



3 Operating and Optical Control Elements

Main switch

The main switch is used to switch the power ON and OFF. The switch cabinet can only be opened when the main switch is set to "O" position.

Touch key "CONTROL ON"

The touch key/button "CONTROL ON" is used to switch on the control power at the beginning of the work process and after each emergency shut-down.

Touch key "OPEN PRESS"

The press is open as long as the touch key is depressed. If the press was set to press pressure, it will open automatically when the switch is touched until the press table has moved its lowest position.

Touch key "CLOSE PRESS"

The press closes as long as the touch key is depressed. If the press is closed and the hydraulic press pressure is above the take-over pressure of 30 bar / 435 psi, the pressure built-up is automatic up to the set pressure. The touch key need not be depressed any longer.

Operating elements - Heating

Controls

One electronic temperature control is installed in each heating platen which allows the required temperature to be set. The heating can be switched ON or OFF by operating a luminous switch.

For specific instructions for different temperature settings please see Section 2.8 "Heating".

Pressing power control (see 3.1)

The pressing power control is used for setting the required operating pressure. When the set pressure is reached, the pressure switching device automatically switches off the motor of the hydraulic system.

See also Section 2.4 "Hydraulic System"

Pressure chart

The pressure chart is used to obtain the appropriate pressure value for the setting on the pressure switching device. These values depend on area and specific pressure.



Button „emergency stop”

By activating one emergency stop button each process procedure is interrupted and the press stops in its current position.

The control is switched off and the control lamp “failure emergency stop” is on.

See also Section 2.8 “Safety and control system”

Button „reset failure”

The button „reset failure” is used to switch on the control power at the beginning of the work process and after each emergency shut-down.

In order to continue working the emergency stop button has to be unlocked by pulling and the button "reset failure" has to be pressed.

When the indicator "ready for operation" is on, the press is ready for operation.

Operating and control elements for optional accessories

Time relays – pressing time (see 3.2)

Time relays are used for the setting of pressing time. When the pressing time is achieved, the press opens automatically.

This function can be activated with the rocker switch “With/without press time”.

Additional temperature control (daylight platen)

An additional temperature control is allocated to each daylight platen.

3.1 Manual Pressing power control

3.1.1 Display and operating elements

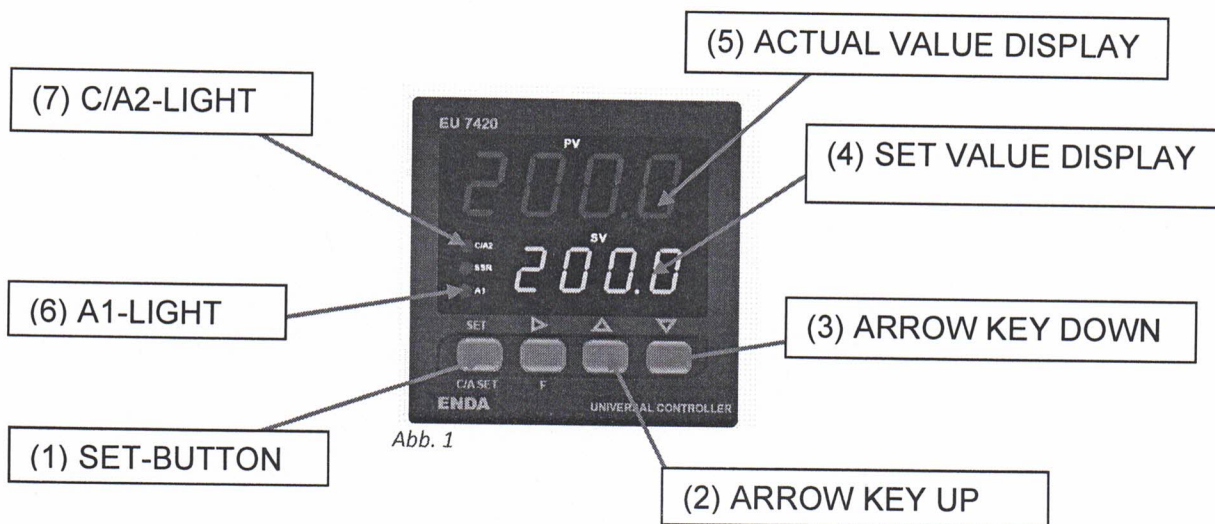
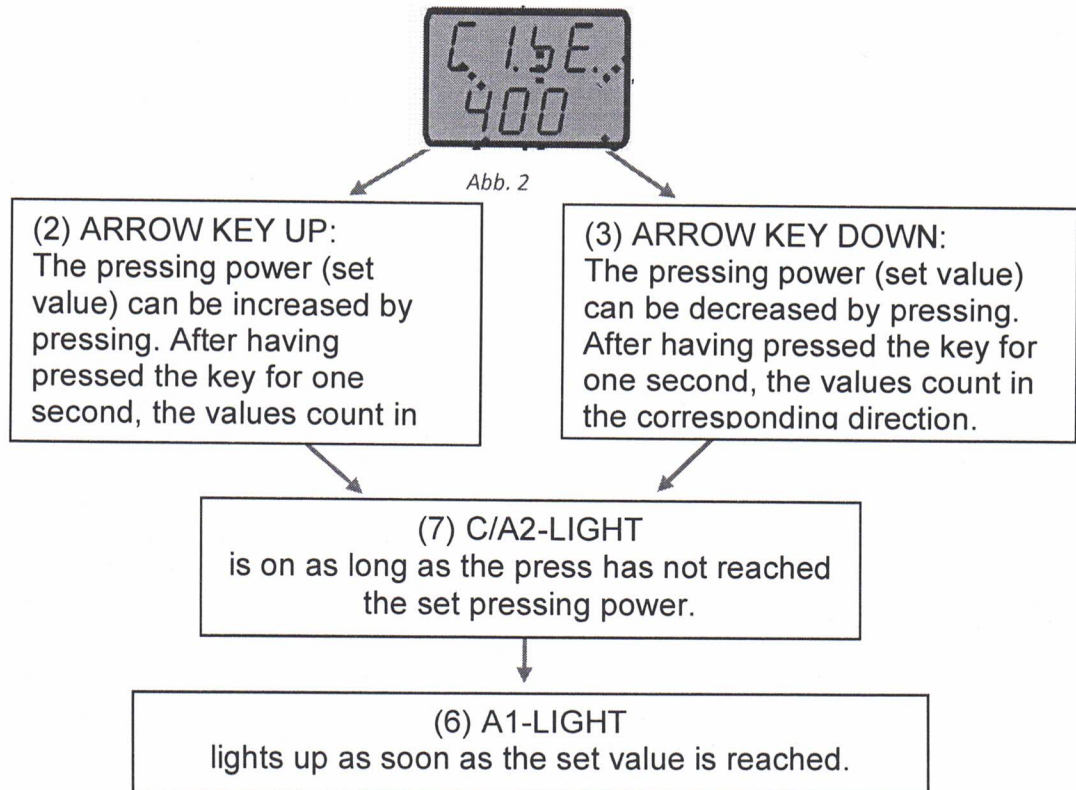


