Operating instructions

(Translation of the original)

PP 1207, PP 1208, PP 1208 L and Plus 70

Strautmann
Umwelttechnik GmbH

Auf dem Haarkamp 22

49219 Glandorf, Germany

Identification data

Tool/Machine/System	
Model designation:	Gantry press
Model:	PP 1207, PP 1208, PP1208 L, Plus 70
Order / Identification number	
Machine number:	_____
Year of manufacture:	_____
Customer details:	
Company name:	
Order no.:	
Site:	
Manufacturer's address:	
Company name:	Strautmann Umwelttechnik GmbH
Street:	Auf dem Haarkamp 22
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Ordering spare parts and customer service:	
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Internet	http://www.strautmann-umwelt.de
Document data:	
Version:	END
Creation date:	20.07.11

Contents

1 General information

1.1 Introduction

These operating instructions provide a significant level of assistance for the correct and safe operation of the PP 1207, PP 1208, PP 1208 L and Plus 70, known hereinafter in these operating instructions as a gantry press.

The operating instructions contain important information for safe, proper and efficient operation of the gantry press. Observance of the operating instructions helps prevent hazards, reduces repair costs and downtimes and increases the reliability and service life of the gantry press.

The operating instructions must always be available and must be read and used by every person who is authorised to work on or with the gantry press. This includes

- operation and troubleshooting during operation,
- servicing (care, maintenance, repairs) and/or
- transportation.

1.2 Information on copyrights and property rights

These operating instructions must be treated as confidential. They are to be made accessible to authorised persons only.

They must not be handed over to third parties without the written consent of Strautmann Umwelttechnik GmbH.

1.3 Information for the operating company

The operating instructions are an important component of the gantry press. The plant operator shall ensure that operating personnel are familiarised with these instructions.

The plant operator must supplement the operating instructions with operating procedures based on national regulations for accident prevention and for environmental protection, including information on supervisory and reporting obligations with regard to operational characteristics, e.g. with reference to work organisation, work flows and utilised personnel.

Apart from the operating instructions and the obligatory regulations for the accident prevention applicable in the country of use as well as in the location of use, the acknowledged technical regulations for safe and correct operation must also be observed.

The plant operator must not modify, extend or convert the gantry press without authorisation from Strautmann Umwelttechnik GmbH! This applies in particular to the installation and setting of safety equipment and safety valves as well as to welding operations on load-bearing components.

Spare parts to be used must comply with the technical requirements specified by Strautmann Umwelttechnik GmbH. This is always guaranteed when original spare parts are used!

Use only trained or instructed personnel for the operation, maintenance, repair and transportation of the gantry press. Clearly specify the responsibilities of the personnel for operation, maintenance, repairs and transportation.

1.4 Instruction and training aids

As the employer/plant operator, you are obliged to inform and instruct the operating personnel about existing legal provisions and accident prevention regulations as well as about existing safety equipment on the gantry press. This obligation also extends to safety equipment which is installed around the gantry press. In doing so, the various professional qualifications of the employees must be taken into consideration.

The operating personnel must have understood the instruction process and it must be ensured that such instruction is observed.

Only in this way will your personnel work in a safety-conscious manner. Observance of the instruction process should be checked regularly.
As the employer/ plant operator, you should therefore be able to acknowledge in writing that each employee has received instruction.

The following pages contain examples of training topics as well as a master copy form to acknowledge that employees have received training/instruction.

1.5 Examples of training topics

1. Safety
Accident prevention regulations General legal provisions General safety instructions Emergency measures Safety instructions for operation of the gantry press Handling the safety equipment for the gantry press Safety equipment in the vicinity of the gantry press Meaning of symbols and signs _____ _____
2. Operation of the gantry press
Handling the gantry press controls Explanation of the operating instructions for the operating personnel Particular experience of the plant operator when handling the gantrty press Troubleshooting _____ _____
3. Servicing and maintenance instructions
Approved handling of cleaning agents, lubricants Particular experience of the operating company in the areas of maintenance, servicing, cleaning and care of the gantry press _____ _____

Acknowledgement of the instruction		
Subject of the instruction:		
Date:	Training manager:	Signature of the training manager:

No.	Last name, first name	Signature
1		
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2 Safety

2.1 General information

The gantry press has been developed and constructed using state-of-the-art technology and in accordance with the acknowledged safety regulations.

During operation of the gantry press the operator may be put in danger or the gantry press and other material assets may be damaged if it:

- is operated by personnel who have not received training or instruction,
- is not used as intended and/or
- is not serviced properly.

2.2 Information on signs and symbols

The operating instructions contain the following designations, signs and symbols which are used for especially important information:

Danger!

This warns of an imminent hazardous situation, with the inevitable consequence of serious injuries or death if the designated instruction is not obeyed exactly.

Warning!

This warns of a risk of danger, with the possible consequence of serious injuries or death if the designated instruction is not obeyed exactly.

Caution!

This warns of a possible hazardous situation, with the possible consequence of moderate or minor injuries as well as damage to property if the designated instruction is not obeyed exactly.

Information!

This refers to useful information on safe and proper handling.

- The bullet point indicates work and/or operating steps. The steps must be performed in the sequence from top to bottom.

– The dash indicates enumerations.

Information and symbols, such as warning signs, actuation signs, component labels, etc. attached directly to the gantry press must be observed. They must not be removed and they must always be fully legible!

2.3 Intended use

The vertical gantry presses PP 1207, PP 1208, PP 1208 L and Plus 70 are to be used solely for compressing cardboard paperboard containers, cardboard, plastic film, tin, textiles, carpeting, plastics, as well as any materials listed additionally in the agreement.

Strongly expanding materials such as foil or foam filled with air may only be compressed after consultation with Strautmann Umwelttechnik GmbH.

The following may not be compressed:

– Hard paper core

– potentially explosive material and fluids, all potentially explosive materials and containers with such content.

Information!

Note the specifications in the *Technical Data* and always observe them.

Intended use also includes observance of the instructions

– on safety,

– on operation and control,

– on servicing and maintenance,

which are described in these operating instructions.

Any other or further-reaching use is not regarded as intended. The plant operator of the gantry press alone is liable for any resulting damage.

2.4 Residual risk

Even when all safety instructions are followed, there is a residual risk during operation of the gantry press as described below.

All persons who work on and with the gantry press must be aware of these residual risks and follow the instructions which prevent these residual risks from causing accidents or damage.

During any set-up and tool setting work, it may be necessary to remove protective equipment installed by the customer. This will result in various residual risks and potential dangers which must be made known to each operator:

Danger!

Danger of death from electric shock!

Before performing any repair, set-up or maintenance work, isolate the gantry press from the power supply via the main switch!

Secure the gantry press to prevent any unintentional reactivation!

Affix warning information sign!

Danger!

Life-threatening injuries during operation of the gantry press!

Automatic sequences of movement by the gantry press during operation can cause life-threatening crush injuries.

Before operating the gantry press, the operator is obliged to check that all protective equipment has been installed and is functioning!

Warning!

Severe injuries to hands and arms!

Hands and arms may be crushed or cut-off when the press cylinder is lowered.

Before starting work in the pressing chamber, the press cylinder must either be lowered or secured at its highest position.

2.5 Description of the protective equipment

The gantry press has been constructed using state-of-the-art technology and in accordance with the acknowledged safety regulations.

Safety equipment (e.g. Emergency Stop switch, trigger lines, etc.) must neither be removed, bridged or their function impaired in any other way. Regularly check that all safety switch devices function.

2.5.1 Location of the Emergency Stop devices

– The Emergency Stop button is located on the control panel

2.5.2 Safety equipment on the gantry press

The loading door is secured with a non-manipulable solenoid switch/sensor. If the loading door is opened the gantry press is completely shut down.

The pressing chamber is secured with a spring-loaded catch.

A mechanical hold-up device mounted into the press prevents the pressing shield from being inadvertently lowered.

Access to the hydraulic cylinders of the press is protected by cover plates - the plates can only be removed using a tool and remain open when not in the cover position.

The machine can only be operated when the two-handed control is held. Releasing it prematurely will result in immediate shutdown of the gantry press.

2.6 Labels and signs on the gantry press

Sign	Meaning	Attachment location
 Text sign	Warning of overpressure! Caution! Before starting servicing work, depressurise the system. Medium: Nitrogen	On the hydraulic accumulators
	Warning of hazardous voltage	Signs on all junction boxes, switch boxes and control cabinets for low voltage.
	Protective conductor connection	Next to the earthing screws

2.7 Labels and signs to be attached by the plant operator

The plant operator is obliged to attach any other labels and signs to the gantry press and in its immediate vicinity.

These labels and signs could refer, e.g. to the regulation for the wearing of personal protective equipment.

2.8 Safety instructions for the operating personnel

The gantry press may be used only in a technically perfect condition as well as for the intended purpose, in a safety-conscious manner and in consideration of these operating instructions! All faults and in particular those which may impair safety must be rectified immediately!

Every person who is authorised to start up, operate or service the machine, must have read and understood these operating instructions before starting work, this applies, in particular, to Chapter 2 *Safety*. Doing this once work has started is too late. This applies in particular to personnel who work only occasionally on the gantry press.

The operating instructions must always be ready to hand on the gantry press.

No liability shall be accepted for damage and accidents which occur due to non-observance of the operating instructions.

Observe the relevant accident prevention regulations as well as the other generally acknowledged safety and occupational health regulations.

Clearly specify and observe the responsibilities for the various activities connected with maintenance and servicing. This is the only way of avoiding mistakes, in particular, in hazardous situations.

The plant operator shall ensure that the operating and maintenance personnel wear personal protective equipment. This shall include, in particular, safety shoes, goggles, gloves and, if required, hearing protection.

Do not wear loose long hair, loose clothing or jewellery! There is a danger of becoming caught, being pulled in or dragged by moving parts!

If safety-related changes are made to the gantry press, immediately shut down and secure the machine and notify the relevant location/person of the process!

When maintaining the gantry press, follow the instructions for maintenance work!

Work on the gantry press may be performed by reliable, trained personnel only. Observe the statutory permitted minimum age!

Personnel who are training, learning, being instructed or receiving a general education may only operate the gantry press under the constant supervision of an experienced person!

