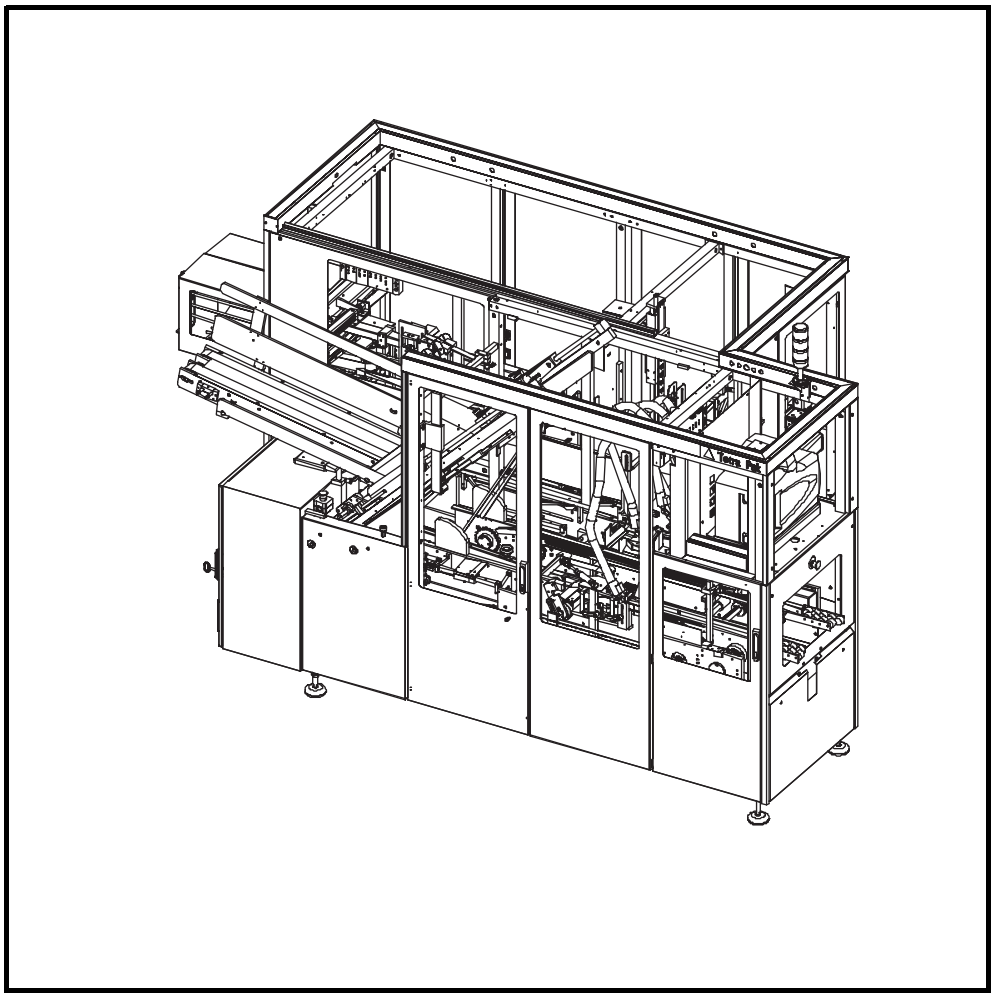
IM

Installation Manual

Cardboard Packer 32 by Tetra Pak

673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm



WARNING

Read and follow all safety precaution instructions throughout this manual and on safety signs attached to this equipment.

Failure to follow all safety precaution instructions could result in death or serious injury.

Tetra Pak

Doc. No. IM-2952924-0101

Copyright © 2008 Tetra Pak Group

All rights reserved. No part of this document may be reproduced or copied in any form or by any means without written permission from Tetra Pak Packaging Solutions AB.

Tetra Pak and all Tetra Pak products are trademarks belonging to the Tetra Pak Group.

The content of this manual is in accordance with the design and construction of the machine or equipment at the time of publishing. Tetra Pak reserves the right to introduce design modifications without prior notice.

The English version of this document is the original language version.

This document was produced by:

Tetra Pak Packaging Solutions AB
Ruben Rausings gata
SE-221 86 Lund
Sweden

Additional copies can be ordered from Tetra Pak. When ordering additional copies, always provide the document number.

Doc. No. IM-2952924-0101

Issue 2008-04

This manual is valid for:

Series No./ Machine No. Sign.

IM

Installation Manual

Cardboard Packer 32 by Tetra Pak
673852-0200

i Introduction

ii Safety Precautions

1 Technical Data and Drawings

2 Preparation

3 Moving and Unpacking the Equipment

4 Positioning, Assembly, and Connections

5 Final Installation Check

6 Preparation for Commissioning

7 Disassembly and Removal

Machine or equipment configurations that this manual is valid for are described on the next page.

Doc. No. IM-2952924-0101

Issue 2008-04

Tetra Pak

Tetra Pak Packaging Solutions AB

Valid for:

Name	Drawing Specification and Development Step	Additional Information
CK Belt Brake 195 mm & Infeed Conveyor 203 mm	2939290-0100	
Air Jet Gun	2802489-0200	
Spray Gun	1287076-0200	
Illumination	1287186-0300	
Cooling Unit	2792385-0200	
Light Barrier Unit	2834002-0200	

Update Log for Doc. No. IM-2952924-0101

This table shows all changes made to this manual, including installed rebuilding kits, added or removed pages. Page numbering on added pages begins with UP.

Date	Installed Kit	Added Pages (Doc. No.)	Removed Pages	Signature

Date	Installed Kit	Added Pages (Doc. No.)	Removed Pages	Signature

i Introduction

About the Introduction Chapter

This chapter contains basic information about this manual and related Tetra Pak equipment.

Abbreviations and Terminology . . . . . i - 5
Manual Information . . . . . i - 6
Delivered Manuals . . . . . i - 6
Page Layout . . . . . i - 7
Page Numbering. . . . . i - 8
Typographical Conventions . . . . . i - 8
Symbols . . . . . i - 8
Machine Introduction . . . . . i - 9
Intended Use of the Equipment . . . . . i - 9
Manufacturer . . . . . i - 9
Support and Feedback . . . . . i - 9
Identification . . . . . i - 10
CE Classification . . . . . i - 10
Machine Plate . . . . . i - 10
Orientation . . . . . i - 11
Machine Variant . . . . . i - 12
Hygiene. . . . . i - 13

This page intentionally left blank

Abbreviations and Terminology

Abbreviation/ Terminology	Meaning	Translation
ANSI	American National Standards Institute	
CE	Communautés Européennes / European Communities	
EEA	European Economic Area	
EM	Electrical Manual	
IM	Installation Manual	
ISO	International Organization for Standardization	
OM	Operation Manual	
m	meter	
MM	Maintenance Manual	
SPC	Spare Parts Catalogue	
TPMS	Tetra Pak Maintenance System	
TPOP	Tetra Pak Operator Panel	
WA	Wraparound unit	

Manual Information

Tetra Pak recommends reading all delivered manuals carefully. Make sure that the delivered manuals are available to personnel who operate or maintain the equipment.

It is important to keep this manual for the lifetime of the equipment and to pass the manual on to any subsequent holder or user.

Tetra Pak will not be held responsible for any damage to the equipment caused by not following the instructions given in this manual.

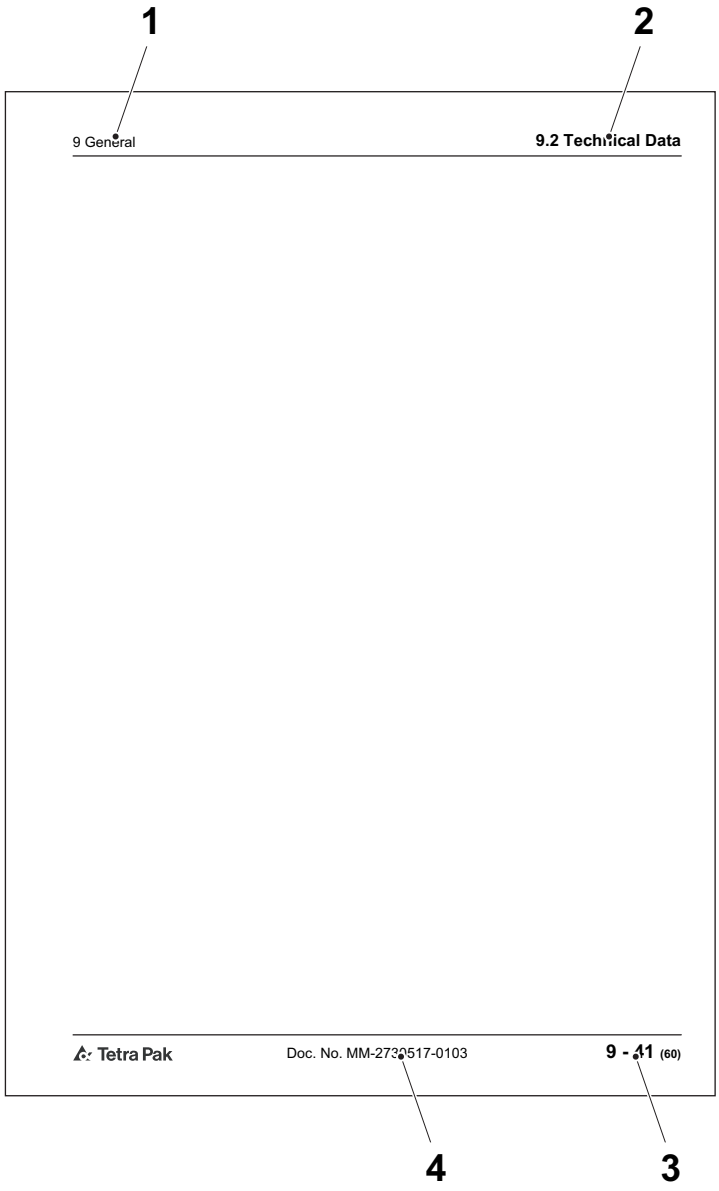
Delivered Manuals

The manuals delivered with this equipment include

- EM
  The Electrical Manual provides technicians with information about the equipment's electrical system.
- IM
  The Installation Manual provides technicians with information required to safely install the equipment.
- MM
  The Maintenance Manual provides technicians with information on maintaining the equipment.
- OM
  The Operation Manual manual provides the operator with information on handling and operating the equipment before, during, and after production.
- SPC
  The Spare Parts Catalogue provides the information necessary to order spare parts from Tetra Pak.

Page Layout

Every main page in a manual contains a header and a footer. The page header contains the chapter name (1) and the section name (2). The page footer contains the page number (3), and the document number (4). See also the Page Numbering section.

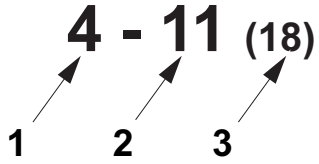


1 Chapter name
2 Section name
3 Page number
4 Document number

Page Numbering

A page number has three parts:

- chapter number (1)
- consecutive page number (2) within the chapter
- total number of pages (3) in the chapter.



1 Chapter number
2 Consecutive page number
3 Total number of pages

Typographical Conventions

Controls on the operator panel, emergency stop devices, and program steps are printed in CAPITAL LETTERS.

Menu names, button names and other text displayed in software are printed in `Courier`.

Cross-references are underlined.

Symbols

Symbols used in illustrations.

	A pointer arrow indicates the position of an object.
	A zoom arrow indicates that an object view is enlarged. The arrow points towards the enlarged view of the object.
	A rotation movement arrow indicates rotational movement of an object. The arrow points in the direction of rotation.
	A straight movement arrow indicates movement of an object. The arrow points in the direction of movement.

Machine Introduction

Intended Use of the Equipment

The intended use of this Tetra Pak machine or equipment is to place packages approved by Tetra Pak Packaging Solutions AB into units made of corrugated cardboard.

All other use is prohibited. Tetra Pak will not be held responsible for injury or damage if the equipment is used for any other purpose.

Manufacturer

This Tetra Pak equipment has been manufactured by

Tetra Pak Packaging Solutions AB
Ruben Rausings gata
SE-221 86 Lund
Sweden

Support and Feedback

If you encounter problems when operating this equipment or have other inquiries, comments, or suggestions for improvement, contact Tetra Pak.

Identification

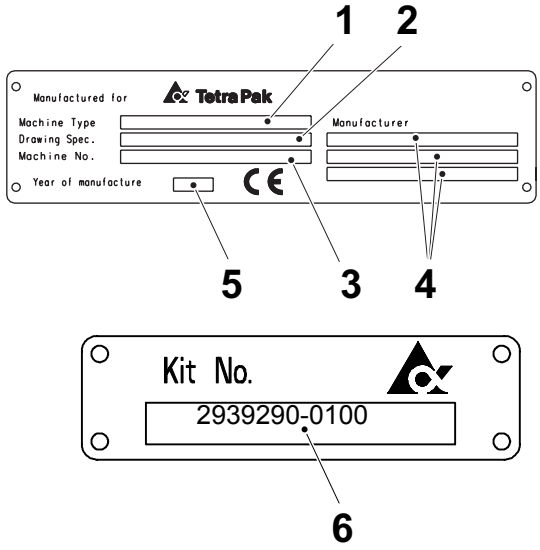
CE Classification

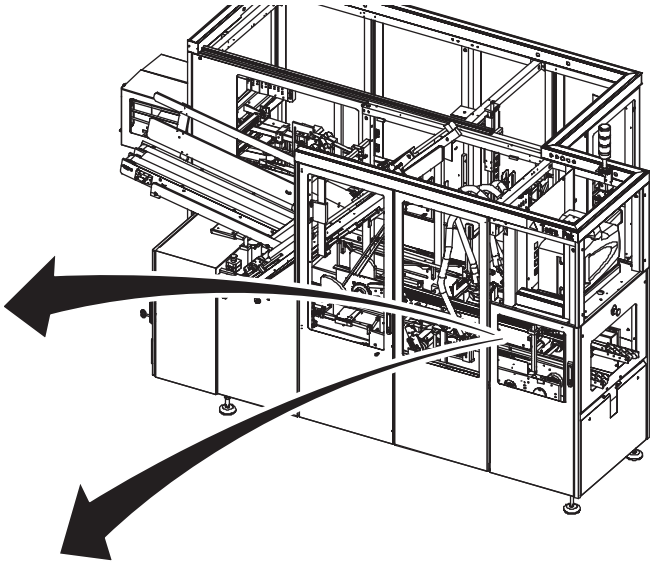
This equipment complies with the basic health and safety regulations of the European Economic Area (EEA).

Machine Plate

The illustration below shows an example of the machine plate and its location on the equipment. The machine plate carries data needed when contacting Tetra Pak concerning this specific equipment.

Make sure that the equipment data in the front pages of this manual corresponds to the machine plate data and the machine specification.

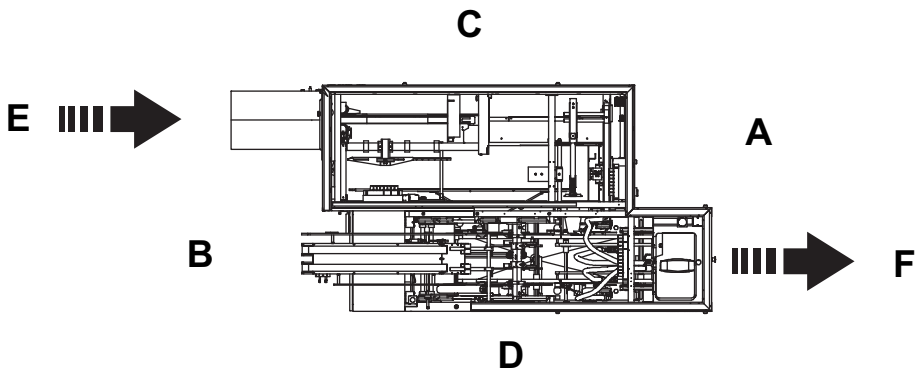




1 Machine type
2 Drawing specifications
3 Machine number
4 Manufactured by
5 Year of manufacture
6 Kit number

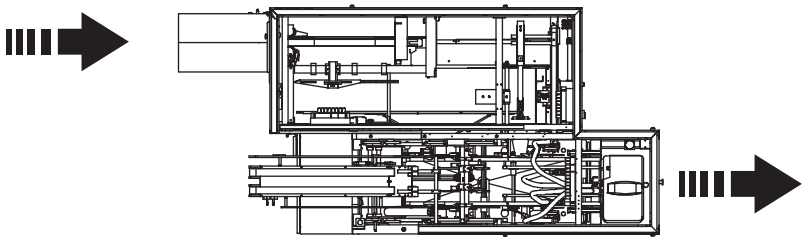
Orientation

The illustration below shows the orientation of the equipment. This orientation information will be used throughout this manual. The arrows indicate the flow of material.



A Front
B Rear
C Left-hand side
D Right-hand side
E Infeed
F Discharge

Machine Variant



Z-infeed, left hand version

Hygiene

- Keep your hands clean.
- Always wear some type of hair protection (cap or hairnet) and clean clothes (preferably white).
- Do not wear a watch, ring, necklace, earrings, or any other exposed jewellery.

This page intentionally left blank

ii Safety Precautions

Safety Precaution Instructions

WARNING

Read all safety precautions instructions throughout this manual and on safety signs attached to this equipment.
Failure to follow all safety precaution instructions could result in death or serious injury.