Abb. 1

- (1) The set value can be changed by the SET-BUTTON.
(See 3.1.2 setting the required pressure)
- The buttons (2) and (3) are used for increasing and decreasing the required pressure.
(See 3.1.2 setting the required pressure)
- (4) The set value display indicates the pressure that is currently set.
- (5) The actual value display indicates the actual pressure.
- The lights (6) and (7) are control lamps.
(See 3.1.2 setting of the required pressure)

3.1.2 Setting the required pressure

→ (1) Press the set button once until the set value display is flashing. (image 2)

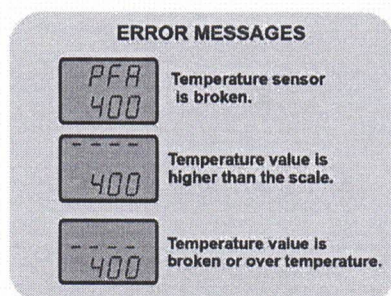


→ After 3 seconds the display returns to the initial display. (See image 1)
The set pressing power is automatically saved.

NOTE:

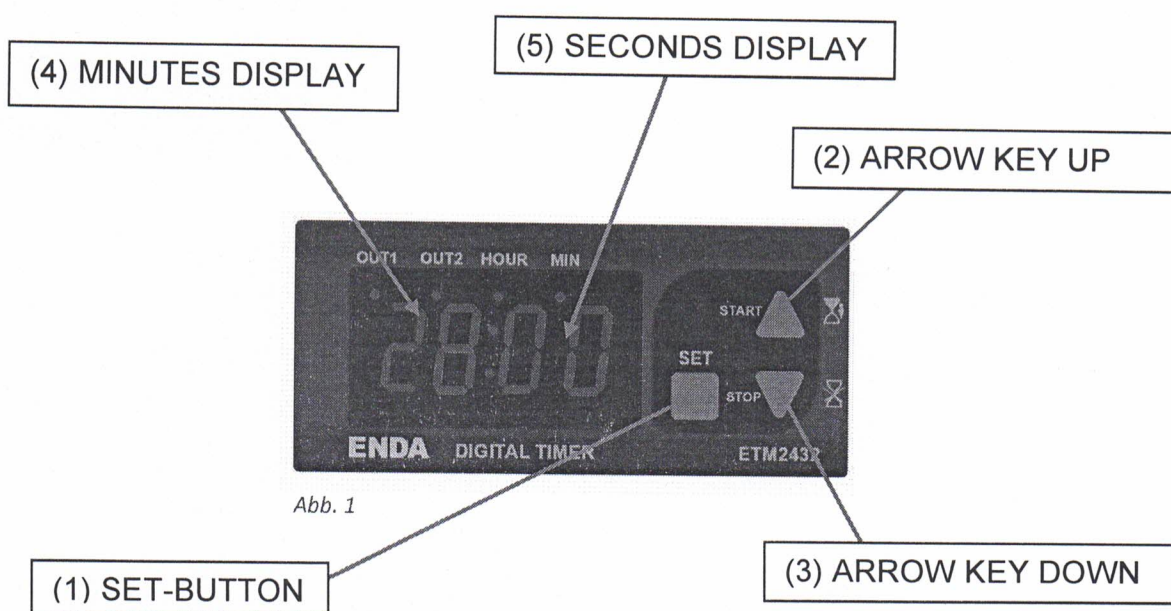
The alarm value cannot be changed by the user. It is pre-programmed and protected by password!

3.1.3 Error messages



3.2 Manual for time relay (Option)

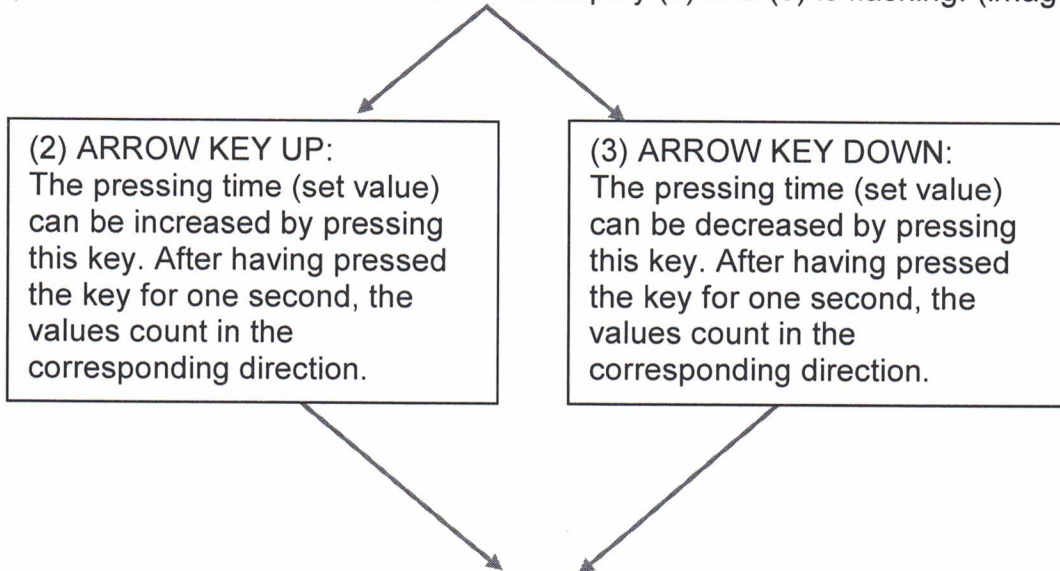
3.2.1 Display and operating elements



- (1) The set value can be changed by the SET-BUTTON.
(See 3.1.2 setting the required pressing time)
- The buttons (2) and (3) are used for increasing and decreasing the required time.
(See 3.1.2 setting the required pressing time)
- Display (4) and (5) indicates the remaining pressing time.

