

Ageo

OPERATING MANUAL

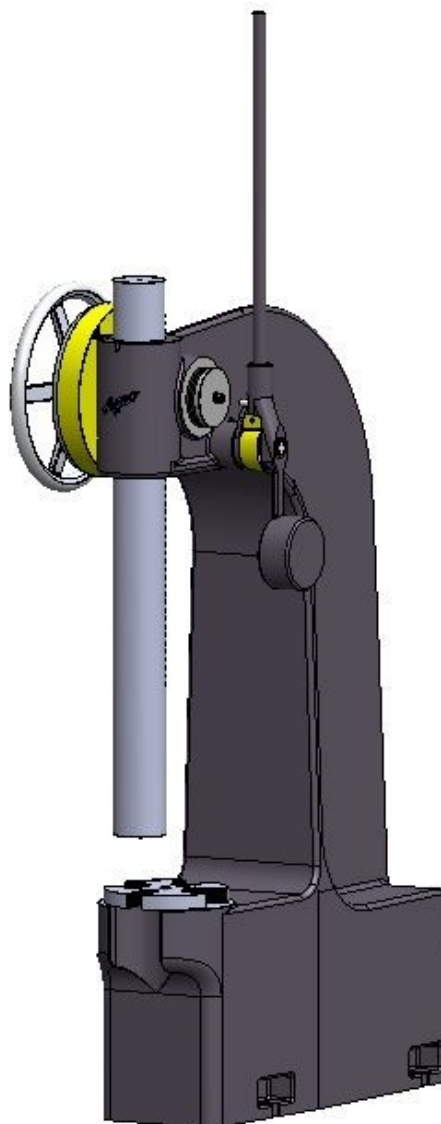
Machine No.:

Model:

DP 6000RS

Contents:

- Operating instructions
- Copyright
- Declaration of EG-Conformity
- Spare parts: ratchet mechanism



Contents

1. Instruction	2
2. Mounting the press.....	2
3. Operation.....	4
3.1. Retaining the ram/ plunger in position.....	4
3.2. Adjustment of the preload force.....	5
4. Warning notice.....	6
5. Performance and Maintenance.....	7
6. Special accessories.....	9
6.1 Revolving slotted disc	9
6.2. Tool receiving socket in plunger / ram (similar DIN810).....	10
6.3. Clamping plate with T-slot.....	11
6.4. Protection against torsion for the plunger (toothed rack).....	12
6.5. Depth stop adjustable	12
7. Declaration of EG-Conformity and technical documents.....	14
8. EG – DECLARATION OF CONFORMITY	15

Appendix: ratchet mechanism

Operating Instructions for Ageo Mandrel Press Ageo- DP 6000RS with ratchet mechanism

1. Instruction

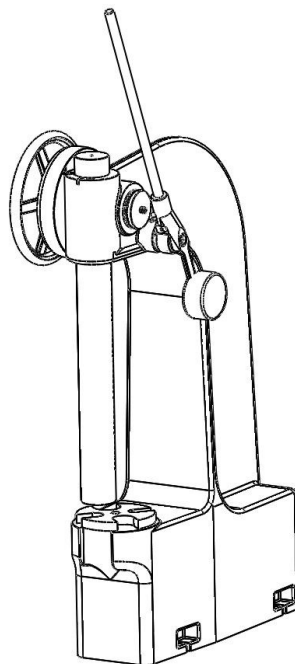
The AGEO Mandrel press DP6000RS is a new development of the company AGEO Press GmbH, based on our traditional press design, which has proven itself for decades in everyday operation. The press is manufactured with ratchet drive and transmission gear. It is often used to push in or press out turning mandrels, bushings, roller bearings, bolts and pins, etc. and can also to be used for assembly work.

Bending jobs can be achieved with the relevant special tools. Equipped with a corresponding broaching tool, it can be used as well for the efficient production of keyways and similar profiles.

The length of the lever is designed in a way that the operator can easily apply the correct working pressure.

2. Mounting the press

Before the AGEO-Mandrel press is used, it must be bolted down on an even, fortified industrial floor, using suitable anchoring plugs.