Definition of Lockout Procedure

A lockout procedure is a procedure to put each necessary energy isolating device in its safe position to prevent the energisation of the equipment, such as when a maintenance procedure should be carried out.

A lockout is the use of a device, for example, a padlock, to make sure that an energy isolating device cannot be operated.

An energy isolating device is a mechanical device that physically prevents transmission or release of energy, such as a power supply disconnector.

Safety Messages Description . . . . . ii - 5
Personnel Requirements . . . . . ii - 6
Skilled Person . . . . . ii - 6
Instructed Person. . . . . ii - 6
Safety Signs . . . . . ii - 7
Locations of Safety Signs . . . . . ii - 10
Protective Devices. . . . . ii - 11
Emergency Stop. . . . . ii - 11
Emergency Stop Push-Buttons . . . . . ii - 12
Safeguards . . . . . ii - 13
Warning Lamp . . . . . ii - 15
Personal Protection. . . . . ii - 16
Noise Hazard . . . . . ii - 16
Entanglement Hazard . . . . . ii - 16
Ergonomic Hazard . . . . . ii - 16
Supply Systems . . . . . ii - 17
Power Supply . . . . . ii - 17
Residual Voltage . . . . . ii - 17
Electrical Cabinet. . . . . ii - 18
Socket Outlet . . . . . ii - 19
Air Supply . . . . . ii - 20
Hotmelt Equipment . . . . . ii - 21
Transfer Stop Plate . . . . . ii - 23
Lifting Accessories . . . . . ii - 24
Production Mode Changes . . . . . ii - 24

This page intentionally left blank

Safety Messages Description

A safety message is always accompanied by a safety alert symbol and a signal word.

The safety alert symbol is used to alert about potential personal injury hazards. To avoid hazards, obey all safety messages that follow this symbol.

The following safety alert symbols and signal words are used in this manual to inform the user of hazards.

DANGER	Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Warning indicates a potentially hazardous situation which, if not avoided, **could** result in **death or serious injury**.
CAUTION	Caution indicates a potentially hazardous situation which, if not avoided, **may** result in **minor or moderate injury.** It may also be used to alert against unsafe practices.
CAUTION	Caution without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **may** result in **property damage**.

Personnel Requirements

Note! Personnel includes all persons working on or near this equipment.

Only skilled or instructed persons are allowed to work with this equipment.

Skilled Person

A skilled person must have relevant education and experience to enable him or her to identify hazards, analyse risks, and avoid hazards which electricity, machinery, chemicals, other energies, and supply systems on this equipment can create.

Skilled persons must meet local regulations, such as certifications and qualifications for working with these energies and systems.

Instructed Person

An instructed person must be adequately advised or supervised by a skilled person. The skilled person enables the instructed person to identify hazards, analyse risks, and avoid hazards which electricity, machinery, chemicals, other energies, and supply systems on this equipment can create.

Safety Signs

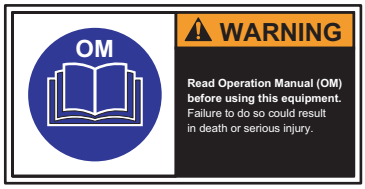
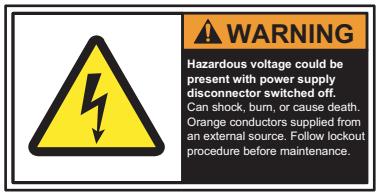
WARNING

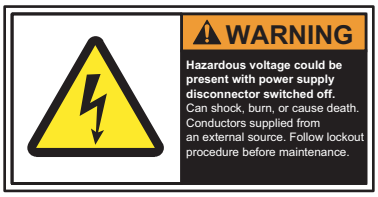
Damaged or missing safety signs increase the risk of death or serious injury.

Replace all missing or damaged safety signs immediately.

Safety signs are attached to the equipment. The table below lists all the signs that are used, and illustrations show their locations on the equipment. Each position number refers to two variants of a safety sign in the table, but only one is used on the equipment.

- Make sure that each safety sign is legible and in its correct position after installation and maintenance.
- Replace all missing or damaged safety signs immediately.

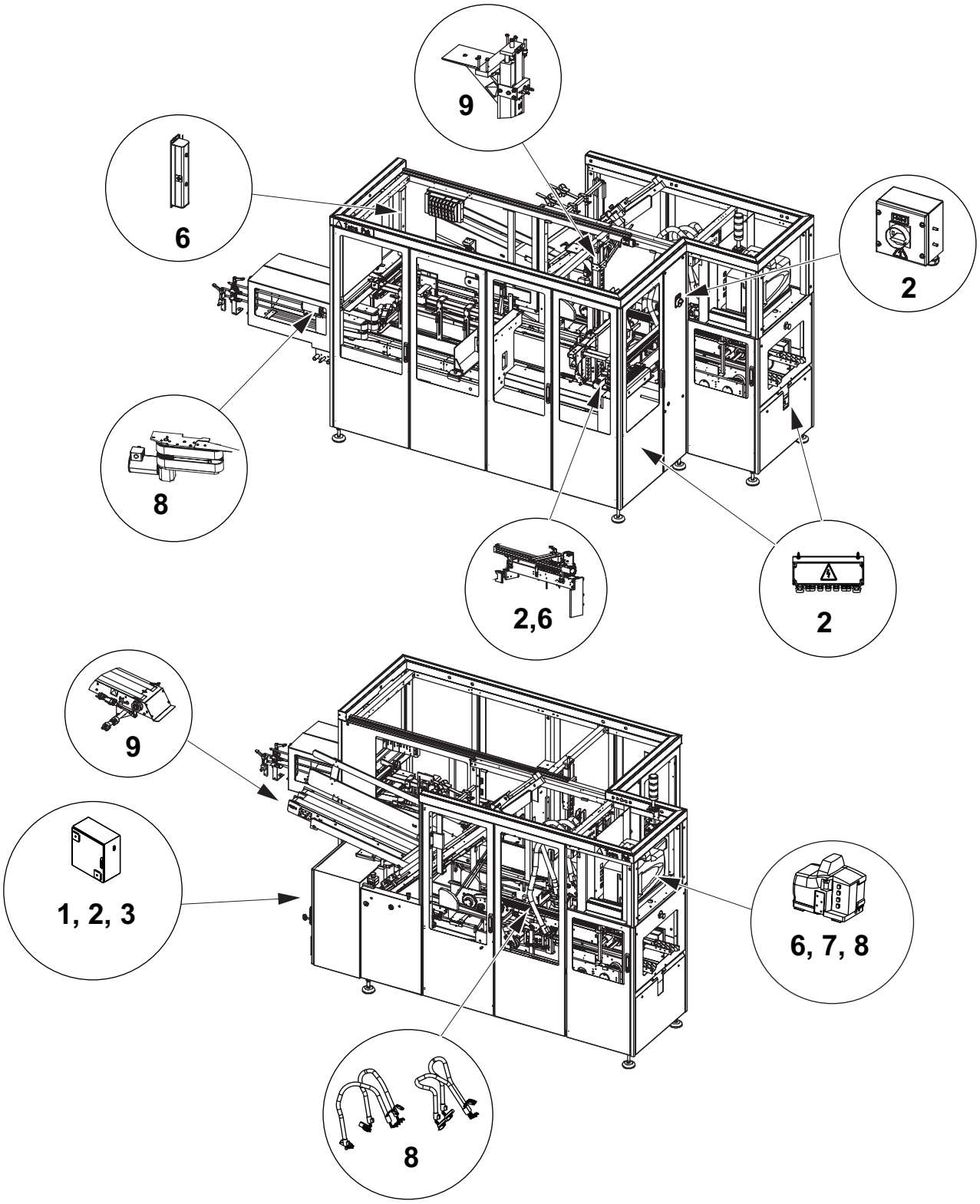
Pos.	ISO sign	ANSI sign
1		
	Read Operation Manual (OM) before using this equipment. Failure to do so could result in death or serious injury.	
2		
	Hazardous voltage. Will shock, burn, or cause death. Follow lockout procedure before maintenance.	
3		
	Hazardous voltage could be present with power supply disconnector switched off. Can shock, burn, or cause death. Orange conductors supplied from an external source. Follow lockout procedure before maintenance.	

Pos.	ISO sign	ANSI sign
4		
	Hazardous voltage could be present with power supply disconnector switched off. Can shock, burn or cause death. Conductors supplied from an external source. Follow lockout procedure before maintenance.	
5		
	Hazardous voltage. Can shock, burn, or cause death. Read Maintenance Manual before using this socket outlet.	
6		
	Risk of equipment damage. Do not let water into this area.	
7		
	Burn hazard. Trapped heat energy. Do not touch.	
8		
	Hot surface. Do not touch. Follow lockout procedure before maintenance.	

Pos.	ISO sign	ANSI sign
9		

Trapped pneumatic energy.
Moving parts could cause serious injury.
Follow lockout procedure before maintenance.

Locations of Safety Signs



Protective Devices

WARNING

Hazardous zones.

Hazardous zones are safeguarded and provided with protective devices. Do not inch or run this equipment if any protective device is inoperative.

Change inoperative components of the safety system immediately.

WARNING

Hazardous voltage.

Hazardous voltage remains on this equipment after activating an EMERGENCY STOP or an interlocking device.

Emergency Stop

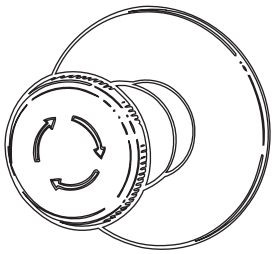
Emergency stop devices are used to stop this equipment immediately in an hazardous situation. Learn the positions of all emergency stop devices and how to use them.

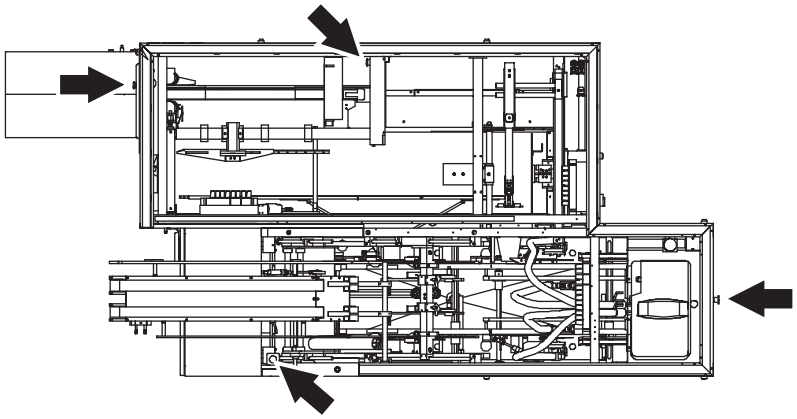
Instructions for a normal production stop are included in the Stop chapter of the Operation Manual.

Emergency Stop Push-Buttons

Push one of the EMERGENCY STOP push-buttons to stop this equipment immediately.

The location of each EMERGENCY STOP push-button is shown by an arrow.





Safeguards

WARNING

Moving machinery.

Never defeat or bypass the interlocking devices.

Movable guards, for example, doors and covers leading to hazardous zones, are fitted with interlocking devices where required. These devices are usually electric safety switches that are parts of the safety system and must never be defeated, bypassed, or otherwise made inoperative.

WARNING

Corners and edges.

To prevent injury from corners and edges of open doors and covers, close them unless they must be open during such work. Be careful when working under an open door, cover or elsewhere below parts of the equipment with corners and edges.

CAUTION

Burn hazard.

Parts of this equipment may be hot after operation.

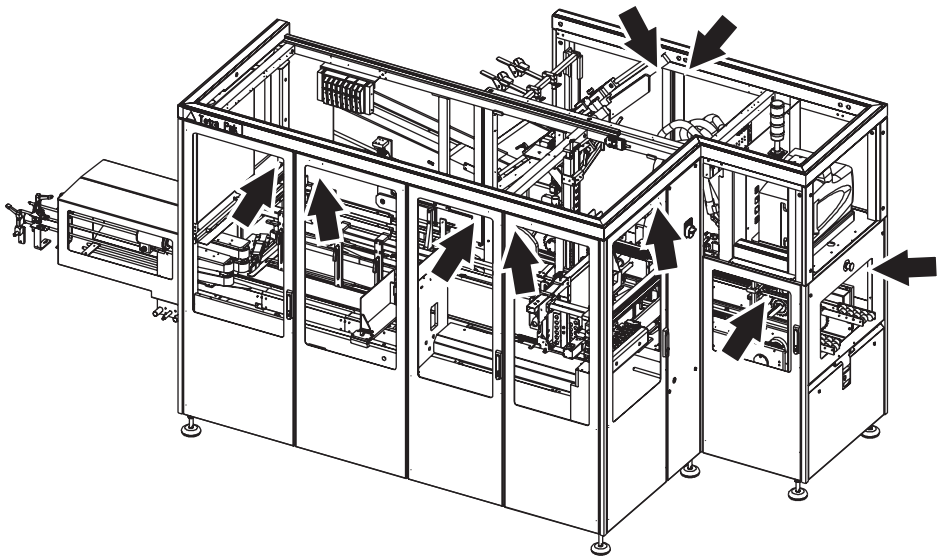
After installation and maintenance, and before this equipment is inched or run, check that all safeguards are in place and that they operate correctly.

(Cont'd)

(Cont'd)

CAUTION
Equipment damage.
Never stop this equipment by opening an interlocking guard.

The location of each interlocking guard is shown by an arrow.



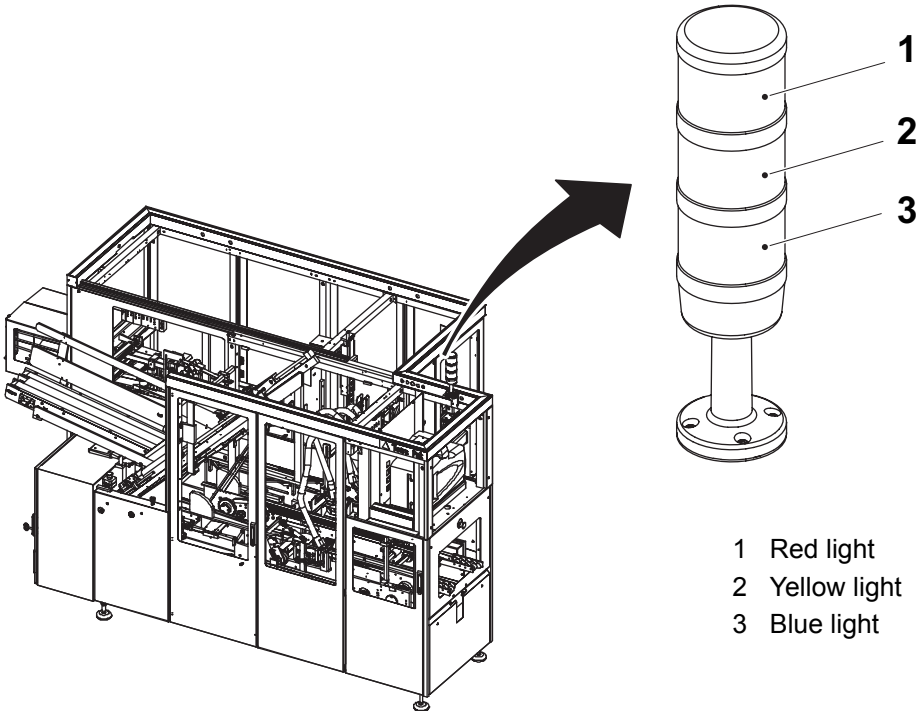
Machine equipped with light barrier.

Warning Lamp

A warning lamp is a column of warning lights:

- A red light (1) indicates a hazardous condition. This is a situation that requires immediate action.
- A yellow light (2) indicates an abnormal or impending critical condition. This is an impending critical condition calling for action by the operator.
- A blue light (3) indicates that operator action is required.

Note! If the yellow and blue colours are flashing at the same time, it indicates a queue on the discharge side in the downstream equipment.



1 Red light
2 Yellow light
3 Blue light

Personal Protection

This section applies to all personnel at all times when this equipment is in operation.

Noise Hazard

CAUTION

Hazardous noise.

Risk of impaired hearing.

Hearing protection is recommended whenever this equipment is in operation.

Entanglement Hazard

WARNING

Risk of entanglement.

Do not wear jewellery or loose clothing when working on or near this equipment. Long hair may not be loose.

Ergonomic Hazard

WARNING

Ergonomic Hazard.

Handling materials and supplies, for the machine, can be repetitive manual work and involve ergonomic hazards with risk for personal injury. Materials and supplies should be located, e.g. layout design, to avoid twisting the body or bending the back when placing them into the machine. It is recommended to use aids such as a lifting table or lifting device for these tasks. Follow instructions for safe work practices.