2.9 Safety instructions for servicing and troubleshooting on the gantry press

Observe the stipulated periods or the periods indicated in the operating instructions for recurring checks/inspections.

When servicing the machine, it is essential to have suitable workshop equipment for the specified work.

Set up, maintenance and repair work, as well as troubleshooting, may only be performed when the gantry press is switched off.

Secure an appropriately large zone around the maintenance area!

Cordon off the work area with a red and white safety chain and a warning sign!

Also attach a warning sign.

When performing maintenance and repair work, always tighten loosened screwed connections! If stipulated, tighten the designated bolts using a torque wrench.

In particular, remove dirt or care products from connections and screwed connections at the start of maintenance/ repairs/care.

When replacing individual parts and large assemblies, carefully attach and secure them to lifting devices in order to minimise the danger which emanates from them. Use only suitable and technically perfect lifting devices and load suspension devices which have adequate load-bearing capacity!

Never stand or work under suspended loads!

Do not use aggressive cleaning agents! Use non-linting cleaning cloths!

Dispose of operating and auxiliary materials as well as replacement parts safely and in an environmentally friendly manner!

2.10 Information on particular types of danger

2.10.1 Electrics

Work on the electrical equipment of the gantry press may be performed by electricians or instructed personnel under the management and supervision of electricians in accordance with the rules on electrotechnology!

Before opening the control cabinet, switch off the gantry press using the main switch and secure with a safety lock to prevent reactivation.

If the electric power supply is defective, immediately switch off the gantry press using the main switch!

Use only original fuses with the stipulated nominal current!

Electrical components which have to be inspected, maintained or repaired must be deenergised. Secure operating facilities, which were used for activation, to prevent unintentional or automatic reactivation (lock away fuses, block disconnector, etc.). Should any electrical components be active, first check that they are deenergised, then isolate adjacent energised components. In the case of repairs, ensure that the safety of design features is not compromised (e.g. do not reduce creepage distances and air paths nor distances by insulation)!

If work has to be performed on live components (in exceptional situations only!), request the assistance of an additional person who can actuate the Emergency Stop pushbutton or the main switch in an emergency. Use insulated tools only.

The electrical system must be properly earthed by means of protective conductor systems.

Even when the machine has been switched off, certain assemblies can still be live or charged.

Regularly check cables for damage and, if required, replace.

2.10.2 Hydraulic system

Only personnel with specialist knowledge and experience in the area of hydraulics may work on the hydraulic equipment!

When performing maintenance work on the hydraulic system, the maintenance personnel must be completely familiar with the hydraulic circuit diagram and must be acquainted with function as well as the possible consequences of any faulty operation.

Check on a daily basis all pipelines, hoses and screwed connections for leaks. If there are any leaks, immediately shut down the gantry press and repair the fault. Collect any escaping hydraulic oil and dispose of correctly.

Before working on the hydraulic accumulators, ensure that the accumulator circuits have been deenergised.

Before starting repair work, depressurise system sections and pressure lines which are to be opened!

Before starting maintenance work, remove all types of soiling from connections and screwed connections of the hydraulic system and, if required, rinse them once maintenance work has been completed.

The maximum permitted service life of the hydraulic hoselines is six (6) years, including any storage times! The storage duration must not exceed two years.

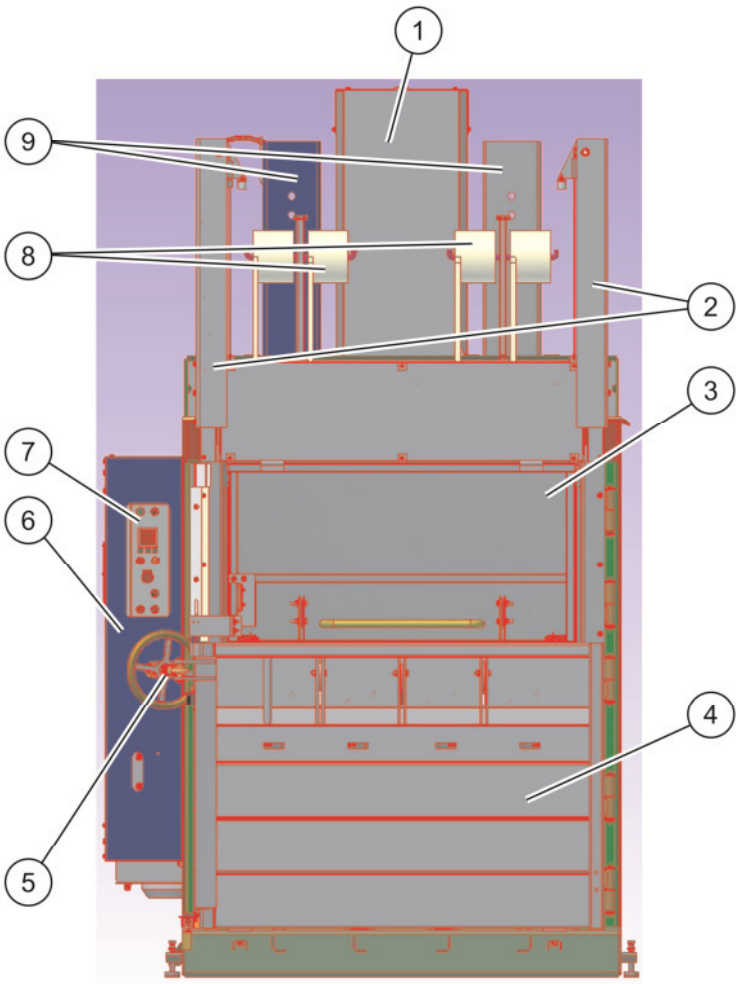
2.10.3 Noise

The A-rated equivalent continuous sound pressure level at the operator workstations during normal operation of the gantry press is below 80 dB(A).

On account of the local conditions and different materials, there may be a higher sound pressure level at the installation site of the gantry press. In this case the plant operator is obliged to provide the operating personnel with the appropriate protective equipment.

3 Product description

3.1 General information



1: Press cylinder
2: Loading flap guide
3: Loading flap
4: Press chamber door
5: Door locking wheel
6: Hydraulics cover
7: Control panel
8: Belt pulleys
9: Square tube guide

Fig. 3-1: Overview

Loading of the press chamber of the gantry press is segregated. Once compressed, blank holders prevent any expansion and compression of the material (Circle System). Upon reaching the set bale height (cam) in the press chamber, the pressing shield moves up again or it is left positioned (only with foil programme) on the compressed bale at max. pressure and the message BALE FINISHED is displayed (See Chapter 5.2).

The pressing shield can then only be moved up when the door is open using the two-handed control mode. The operator stands at the left next to the opened press chamber door (4). The completed bale will be discharged onto a euro-pallet provided via two-hand operation.

3.2 Press chamber

The press chamber frame is made of structural-steel sections.

Amply dimensioned square tube guides serve for absorbing the developing forces. The tubes are guided in adjustable, high-strength plastic friction bearings.

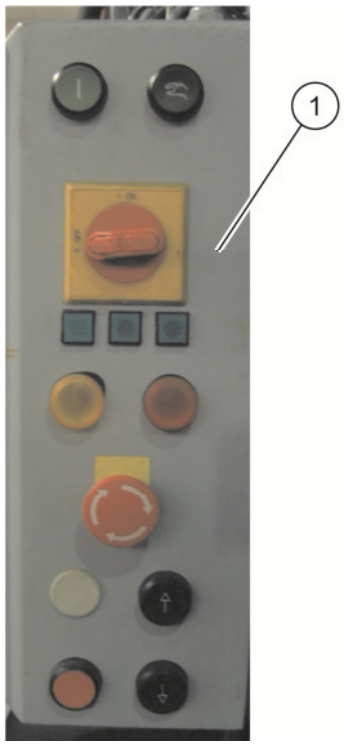
Three folding blank holders in the press chamber door and two folding blank holders in the rear panel prevent any material expansion following the compression process, to maintain as large a loading area as possible **(Circle System).**

The solenoid switch sensor on the panelling of the press chamber frame secures the loading door during the compression procedure. When the loading door is opened the gantry press is switched off.

Pressing force is transmitted by way of a hydraulic cylinder onto the pressing shield.

The bale height can be set using the cams.

3.3 Electrics



1: Controls for electrics

Fig. 3-2: Control cabinet

The gantry press electrical control system is wired up behind the the control panel (1). The controls on the control panel can be used to issue commands to the control system.

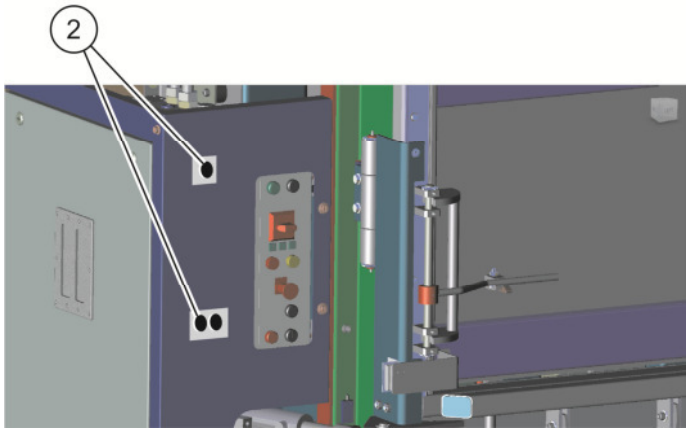


Fig. 3-3: Two-handed control

On the gantry press with hydraulic door lock, the two-handed control (2) is mounted at the left next to the control panel. The two-handed control is mounted on the control panel itself on the other gantry presses.

Information!

An exact description of the controls can be found in Chapter 5.2 Gantry press controls.

3.4 Hydraulic system

The gantry press hydraulic unit is mounted below the protection plate (1)

The hydraulic unit is required to generate the hydraulic pressure required for the press.