When the floor is uneven or not sufficiently fortified, the press may become unstable and could present a hazard for hands, feet or other parts of the body.

The approved safety regulations and guidelines have to be applied for lifting and transport of the AGEO-Mandrel press.

Safety regulations:

According to the European Union and the country in which the machine is to be operated.

3. Operation

Before the press is used all unpainted parts must be freed of the anti-corrosive protection. The moving parts and the guides must always be lightly greased. The press is operated via the ratchet lever and via the hand wheel on the press head. By operating the ratchet lever the press plunger (ram/toothed rack) moves down and executes the working stroke.

After completing the stroke the operator must return the ratchet lever to the upper starting position. It must be ensured that the release bolt (pos.9) re-engages in the recess of the plate cam (pos.13) (please keep the unlocking bolt always slightly greased).

Now use the hand wheel (pos.26) to move the press ram back to the desired position (observe preload force).

The plunger must always be lowered so far that an automatic plunger movement is excluded when the press is not operated.



Beware of crushing or cutting fingers or hands.

3.1. [Retaining the ram/ plunger in position](#)

The plunger (ram/toothed rack) is secured against automatic movement by installation of two disc springs (pos.18). These disc springs are arranged on the right side of the press head. These disc springs are pre-loaded by means of a washer (position 7) and a threaded pin (pos. 32), which are locked with two hexagon nuts (SW17).

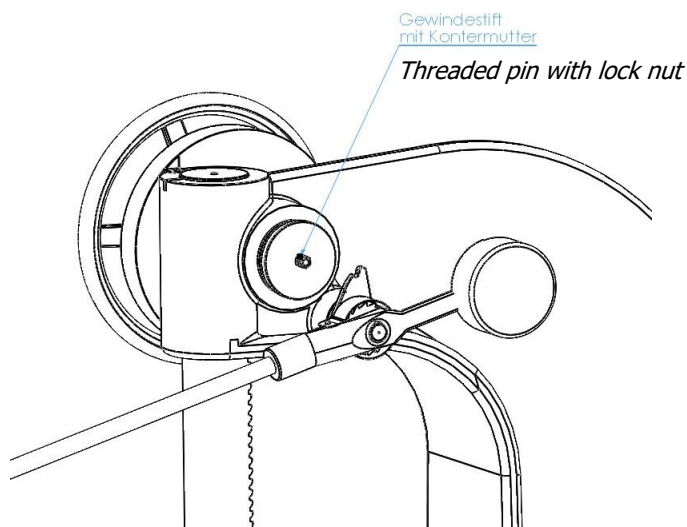
By this bias between pinion shaft (pos.2) and press head adhesion or friction is generated, which prevents the pinion shaft from rotating and moving down caused by the weight of the press ram.

(pos. *) - Spare parts DP6000RS (DP00-0-08 (3))

3.2. Adjustment of the preload force

Because of pre-loading a higher operating force must be applied during upward or downward movements of the press plunger. If the preload force has not been set in accordance with the ram and tool weight, the press ram may automatically move together with the tool.

- Turn hexagon nut M 10 (hexagon nut SW 17 mm), then counter the adjustment work again:



+ clockwise to increase preload

- counter clockwise to reduce preload

- Check the function of the safety release, if necessary adjust again.



Warning: Since this movement is uncontrolled, failure to regard safety warnings may result in extended risk of increased injury to the operator or persons directly next to the machine!

4. Warning notice

Maintenance or repair must always be carried out by qualified persons with knowledge of

- safety regulations
- accident prevention regulations
- guidelines and approved rules of engineering (i.e. VDE-regulations, DIN EN- standards).

The qualified person must

- be able to evaluate the assigned job
- recognize and eliminate possible danger
- have the permission of the work safety officer to carry out the required work and requirements.

Please note:

*** NEVER lengthen the lever with a tube or the like to increase the force of the press plunger. Otherwise there is danger of damaging machine parts through overload, and / or injury to the operator (by failure of components).**

*** NEVER force the lever into the start position, as this will damage the release bolt and possibly the associated mechanics. In this case, a normal work cycle is no longer possible and the danger of the operator being injured by the lever rises considerably.**

*** The hand wheel to adjust the press plunger may ONLY be moved when the lever is in the start position. Otherwise lever and press plunger may move downwards unintentionally, possibly causing injury to the operator.**

ALL OPERATORS MUST BE INFORMED OF THIS FACT.