Supply Systems

Power Supply

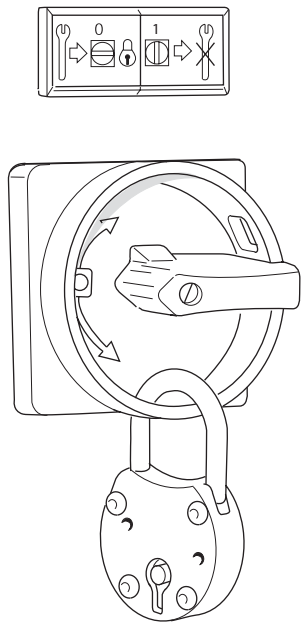
DANGER

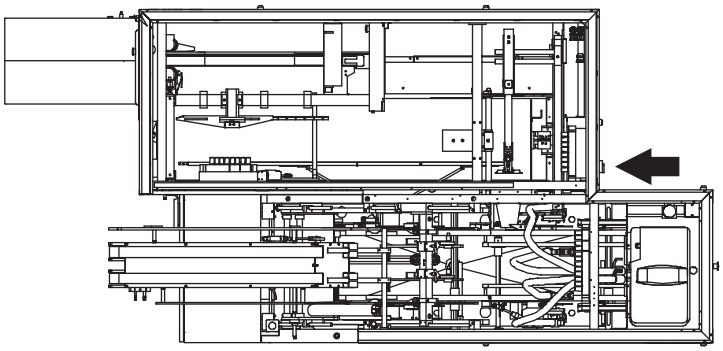
Hazardous voltage and moving machinery.
The power supply disconnector must be turned off and secured with a lock before any maintenance.

Note! The key to the lock must be removed by the technician and retained in his/her possession until all work is completed.

Certain maintenance procedures may require power supply systems to be on. These exceptions are clearly stated in the Maintenance Manual.

The illustrations show the power supply disconnector and its location.





Residual Voltage

DANGER

Hazardous voltage.
Do not touch any terminals immediately after the power supply disconnector is turned off. Ensure that no residual voltage remains on the capacitors before touching. Wait five minutes. Failure to observe this information will cause death or serious injury.

After the power supply disconnector is turned off, residual voltage remains in the capacitor circuits.

Electrical Cabinet

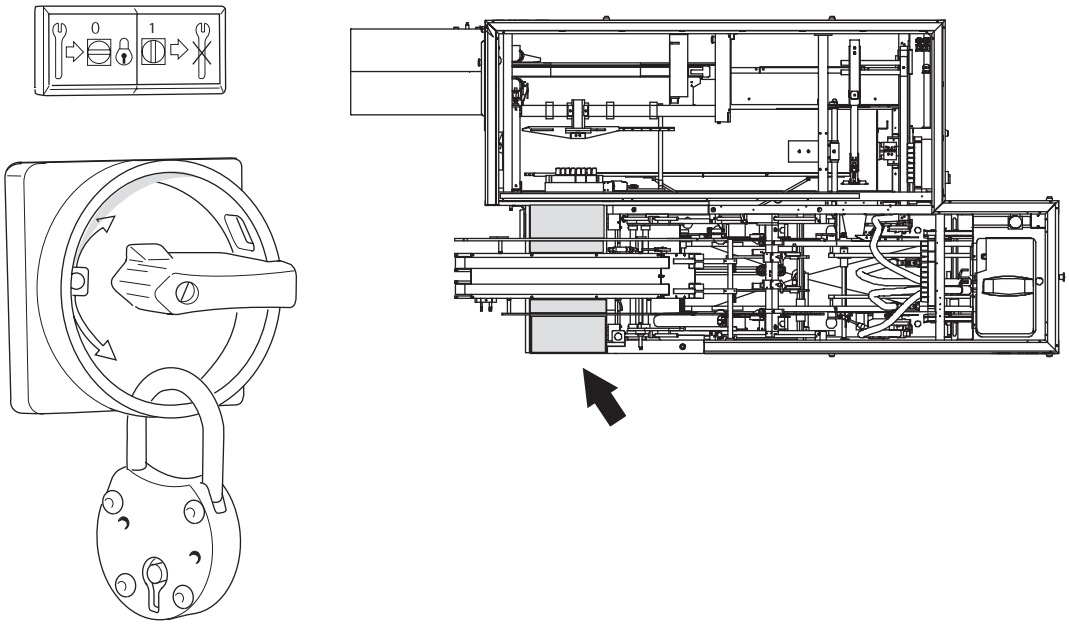
DANGER

Hazardous voltage.
Will shock, burn, or cause death.
The power supply disconnector must be turned off and secured with a lock before maintenance inside the electrical cabinet.

Note! The key to the lock must be removed by the technician and retained in his/her possession until all work is completed.

Make sure that the electrical cabinet door is closed after working inside the electrical cabinet. Door with lock must be locked.

The location of the electrical cabinet is shown by an arrow.



Socket Outlet

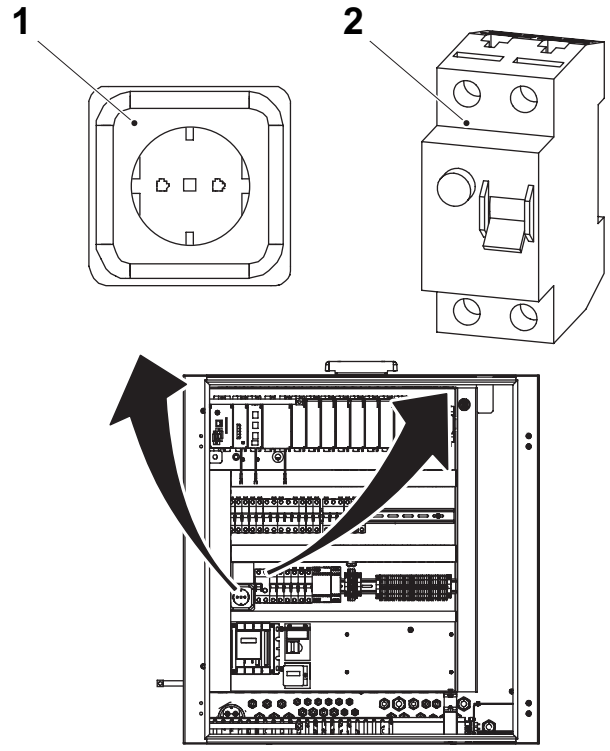
WARNING

Hazardous voltage.

Can shock, burn, or cause death. Read the Maintenance Manual before using this socket outlet.

The socket outlet (1) is connected to a residual current device (2) to protect users against electrical shock if there is an earth fault in the connected equipment. The residual current device shall be tested each time before the socket outlet is being used. See the MM for test procedure.

The illustrations show the socket outlet, the residual current device, and their location.



1 Socket outlet
2 Residual current device A01F0070

Air Supply

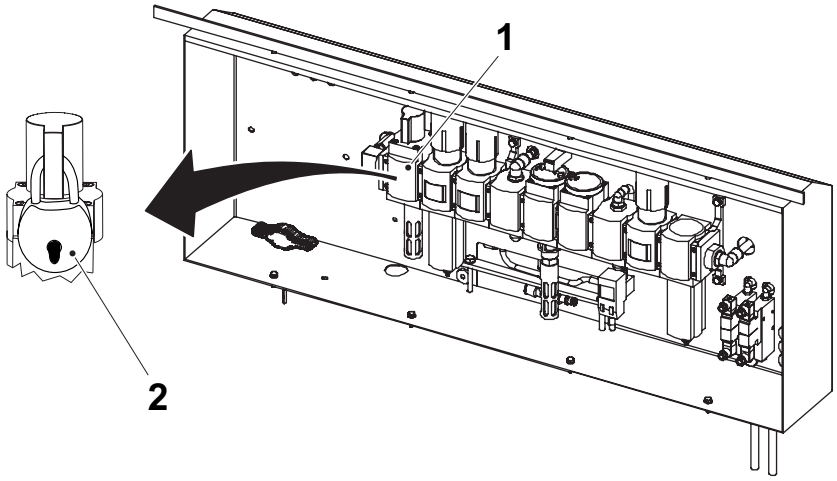
WARNING

Compressed air and moving machinery.
Close the main air valve and lock it before any maintenance.

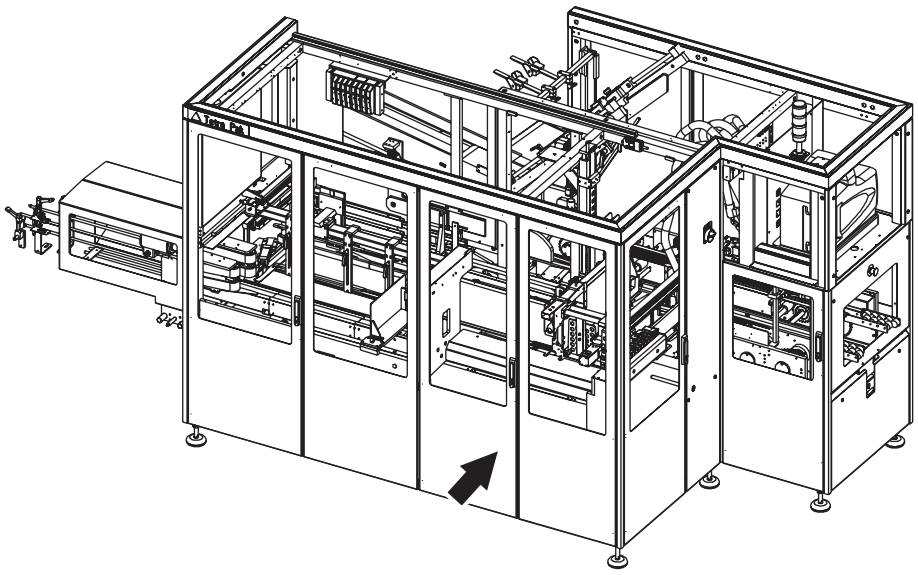
Note! The key to the lock must be removed by the technician and retained in his/her possession until all work is completed.

Certain maintenance procedures may require air supply systems to be on. These exceptions are clearly stated in the Maintenance Manual.

The illustrations show the main air valve (1), the lock (2), and their location.



1 Main air valve
2 Padlock



Hotmelt Equipment

DANGER

Hazardous voltage.
The voltage is 400 V inside the hotmelt unit. Risk of immediate danger to life through electrical shock.

Never flush water or any other liquid towards the hotmelt unit when cleaning the machine. Failure to obey will result in danger to your life.

WARNING

Important when work on hotmelt equipment.
All service work on the hotmelt unit must be carried out by authorized personnel. Always wear safety glasses, protective gloves, and other protective clothing to avoid injuries caused by splashing adhesive.

Never remove any part or component until air and the electrical supply to the machine have been disconnected and the pressure of the adhesive in the system has been relieved.

Failure to relieve any remaining air or liquid (adhesive) pressure may cause serious injuries from burning when the hotmelt filter is detached or flushed.

During heating and production the unit gets hot. The hotmelt tank contains heated adhesive which can cause serious injuries. Do not touch the adhesive!

During tank drainage never touch the drain shut!

(Cont'd)

(Cont'd)

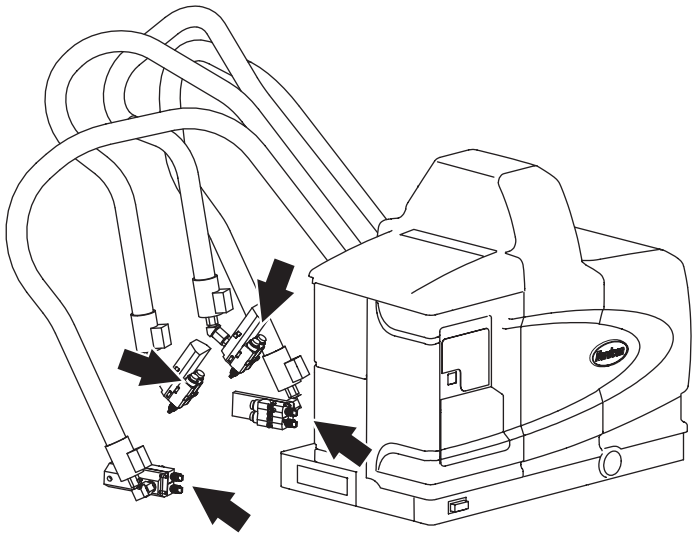
WARNING

Burn hazard.

The hotmelt nozzles and their covers are very hot and there is risk of severe burns. Never touch the hotmelt nozzles or their covers!

Note! The section **Hotmelt equipment** in this manual only deals with what is specific for this machine.

Always refer to the documentation provided from Nordson Corporation (is included in english in the delivery from Tetra Pak) before doing any kind of work on the hotmelt equipment.

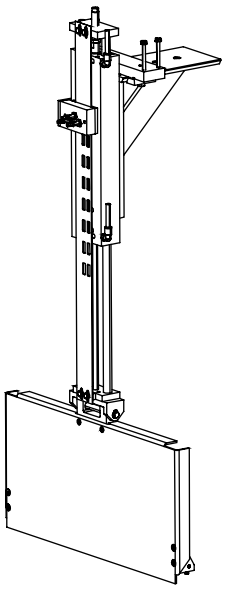


Transfer Stop Plate

WARNING

Compressed air and moving machinery.

The transfer stop plate contains entrapped compressed air, which could cause serious injuries.



Lifting Accessories

All lifting accessories supplied by Tetra Pak, such as lifting yokes and eyebolts, must be used as intended only. Their correct use is described for each instruction requiring a lifting accessory. Lifting accessories must be stored in a safe place.

Production Mode Changes

All changes concerning packing pattern and infeed alternatives must be carried out by **skilled personnel** only.

1 Technical Data and Drawings

Description

This chapter includes essential reference data and drawings used prior to and during the equipment installation.

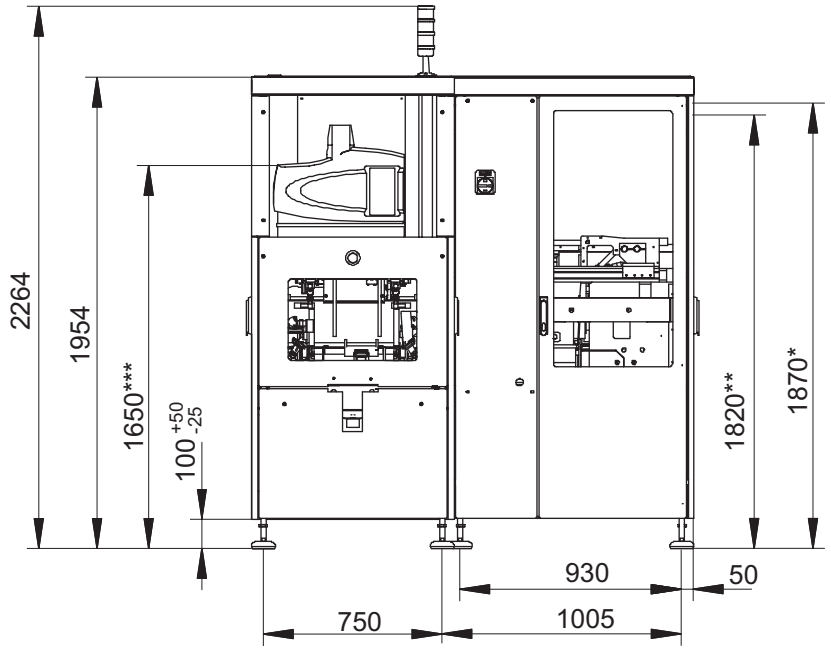
1.1 Installation Drawings. . . . . ii - 5
1.1.1 Z-infeed . . . . . ii - 5
1.2 Mass (Weight) . . . . . ii - 8
1.2.1 Data . . . . . ii - 8
1.2.2 Centre of Gravity . . . . . ii - 8
1.2.3 Fork Lift Position . . . . . ii - 9
1.2.3.1 Equipment damage . . . . . ii - 9
1.3 Utility Connection Data . . . . . ii - 10
1.4 Selection Table . . . . . ii - 12
1.5 Noise. . . . . ii - 13
1.5.1 Conveyor Lubrication . . . . . ii - 13
1.6 Distribution Units. . . . . ii - 14
1.6.1 Wraparound Unit . . . . . ii - 14
1.7 Corrugated Board . . . . . ii - 15
1.8 Technical Order Specification . . . . . ii - 16

This page intentionally left blank

1.1 Installation Drawings

1.1.1 Z-infeed

Note! The conveyor chain is driven from the machine.