3.2.2 Setting the required pressing time

→ (1) Press the SET-button once until the display (4) and (5) is flashing. (image 1)



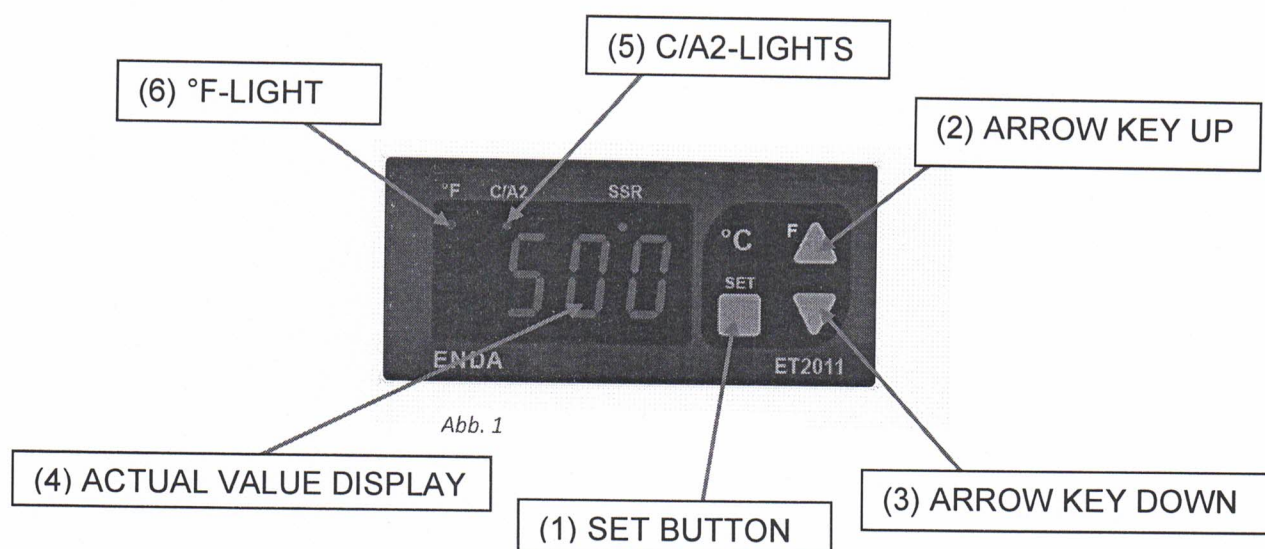
→ After 10 seconds or new pressing of the set button the display returns to the initial display. The required pressing time is automatically saved (See image. 1)

→ Only if the pre-set pressing power is reached the time of the time control counts down.

→ Changes of the time units are protected by password.

3.3 Manual temperature control

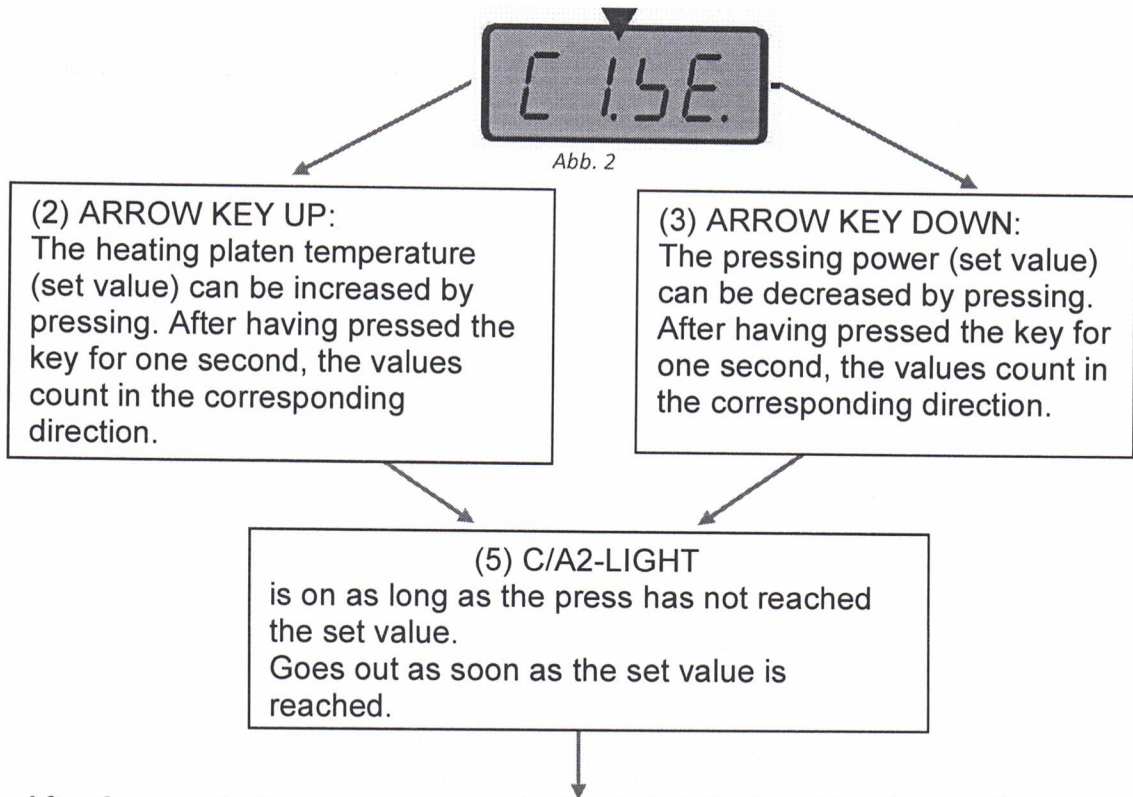
3.3.1 Display and operating elements



- (1) The set value can be changed by the SET-BUTTON.
(See 3.3.2 setting of the required temperature)
- The buttons (2) and (3) are used for increasing and decreasing the required temperature.
(See 3.1.2 setting of the required temperature)
- (4) The actual value display indicates the current temperature.
- The light (5) is a control lamp.
(See 3.3.2 setting of the required temperature)
- (6) The control light is only on if the temperature unit "Fahrenheit" is set.
(See 3.3.2 setting of the required temperature)

3.3.2 Setting of the required temperature

→ (1) Press the set button once until the set value display is flashing. (image 2)

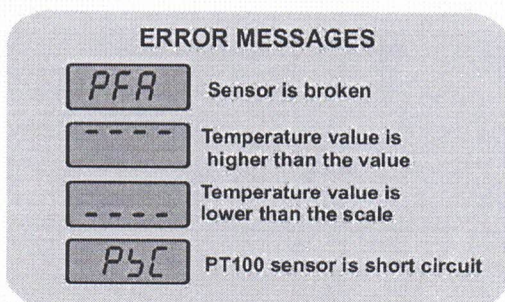


→ After 3 seconds the display returns to the initial display. (See image 1)
The set heating platen temperature is automatically saved.