Fig. 3-4: Hydraulics

3.5 Technical data

PP 1207

Gantry height	1958 mm	2158 mm
Dimensions (Width x depth x height)	1844 x 1067 x 2868 mm	1844 x 1067 x 3068 mm
Height of filling hole	1145 mm	
Doorway	400 mm	600 mm
Kerb weight	approx. 2200 kg	approx. 2300 kg

Operating voltage	400 V / 3 phases / 50 Hz / N / PE
Motor power	4 kW
Total connected load	4.5 kW
Protection class	IP 54
Fuse protection	3 x 16 A (tripping characteristic C)
Supply line	NYM 5 x 2.5 mm² with 16 A CEE connector
Installation location	Inside / outside, roofed
Pressing weight	580 kN
Bale dimensions	580 kN
Noise level	below 80 dB(A)

Plus 70

Gantry height in mm	2.149		
Dimensions (Width x depth x height) in mm	2117 x 1349 x 3069		
Height of filling hole in mm	1155		
Weight in kg	approx. 2600		
Stroke length in mm	690	890	1090
Operating voltage	400 V / 3 phases / 50 Hz / N / PE		
Motor power in kW	4	9,2	
Motor power in kW	4	9,2	
Protection class	IP 54		

Max. fusing in A	32 (at 400 V)
Installation location	Inside / outside, roofed
Pressing force in kN	680
Bale dimensions (width x depth x height) (ejected bale) in mm	1200 x max. 800 x 800 to max. 1200
Noise level in dB(A)	below 80

PP 1208

Gantry height	1958 mm	2158 mm
Dimensions (Width x depth x height)	1844 x 1116 x 2856 mm	1844 x 1116 x 3056 mm
Height of filling hole	1153 mm	
Weight	approx. 2400 kg	
Operating voltage	400 V / 3 ph / 50 Hz	
Motor power	4 kW	
Total connected load	4.5 kW	
Protection class	IP 54	
Fuse protection	32 A	
Installation location	inside	Outside, roofed
Pressing weight	580 kN	
Bale dimensions	1200 x 800 – max. 1100	1200
Noise level	below 80 dB(A)	

4 Transportation and installation

4.1 General information

The gantry press was configured by Strautmann Umwelttechnik GmbH.

In doing so, all technical and safety concerns were taken into consideration.

When the safety equipment has been commissioned and tested, the gantry press is ready to be operated for the intended purpose.

If the gantry press is to be modified, it may be advantageous to have the conversion as well as the set-up and tool-setting work on the gantry press performed at Strautmann Umwelttechnik GmbH. To this end, the gantry press will have to be returned to Strautmann Umwelttechnik GmbH.

4.2 Transportation by crane

Observe the following safety instructions if the gantry press is transported by crane:

Danger!

Life-threatening crush injuries when lifting and transporting the system components!

Improper lifting and transportation may cause the machine components to tip over and fall down!

The components may be lifted and transported by suitable lifting tackle only!

- **Only use lifting tackle that can support a minimum load-bearing capacity of half the machine weight (evenly distributed load) and which is in a technically perfect state!**
- **The components must be attached to the appropriately identified attachment points!**
- **Never stand under suspended loads!**

- Observe the applicable accident prevention and occupational safety regulations!
- Follow the instructions and regulations of the freight carrier!
- Check that the lifting tackle is securely fixed to the attachment points and to the crane hook.

For this type of transportation, the machine base is equipped with suspension plates (welded or bolted) with bores.

- Attach the transport cables to the crane hook in such a way that when they are taut they do not touch machine components located above the suspension bores.
- If required, use lifting gear.
- Adjust the length of the 4 support cables so that the gantry press is suspended horizontally. Attach the support cables to the suspension brackets using shackles.
- When selecting the shackles, ensure that each individual shackle has an adequate load-bearing capacity!

4.3 Transportation with floor conveyor

Danger!

Life-threatening crush injuries during transportation of the gantry press!

Improper lifting and transportation may cause the gantry press to tip over and fall down!

Close the gantry press completely. This will avoid any centre of gravity displacement and the associated risk of tipping over!

Never stand under suspended loads!

The following floor conveyors are permitted for transportation of the system components:

- Transport system roller pallets with transport vehicle,
- forklifts and
- pallet trucks.

Information!

The supporting forks must be long enough so that the gantry press rests fully on the forks.

- Ensure that the front side of the machine is not approached too closely.
- Select the minimum distance of the forks to prevent the machine from tipping over.

The minimum load-bearing capacity of the forklift must withstand the weight of the gantry press. When lifting the gantry press, ensure that the height difference between two sides does not exceed 100 mm.

- Always avoid blows and impacts.

4.4 Assembly

4.4.1 Installation

Install the gantry press on a level and non-slip underground. The underground must resist a surface load of at least 1000 kg/m². The feet must all be on the floor at the same time.

Check the gantry press using the checklist.

4.4.2 Electrical connection

Danger!

Danger of death from electric shock!

Before performing any repair, set-up or maintenance work, isolate the gantry press from the power supply via the main switch!

Unplug the gantry press mains plug.

Secure the gantry press to prevent any unintentional reactivation!

Affix warning information sign!

The connection may only be performed by skilled and authorised personnel in accordance with the well-established VDE (Association of German Electrical Engineers) regulations.

The gantry press is fitted with a plug for a CEE- 400 V/16 A or 32 A socket.

Check whether the electrical fuse protection matches the press rating (see chapter entitled Technical Data).

Route the connecting cable in such a way that it does not present a tripping hazard.

Caution!

The gantry press may suffer considerable damage.

There must be a clockwise rotating field on the socket of the operating voltage.

Before switching on the machine for the first time, check the rotating field of the socket.

4.4.3 Hydraulic system

Fill the hydraulic unit with the specified hydraulic oil. Use fluid of the same grade and viscosity only - DIN-HPL 22, ISO-HM 22.

Information!

See also Chapter 6.3.4 Hydraulic oil

4.5 Checklist

After delivery and whenever the gantry press is installed, the following checks must be performed:

	Date	Name
Check the gantry press for completeness in line with the shipping note.		
Visible inspection for signs of damage and damage in transit (damage report to be sent immediately to manufacturer, haulage company or service engineer).		
Install the gantry press on a base with adequate load-bearing capacity (see Chapter 4.4.1 Installation).		
Check oil level of the hydraulic unit.		
Apply voltage to the gantry press. (see Chapter 4.4.2 Electrical connection, observing rotating field)		
First manually test-run the gantry press without any material		
With the machine running, check the electrical function of the safety switches:		
If the flap and/or door is opened during operation, the gantry		

	Date	Name
press must come to an immediate standstill.		
Check two-handed control: – The pressing shield may only move when both buttons are pressed simultaneously (within 0.5 s). – The ejector may only move when both buttons are pressed simultaneously (within 0.5 s) and the door is open further than 100°. – The hydraulic door lock may only move when both the buttons are pressed simultaneously (within 0.5 s) (optional).		
The operating instructions must be kept within easy reach of everyone in the vicinity of the gantry press.		
Attach the safety instructions in a clearly visible location on the gantry press.		
Display safety checklist and maintenance schedules in clearly visible location on the gantry press.		
Instruct qualified personnel in maintenance and fault resolution.		
Instruct operating personnel.		

If required, copy this list. Enclose the signed technical documentation list for the gantry press.

5 Operation and control

Each person who is involved in the operation, maintenance and repairing of the gantry press must have carefully read and understood these operating instructions before starting work.

5.1 General information

Work on the gantry press may be performed by trained and/ or instructed personnel only. If not used as intended, this may be hazardous for life and limb, the gantry press and connected systems, and the efficient operation of the gantry press. The equipment may be used only for the purpose which the manufacturer specified or which is standard.

The gantry press may be operated by authorised, technically proficient persons only.

A technically proficient person can assess and perform the work given to him and recognise potential hazards based on his technical education, knowledge and professional experience as well as knowledge of the accident prevention and industrial safety regulations, provided he also satisfies the required personal prerequisites for the activity, e.g. he can work independently. To avoid accidents, the gantry press may be operated when in a technically perfect condition only. Third-party components must not be used on the gantry press, otherwise the required safety compliance cannot be guaranteed.

Do not use any working habits that may impair safety on the gantry press. The operator must immediately notify the relevant supervisor of any changes made to the gantry press (which compromise safety). The operator must immediately shutdown the gantry press if a malfunction impairs the safety of the employees. The gantry press must not be restarted until the malfunction has been eliminated. Safety equipment must not be removed or manipulated or shut down.

The plant operator shall ensure that the function of the safety equipment on the gantry press is checked both before the first start-up and before each subsequent restart. These checks must be performed by instructed personnel.

The plant operator shall provide the operating personnel with the required personal protective equipment (PSA) and also ensures that it is used.

No covers on drive components may be removed before the dangerous movements have stopped and must be properly attached before the machine is restarted.

5.2 Controls and displays

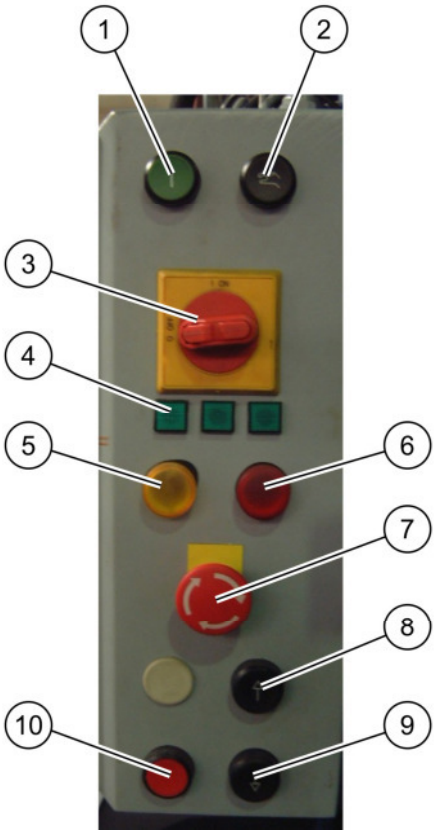


Fig. 5-1: Control panel

Item	Designation	Function
1	Start (green button)	Starts the automatic compression operation
2	Manual operation button	First button on two-handed control The buttons on the two-handed control must **both be pressed within 0.5 seconds**.
3	Main switch, switch	Switches the power supply to the press
4	Phase indicator lamp, green lamp	Indicates whether current is applied to all 3 phases. 3 small green glow lamps, whereby each lamp represents one phase. If one lamp malfunctions, the power supply in a lead is interrupted.
5	Bale finished orange lamp	Signals the bale height reached (Bale finished)