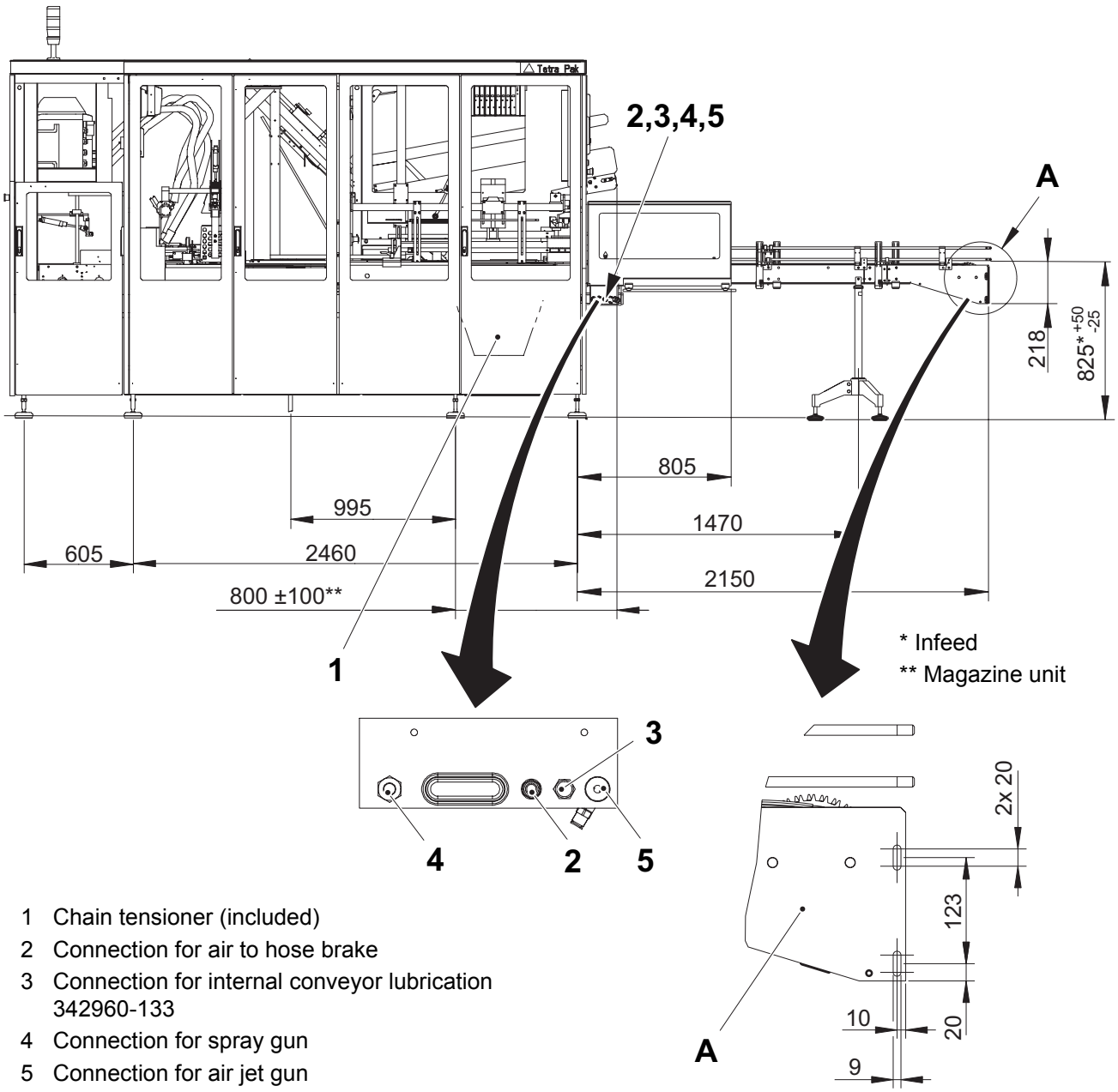
*Inlet connections for main power cable

** Inlet connections for water and compressed air

***Hotmelt unit

(Cont'd)

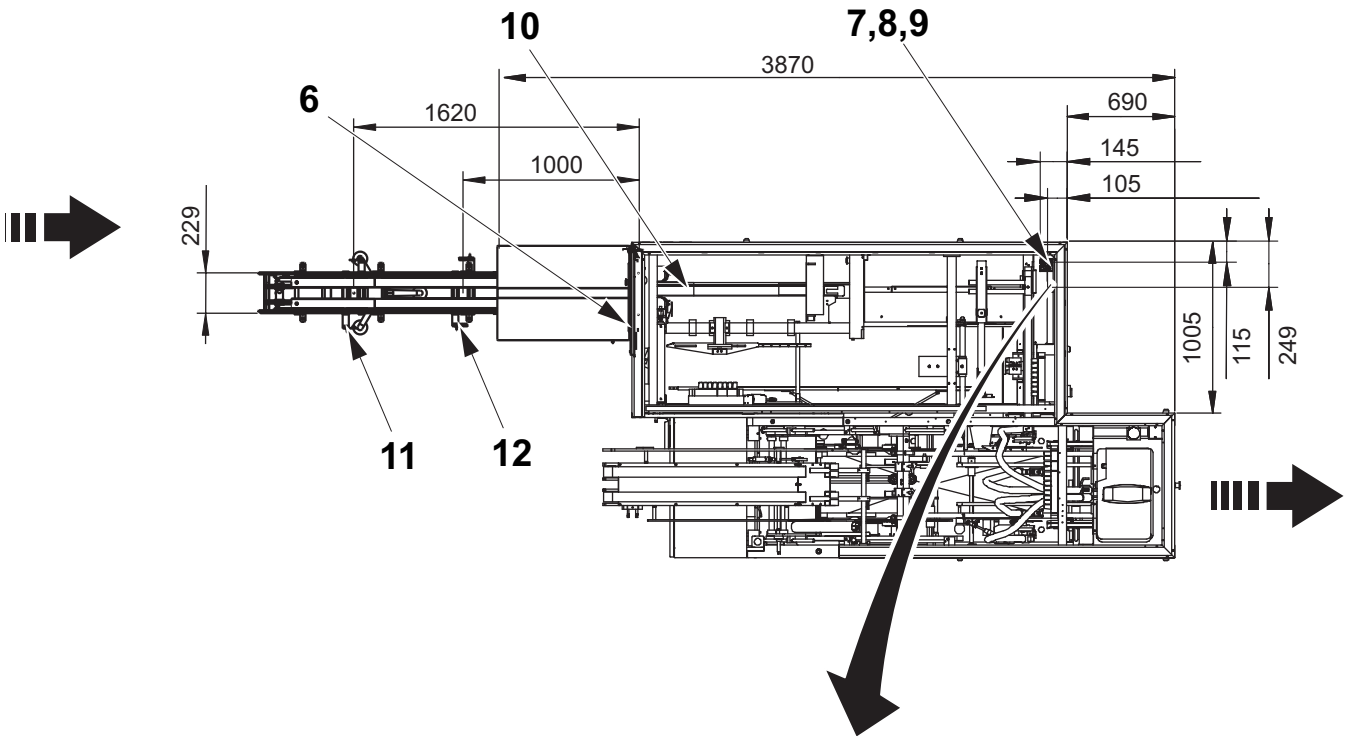
(Cont'd)

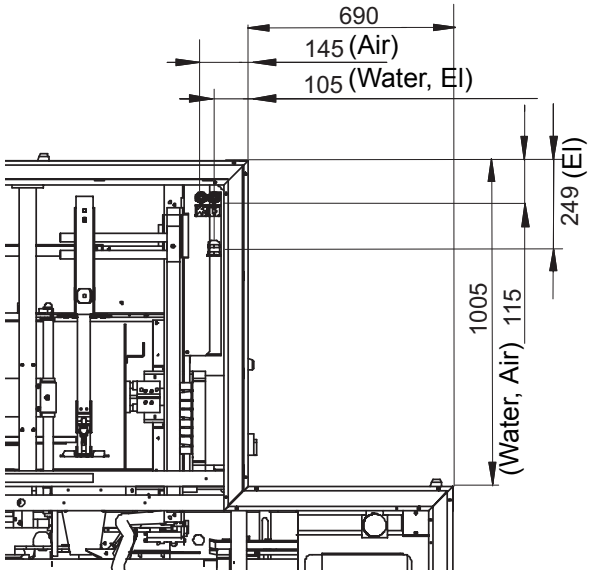


1 Chain tensioner (included)
2 Connection for air to hose brake
3 Connection for internal conveyor lubrication 342960-133
4 Connection for spray gun
5 Connection for air jet gun

(Cont'd)

(Cont'd)





6 Control panel
7 Air connection: 1/2” or “Quick release coupling” Atlas Copco MT15
8 Electrical connection (approximately 5 m of cable needed, not included)
9 Water connection (pistol), 1/2”
10 Connection point for infeed conveyor
11 Photocell unit (included)
12 Queue guard double (included)

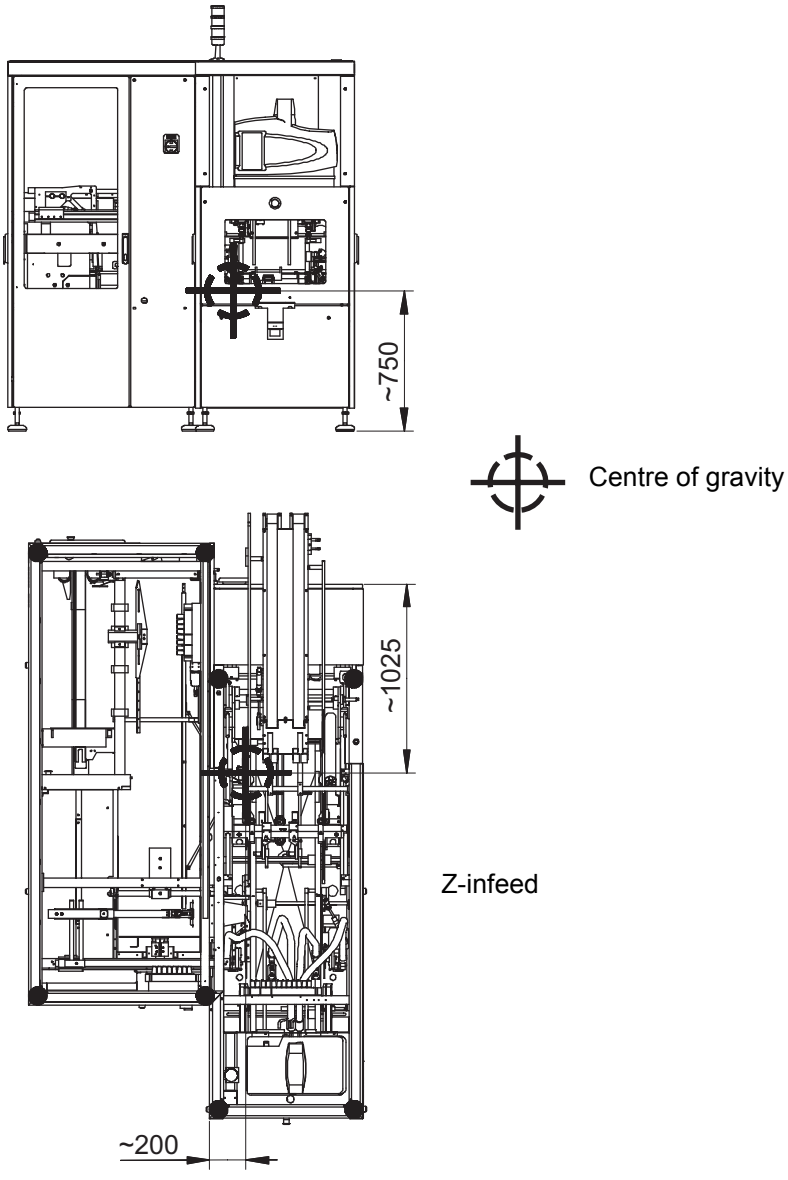
(Cont'd)

1.2 Mass (Weight)

1.2.1 Data

Machine variant	Weight (kg)	Length (mm)	Width (mm)	Height (mm)
Z-infeed	1800 (With conveyor +100)	3600	2100	2200

1.2.2 Centre of Gravity



Z-infeed

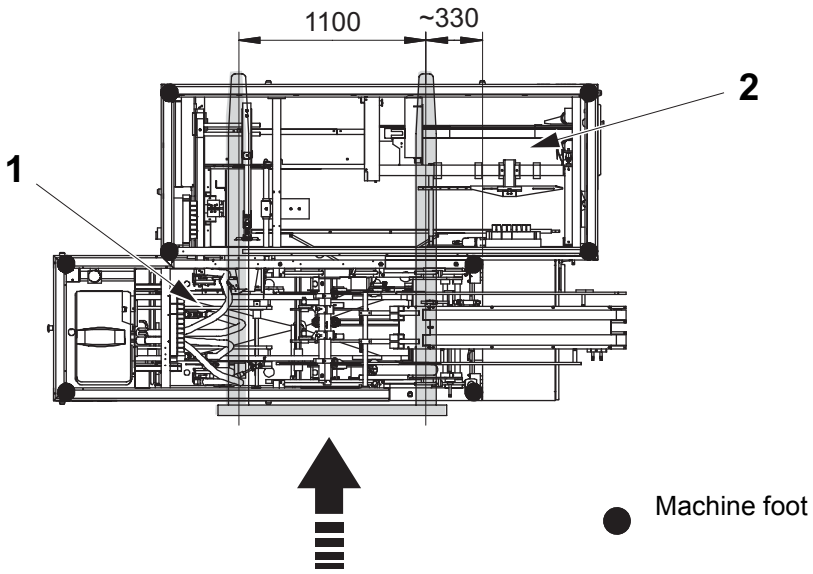
1.2.3 Fork Lift Position

1.2.3.1 Equipment damage

Beware not to hit the machine feet with the fork lift. It could result in serious frame damage on the machine.

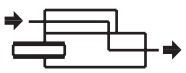
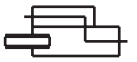
a) Put the forks according to the drawing below. Fork length must reach across both the Tray forming (1) and Pattern forming (2).

b) After moving the machine, put it down gently.



1 Tray forming
2 Pattern forming

1.3 Utility Connection Data

Documentation	
Installation drawings	2950320-1, (2895022-1)
Pneumatic diagram	2877499
Selections	
Infeed type	
Z infeed	See 1.1 Installation Drawings
Volume/PP	See 1.4 Selection Table
Package volume	100 to 2000 ml
Infeed side	Left hand Z-Infeed 
Discharge side	Z-Infeed  Straight
Compressed air	
Consumption (Consumption measured at 7000 p/h, packing pattern 2x6, including WA)	465 ln/min
Maximum particles size	50 µm
Connection thread	G 1/2" internal
Connection	Dim. 1/2” or Atlas Copco MT15
Incoming pressure	10 bar
Electricity	
Control system	Compact Logics
Power consumption (Consumption measured at 7000 p/h, packing pattern 6x6, including WA)	
Production Preheating	2.1 ± 0.7 kW 2.9 ± 0.7 kW
Voltage/frequency	3/N/PE~50Hz 400/230V 3/N/PE~60Hz 400/230V
Fuse dimension	16 A
Cable area (min.)	2.5 mm^2
Connection	See Electrical Manual (EM)
Conveyors	
Infeed For multipacks	
Type	**Intralox Conveyor 203 mm**
Width	See 1.1 Installation Drawings
Required chain length	8 m (included)
Height	See 1.1 Installation Drawings
Speed	1.4 Selection Table
Chain tensioner on infeed conveyor shall be used with this equipment. Chain tensioner is included	

Discharge For distribution units	
The machine fulfils the safety demands when Light barrier Tetra Pak No. 2515198 is mounted, or similar equipment which fulfils machinery directive 98/37/EC and sub directives.	
Production material	
Consumption:	Blank consumption = $\frac{A}{B}$ (blank/hour) A: Capacity of filling machine (packages/hour) B: Number of packages/blank
Blank	Adhesive
Tetra Tray - with over flaps	0.5 kg/1000 pcs 1.0 kg/1000 pcs
Tetra Wraparound Box - with meeting flaps - with inside top flap - with side flap	 1.0 kg/1000 pcs 1.5 kg/1000 pcs 1.5 kg/1000 pcs
Accessories	
Regular accessories	673835
Miscellaneous	
Capacity	See 1.4 Selection Table
Noise level	See 1.5 Noise
PLMS-version	Se Electrical Manual (EM)
The machine is adjustable between different packing patterns, cardboard units and between different package sizes.	
Optional equipment	
Air jet Gun Spray Gun Illumination Light Barrier Unit Cooling Unit	
Order	
The specification can be found in the Tetra Pak Product Portfolio Configurator on ORBIS.	
Shipping data	
See Section 1.2 Mass (Weight)	

1.4 Selection Table

This information can be found in the Tetra Pak Product Portfolio Configurator and PIM Conveyors on ORBIS.

1.5 Noise

CAUTION

Hazardous noise.

Risk of impaired hearing. Hearing protection is recommended whenever this equipment is in operation.

The following table give the noise level measurements for Cardboard Packer 32 machines under the following conditions:

- machine on a concrete floor supported by standard feet
- production under normal operating conditions at 7000 p/h

Values declared in accordance with ISO 4871			
Symbol	Definition	Declared value	Notes
L_{WA} K_{WA}	Measured A-weighted sound power level Uncertainty factor	94.5 dB(A) 2.5 dB(A)	Values determined using the basic standard ISO 3744 (Engineering method)
L_{pA} K_{pA}	Emission sound pressure level, operator position Uncertainty factor	75.5 dB(A) 2.5 dB(A)	Values determined using the basic standard ISO 11204 (Engineering method)

1.5.1 Conveyor Lubrication

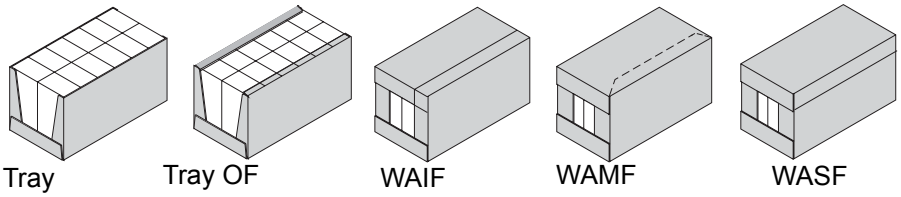
This section is only valid for Tetra Pak conveyors in the production line, **not** for conveyors inside the machine.

Note! In order to have optimized line performance it is **very** important that the conveyor lubrication is set in accordance with the conveyor lubrication technical manual (TeM).