NOTE:

The alarm value cannot be changed by the user. It is pre-programmed and protected by password.

3.3.3 Error messages





4 Faults / Trouble shooting

Fault	Possible cause	Trouble shooting
Press does not close	<ol style="list-style-type: none"> 1. emergency stop button is pressed (control light ON) 2. Pressing power control set to "O" 3. ABS System activated (optional) 4. Hydraulics defective 	<ol style="list-style-type: none"> 1. Unlock button and reset 2. Set pressure to min. 10 bar / 145 psi 3. Manual emergency handling of the hydraulic valve to lower table 4. Ask for customer service
Press does not open	<ol style="list-style-type: none"> 1. emergency stop button is pressed (control lamp ON) 2. Hydraulics defective 	<ol style="list-style-type: none"> 1. Unlock button and reset 2. Ask for customer service
Mechanical safety door does not open	<ol style="list-style-type: none"> 1. compressed air is not connected 2. pressure regulator not set correctly 	<ol style="list-style-type: none"> 1. connected compressed air 2. set pressure
Pneumatic system leaking	<ol style="list-style-type: none"> 1. Screw connections have loosened 	<ol style="list-style-type: none"> 1. tighten screw connections
Table "rocks" on upward movement	Air in the hydraulic system	Ventilate hydraulic cylinder
Press does not open or close evenly	<ol style="list-style-type: none"> 1. Pin between toothed rack and shaft is sheared off 2. Hydraulic defect 	<ol style="list-style-type: none"> 1. Replace pin 2. Contact customer services
Pump does not switch off during pressure built-up	Operating pressure is set too high on the pressing power control	Lower the setting
Pump unusually noisy	Too little oil in the hydraulic system	Top up hydraulic oil
Heating plate does not heat up	<ol style="list-style-type: none"> 1. Fuse defective 2. Thermostat defective 3. Heating wire is broken off 	<ol style="list-style-type: none"> 1. Check fuses 2. Contact customer services 3. Contact customer services
Heating plate overheats	<ol style="list-style-type: none"> 1. Fuse defective 2. Thermostat defective 3. Wrong cover 	<ol style="list-style-type: none"> 1. Check fuses 2. Contact customer services 3. Add blank pieces
Oil leak on the cylinder	Cylinder seals defective	Exchange seals
Hydraulic system leaks	Screw connections are loose	Adjust screw connections

5 Maintenance, Greasing and Servicing

5.1 General Safety Regulations

- Maintenance and Servicing work must only be carried out by specifically trained and authorised staff.
- All maintenance and servicing work must only be carried out under adherence to the safety instructions in chapter 1.1.
- Danger of accidents through pipes under pressure (hydraulics)
 - Before all maintenance work on the hydraulic system the pipes must not be under pressure.
 - Set main switch to "0" and secure against accidental switch-ON.
- Danger of accident through electric power
 - When working on the electrical system, set main switch to "0" and secure against switch-ON.
 - Disconnect power supply and attach label.
- Danger of accident through missing protective devices
 - Protective devices must be replaced before operating the machine.
 - Check for perfect functionality,
- Danger of accident through lowering table
To avoid accidental lowering, the table must be safely fixed into position before work is carried out under the table.
- Old greasing materials, oils, cleaning rags must be removed in accordance with the current regulations.

5.2 Hydraulic Oil

Hydraulic oil must be used in accordance with DIN 51524 viscosity class ISO VG 46.



Do not extinguish the Hydraulic oil with water



5.3 Maintenance Intervals

For perfect functioning of the machine depends on adherence to the maintenance intervals. Such intervals apply to normal usage of the machine (one shift operation). If the usage of the machine is any different, the intervals must be shortened.

Maintenance Interval	Machine Part	Action
daily before work begins	Inner / outer pull cord	- Check function by pulling - Check safety device for mechanical damage
Monthly	Hydraulic power pack	Check oil level (only possible in lowest position of the press table)
	Toothed rack	Wipe with oil
Every half year	Eccentric pin	Grease. No clearance between pin and gear rack.
	Hydraulic cylinder	Clean and cover with a light film of oil

The machine must be kept in clean condition in order to guarantee safe and technically perfect functioning. To achieve this, the machine must be cleaned from dust, dirt etc. at reasonable intervals.

If you have any further questions regarding maintenance and cleaning work, please contact our customer services.

We recommend that you have the machine checked annually by our customer services.

6 Transport / Installation / Connection

Transport, installation and the trial run can be carried out by our customer services department on request.

6.1 General Safety Regulations

The transport instructions give advice on safe transportation of the machine as well as for its installation and connection.



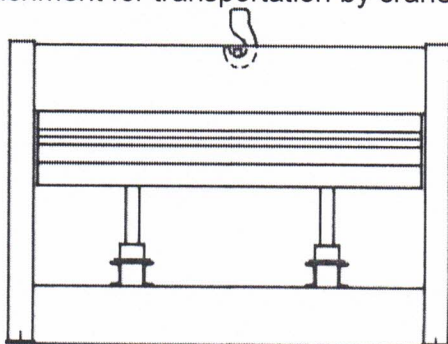
During transportation of loads accidents can occur through sliding, tipping or falling of the machine.

- Observe transport advice, safety advice, accident prevention regulations as well as local regulations!
- Make sure that the transport path is sufficiently wide to avoid danger from squashing!
- Observe legally permitted transport weight restrictions by the appropriate authorities.
- Transport the machine with utmost care!
- Select suitable transport and lifting gear. The machine weight can be found in the data leaflet!
- If transporting on heavy load rollers, observe sufficient load capacity for the base!
- Never step underneath suspended loads: **Danger of life !!!**

6.2 Transport

On arrival check the machine immediately for completeness and for transport damages. Any complaint must be reported within the stipulated time either to us or the transport agent.