Item	Designation	Function
6	Fault (red lamp)	Signals a status, in which the press is not ready for operation. An automatic cycle cannot be started. The lamp flashes on and off for a fault message (e.g. door open)
7	Emergency stop red palm button	Switches off the machine in the event of a hazard or an emergency and is locked mechanically.
8	Raise shield button	Lifts the pressing shield in manual mode (second pushbutton for two-handed control).
9	Lower shield button	Lowers the pressing shield in manual mode (second pushbutton for two-handed control).
10	Stop pushbutton	Stops the automatic cycle

5.2.1 Controls for two-handed control (only for hydraulic door lock)

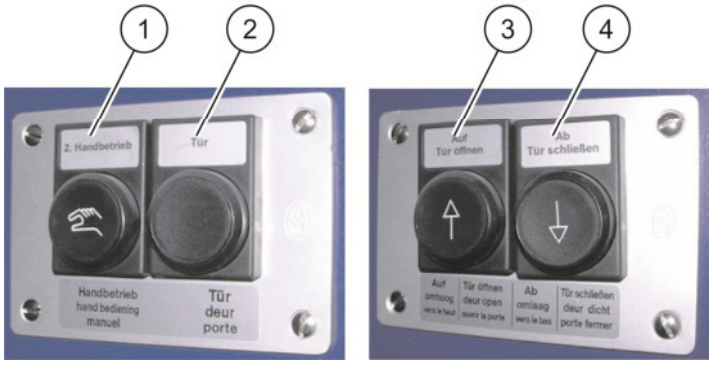


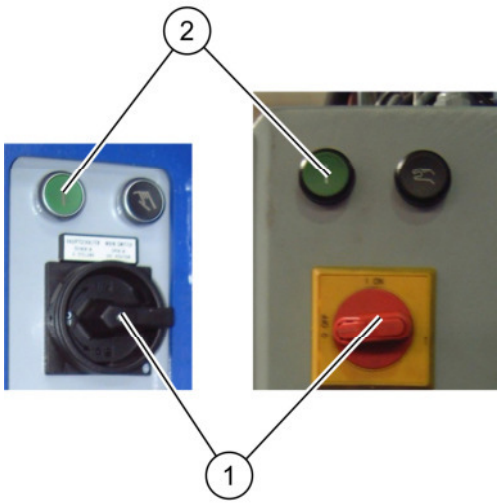
Fig. 5-2: Two-handed control

The respective two pushbuttons of the manual control device must **be pressed within 0.5 s**.

Function	Button combination
Open the door	Button 2 and button 3
Close the door	Button 2 and button 4
Raise pressing shield	Button 1 and button 3
Lower pressing shield	Button 1 and button 4
Lift ejector	Button 1 and button 3
Lower ejector	Button 1 and button 4

5.3 Switching on the gantry press

- Insert the mains plug into the designated socket



Switch on the power supply for the gantry press using the main switch (1).

Fig. 5-3: Switch-on

5.3.1 Starting the gantry press in automatic mode:

Danger!

Life-threatening injuries during operation of the gantry press!

Automatic sequences of movement by the gantry press during operation can cause life-threatening crush injuries.

Before operating the gantry press, the operator is obliged to check that all protective equipment has been installed and is functioning!

- Press Start button (2) to start press cycle.

5.3.2 Starting the gantry press in manual mode:

- Press the two buttons for two-handed control within 0.5 s.
- Press and hold the button during manual mode. Movement is stopped when the button is released.

5.4 Gantry press operation

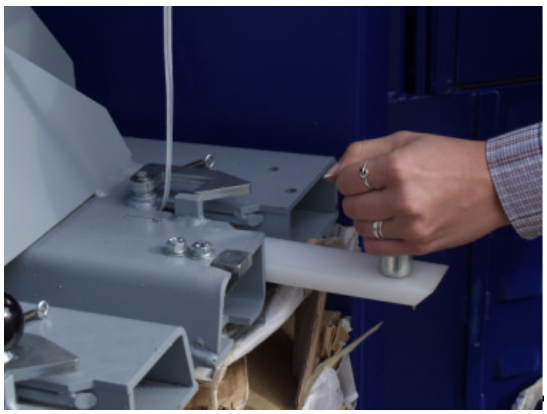
5.4.1 Preparing the press chamber

- Open the press chamber door
- Move the ejector plate upwards using the two-handed control MANUAL MODE and LIFT SHIELD buttons.

Inserting the binding thread:

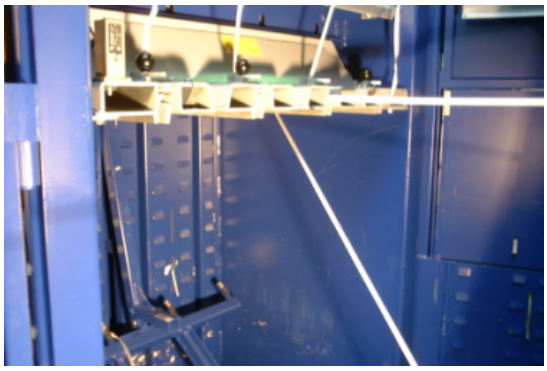
- Insert the free end of the binding thread into the hole at the end of the tape pull hook

Fig. 5-4: Hole at front end of tape pull hook



- Insert the tape pull hook into the pressing shield's tape duct.
- Allow the tape pull hook to latch into place.

Fig. 5-5: Tape pull hook in tape channel



- Pull the tape hanging out of the first hole approx. 2 m out of the machine.

Fig. 5-6: Pull tape out of machine

- Thread the tape below the spring plates of the ejector. For this, the ejector should be extended. If not, extend the ejector using the two-handed control.

Fig. 5-7: Thread tape under ejector's spring plates

- Pull in the tape further and deflect the tape at the hold points provided. The tape should be pulled approx. 0.8 m beyond the hold point.
- Repeat steps 1-6 for the remaining tape pull hooks.
- Move the ejector to its basic position in manual mode with the door open, (Ejector must be at the very bottom.)

Fig. 5-8: Hold points

- Close the pressing chamber (using two-handed control for hydraulic door lock, otherwise using the handwheel)
- Turn the locking wheel until the press chamber door is fully closed.
- Use the two-handed control to move the ejector plate all the way down (preferred procedure). If the ejector plate is not lowered as described above, when the loading flap is closed the ejector plate will automatically move to its basic position.

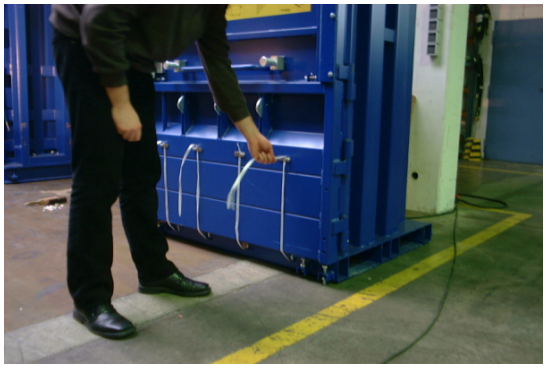


Fig. 5-9: Thread clamp on chamber door

- Attach the free end of thread behind the thread clamp on the chamber door.

5.4.1.1 Tying with wire

- Open the bale chamber door
- Take the ejector on the two-hand control buttons and switch MANUAL and PRESSPLATE high

Inserting the twine

Bild 5-1 wire shelf

- The federal government wires is placed on the wire holder right on the machine
- Before the first pressing and ejection after every ball must be placed the wires.

Bild 5-2 Wire pull hook

- Remove the hook from wire-drawing their leadership

Bild 5-3 Hooking the wire

- Hook the small loop in the hook of a hook wire drawing

Bild 5-4 Attaching the wire pulling hook

- Slide the wire pulling as far in the lead until he snaps

Bild 5-5 Insert the wire drawing hook

- Wire should face each other to practice drawing the wire hooks protrude downward into the compression chamber

Bild 5-6 Insert the wir

- The wire will now project back into the respective wire slots down. Now the wire is inserted into the bottom oft he wire guard as shown. Repeat this step for each wire

- Close the bale chamber door (with the two-hand operation with hydraulic door closure otherwise by handwheel)
- Turn the handwheel until the complete closure of the bale chamber door
- Take the ejector with the two-hand operation all the way down (the preferred approach). Should not be above the ejector been lowered described, is closing the charging hole, the ejector down automatically in its basic position.

Bild 5-7 Brackets on the chamber door

- The protruding wir eis attached behind the brackets on the front of the door as shown

5.4.2 Loading and compressing

Opening the loading flap:

Slide the loading flap using the handles upwards until the catch (1) latches into the door gates (2).

Fig. 5-10: Gate

Loading pressing chamber:

- Load the segregated material through the opened loading door into the press.

Information!

For loose and crumbling material, place a piece of cardboard that roughly matches the area of the bale to be subsequently compressed, into the press chamber first.

The press chamber may maximally be loaded up to the lower edge of the pressing shield. Ensure that material is not protruding from the pressing shield (may cause trouble when the door is closed).

Compressing bales

- Pull the loading flap forward out of the gate, then downwards and let the loading flap latch into place again.
- Press the "Start" button on the control panel.

The pressing shield moves downwards to the lower end position or until reversal through the pressure relief valve. It is then moved back to the upper end position.

- Open the loading (in the Quick Door Auto version the loading door opens automatically)
- Repeat the loading and compressing procedure until the "Bale finished" indicator lamp lights up and the pressing shield moves up or (for foil programme only) comes to rest on the bale.

5.4.3 Finishing and tying up bales

Situation:

- the "Bale finished" signal lamp comes on.
- the set bale height has been reached, the bale is fully compressed
- the pressing shield remains in the bale (only for foil programme option), otherwise the pressing shield moves up again.

Fig. 5-11: Open press chamber door

- Turn the locking wheel in the given direction.
- Open the press chamber door.

or:

- Open the press chamber door using the two-handed control (with hydraulic door lock).

Information!

Open the press chamber door more than 100° for subsequent bale removal

Tying up the bale:

- Loosen the tapes from the spring plates on the front of the door.
- Pull the tape pull hook out of the tape channel.
- Cut the binding thread to a length of approx. 1.4 m.
- Hook the tape pull hook onto the holder above the gantry press.
- For tying up, pull the two tapes until they are taut and tie a knot in the ends of the thread.