1.6 Distribution Units

Note! If any other unit is chosen than Tetra Tray, a Wraparound unit is needed.

Types of distribution units



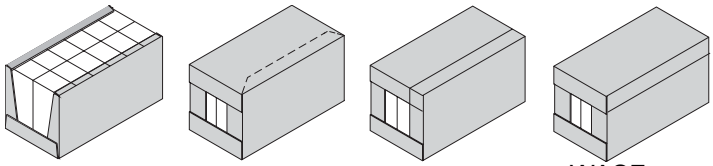
Abbreviations

Tetra **Tray**	Tray
Tetra **Tray** with **O**ver **F**laps	Tray OF
Tetra **W**rap**A**round box with **I**nside top **F**lap	WAIF
Tetra **W**rap**A**round box with **M**eeting **F**laps	WAMF
Tetra **W**rap**A**round box with **S**ide **F**lap	WASF

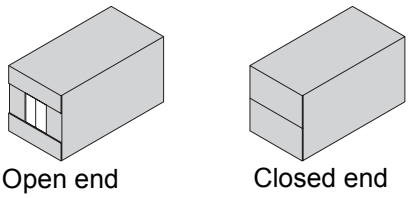
1.6.1 Wraparound Unit

Note! These units need a Wraparound unit installed in the machine.

Wraparound boxes



Different end flap size for the Tetra Wraparound Boxes



Maximum flap length 85 mm.
The machine is set for open end as standard.

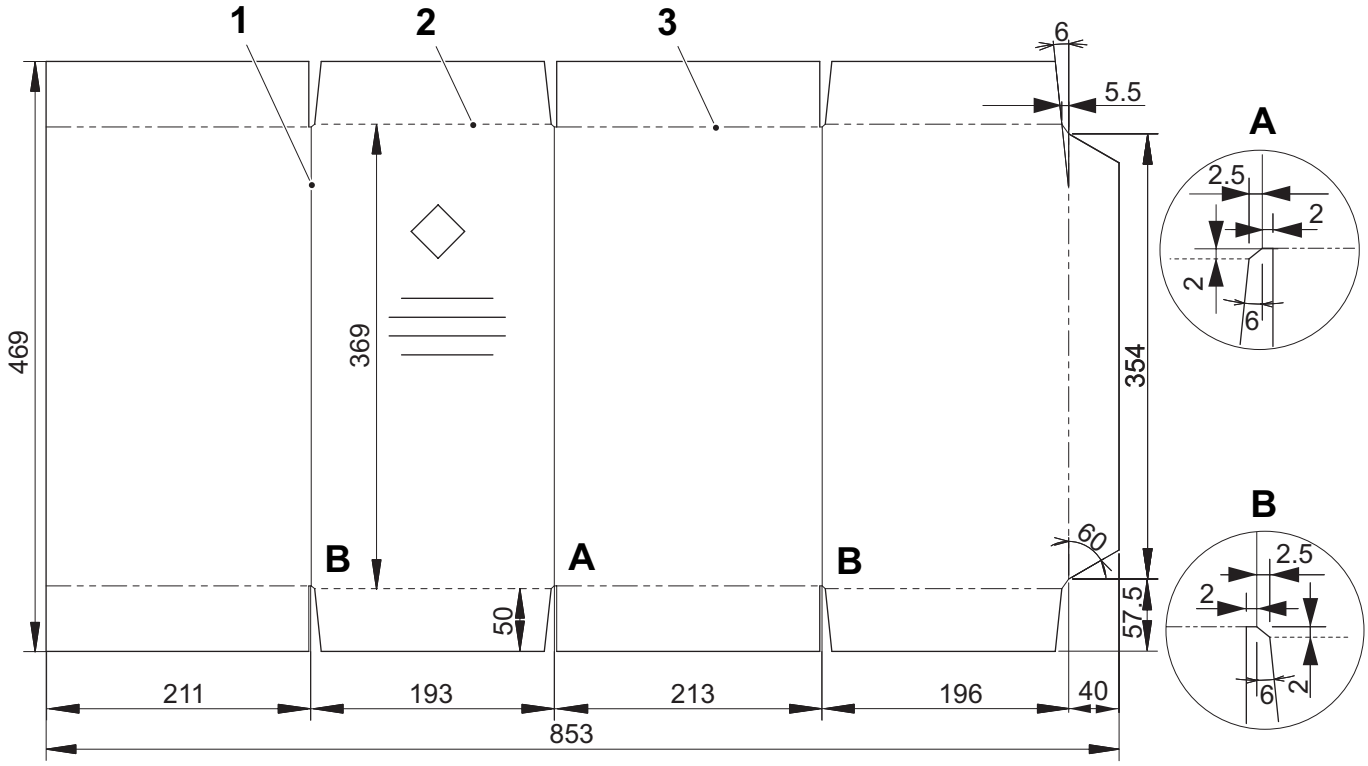
1.7 Corrugated Board

Recommended quality: B-Flute
Data:
Edgewise crush > 4.2 kN/m
Bursting strength >1000 kPa
Flat crush >250 kPa
Water absorption < 28 g/m^2

Make sure that blanks used in a CBP 32 have:

- crease (1)
- matrix crease (2)
- cut crease (3)

in accordance with Cardboard and Straw official blank drawings. The illustration below shows the blank drawing.



1 Crease
2 Matrix crease
3 Cut crease

1.8 Technical Order Specification

This information can be found in the Tetra Pak Product Portfolio Configurator and PIM Conveyors on ORBIS.

2 Preparation

Description

This chapter contains the site preparation requirements for the installation described in the Installation Manual.

2.1 Requirements . . . . . ii - 5
2.1.1 Floor . . . . . ii - 5
2.1.2 Space Requirement . . . . . ii - 5
2.2 Special Tools, Auxiliary Equipment, and Information . . . . . ii - 6
2.2.1 Equipment for Lifting and Moving . . . . . ii - 6
2.2.1.1 Types of Lifting Equipment . . . . . ii - 6
2.2.1.2 Lifting Capacities . . . . . ii - 6

This page intentionally left blank

2.1 Requirements

In order to obtain the best possible working condition for the machine, it is necessary to follow the recommendation of data according to section 1.3 Utility Connection Data.

Note! Installation of the Cardboard Packer 32 machine does not require advanced site preparation.

2.1.1 Floor

To obtain a proper production it is necessary that the machine is standing stable on the floor. It is important that the floor is in a good state condition.

2.1.2 Space Requirement

For space required, see 1.1 Installation Drawings.

2.2 Special Tools, Auxiliary Equipment, and Information

2.2.1 Equipment for Lifting and Moving

2.2.1.1 Types of Lifting Equipment

The following types of equipment can be used to assemble the equipment:

- spirit level, TP No. 90243-163
- pneumatic or electric powered wrench
- 2 m (7 ft.) step ladder
- Ø 30 mm wrench to the machine feet

2.2.1.2 Lifting Capacities

The following equipment is needed when unpacking the machine.

Equipment	Minimum capacity kg	Quantity
Fork lift truck	4000	1

3 Moving and Unpacking the Equipment

Description

This chapter contains information about how to transport, store, and unpack the machine prior to installation.

3.1 Crate Handling . . . . . ii - 5
3.1.1 Crate Data . . . . . ii - 5
3.1.2 Lifting and Unloading . . . . . ii - 6
3.1.2.1 Location of Packing List . . . . . ii - 7
3.1.2.2 Correct Fork Lift Points . . . . . ii - 8
3.1.3 Moving the Crated Equipment . . . . . ii - 9
3.1.4 Storing the Crated Equipment . . . . . ii - 10
3.2 Unpacking Sequence . . . . . ii - 11
3.2.1 Inspection . . . . . ii - 11
3.2.2 Inspection Documentation . . . . . ii - 15
3.2.2.1 Transport Damage Report . . . . . ii - 16
3.2.3 Disposing of Reusable Materials and Waste . . . ii - 17

This page intentionally left blank

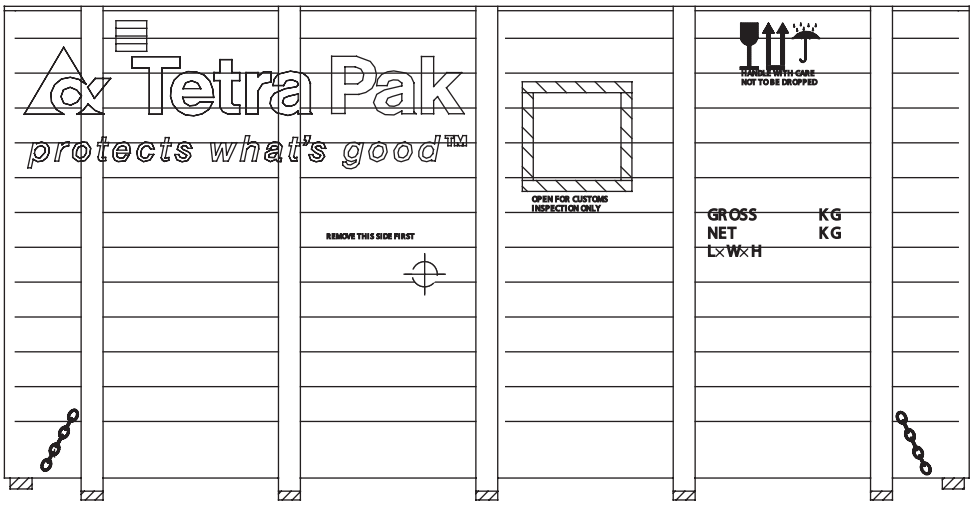
3.1 Crate Handling

Depending on what optional equipment that has been ordered, there may be a number of additional crates. For instructions regarding how to handle these crates, refer to the documentation belonging to the option in question.

Machine Type	Number of Crates
CBP 32	**1**

3.1.1 Crate Data

Contents	Weight (Gross) kg	Length mm	Width mm	Height mm
Crate containing a machine equipped with Z-infeed	2225	4900	2200	2250



3.1.2 Lifting and Unloading

DANGER

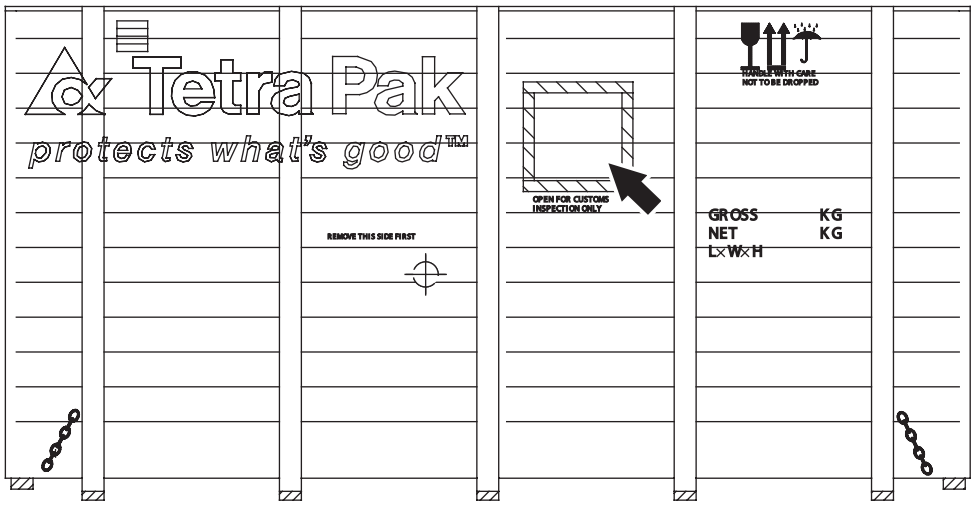
Immediate danger to life.

To ensure safe and efficient handling of the crate, carefully study the following instructions.

Symbol	Meaning
	Centre of gravity
	Lifting points for chains, cables, ropes or slings.
	This way up
	Fragile
	Keep dry
HANDLE WITH CARE	“Handle with care” warning
NOT TO BE DROPPED	“Not to be dropped” warning
GROSS KG.	“Gross weight” value
NET KG.	“Net weight” value
REMOVE THIS SIDE FIRST	“REMOVE THIS SIDE FIRST” first side to remove from crate.

3.1.2.1 Location of Packing List

The packing list is located inside the inspection hatch. See the arrow in the illustration below.



3.1.2.2 Correct Fork Lift Points

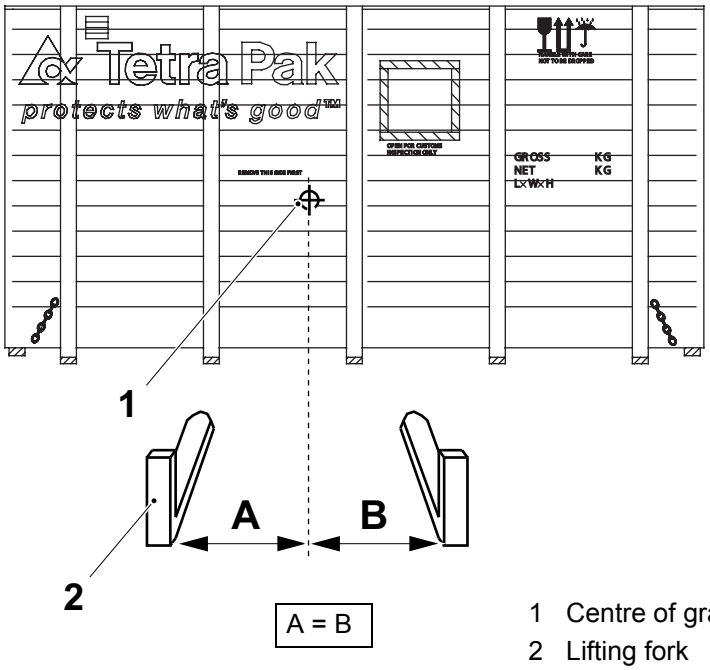
DANGER

Risk of crushing.
The crate may tilt if not observing the centre of gravity or the fork lift points. Failure to observe may result in immediate danger to life and/or major damage to equipment.

See Section for capacity of the lifting equipment.

The crate is marked with centre of gravity symbol (1).

The lifting forks (2). must be positioned at equal distances from the symbol when lifting the crate. The forks should be set as wide as possible.



1 Centre of gravity symbol
2 Lifting fork

3.1.3 Moving the Crated Equipment

a) Lift the crate, see the section 3.1.2 Lifting and Unloading. Lift only enough to clear the floor.

b) Make sure that the crate remains stable on the lifting equipment.

CAUTION

Move the crate slowly and gently.

c) Move the crate to its destination.

d) Look through the customs inspection panel to see in what way the contents are facing. Position the crate to face the most convenient direction.

e) Lower the crate gently to the floor, leaving enough room around it for easy access to all sides.

f) Make sure that the crate is firmly supported. Put blocks or plates under it if necessary.

g) Remove the lifting equipment.

3.1.4 Storing the Crated Equipment

CAUTION

Risk of equipment damage.

Store the crates indoors. Exposure to damp or to high or low temperatures may damage the equipment.

Make sure that the storage environment respects the following conditions:

Contents	Recommended storage temperature	Recommended storage humidity	Special recommendations
Machine	-20°C to +70°C	10 to 95%	Keep dry to prevent condensation and corrosion on connections inside the electrical cabinet.
Cardboard	< 30°C	Approximately 65%	
Adhesive	10 to 30°C		The adhesive can be stored for a maximum of one year. Try to avoid dust and damp in the storage facility. The first box in should be the first box out.

3.2 Unpacking Sequence

WARNING

Risk of personal injury.

Follow the recommendations below to avoid injury when unpacking the machine.

3.2.1 Inspection

a) Examine the outside of the crates before starting to unload, and record any damage. This information must later be recorded on the Transport Damage Report, see 3.2.2.1 Transport Damage Report.

b) Record the readings of the humidity indicators and tipping indicators attached to the outside of the crates (if present). This information must later be recorded on the Transport Damage Report.

(Cont'd)

(Cont'd)

WARNING

Risk of crushing.

The crate sides may tilt during removal. Failure to observe can result in serious personal injury.

a) Before removing any bolts, position a forklift truck with its forks (1) in the direction indicated with an arrow in the illustration below. This will protect the front from falling.

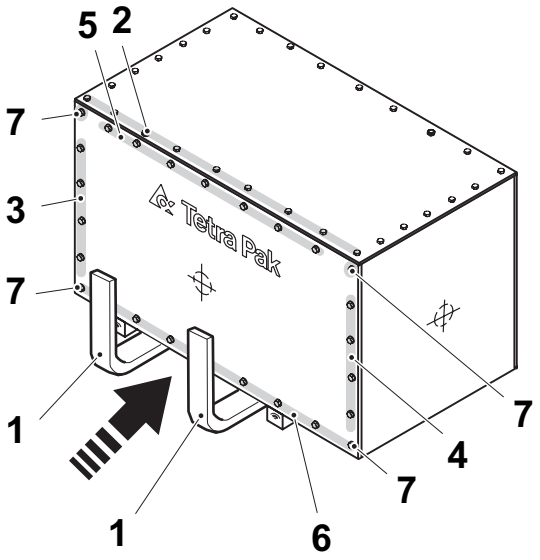
b) Remove the bolts on the front edge (2) of the top lid.

c) Remove the bolts on the sides (3) and (4).

d) Remove the bolts on the upper edge (5) of the crate.

e) Remove the bolts on the lower edge (6) of the crate.

