock
- ⇒ short-circuit.

Attach the danger sign "Caution: repair work".



Danger!

Keep off the processing line outside the platform surfaces in all situations.



Caution!

Danger of the fingers/hands being crushed when closing the protective covers and the maintenance doors.



Danger of quickly falling/falling down from the cleaning platform.

Always clean the walking surface of the cleaning platform thoroughly of water and grease.



Caution!

Before starting with maintenance work it must be ensured that all connection lines are depressurised and cooled down and cannot be restarted during the maintenance work.



Important information

The indications of the lubrication and maintenance intervals on the individual machines are to be obtained in the respective operating manuals in the document folder.

12.00 Maintenance

12.01 General safety information



Danger to life by electric shock!

- ⇒ *Have works on the electrical system only be done by an authorised electrician.*
- ⇒ *Before all work on the electrical system disconnect the system and protect against unauthorised restarting.*

Danger!

High body current-flows and burns by direct or indirect touching of live sections are possible.

Before starting work on the machine, particularly before opening covers of live or moving sections, the machine must be disconnected.

In addition to the main circuits, possibly existing additional or auxiliary circuits particularly stand-by heaters are to be also observed.

Wait for the machine to come to a stop (after-running subject to rating oscillating weight).

(See Notes on hazards, Chapter 2.12)

The usual safety rules according to DIN VDE 0105 are as follows:

- ⇒ *disconnect,*
- ⇒ *protect against restarting.*
- ⇒ *Determine that the circuit is voltage-free,*
cover neighbouring energized parts or lock
- ⇒ *short-circuit.*

Attach the danger sign "Caution: repair work".



Danger!

Keep off the processing line outside the platform surfaces in all situations.



Caution!

Danger of the fingers/hands being crushed when closing the protective covers and the maintenance doors.



Danger of quickly falling/falling down from the cleaning platform.

Always clean the walking surface of the cleaning platform thoroughly of water and grease.



Caution!

Before starting with maintenance work it must be ensured that all connection lines are depressurised and cooled down and cannot be restarted during the maintenance work.



Important information

The indications of the lubrication and maintenance intervals on the individual machines are to be obtained in the respective operating manuals in the document folder.

13.00 _____ **Shutting-down, storage and disposal**

13.01 _____ **General safety information**



Danger!

High body current-flows and burns by direct touching of live sections are possible.

Work on the electrical system to be undertaken only by authorised electricians.



Before all works on the electrical system:

- **disconnect the plant;**
- **determine dead circuit;**
- **protect against restarting.**

13.02 _____ **Shutting down the machine**

- ☐ Discharge the machine completely.
- ☐ Clean the machine.
- ☐ Switch off the main switch.
- ☐ De-energise the current supply.
- ☐ Disconnect the power supply cable.

13.03 _____ **Storing the machine**

Short-term and medium-term storage (up to 2 years) is possible without special measures, under the ambient conditions specified in the technical data.

For longer-term storage, special measures to protect against corrosion are required.

13.04 _____ **Restarting the machine**

Observe the procedure in Chapter 5.

13.05 _____ **Disposing of the machine**



Warning!

Disassemble the machine before the disposal.

Here different hazards can occur. For example:

- *residual pressure in lines and actuating elements;*
- *pretensioned springs;*
- *heavy sections, which fall downward after loosening.*



Important!

Disassembly of the machine to be undertaken only by trained technical personnel.

Wear the following personal protective-clothing:

- *protective gloves*
- *safety shoes*

Procedure for disposal:

- ☐ Place the machine out of operation.
- ☐ Disassemble the machine from the upper assemblies downward.
- ☐ Dispose of all sections and consumables according to the material type and in accordance with the local valid guidelines and regulations.

Important!

It is absolutely necessary to observe the regulations and laws governing the disposal of environmental pollutants. Such materials include for example used oils, cooling agents, colours, plastics and chemicals.

In the case of doubt contact the manufacturer.

Translation of the original EC Declaration of Conformity

according to EC machine directive 2006/42/EG, annexe II A

The manufacturer



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herewith declares that the machine

Description processing Linie

Type 001

Serial number 09-164

is compliant with the provisions of the following EC directives and statutory regulations issued for their implementation:

☒	EC Machine Directive 2006/42/EG
☒	EC EMC Directive 2004/108/EG

The following harmonised standards were used for implementation:

- DIN EN ISO 12100-1: 2004-04 (D), Machine Safety – Basic terms, general design principles – Part 1: Basic terminology, methodology – Modification 1
- DIN EN ISO 12100-2: 2004-04 (D), Machine Safety – Basic terms, general design principles – Part 2: Technical principles
- DIN EN ISO 14121-1:2007-12, Machine Safety – Risk Assessment – Part 1: Principles

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Winterbach , 15.02.2011

Dr. E.O.Schnell, Managing Director