Information!

Make absolutely sure that you cut through both ends of the thread

5.4.4 Removing bale, finishing work

- Place a euro pallet in front of the gantry press
- Use the two-handed control Manual mode button and the Raise shield button to move the shield upwards. Press the two buttons at the same time (within 0.5 seconds).
- Keep pressing the buttons until the completed bale has been discharged onto the pallet.

5.5 Faults in operational sequence

Pressing shield does not move when in standard cycle

Causes:	– Door or loading flap not closed – Door temporarily opened – Pressing shield is not in the upper end position
Rectification	Close the press chamber door or the loading door. Move the pressing shield up in manual mode. Restart the cycle by pressing START.

Red "FAULT" signal lamp is flashing

Causes:	– Loading door not closed
Rectification	Close the loading door. Set the solenoid – sensor distance on the loading door.

Pressing shield does not move up again when in automatic mode:

Causes:	– Emergency Stop pressed – Press chamber/loading flap temporarily opened – Power failure – Bales finished message on (foil programme option) – Power supply interrupted
Rectification	Release the Emergency Stop button. Move the pressing shield up in manual mode. Close the press chamber/loading door. Move the pressing shield all the way up in manual mode. See Bale finished (Chapter 5.4.3). Move the pressing shield all the way up in manual mode once the power is resumed.

Ejector plate does not return to its home position

Causes:	– Pressing shield is not in the upper limit position.
Rectification	Move the pressing shield all the way up in manual mode.

Bale is not ejected

Causes:	– Pressing shield is not in the upper limit position – Press chamber door is not opened wide enough
Rectification	Move the pressing shield to the upper end position using the two-handed control. Open the door (opening angle must be at least 100°)

Information!

If a fault could not be rectified, notify the Technical Service department at Strautmann Umwelttechnik GmbH (*address see Identification data*).

6 Servicing

The chapter entitled *Servicing* is divided into the areas of care, maintenance and repairs. This is intended to make it easier to schedule the required servicing work.

The instructions described in this chapter are to be regarded as minimum requirements. Depending on the operating conditions, further instructions may be required to keep the gantry press in an optimum state. The indicated intervals refer to **single-shift** operation. Servicing instructions on specific assemblies can be found in the corresponding documentation of the suppliers in Chapter 8.

The maintenance and repair work described in this chapter may only be performed by specially trained repair personnel of the operating company.

Maintenance and repair work in specialist areas, e.g. hydraulic system, may be performed by technicians trained in the particular specialist area only.

In the case of repairs and spare-part orders we refer to the drawings and parts lists, which belong to the documentation, in Chapter 8 *Appendices*. This also applies to the parts purchased by Strautmann Umwelttechnik GmbH.

Spare parts to be used must comply with the technical requirements specified by Strautmann Umwelttechnik GmbH.

This is always guaranteed for original spare parts.

With reference to storage, handling, use and disposal of gases, greases, oils and other chemical substances, the applicable regulations and safety data sheets of the manufacturer as well as the instructions from the valid operating instructions of the operating company must be read and observed!

Ensure safe and environmentally disposal of the operating materials and replacement parts!

- Follow the safety instructions overleaf!

6.1 Care

Care of the gantry press is limited mainly to the regular removal of dust and other deposits from all surfaces. Cleaning should be performed by wiping, blowing or sweeping only. On sensitive surfaces (such as piston rods) do not clean by blowing or sweeping but use instead the following means only.

Caution!

Improper cleaning of the gantry press may result in malfunctions and damage!

Do not select an aggressive cleaning agent which attacks the metal and plastic surfaces as well as hose connections.

Never clean the sensitive components with coarse brushes and heavy mechanical pressure. Do not use linting cleaning cloths.

Never clean the gantry press with a water jet or high-pressure cleaner.

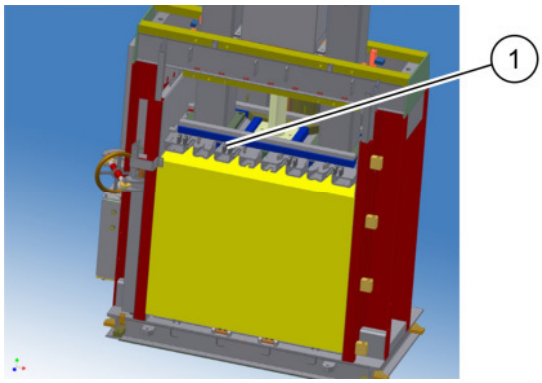
All aqueous industrial cleaners can be used without restriction.

Appropriate care helps keep the gantry press in a permanently functional state.

- Thoroughly clean the gantry press at least once a week.
- Do not use metallic objects such as scrapers, screwdrivers, etc. to clean uncoated machine parts, such as piston rods, guides, etc.
- Do not use aggressive cleaning agents or solvents (damaged seals) or even emery paper for cleaning.
- Use only non-linting cloths for cleaning work.

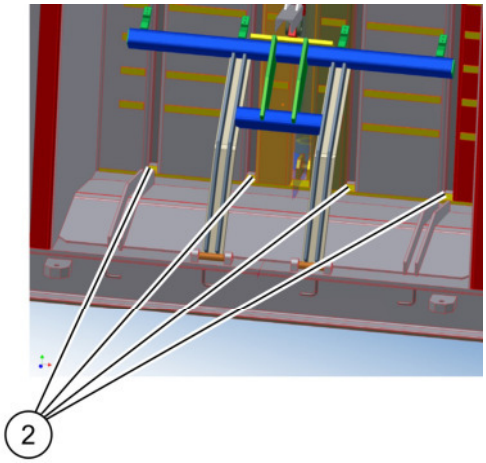
6.2 Cleaning schedule

Clean the listed areas on the gantry press following every bale ejection



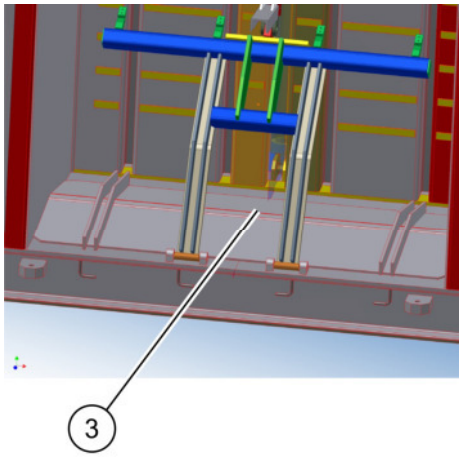
While the pressing shield (1) is positioned on the bale, wipe down the pressing shield at the top

Fig. 6-1: Cleaning pressing shield



Once the bales have been ejected, use the brush to clean the tape slots (2)

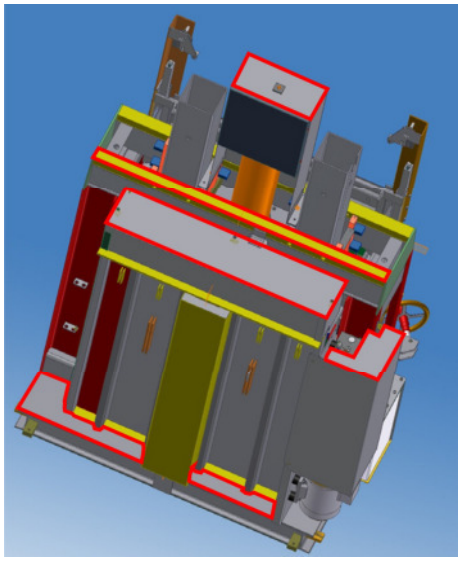
Fig. 6-2: Cleaning tape slots



Sweep out the floor below the ejector plate (3).

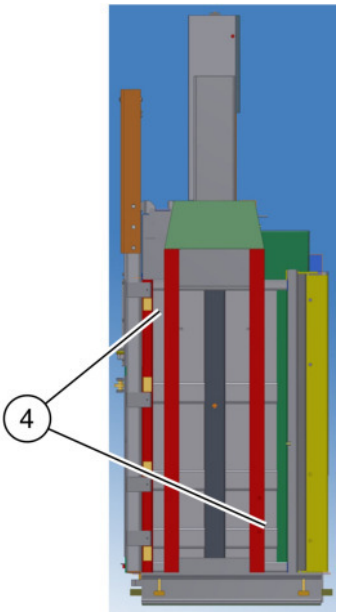
Fig. 6-3: Sweeping floor

Clean the following areas on the gantry press once weekly.



Wipe down all level surfaces (bordered in red) on the gantry press

Fig. 6-4: Wiping surfaces



Wipe down the entire right side of the gantry (4).

Fig.6-5: Wiping right side of gantry

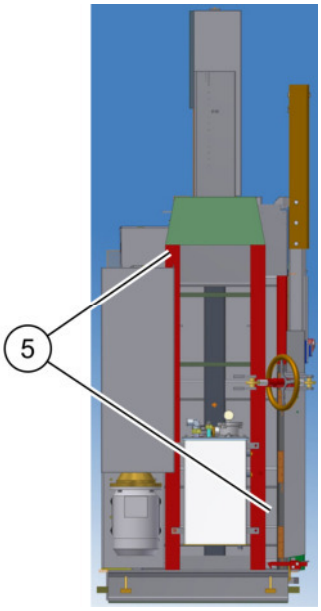


Fig.6-6: Wiping left side of gantry

Wipe down the entire left side of the gantry (5).

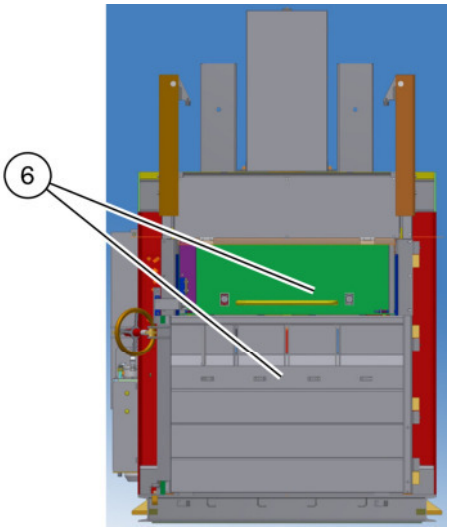


Fig.6-7: Wiping front side

Wipe down the complete front side (door) (6).