Attachment for transportation by crane.





6.3 Installation

Make sure the necessary rooms, connections and aids are available.

- The room where the machine is to be installed must be clean and dry.
- The floor must be suitably strong to hold the weight. The weight of the machine is stated in the data leaflet.
- The machine must not be operated at a room temperature below 10° C / 50 °F.
- Make sure that the machine is accessible for safe operating and maintenance.

Extendable attachments (optional)

If the press is delivered with extendable attachments, a safety gap of >0.5 m / 19,7 inch must be allowed on the outermost edge of the attachment in relation to the fixed objects.

Four base plates are supplied which can be found in the upper part of the press. These plates must be laid under the feet of the machine stand. With the aid of adjusting screws on the feet and the aid of a spirit level which must be laid on the marked surface of the cylinder mats, the press must be perfectly levelled.

The paper covering on the pistons must be removed and disposed of according to regulations. The pistons must be well cleaned so that no foreign objects can enter the cylinders which could damage the gliding surfaces or seals.

The adhesive band must be removed from the swivel key pad.

6.4 Power supply

The electrical power supply is the only power supply needed for the machine.

6.4.1 Electrical connection

Safety advice

- Electrical connections must only be carried out by an expert.
- Local regulations and advice must be adhered to.
- Work on the electrical system may only be carried out when the power is disconnected.
- Incorrect or faulty connections can cause damage through short circuit and damage electrical elements.
- The data in the circuit diagrams must be observed.

Connection

The network supply must be secured by observing the data in the electrical circuit diagram.

The connection of the press must be carried out in accordance with the electrical circuit diagram.

Method

1. Lock network supply and safeguard against switch-On!



Danger of life through electrical current.
The supply cable must be disabled!

2. Allow sufficient cable and pull the network cable through the opening in the switch cabinet, secure by a slackening device.
3. Secure the protective conductor PE on green-yellow clamp.
4. Secure supply cables L1, L2, L3 in the marked clamps. (Zero conductor N is not necessary).
5. Check for correct connection.
6. Close switch cabinet.

6.5 Initial start-up

Before a first operation the following checks must be made:

- The machine is correctly installed and levelled.
- Support wood (press table) or table safety devices are removed.
- Energy supply is connected in accordance with regulations.
- Pull cord switch is unlocked and the cord has the correct tension.

With the aid of the chapters on control and indicator elements the further method is as follows:

1. Switch on main switch
2. Press touch key "CONTROL ON"
3. Press touch key "OPEN PRESS" - the press opens
4. Set the pressing power control to 50 bar / 725 psi.
5. Press touch key "CLOSE PRESS" - table moves upwards at approx. 24 mm/s / 1 inch/s.
If the table moves considerably slower upwards, the rotational direction of the motor is wrong. The poles must be exchanged.
6. Press touch key "OPEN PRESS" - the press opens.
7. Remove protective cardboard from the heating plates and dispose appropriately.



6.6 Trial run of heating plates

In order to eliminate possible residual stress in the heating plates we recommend a trial run of the heating plates under pressure and temperature.

Proceeding

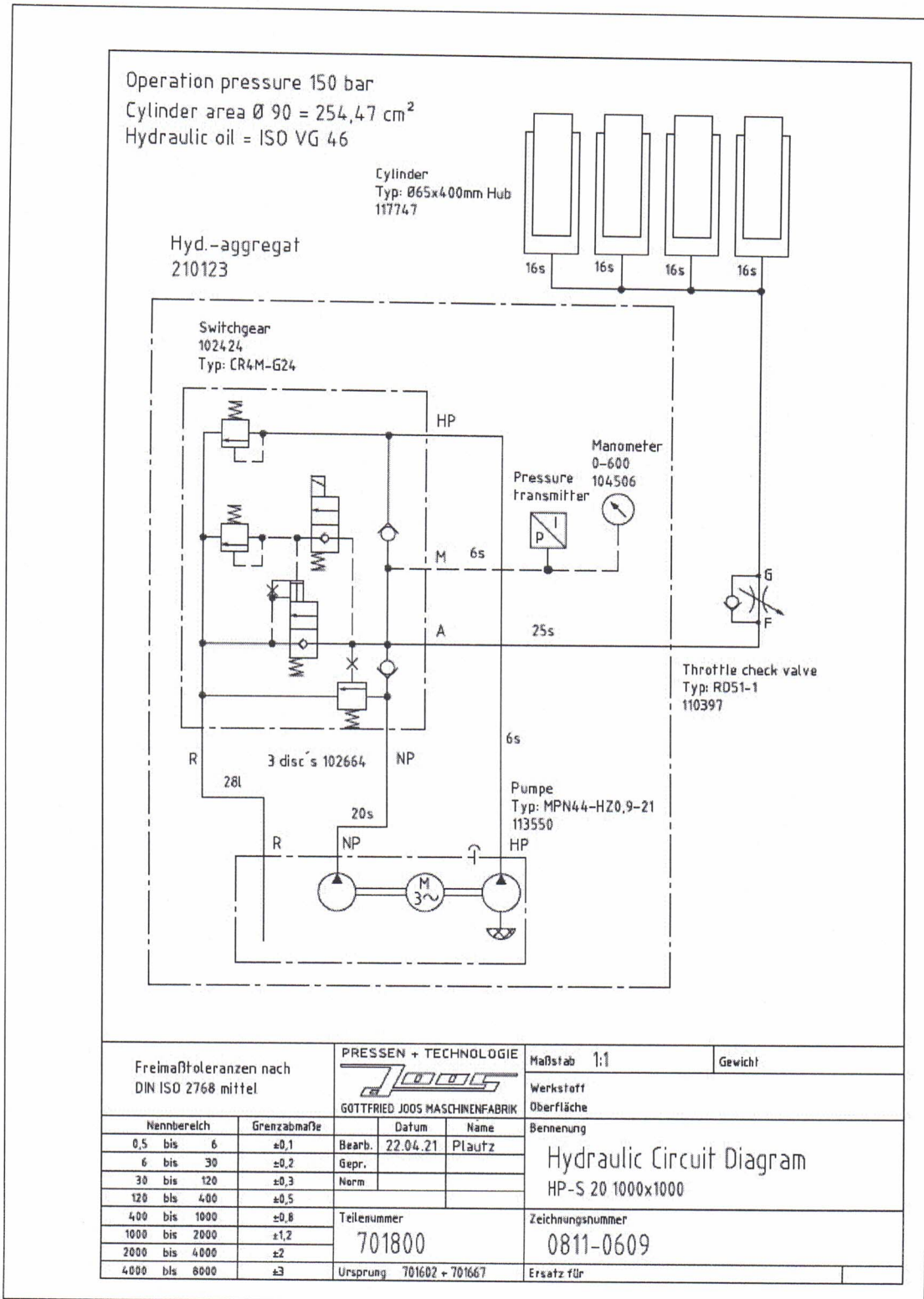
1. Cover the entire surface of the press (for example with chip board).