The manufacturer will not take responsibility for any damage!

5. Performance and Maintenance

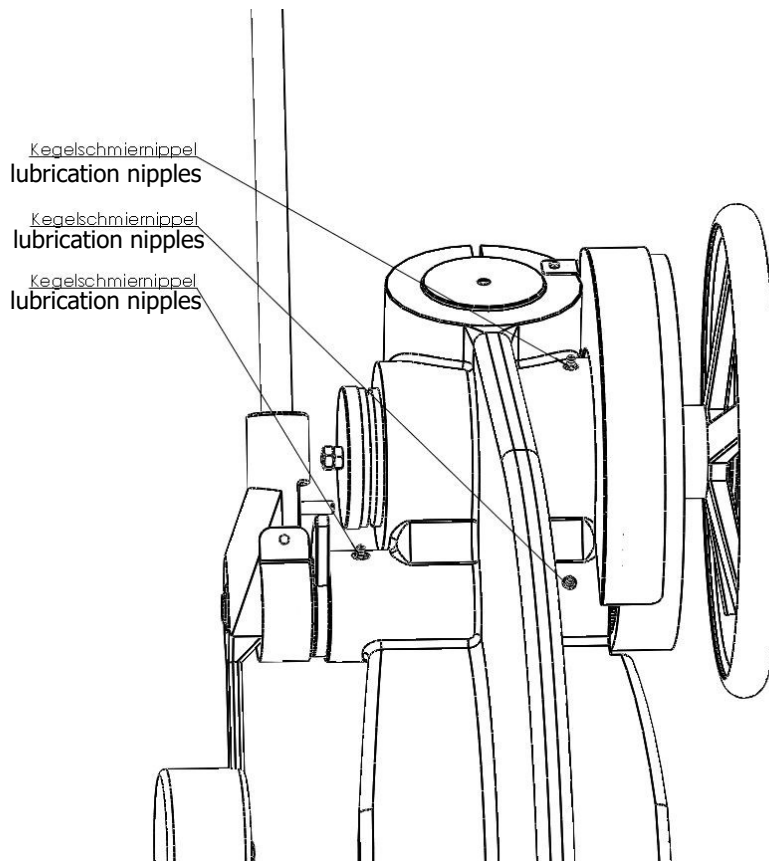
Performance

This press is designed for a maximum pressure output of:

60kN (approx. 6.000 kg)

Maintenance

Every 10 to 14 days, the machine must be lightly greased with a grease press at the three lubrication nipples. To increase the life span of the press ram, keep it always lightly greased and clean.



When parts and components of the press reach the end of their economic lifetime, e.g. by wear, corrosion, mechanical stress, fatigue and/or through other not directly visible causes, they must be dismantled and disposed of according to national and international laws and guidelines.

The same applies to all used lubricants, grease and other materials.



Intentional or unintentional re-utilisation of worn parts, such as pinion shaft, ratchet wheel, pawl, etc. could endanger persons, machines and environment. All local laws must be applied.

When ordering spare parts, please specify the

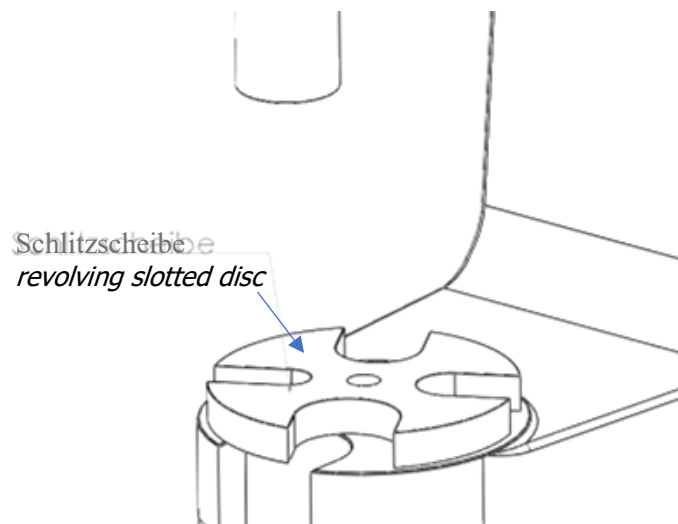
- model of the press
- machine number
- year of manufacture

This information can be found on the machine name.