Note! Do **not** remove the corner bolts (7) yet!



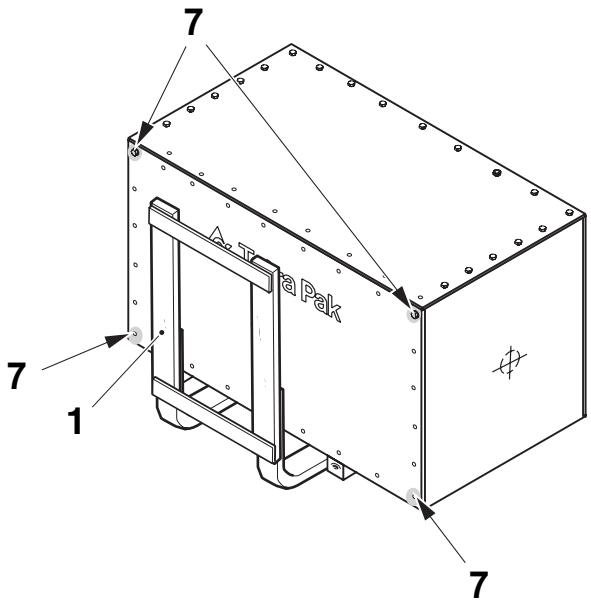
1 Fork
2 Front edge
3 Side
4 Side
5 Upper edge
6 Lower edge
7 Bolt

(Cont'd)

(Cont'd)

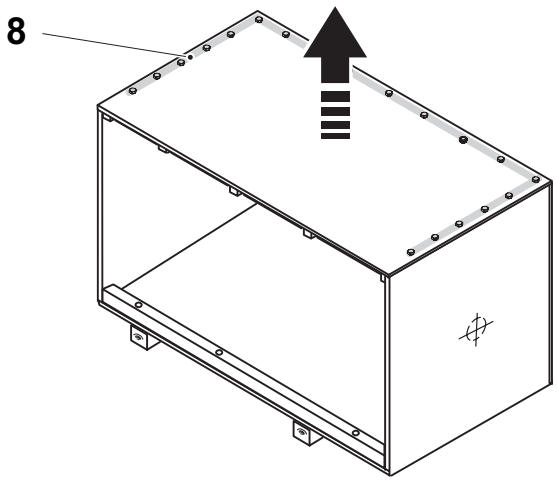
f) Make sure that the forks (1) are close to the front.

g) Remove the bolts (7) and lower the front against the forklift truck.



1 Fork
7 Bolt

h) Remove the remaining bolts (8) and use the forklift truck to lift of the top lid.

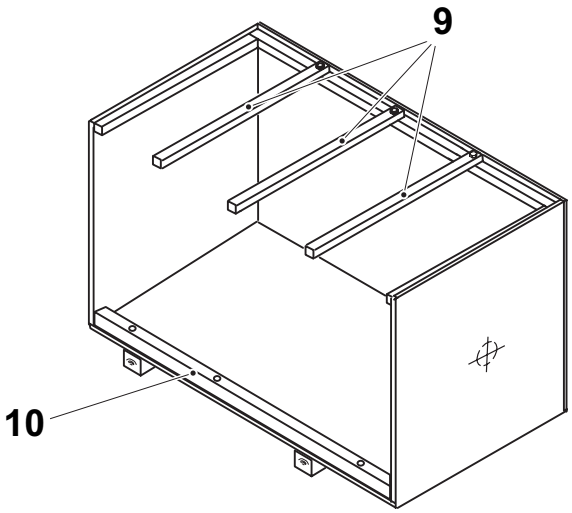


8 Bolt

(Cont'd)

(Cont'd)

i) Remove the cross beams (9) and the beam (10). (The number and location of the cross beams (9) may vary depending of machine variant.



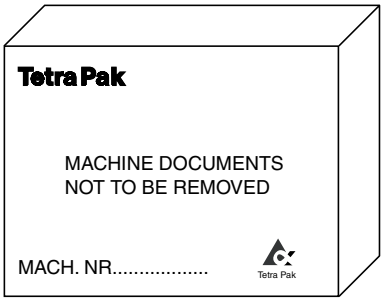
9 Cross beam
10 Beam

3.2.2 Inspection Documentation

a) Use the packing list to check that nothing is missing.

b) Inspect the equipment for damage.

c) Open the machine document box and check that the documentation corresponds with the machine and the machine number.



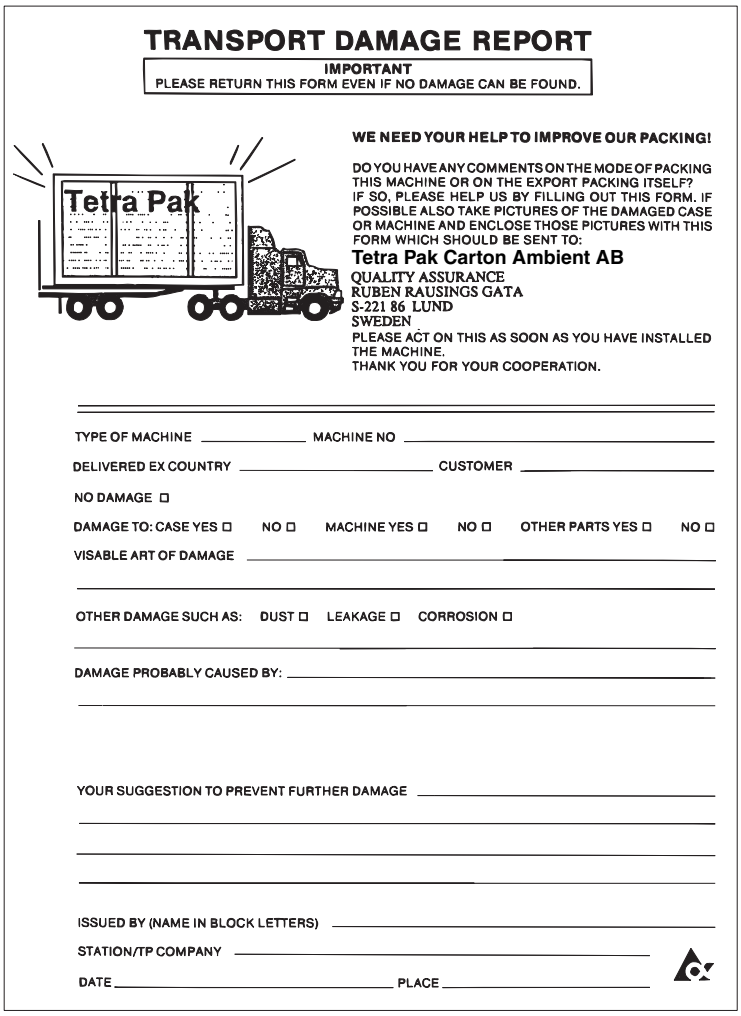
3.2.2.1 Transport Damage Report

Enclosed you will find a Transport Damage Report. Fill in the report as soon as the machine is uncrated and send it to the address below. If any Tetra Pak equipment is damaged when opening the crate, take pictures to illustrate the damage and enclose the photographs.

The report and the pictures (if any) should be sent to:

Tetra Pak Packaging Solutions AB
Quality Assurance
Ruben Rausings gata
SE-221 86 Lund
Sweden

Note! The Transport Damage Report must be filled in and returned even if there is no damage to report.



TRANSPORT DAMAGE REPORT

IMPORTANT
PLEASE RETURN THIS FORM EVEN IF NO DAMAGE CAN BE FOUND.

WE NEED YOUR HELP TO IMPROVE OUR PACKING!

DO YOU HAVE ANY COMMENTS ON THE MODE OF PACKING THIS MACHINE OR ON THE EXPORT PACKING ITSELF? IF SO, PLEASE HELP US BY FILLING OUT THIS FORM. IF POSSIBLE ALSO TAKE PICTURES OF THE DAMAGED CASE OR MACHINE AND ENCLOSE THOSE PICTURES WITH THIS FORM WHICH SHOULD BE SENT TO:

Tetra Pak Carton Ambient AB
QUALITY ASSURANCE
RUBEN RAUSINGS GATA
S-221 86 LUND
SWEDEN
PLEASE ACT ON THIS AS SOON AS YOU HAVE INSTALLED THE MACHINE.
THANK YOU FOR YOUR COOPERATION.

TYPE OF MACHINE _____ MACHINE NO _____
DELIVERED EX COUNTRY _____ CUSTOMER _____
NO DAMAGE ☐
DAMAGE TO: CASE YES ☐ NO ☐ MACHINE YES ☐ NO ☐ OTHER PARTS YES ☐ NO ☐
VISABLE ART OF DAMAGE _____
OTHER DAMAGE SUCH AS: DUST ☐ LEAKAGE ☐ CORROSION ☐
DAMAGE PROBABLY CAUSED BY: _____
YOUR SUGGESTION TO PREVENT FURTHER DAMAGE _____
ISSUED BY (NAME IN BLOCK LETTERS) _____
STATION/TP COMPANY _____
DATE _____ PLACE _____

3.2.3 Disposing of Reusable Materials and Waste

Re-usable packing materials and structures
Re-usable packaging materials and structures should be collected and re-used in accordance with local regulations.

Non re-usable packing materials and structures
Non re-usable packaging materials and structures should be collected and disposed of in accordance with local regulations.

This page intentionally left blank

4 Positioning, Assembly, and Connections

Description

All procedures in this chapter are related to the uncrated machine, including the main phases of the installation process.

4.1 Transporting the Machine . . . . . 4 - 5
4.1.1 Personnel . . . . . 4 - 5
4.1.2 Lifting Equipment . . . . . 4 - 5
4.1.3 Installation Area . . . . . 4 - 5
4.2 Transporting the Machine . . . . . 4 - 6
4.3 Positioning . . . . . 4 - 7
4.4 Levelling . . . . . 4 - 8
4.5 Assembly . . . . . 4 - 9
4.5.1 Warning Lamp . . . . . 4 - 9
4.5.2 Infeed Conveyor . . . . . 4 - 10
4.5.2.1 Conveyor Body . . . . . 4 - 10
4.5.2.2 Railing . . . . . 4 - 11
4.5.2.3 Queue Guard, Double . . . . . 4 - 12
4.5.2.4 Line Automation Equipment . . . . . 4 - 13
4.5.2.4 Tunnel . . . . . 4 - 14
4.5.3 Internal Conveyor Lubrication . . . . . 4 - 15
4.6 Connections . . . . . 4 - 16
4.6.1 Utility Connections . . . . . 4 - 16
4.6.1.1 Inlet/Outlet Connections for Compressed Air and Water . . . . . 4 - 16
4.6.2 Electrical Connections . . . . . 4 - 18
4.6.2.1 Main Power Supply Cable . . . . . 4 - 18
4.6.2.2 Ethernet Cable . . . . . 4 - 19

This page intentionally left blank

4.1 Transporting the Machine

4.1.1 Personnel

Only skilled or instructed Tetra Pak installation personnel are allowed to assemble the machine.

4.1.2 Lifting Equipment

The equipment used for lifting and moving the crate can also be used for installing the equipment. See the section 2.2.1 Equipment for Lifting and Moving for further details.

4.1.3 Installation Area

WARNING

Risk of entanglement!

Keep the installation site clean and tidy to avoid personal injury and damage to the equipment.

a) Clear all obstacles away from the installation site and, if necessary, clean the floor of the site before starting to install the machine.

b) Make sure that there is sufficient room to move safely around the installation site. If machines around the site cannot be stopped, put guards around them to prevent accidental contact.

c) Make sure that lighting is adequate. Arrange additional portable lights if necessary.

d) Check that preparation of the site has been completed according to Chapter 2 Preparation.

4.2 Transporting the Machine

DANGER

Immediate danger to life.

The machine may tilt if not observing the centre of gravity or the fork lift points. Failure to observe may result in immediate danger to life and major damage to equipment.

Use the correct lifting equipment. See the section 2.2.1 Equipment for Lifting and Moving.

a) Check that the machine can be transported to the assembly site without any problems regarding ceiling height, doors, passages.

b) Remove the machine from the crate. Lift only enough to clear the crate. When lifting the machine using a fork lift truck, use the fork lift positions as shown in .

c) Manoeuvre the machine out of the crate.

d) Lower the machine feet approximately 85 mm to facilitate the levelling later on 1.2.3 Fork Lift Position.

4.3 Positioning

DANGER

Immediate danger to life.
The machine may tilt if not observing the centre of gravity or the fork lift points. Failure to observe may result in immediate danger to life and/or major damage to equipment.

Move the main body to its place of production and position it. See also the measurements given in Section 1.1 Installation Drawings.

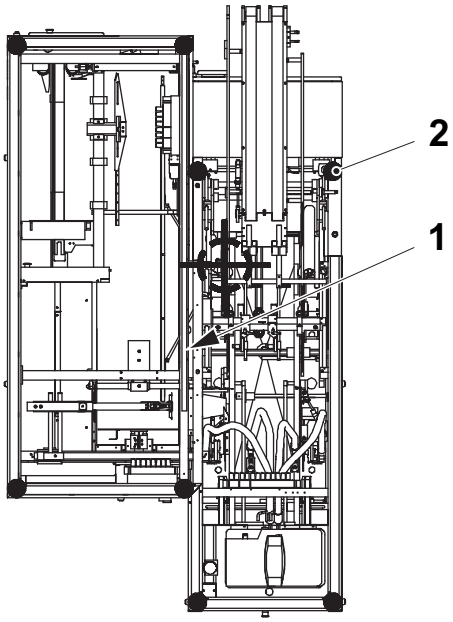
4.4 Levelling

a) Check that the machine is positioned straight with for example a measuring tape. This to facilitate the connection of the infeed conveyor.

b) Check that the machine is in level with for example a spirit level. Put the spirit level in a central place in the machine, for example on the beam (1) between the tray forming and the pattern forming. If necessary, adjust by turning the machine feet (2) to a level of longitudinally ±1 mm/m. Hydraulic jacks can be used to facilitate the setting.

c) Make sure that the infeed height is correct, see 1.1 Installation Drawings.

d) Check that the feet are fasten in a proper way.



1 Beam
2 Machine foot (8 pcs)

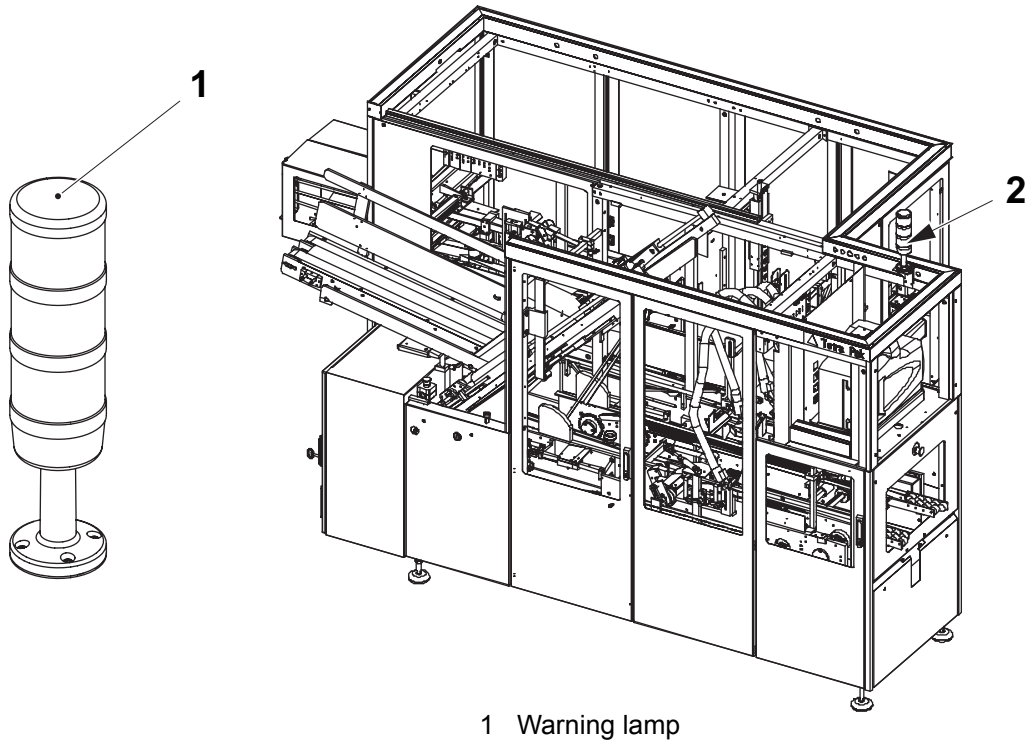
4.5 Assembly

4.5.1 Warning Lamp

The warning lamp has been mounted upside down in order for the machine to fit in the crate.

a) Loosen the warning lamp (1).

b) Turn the warning lamp and assemble it in the same holes as it was assembled before, with the same screws on the same place. The warning lamp can be assembled to the machine at position (2).