Attention: On principle the press should be heated up without separators and using a thin chipboard or hardboard sheet in between, so that suction of the heating plates is avoided.

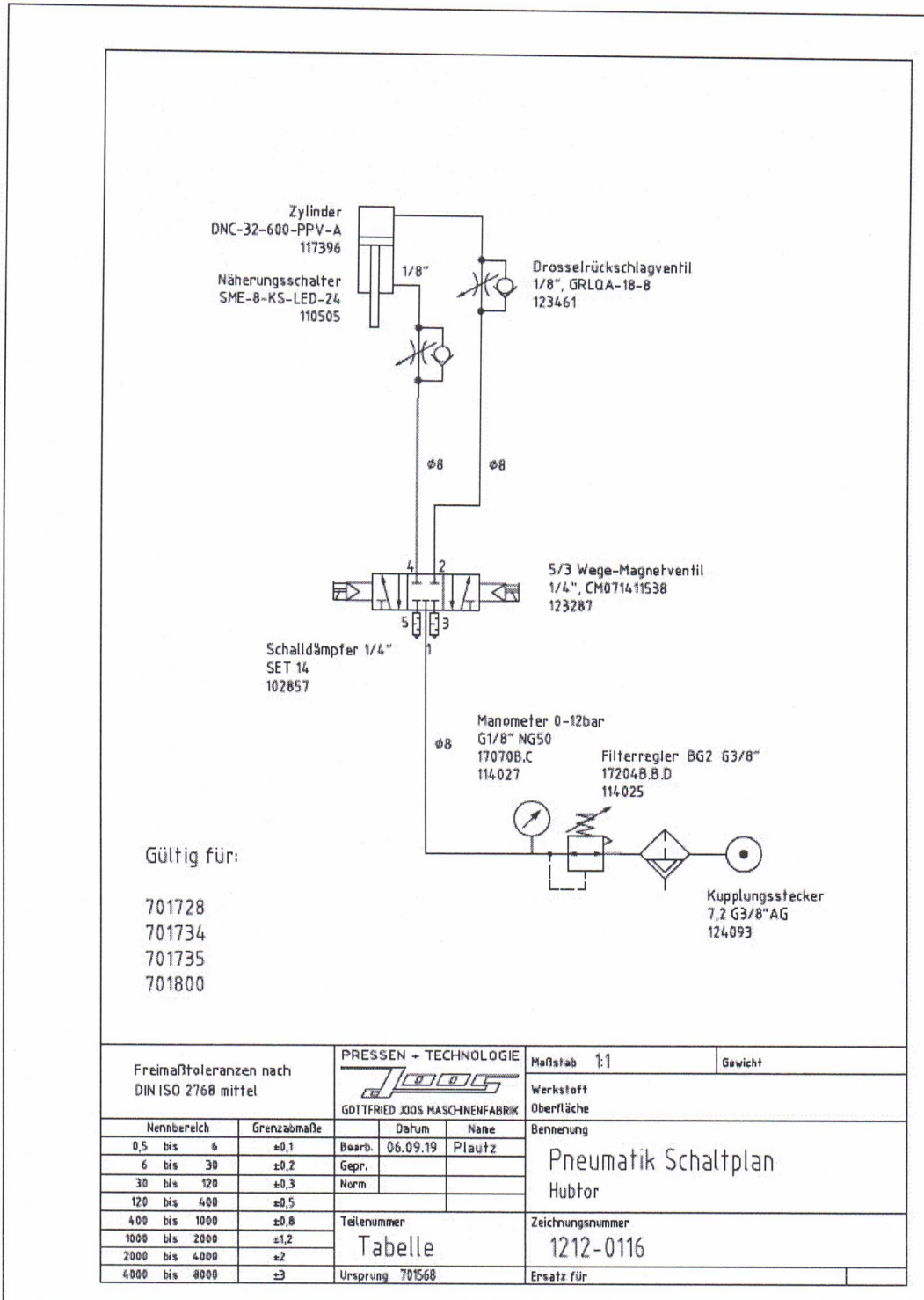
2. Set the pressing power control to 50 bar / 725 psi.
3. Press touch key/button "CLOSE PRESS" - the press closes and builds up pressure.
4. Switch on heating and set temperature controls to 120° C / 248°F.
5. When the temperature is reached, set the pressure switch device to the maximum allowable operating pressure (data in hydraulic circuit diagram and on the model label) - pressure builds up until the maximum pressure is reached.
6. Leave the press to stand in this condition for approx. 3 - 4 hours.
7. Switch off heating
8. Switch off main switch. The press is under pressure and is best allowed to cool down overnight.

This process can be repeated from time to time if necessary.