6. Special accessories

6.1 Revolving slotted disc

As standard equipment, this press has a revolving slotted disc serving as base for the press plunger (ram/toothed rack). The four different open slots (clearance sizes see below) serve as a quick aide to push out or press in bearings, bushings, rings, or bushes from shafts or similar.



DP 6000RS - 35, 50, 65, 80 mm



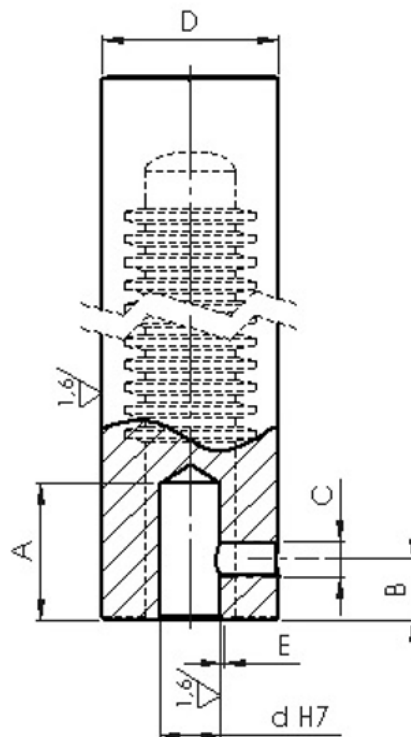
Beware of crushing or cutting fingers or hands.

6.2. Tool receiving socket in plunger / ram (similar DIN810)

The plunger (toothed rack) from a mandrel press can be furnished with a drilled hole to allow mounting of special tools (= tool receiving socket). The tool receiving socket is fitted centrally on the underside of the plunger. To secure the tool the grub screw on the side of the plunger is fastened to prevent the tool dropping out of the socket.

Note: Depending on the tool used the total weight of the plunger will change on account of the extra weight. When first using a tool always test and if necessary adjust the preload force of the plunger as stated in 3.2. of this operating manual.

The size of the tool receiving socket depends on the model of the press.



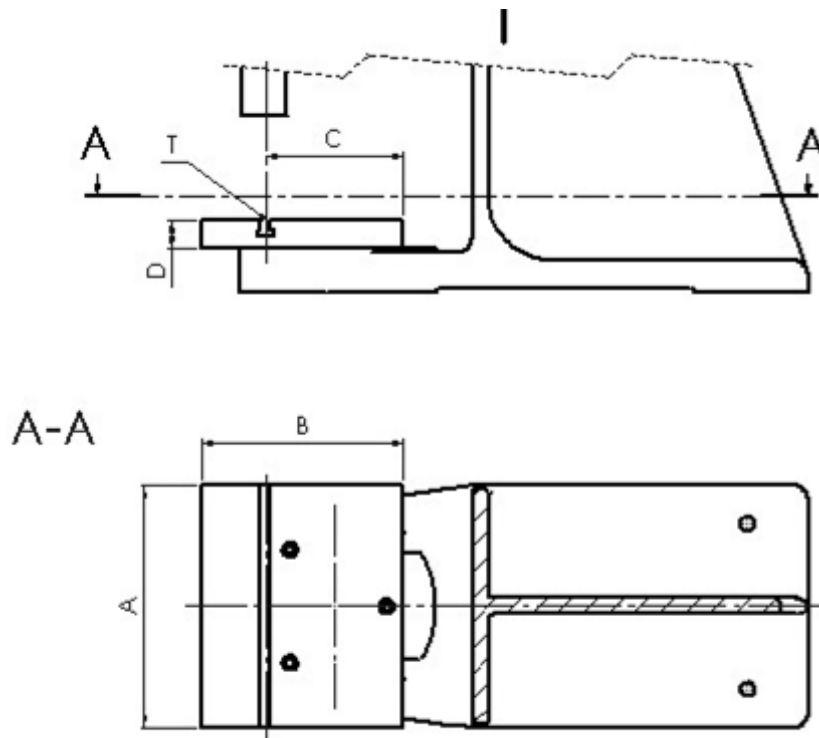
100 mm \varnothing ram of the DP6000RS				
d H7	A	B	C	E
20	45	20	M12	1,6 x 45°
25	50	25	M12	1,6 x 45°
32	60	28	M16	1,6 x 45°
40	75	40	M20	2 x 45°
50	85	40	M20	2 x 45°