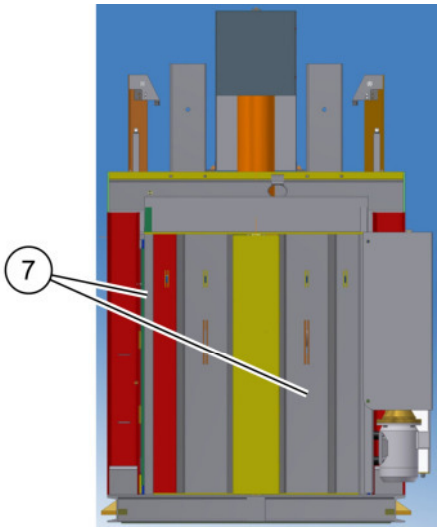


Fig.6-8: Wiping rear side

Wipe down complete rear side (7).

6.3 Maintenance

6.3.1 General maintenance instructions

Observing the proposed care and maintenance intervals will exert a positive influence on the high availability of the gantry press.

Check the gantry press on a regular basis and inform the person responsible for the gantry press, if repairs and maintenance work are required.

Warning!

Warning of serious physical injuries

There is a risk of serious physical injuries due to inappropriate behaviour, e.g. risk of crushing, loss of fingers or hand caused by uncontrolled movements of individual machine elements.

Repair and maintenance work on the gantry press may be performed only by trained and authorised technicians in accordance with the safety instructions and the applicable accident prevention regulations!

Set-up, maintenance and repair work as well as troubleshooting may only be performed when the system is switched off.

Before repair and maintenance work

- Depressurise hydraulic system. Using a pressure gauge, check whether the hydraulic system is depressurised.
- When working, use only proper tools and replace worn parts, bolts, nuts, etc. with original spare parts only.
- Carefully identify components and pipelines before removing them.

6.3.2 Safe maintenance of electrical equipment

Work on the power supply may be performed by electricians only.

Danger!

Danger of death from electric shock!

- Before performing any repair, set-up or maintenance work, isolate the gantry press from the power supply via the main switch!
- Secure the gantry press to prevent any unintentional reactivation!
- Check that the machine is de-energised!
- Lock main switch and affix warning information signs!
- Also actuate EMERGENCY STOP pushbutton.

- Regularly check the electrical equipment of the gantry press.
- Immediately rectify loose connections and damaged cables.

Information!

When working on live parts, it is essential to request the assistance of a second person, as follows:

The 1st person works and

the 2nd person stands continuously by one of the Emergency Stop pushbuttons to actuate it in an emergency.

6.3.3 Safe maintenance of hydraulic equipment

Only persons with specific knowledge and experience in hydraulic systems may work on hydraulic equipment.

Warning!

Warning of serious physical injuries

There is a risk of serious physical injuries due to inappropriate behaviour, e.g. risk of crushing, loss of fingers or hand caused by uncontrolled movements of individual machine elements.

- Switch off main switch and secure to prevent unauthorised reactivation.
- Before starting repair work, depressurise system sections and pressure lines which are to be opened.

- Change hydraulic hoselines at appropriate intervals (6 years) even if there are no identifiable safety-relevant defects.
- Check hydraulic lines for chafe marks.
- If required, replace damaged hoses and eliminate the possibility of chafing.

6.3.4 Hydraulic oil

Check the oil level in the hydraulic unit once weekly, but always check it after any prolonged downtimes.

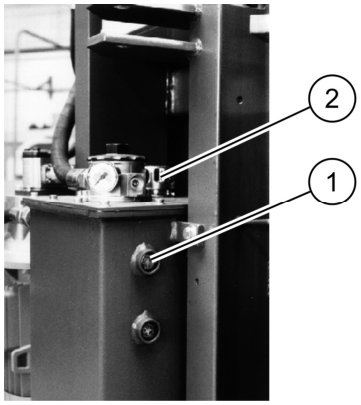
Caution!

Hydraulic oil may spurt out.

Hot hydraulic oil may cause burns.

Check the oil level in the hydraulic unit only when the gantry press is switched off.

Top up oil



- Retract all cylinders.
- Switch off the gantry press.

The upper oil level gauge glass (1) must be half full.

- Top up the oil through the tank filler neck (2).

Fig.6-9: Hydraulic unit

The oil grade for the gearbox and hydraulic oil matches DIN-51524/2 HLP 22

Strautmann Umwelttechnik GmbH recommends the following oil grades:

ARAL	Vitam GF 22
BP	Energol HLP 22
CASTROL	Hyspin AWS 22
ESSO	Nuto H 22
FINA	Hydran 22
Mobil Oil	DTE 11
Fuchs	Renolin MR 5 VG 22
SHELL	Tellus Öl 22
Texaco	Rando Oil HD B-22

Caution!

Water-polluting substances!

May pollute the ground and the groundwater or get into the sewage system!

Eliminate leaks immediately.

Wipe up leaking hydraulic oil immediately.

Dispose of the waste correctly

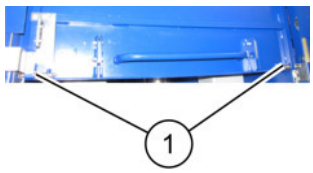
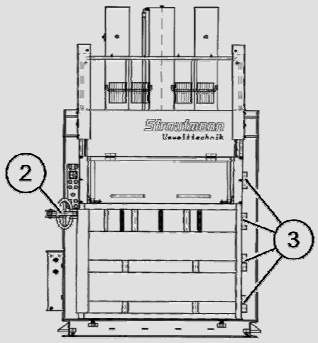
Caution!

Risk of slipping on leaking hydraulic oil

Immediately remove oil patches in the correct manner from accessible platforms and the operating area of the system!

6.4 Maintenance schedule

Interval	Component	Activities
Weekly	Gantry press	Check that all parts are in proper working condition

Interval	Component	Activities
		Clean the press chamber area
		Clean the pressing shield area
	Hydraulic system	Check the hydraulic system for signs of leaks.
		Check the hoses, replace them if necessary.
		Check the oil level, top up if necessary.
Annually	Hydraulic system	Check the oil level
		Check the filter system's filter contamination indicator, change the filter if necessary.
		Perform a leak test on the overall system
		Check the cylinders for signs of leaks and wear.
		Inspect the hoses, replace them if necessary.
		Clean the hydraulics
	Loading door guide system	Check the plastic slide rails.
		Check the guide clearance, adjust if necessary.
	Sliding door	Check the function of the index bolt (1) 
	Press chamber door	Clean and lubricate the spindle on the locking wheel Lubricate the hinges of the press chamber door 

6.5 Repairs

Repair work on the gantry press may only be performed by trained and authorised technicians of the plant operator. The instructions in this chapter are limited to important general information and instructions which must be followed for repair work.

Information!

The following applies to all extension and disassembly work:

- Identify parts which belong together.
- Identify and record installation location and place.

Following re-installation, retighten all mechanical connections
.

7 Disposal

7.1 Environmental protection

Caution!

Water-polluting substances!

May pollute the ground and the groundwater or get into the sewage system!

When performing any work on or with the system, observe the statutory obligations for the avoidance of waste and proper utilisation/disposal!

In particular, when performing installation, repair and maintenance work, ensure that water-polluting substances such as lubricating greases and oils do not pollute the ground or get into the sewage system!

These substances must be stored, transported, collected and disposed of in suitable containers!

When disposing of expendable or replacement material during maintenance or when shutting down the gantry press, it is essential to follow the applicable statutory regulations!

In particular, when performing installation, repair and maintenance work, ensure that water-polluting substances such as lubricating greases and oils, emulsions and liquids containing petrol do not pollute the ground or get into the sewage system!

These substances must be stored, transported, collected and disposed of in suitable containers!

7.2 Oil and oily waste, lubricating greases

Oil and oily waste as well as lubricating greases represent a high risk potential for the environment. Therefore, this waste is disposed of by specialist companies!

- Take this waste to the in-house disposal area which forwards it to specialist companies!

7.3 Plastics

The utilised/processed plastics must be sorted as far as possible. Plastic must be disposed of in accordance with statutory requirements.

7.4 Metals

Separate and dispose of different metals. Disposal must be implemented by an authorised company.

7.5 Electrical and electronic scrap

Electrical and electronic scrap!

Devices with this logo on the packaging or on the device must be disposed of separately. These devices must not be disposed of via the normal household refuse.

You are responsible for disposing of any electrical or electronic waste via the appropriate centres, e.g. the recycling depot.

7.6 Final shutdown

Check which materials can be recycled and then arrange for this to be done.