7 Hydraulic Circuit Diagram

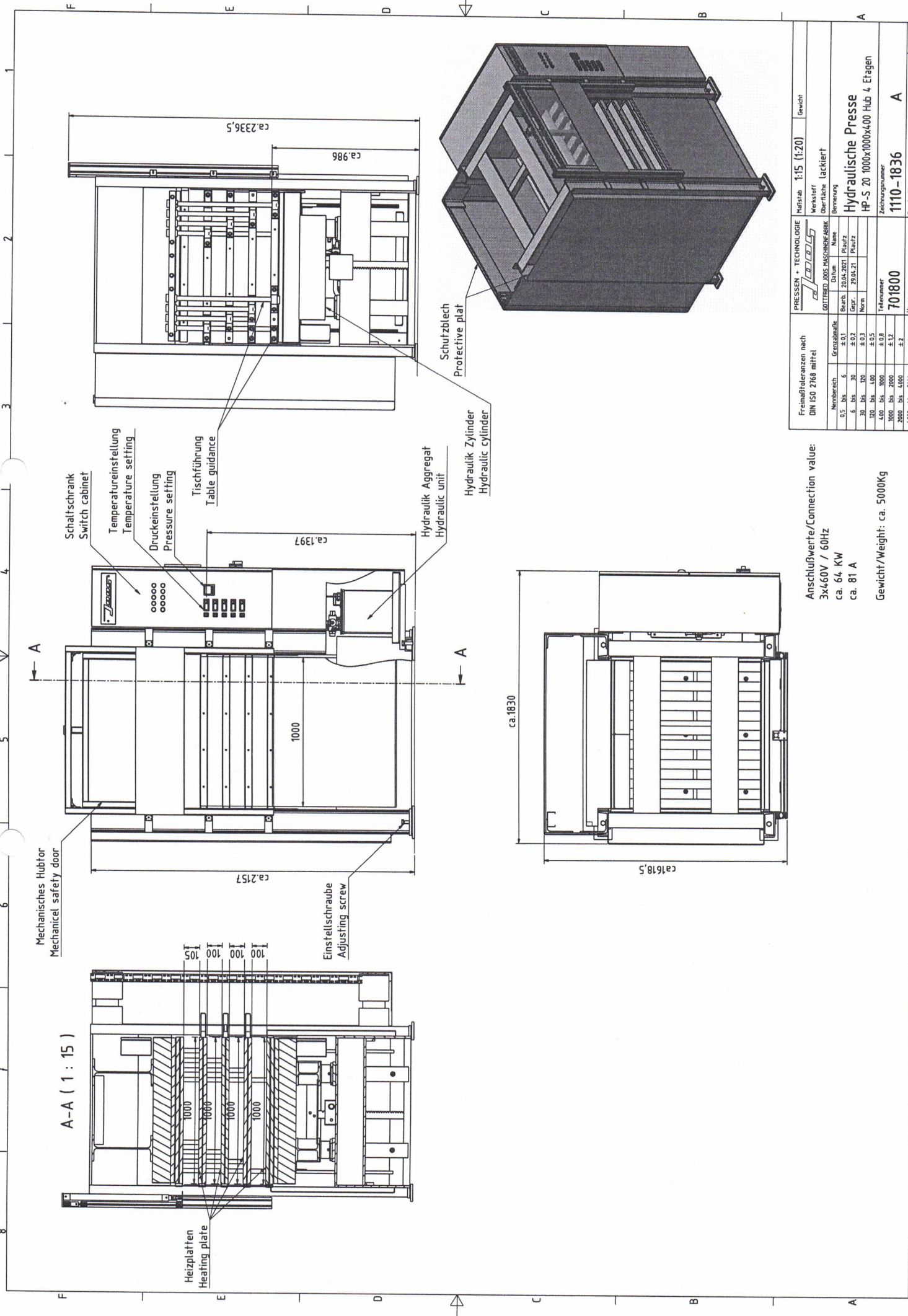


8 Pneumatic Circuit Diagram





9 Electric Circuit Diagram



PRESSEN + TECHNOLOGIE		Maßstab 1:15 (1:20)		Gewicht	
GOTTFR. JOS. HASCHINGER & CO.		Werkstoff		Oberfläche lackiert	
Name		Datum		Benennung	
HP-S 20 1000x1000x400 Hub + Etagen		20.04.2021		Hydraulische Presse	
Zeichnungsnummer		Gepr. 29.04.21		HP-S 20 1000x1000x400 Hub + Etagen	
701800		Norm		1110-1836	
Foliennummer		Ursprung		A	
701800		Ursprung		A	

Freimaßtoleranzen nach DIN ISO 2768 mittel

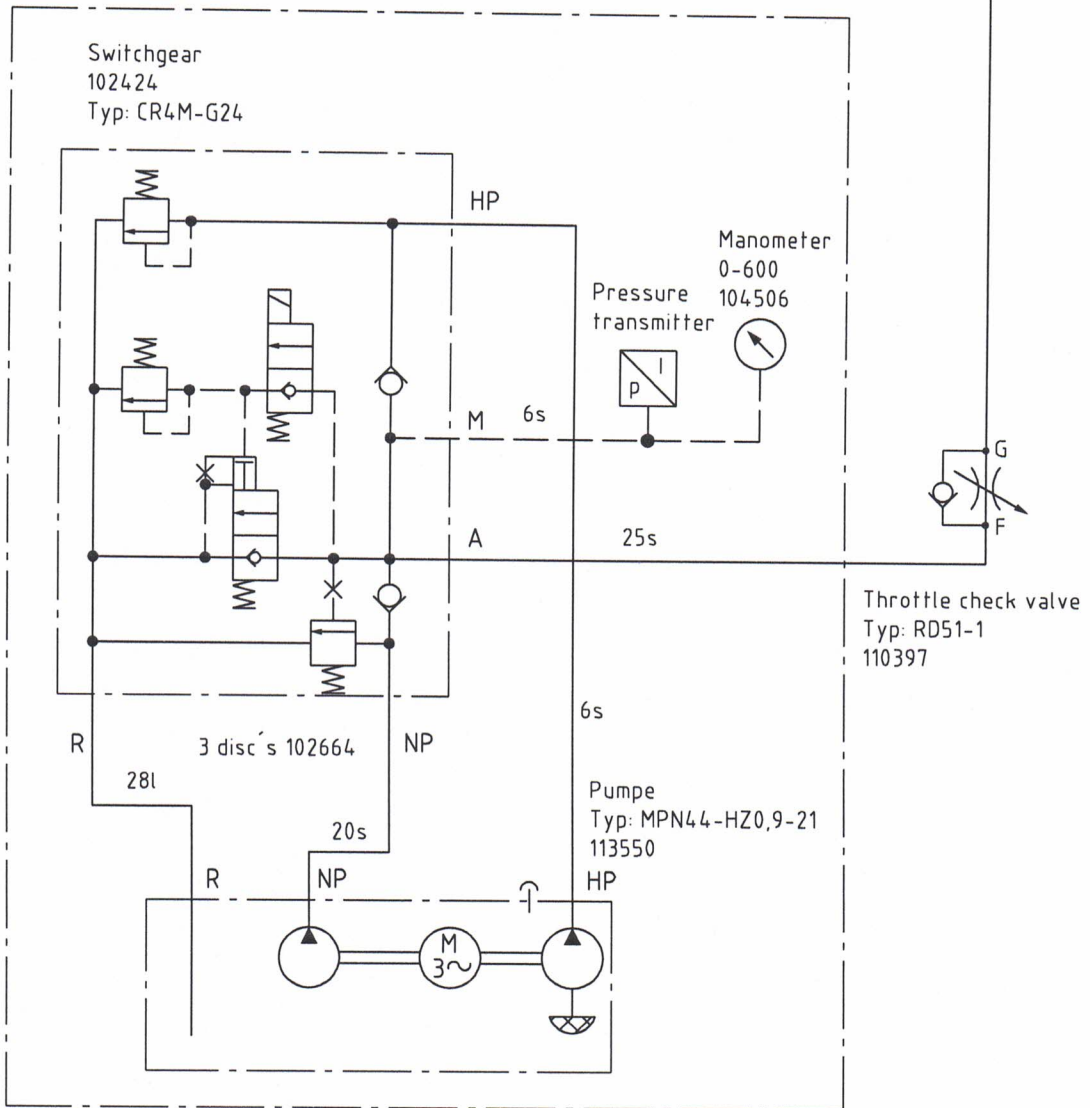
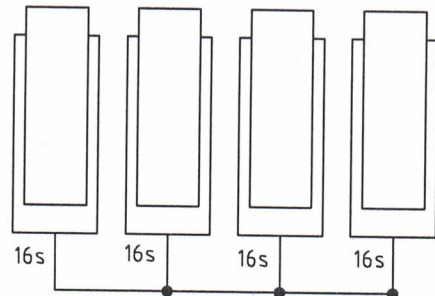
Nennbereich	Größenstufe	±0,1	±0,2	±0,3	±0,5	±0,8	±1,2	±2	±3
0,5 bis 6	6								
6 bis 30	30								
30 bis 120	120								
120 bis 400	400								
400 bis 1000	1000								
1000 bis 2000	2000								
2000 bis 4000	4000								
4000 bis 8000	8000								