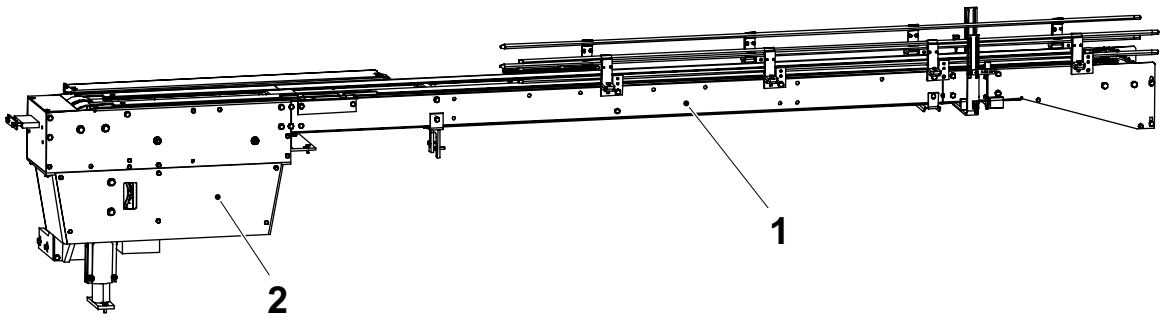
1 Warning lamp
2 Position for warning lamp

4.5.2 Infeed Conveyor

4.5.2.1 Conveyor Body

Infeed Conveyor

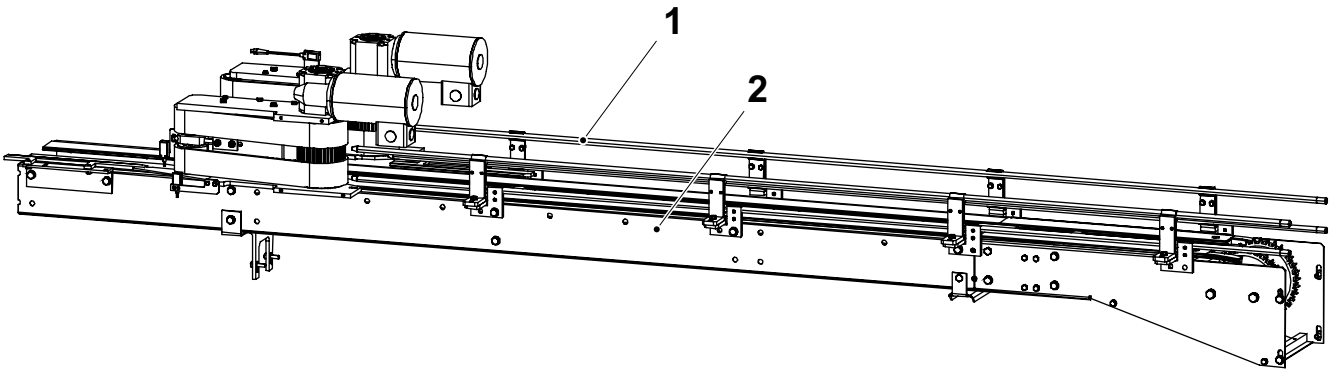
a) Assemble the conveyor body (1) to the chain tensioner (2).



1 Conveyor body
2 Chain tensioner

4.5.2.2 Railing

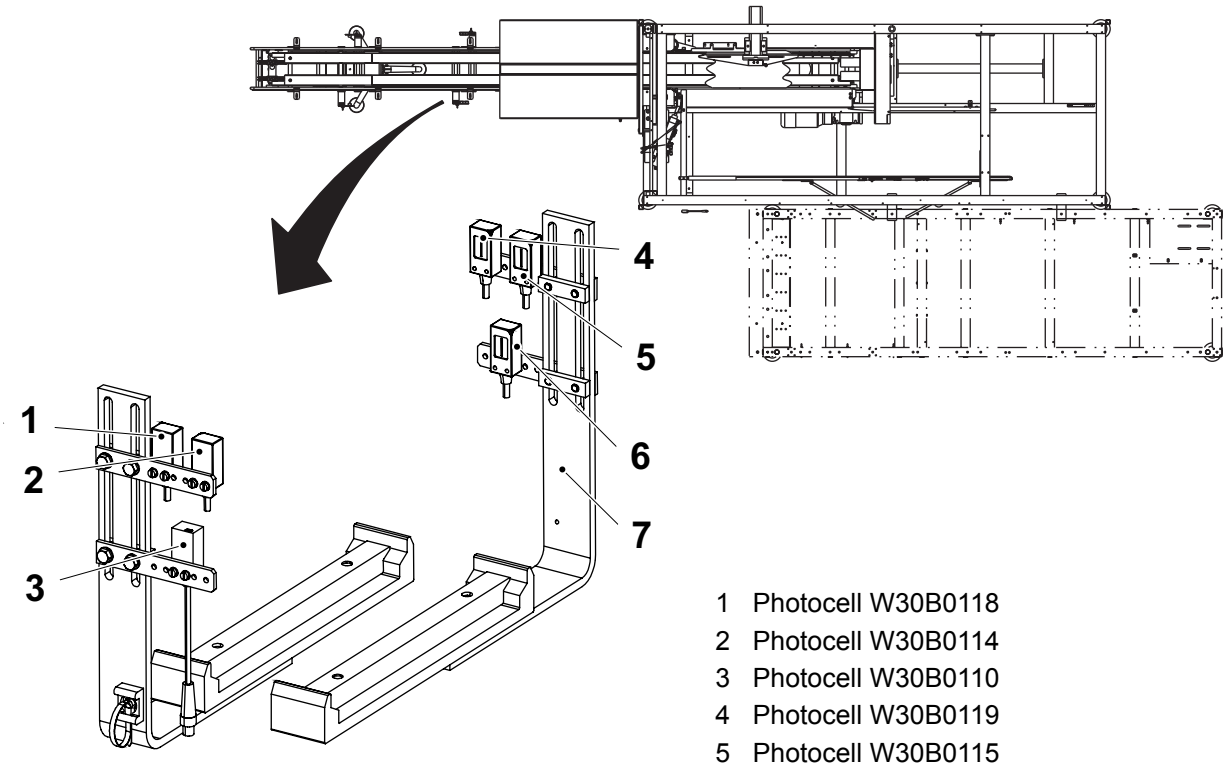
a) Assemble the railing (1) to the conveyor body (2).



1 Railing
2 Conveyor body

4.5.2.3 Queue Guard, Double

Assemble the photocells (1), (2), (3), (4) and (5) to the holders (7). For more information about measurements, see 1.1 Installation Drawings



1 Photocell W30B0118
2 Photocell W30B0114
3 Photocell W30B0110
4 Photocell W30B0119
5 Photocell W30B0115
6 Photocell W30B0111
7 Holder

4.5.2.4 Line Automation Equipment

a) There are different ways to control the start/stop of the infeed conveyor. See the configuration table below.

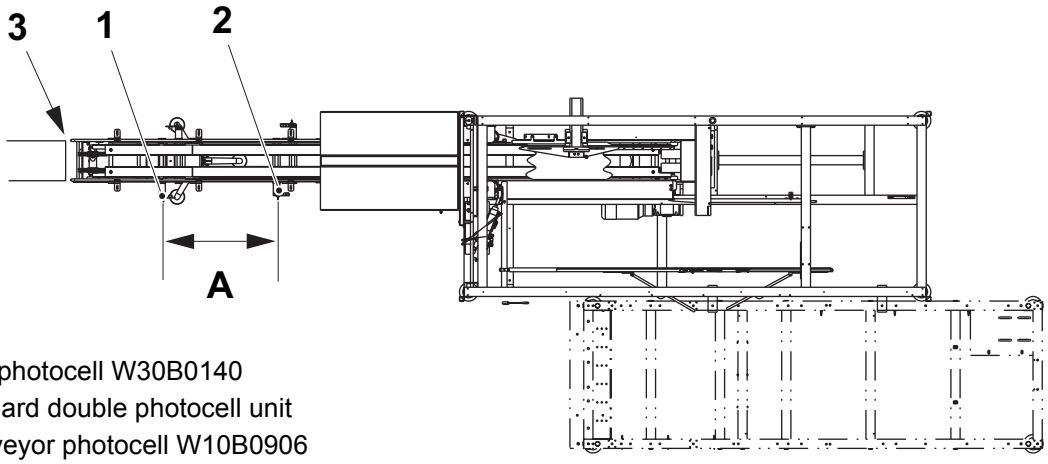
b) If Line Controller is used: adjust the distance A between photocells (1) and (2) according to the pattern capacity and the package stability.

Note! The overflow photocell (1) must be mounted on the infeed conveyor belonging to the machine.

c) If Photocell Control is used: Mount the photocell (3) in the junction of the infeed conveyor and the previous conveyor.

Configuration Line Automation

Configuration	Equipment
Line Controller (Ethernet)	Photocells (1) and (2), and Ethernet cable. Perform the connection of the Ethernet cable accordning to 4.6.2.2 Ethernet Cable.
Line Communication X90 relay control	Photocells (2) and X90 relays. Perform the connections of the relays according to the Electrical Manual (EM).
Photocell Control	Photocells (2) and (3)
No Line Automation (Not recommended)	Photocell (2)



1 Overflow photocell W30B0140
2 Queue guard double photocell unit
3 Start conveyor photocell W10B0906

4.5.2.4 Tunnel

WARNING

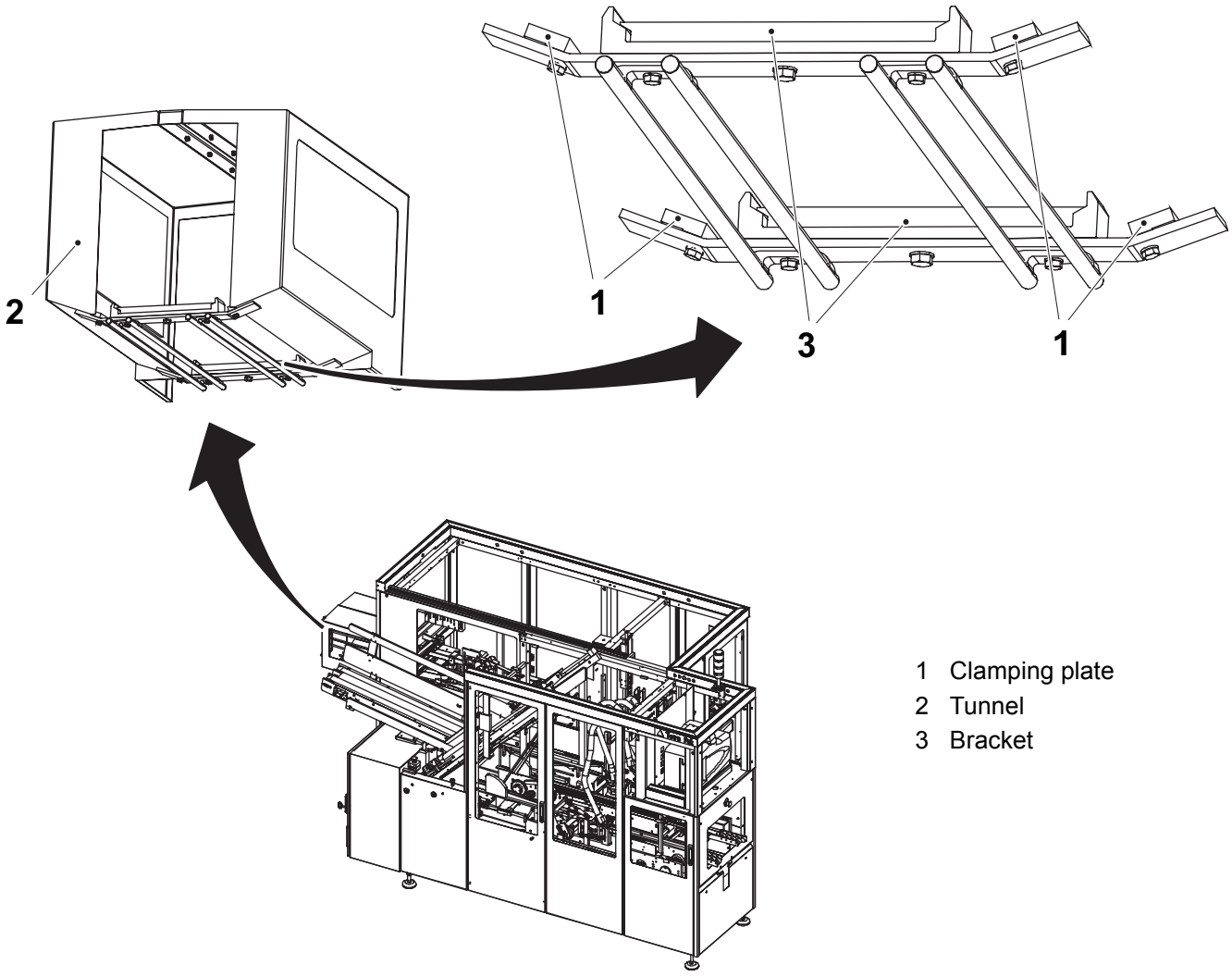
Moving parts can cause serious injuries.
Never run the machine if the tunnel is not fitted.

a) Loosen the clamping plates (1) and remove the tunnel (2).

b) Assemble the brackets (3) to the infeed conveyor.

c) Assemble the tunnel (2) to the clamping plates (1).

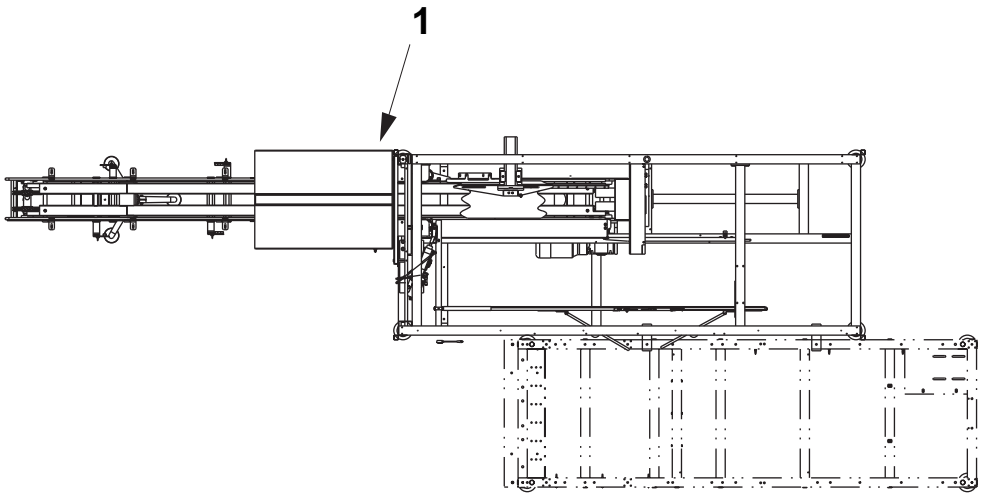
For more information about the measurements, see 1.1 Installation Drawings.



1 Clamping plate
2 Tunnel
3 Bracket

4.5.3 Internal Conveyor Lubrication

Connect the machine for internal conveyor lubrication (1), see 1.1 Installation Drawings. See also 4.6 Connections.



1 Internal conveyor lubrication connection

4.6 Connections

4.6.1 Utility Connections

WARNING

Risk of personal injury.

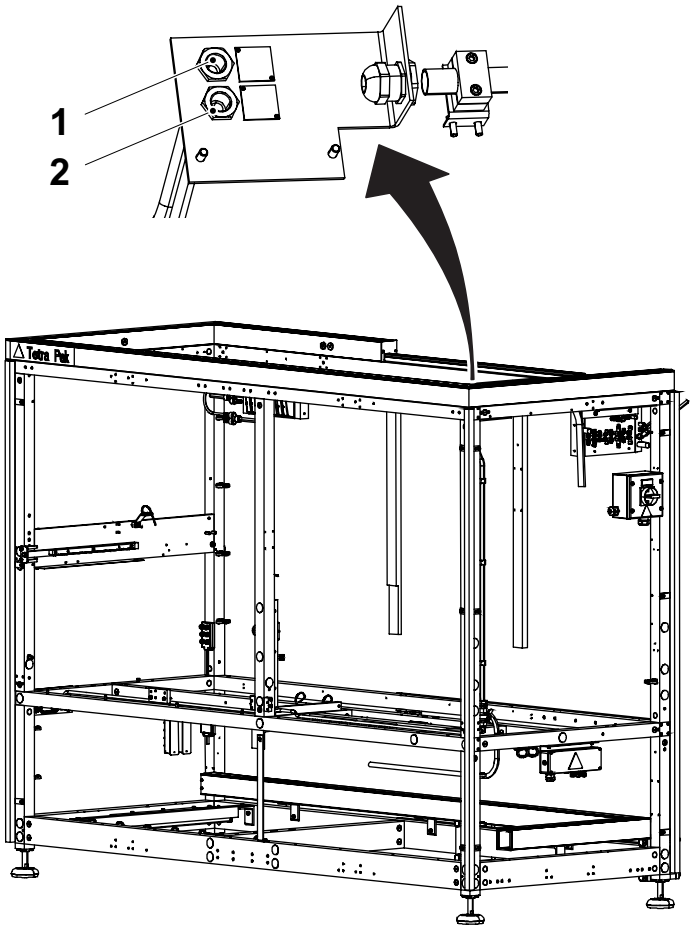
Make sure that air supply to the machine is switched OFF before performing any connection work.

4.6.1.1 Inlet/Outlet Connections for Compressed Air and Water

a) Connect the water hose to the water connection (1).

b) Connect the compressed air hose to the air connection (2).

See 1.1 Installation Drawings, for measurements.