8 Appendix

- Declaration of Conformity
- Assembly drawings
- Parts list with recommended/identified spare parts
- Hydraulic diagram + parts list
- Circuit diagram + parts list
- Supplier documentation

8.1 Declaration of Conformity

8.2 Assembly drawings

8.3 Parts list with recommended/identified spare parts

8.4 Hydraulic diagram + parts list

8.5 Circuit diagram + parts list

8.6 Supplier documentation

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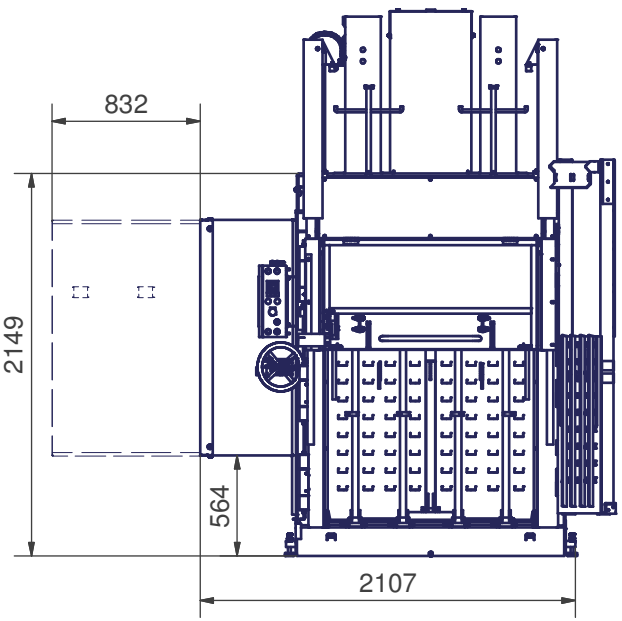

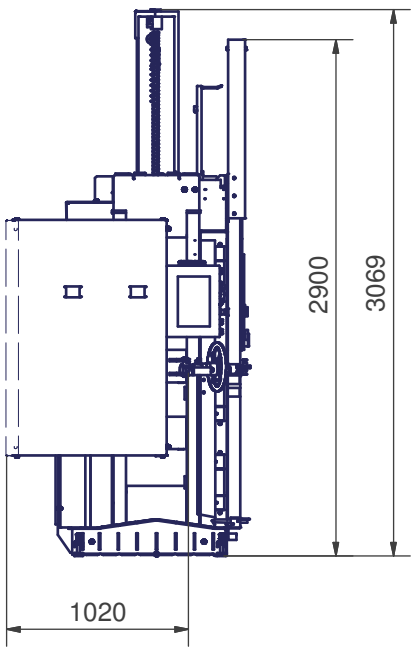

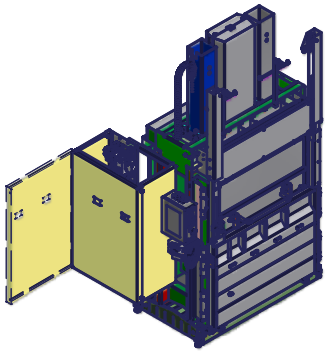

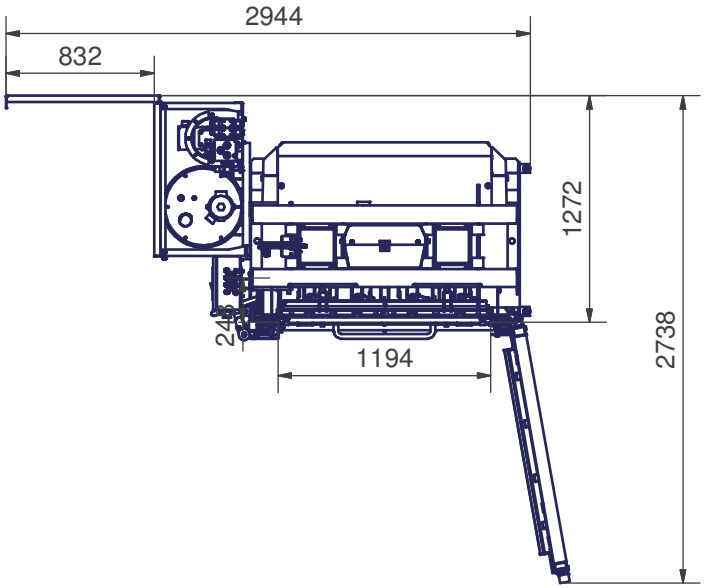

Ballenabmessung:
820 x 1200 x 1200 [LxBxH in mm]

Ballengewicht:
500 kg *

Kammerinnenmaße:
1190 x 790 x 1597 [BxTxH in mm]

Einfüllöffnung:
1200 x 600 [BxH in mm]

Presskraft:
700 KN

Presshub:
890 mm

Taktzeit:
ca. 30 sek.

Maschinengewicht:
2600 Kg

Motorleistung:
9,2 KW

Anschlußwerte:
400 V / 3 Phasen / 50 Hz

Optionen:

TopPlus®
QuickDoor®
PowerSave
HydroClose
CircleSystem®
BaleMatic®
ReineForce
EasyStrap
EasyBind

*...Ballengewicht ist materialabhängig

Allgemeintoleranzen ISO 2768-m

Oberflächen DIN ISO 1302

	Datum	Name
Gezeichnet	25.05.2009	Martin.Meyer
Kontrolliert		
Norm		

Status	Änderungen	Datum	Name

Maßstab: 1:30 | Masse:

Typ: PP1208Plus70

PP 1208 PLUS 70 - 700KN

Strautmann Umwelttechnik
Ihr Spezialist für Entsorgungstechnologie

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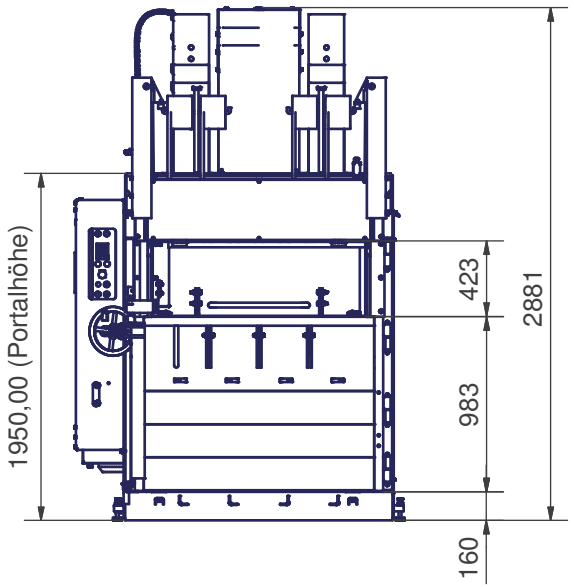

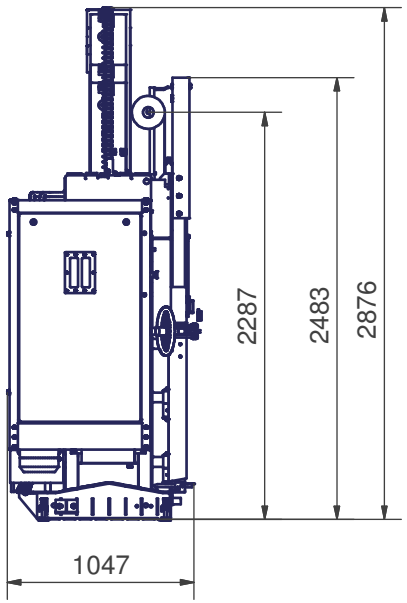

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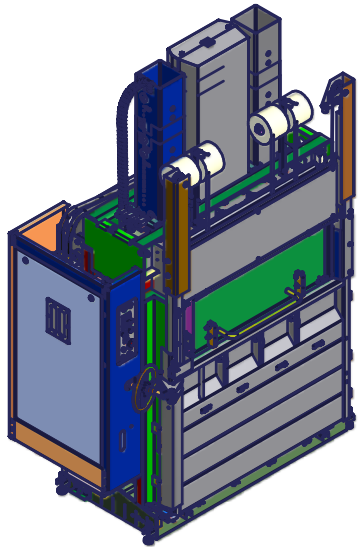

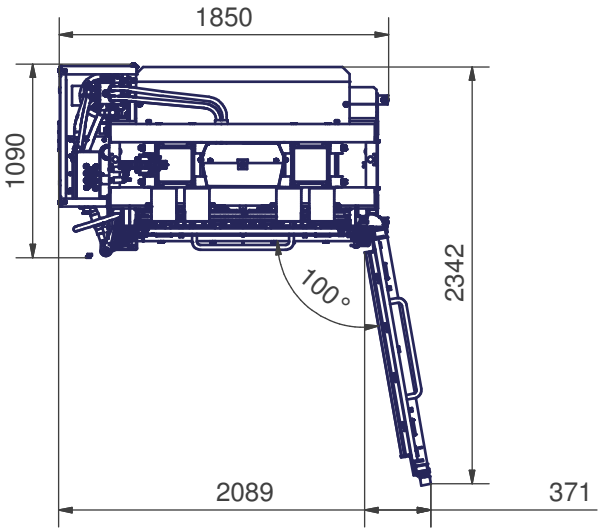

Ballenabmessung:
1200 x 1100 x 730 [LxBxH in mm]

Ballengewicht:
bis zu 350 kg *

Kammerinnenmaße:
1200 x 700 x 1397 [BxTxH in mm]

Einfüllöffnung:
1190 x 400 [BxH in mm]

Presskraft:
580 KN

Presshub:
890 mm

Taktzeit:
ca. 37 sek.

Maschinengewicht:
2300 Kg

Motorleistung:
4 KW

Anschlußwerte:
400V / 3 Phasen / 50 Hz

*...Ballengewicht ist materialabhängig

Allgemeintoleranzen ISO 2768-m

Oberflächen DIN ISO 1302

Status	Änderungen	Datum	Name

	Datum	Name
Gezeichnet	21.01.2009	Martin.Meyer
Kontrolliert		
Norm		

Maßstab: 1:30

Masse:

Typ:

PP1207 PLUS - 195

Strautmann Umwelttechnik
Ihr Spezialist für Entsorgungstechnologie

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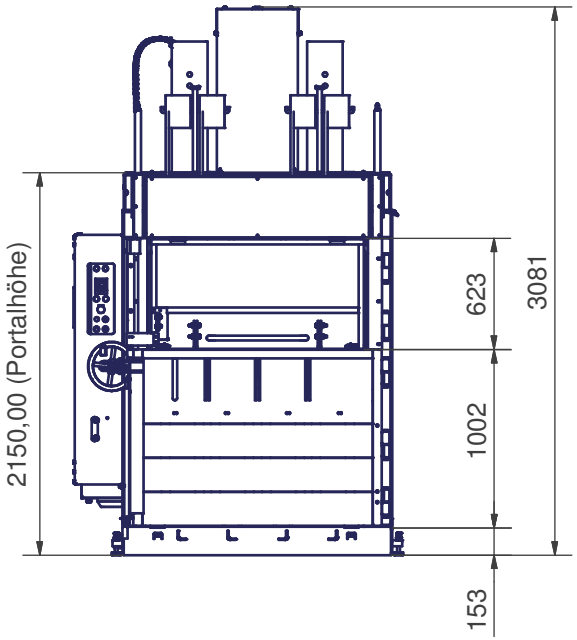