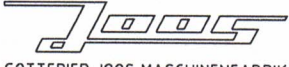
Anschlußwerte/Connection value:
 3x460V / 60Hz
 ca. 64 kW
 ca. 81 A
 Gewicht/Weight: ca. 5000Kg

Operation pressure 150 bar
 Cylinder area $\varnothing 90 = 254,47 \text{ cm}^2$
 Hydraulic oil = ISO VG 46

Cylinder
 Typ: $\varnothing 65 \times 400 \text{ mm}$ Hub
 117747

Hyd.-aggregat
 210123

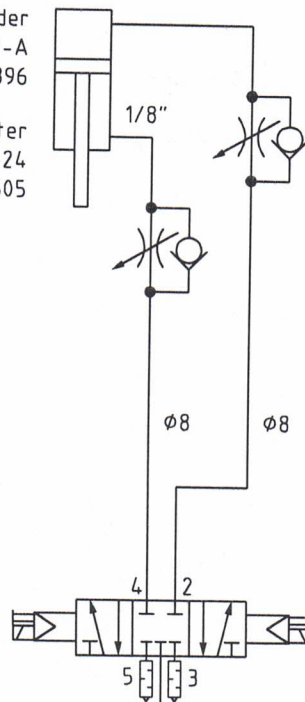


Freimaßtoleranzen nach DIN ISO 2768 mittel		PRESSEN + TECHNOLOGIE  GOTTFRIED JOOS MASCHINENFABRIK			Maßstab 1:1	Gewicht
					Werkstoff Oberfläche	
					Benennung	
					Hydraulic Circuit Diagram HP-S 20 1000x1000	
		Teilenummer			Zeichnungsnummer	
		701800			0811-0609	
		Ursprung 701602 + 701667			Ersatz für	

Zylinder
DNC-32-600-PPV-A
117396

Näherungsschalter
SME-8-KS-LED-24
110505

Drosselrückschlagventil
1/8", GRLQA-18-8
123461



5/3 Wege-Magnetventil
1/4", CM071411538
123287

Schalldämpfer 1/4"
SET 14
102857

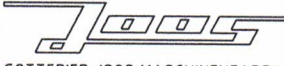
Manometer 0-12bar
G1/8" NG50
17070B.C
114027

Filterregler BG2 G3/8"
17204B.B.D
114025

Kupplungsstecker
7,2 G3/8" AG
124093

Gültig für:

701728
701734
701735
701800

Freimaßtoleranzen nach DIN ISO 2768 mittel		PRESSEN + TECHNOLOGIE  GOTTFRIED JOOS MASCHINENFABRIK			Maßstab 1:1	Gewicht																													
					Werkstoff Oberfläche																														
					Bennennung																														
					Pneumatik Schaltplan Hubtor																														
					Zeichnungsnummer																														
		Teilenummer Tabelle			1212-0116																														
		Ursprung 701568			Ersatz für																														
<table border="1"> <thead> <tr> <th>Nennbereich</th> <th>Grenzabmaße</th> </tr> </thead> <tbody> <tr> <td>0,5 bis 6</td> <td>±0,1</td> </tr> <tr> <td>6 bis 30</td> <td>±0,2</td> </tr> <tr> <td>30 bis 120</td> <td>±0,3</td> </tr> <tr> <td>120 bis 400</td> <td>±0,5</td> </tr> <tr> <td>400 bis 1000</td> <td>±0,8</td> </tr> <tr> <td>1000 bis 2000</td> <td>±1,2</td> </tr> <tr> <td>2000 bis 4000</td> <td>±2</td> </tr> <tr> <td>4000 bis 8000</td> <td>±3</td> </tr> </tbody> </table>	Nennbereich	Grenzabmaße	0,5 bis 6	±0,1	6 bis 30	±0,2	30 bis 120	±0,3	120 bis 400	±0,5	400 bis 1000	±0,8	1000 bis 2000	±1,2	2000 bis 4000	±2	4000 bis 8000	±3		<table border="1"> <thead> <tr> <th>Bearb.</th> <th>Datum</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>06.09.19</td> <td></td> <td>Plautz</td> </tr> <tr> <td>Gepr.</td> <td></td> <td></td> </tr> <tr> <td>Norm</td> <td></td> <td></td> </tr> </tbody> </table>	Bearb.	Datum	Name	06.09.19		Plautz	Gepr.			Norm					
Nennbereich	Grenzabmaße																																		
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