1 Water connection 1/2”

2 Compressed air connection 1/2” or quick release coupling

(Cont'd)

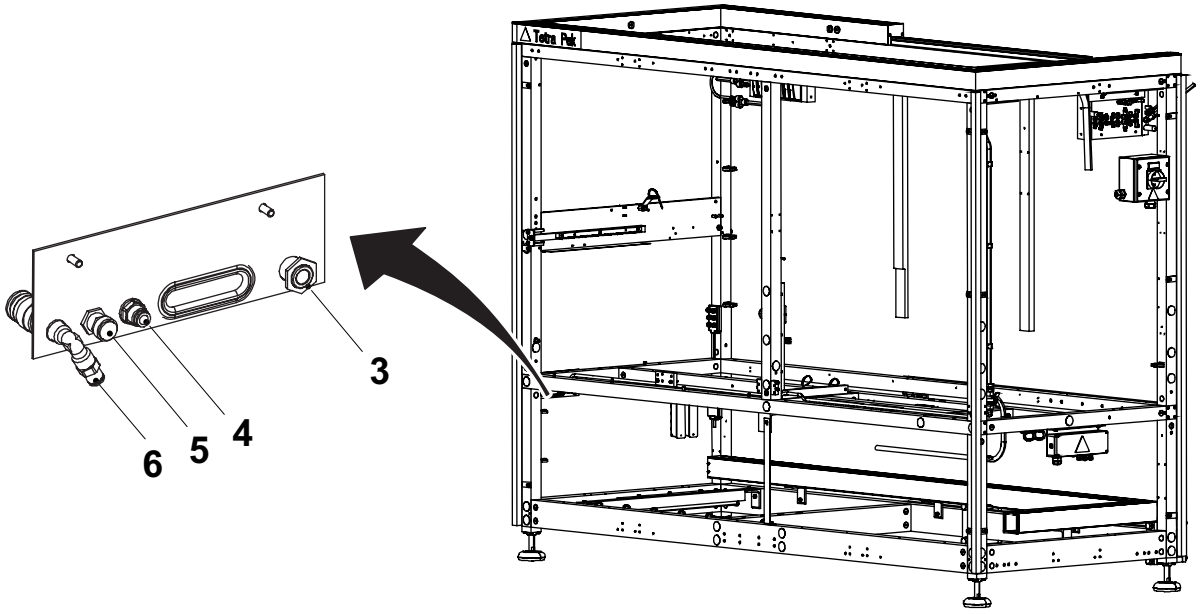
(Cont'd)

c) Connect the spray gun hose to the spray gun connection (3).

d) Connect the hose brake hose to the hose brake connection (4).

e) Connect the lubrication hose to the internal conveyor lubrication connection (5). For lubrication use in first hand liquide conveyor lubrication. If it is not available, use water.

f) Connect the air jet gun hose to the air jet gun connection (6).



3 Spray gun connection (optional)
4 Hose brake connection
5 Internal conveyor lubrication connection
6 Air jet gun connection (optional)

4.6.2 Electrical Connections

DANGER

Risk of electrical shock and short circuits.
Make sure that power is switched OFF upstream before performing any work on cables and electrical components.

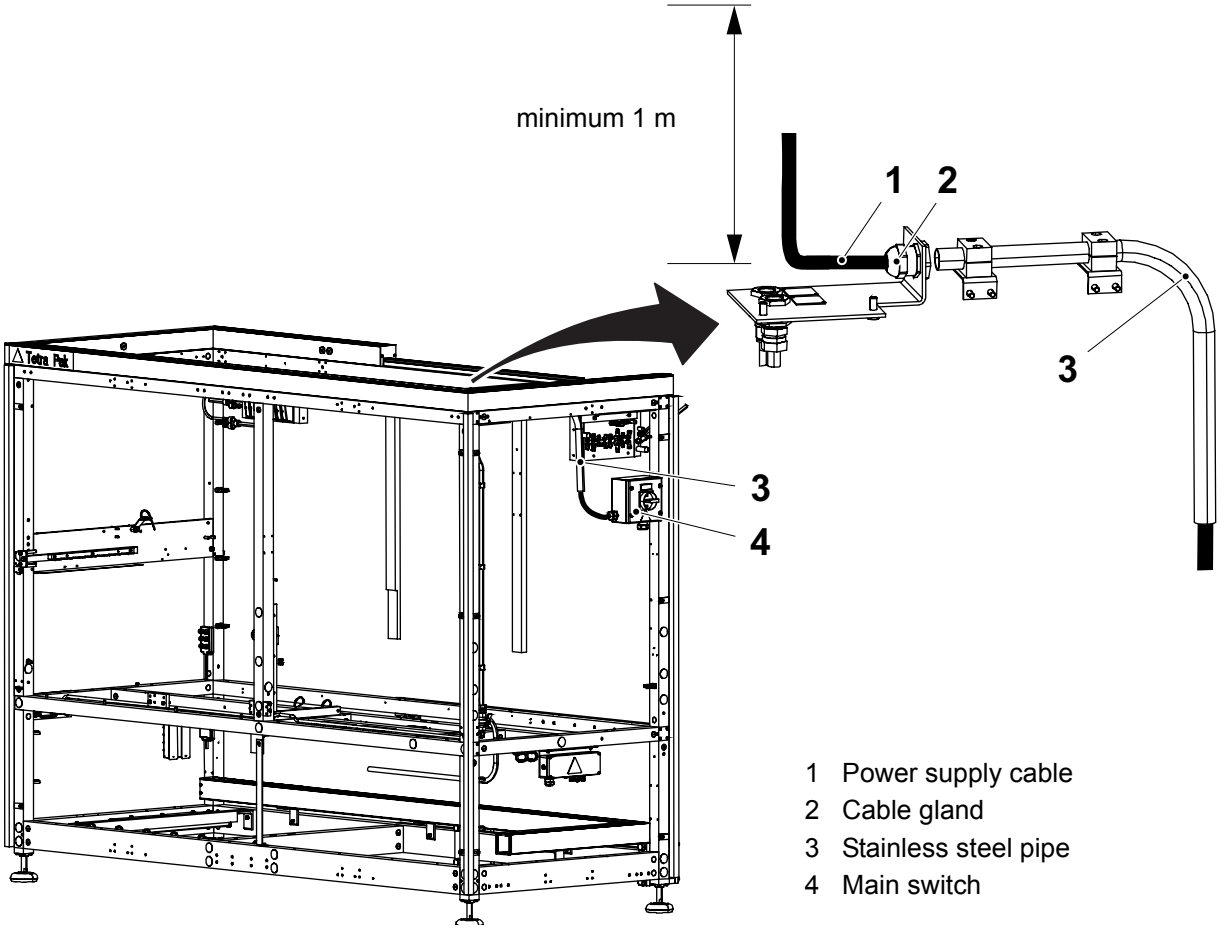
Perform the electrical connection according to the Electrical Manual (EM). See also 1.1 Installation Drawings.

4.6.2.1 Main Power Supply Cable

a) Install the power supply cable (1) through the cable gland (2) and further through the stainless steel pipe (3).

Note! The main supply cable must be routed minimum 1 m straight up from the top of the machine before it turns away. The main supply cable must never be routed through the machine.

b) Connect the power supply cable (1) to the main switch (4).

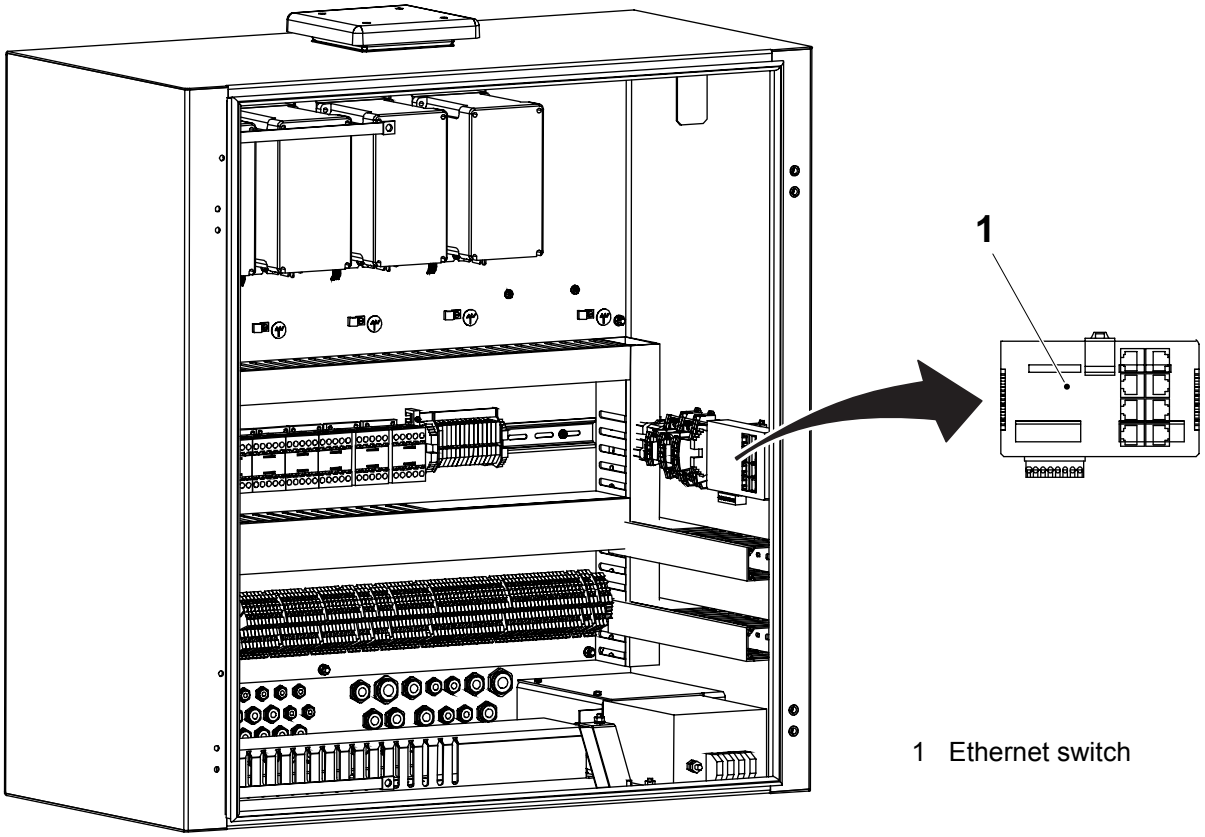


1 Power supply cable
2 Cable gland
3 Stainless steel pipe
4 Main switch

4.6.2.2 Ethernet Cable

a) Connect the ethernet cable to the ethernet switch (1) in the electrical cabinet.

b) Perform the electrical connection according to the Electrical Manual (EM).



1 Ethernet switch

This page intentionally left blank

5 Final Installation Check

Description

This chapter describes all checks that must be performed after the machine installation is completed.

5.1 Checklist. . . . . 4 - 5

This page intentionally left blank

5.1 Checklist

Verify the installation work by following the checklist below. Some steps require mechanical checks, others require running tests. For further details, see Chapter 4 Positioning, Assembly, and Connections.

WARNING

Risk of serious injuries.

Never run the machine if any of the EMERGENCY STOP buttons is non-operational.

No.	Text	Done
1	Inspect the compressed air connection. Make sure that the connection is done correctly.	
2	Inspect the electrical connection. Make sure that the connection is done correctly.	
3	Make sure that the machine stops when an EMERGENCY STOP button is pushed. Test **all** EMERGENCY STOP buttons. See sub-section Emergency Stop in the Safety Precautions chapter.	
4	Make sure that the machine stops when doors fitted with safety switches are opened. This should be tested for **all** safety switches. Make sure that all covers are fitted to the machine before it is run. See sub-section Safeguards in the Safety Precautions chapter.	
5	Make sure that all delivered equipment is assembled in accordance with the instruction in the Chapter 4 Positioning, Assembly, and Connections.	
6	Make sure that the machine is correctly connected to the infeed and discharge conveyors. Set the infeed conveyor length via the TPOP.	
7	Check the direction of rotation for motor T40M0050; that the transfer belt moves towards the end stop.	
8	Check all pressure gauges settings according to the Operation Manual (OM).	
9	Check the machine programme (function, program steps, and alarms) as described in the Operation Manual (OM).	
10	Make sure that there are no abnormal noises, vibrations, etc. when the machine is running.	
11	Make sure that the Start-up kit is delivered together with the machine.	

(Cont'd)

(Cont'd)

Note! This machine has been tested with dummies and might need a fine tuning on settings to fit packages at site. Note that filling machine packages made of fibre can differ from each other.

Follow these steps to complete the installation check. See the Maintenance Manual for settings.

No.	Text	MM Procedure
1	Check the setting of the brake unit.	3.4.1-2 Brake Unit- Set
2	Check the setting of the end stop grouping. If there are big deviations, perform the settings in the End Stop Grouping section in the Infeed chapter and all the settings in the Transfer Unit section in the Pattern Forming chapter in the Maintenance Manual (MM).	3.4.2-2 End Stop Grouping - Set 2.2 Transfer Unit
3	Fold a tray manually and check that the packages are fitting in the current tray. The packages shall fit exactly.	

6 Preparation for Commissioning

Description

The machine does not require preparations for commissioning.

7 Disassembly and Removal

Description

The chapter contains information about how to safely disassemble and remove the machine for reuse in another location or for final disposal.

7.1 Preparation . . . . . 7 - 5
7.1.1 Personnel Requirements . . . . . 7 - 5
7.1.2 Transport and Auxiliary Equipment . . . . . 7 - 5
7.1.3 Utility Connections . . . . . 7 - 5
7.2 Disconnect Utilities . . . . . 7 - 6
7.2.1 Compressed Air . . . . . 7 - 6
7.2.2 Electricity . . . . . 7 - 6
7.3 Disassemble Machine . . . . . 7 - 7
7.3.1 Safety Precautions . . . . . 7 - 7
7.3.2 Disassembling of the Machine . . . . . 7 - 7
7.4 Storage Preparation . . . . . 7 - 8
7.5 Moving . . . . . 7 - 9
7.6 Re-Crating . . . . . 7 - 10
7.7 Final Disposal . . . . . 7 - 11

This page intentionally left blank

7.1 Preparation

7.1.1 Personnel Requirements

Only skilled or instructed installation technicians are allowed to disassemble the equipment for moving to other installation positions.

7.1.2 Transport and Auxiliary Equipment

Required tools and auxiliary equipment needed for the job, see Section 2.2 Special Tools, Auxiliary Equipment, and Information.

7.1.3 Utility Connections

De-energize the machine, that is, shut off supplies of electricity and compressed air.

7.2 Disconnect Utilities

7.2.1 Compressed Air

WARNING

Risk of personal injury!

Make sure that air supply to the machine is switched OFF before performing any disconnection work.

Disconnect the compressed air. For more information, see 1.1 Installation Drawings.

7.2.2 Electricity

DANGER

Risk of electrical shock and short circuits!

Make sure that power is switched OFF upstream before performing any work on cables and electrical components.

Disconnect the electricity according to the Electrical Manual (EM). See also 1.1 Installation Drawings.

7.3 Disassemble Machine

7.3.1 Safety Precautions

WARNING

Risk of personal injury!

Before you start to disassemble the machine, read Chapter ii Safety Precautions . If safety precautions are not followed, there is risk of personal injury.

7.3.2 Disassembling of the Machine

Read the instructions in Section 4.5 Assembly and then disassemble the machine in reverse order.

7.4 Storage Preparation

If the machine is going to be transported to a storage site, then see 3.1.4 Storing the Crated Equipment for more information about environmental factors, such as acceptable storage humidity and temperature range.

7.5 Moving

DANGER

Immediate danger to life!

The machine may tilt if not observing the centre of gravity or the fork lift points. Failure to observe may result in immediate danger to life and/or major damage to equipment.

Before lifting and moving the machine from its production site, do the following:

- Check that the machine can be transported without any problems with the ceiling height, doors and passages.
- Make sure that the machine can be lifted in accordance to the section 1.2 Mass (Weight).

7.6 Re-Crating

Read the instructions in Section 3.2 Unpacking Sequence.
Re-crate the machine in the reverse order.

7.7 Final Disposal

If the machine is to be permanently disposed of, perform the following operations:

a) Remove the blanks and dispose of these in compliance with local regulations.

b) Empty the adhesive from the hotmelt equipment according to the Nordson Manual. Dispose of the adhesive in compliance with local regulations.

c) Empty the oil from the central lubrication system. Dispose of the oil in compliance with local regulations.

d) Disassemble the machine as far as possible and separate the following materials:
   - stainless steel (panels and doors)
   - cast iron
   - aluminium
   - glass (windows etc.)
   - rubber (seals, O-rings etc.)
   - nylon and other plastics
   - electrical cables
   - hydraulic and pneumatic hoses
   - electrical components (batteries etc.,)

e) Recycle or dispose of all materials, groups, and components in compliance with local regulations.

This page intentionally left blank

Note! *This page is generated* ***automatically****.*
using the ***variable definitions*** *made in the* ***front page*** *file!*

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm
Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 1(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101

Cardboard Packer 32 by Tetra Pak 2(2)
673852-0200

CK Belt Brake 195 mm & Infeed Conveyor 203 mm

Issue 2008-04 Doc. No. IM-2952924-0101