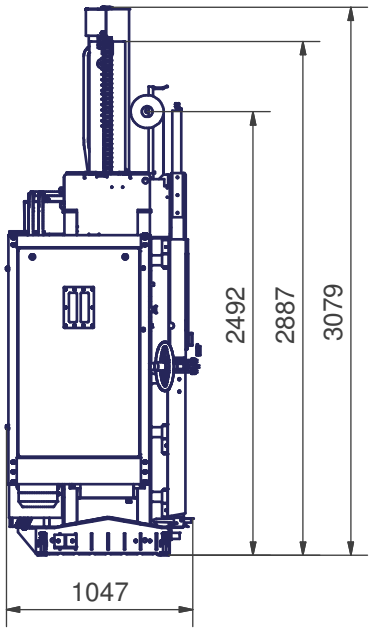

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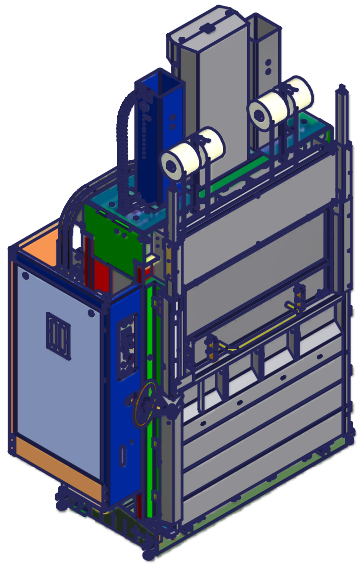

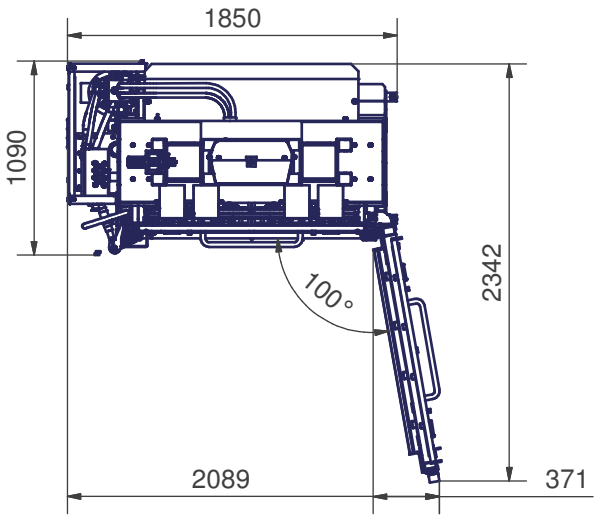

Ballenabmessung:
1200 x 1100 x 730 [LxBxH in mm]

Ballengewicht:
bis zu 350 kg *

Kammerinnenmaße:
1200 x 700 x 1397 [BxTxH in mm]

Einfüllöffnung:
1190 x 600 [BxH in mm]

Presskraft:
580 KN

Presshub:
890 mm

Taktzeit:
ca. 37 sek.

Maschinengewicht:
2400 Kg

Motorleistung:
4 KW

Anschlußwerte:
400V / 3 Phasen / 50 Hz

*...Ballengewicht ist materialabhängig

Allgemeintoleranzen ISO 2768-m

Oberflächen DIN ISO 1302

	Datum	Name
Gezeichnet	02.07.2009	Martin.Meyer
Kontrolliert		
Norm		

Status	Änderungen	Datum	Name

Strautmann Umwelttechnik
Ihr Spezialist für Entsorgungstechnologie

Maßstab: 1:30

Masse:

Typ:

PP1207 PLUS - 215

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A3

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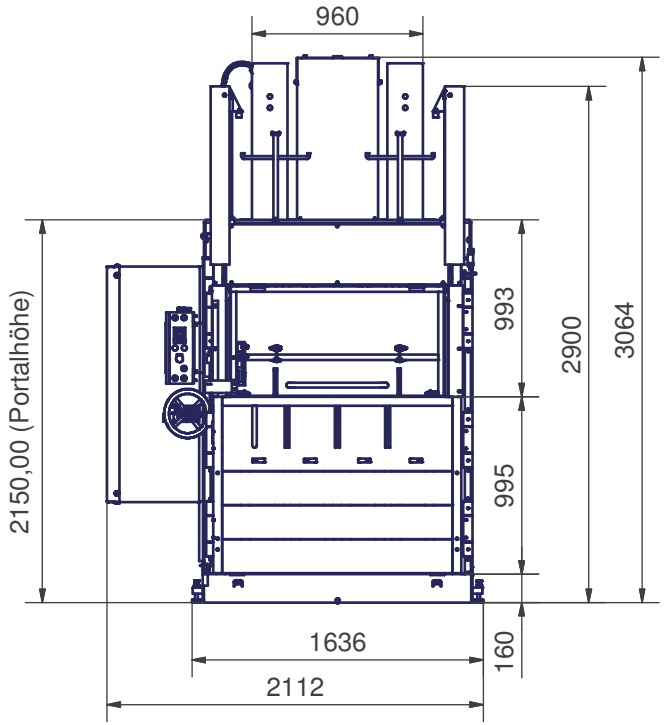

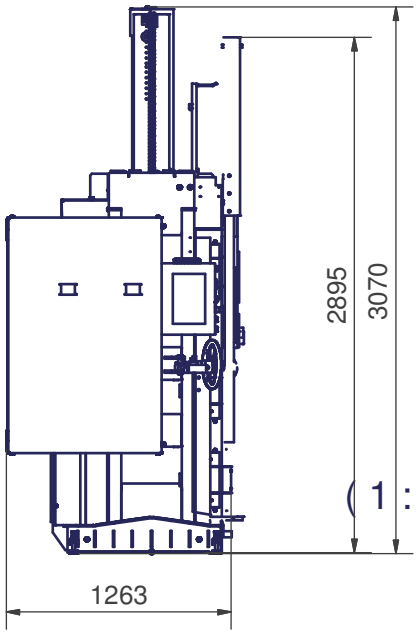

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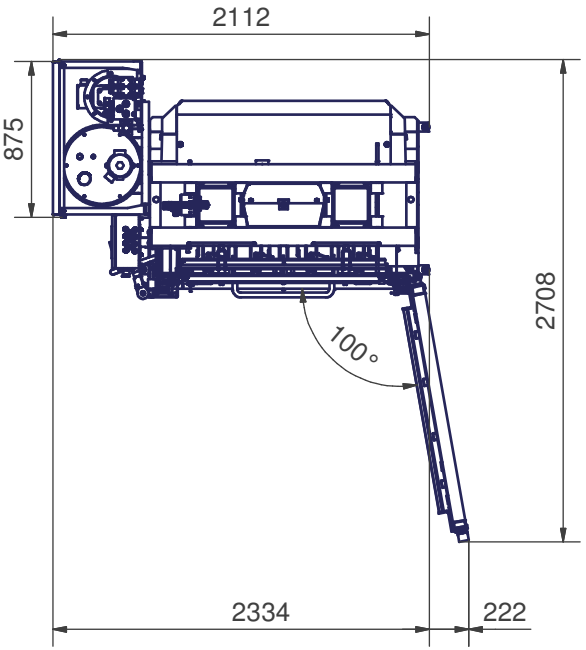
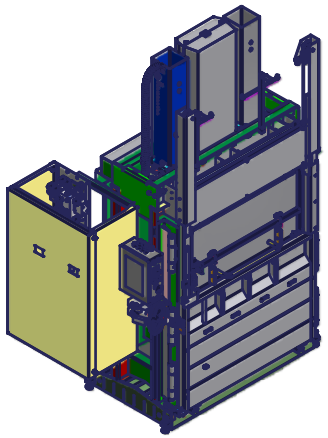


Tabelle		
Beschreibung	Werte	Dimension
Kammerinnenbreite	1190	mm
Kammerinnentiefe	790	mm
Kammerinnenbreite	1571	mm
Transporthöhe (abgesenkt)	2150	mm
Ballenhöhe	820	mm
Ballenbreite	1200	mm
Ballentiefe	1200	mm
Einwurföffnung	1200 x 600	mm x mm
Leergewicht	2500	kg
Presskraft	580	kN
Presshub	890	mm
Motorleistung	4	kW
Umdrehungen	3000	U/min
Taktzeit	34	sec
Spannung	400	V
Phasen	3	
Frequenz	50	Hz
Absicherung	16	A



Pressschildführung
Typ: **Strautmann TopPlus**

Mikroprozessorsteuerung
Typ: **Strautmann MicroLogic**

Ballenauswurfsystem
Typ: **Strautmann BaleMatic**

*...Ballengewicht ist materialabhängig

Allgemeintoleranzen ISO 2768-m

Oberflächen DIN ISO 1302

Maßstab: 1:30

Masse:

Typ: PP 1208 Plus

	Datum	Name
Gezeichnet	17.02.2010	Martin.Meyer
Kontrolliert		
Norm		

PP1208 Plus - 215

Strautmann Umwelttechnik
Ihr Spezialist für Entsorgungstechnologie

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Status	Änderungen	Datum	Name

EC Declaration of Conformity

Design: **Gantry press**

Model: **PP 1207Plus, PP 1208Plus, PP1208L and Plus 70**

Machine no.: _____

has been developed, designed and manufactured in compliance with the EC Directives
2006/42/EC Machines
2004/108/EC Electromagnet. Compatibility
97/23/EC Pressure equipment
- the protection goals of the **2006/95/EC Low-Voltage Directive** have been observed in accordance with Appendix I, No. 1.5.1 of the Machinery Directive -
under the sole responsibility of

Company: **Strautmann Umwelttechnik GmbH**

Auf dem Haarkamp 22

49219 Glandorf, Germany

The following harmonised standards are applied:

EN ISO 12100	Safety of Machines, Equipment and Plant
EN ISO 13857	Safety of Machines; Safety Distances - Upper and Lower Limbs
EN 693	Hydraulic Presses; Safety
EN 982	Safety of Hydraulics
EN 61000-6-4	EMC Emitted Interference
EN 61000-6-2	EMC Interference Immunity
EN 60204-1	Safety of Electrical Engineering

A complete list of the applied standards, directives and specifications is available from the manufacturer. Technical documentation is available in full.
The operating instructions which belong to the single chamber baling press/multi-chamber baling press are available.

Person responsible for documentation: Mr Martin Meyer

16.07.2010

Strautmann Umwelttechnik GmbH
Auf dem Haarkamp 22
49219 Glandorf
Telefon: +49 (0)5426-807776

Glandorf, 22.03.2010

X

Martin Meyer
Projektingenieur