Priority if no data requested

6.3. Clamping plate with T-slot

Instead of the slotted disc we can offer a clamping plate with T-slot (DIN 650) in different sizes. A clamping plate with T-slot is convenient for mounting special devices, equipments and tools.

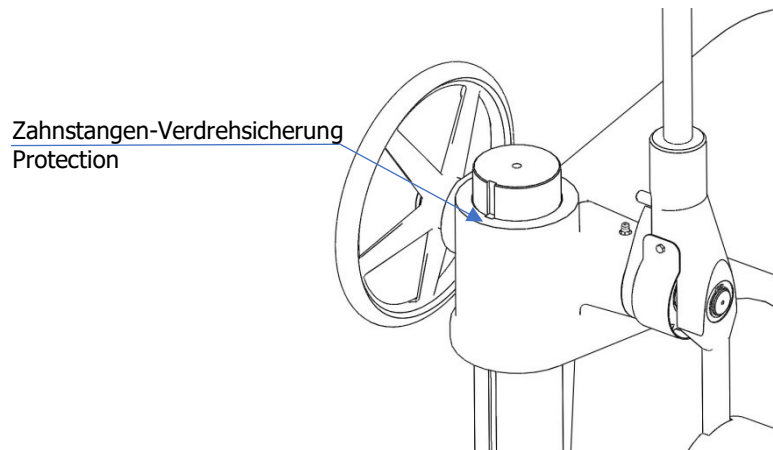
The clamping plate with T-slot is assembled in dead centre to the plunger.



A x B	C	D	T
300 x 250	170	35	12
480 x 420	170	35	12

6.4. Protection against torsion for the plunger (toothed rack)

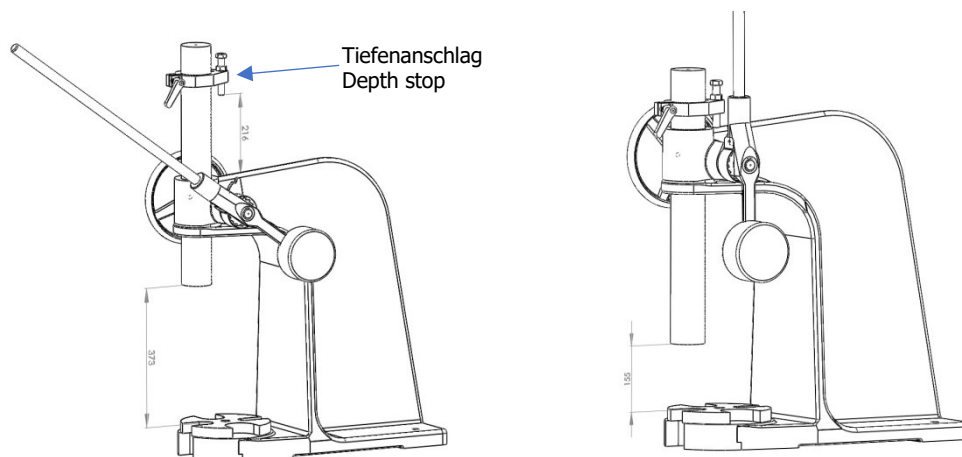
Bending, joining or assembling can lead to torsion forces. These torsion forces can alter the fitting accuracy of the tool and can also damage the plunger and / or pinion shaft. The protection against torsion for the plunger prevents this.



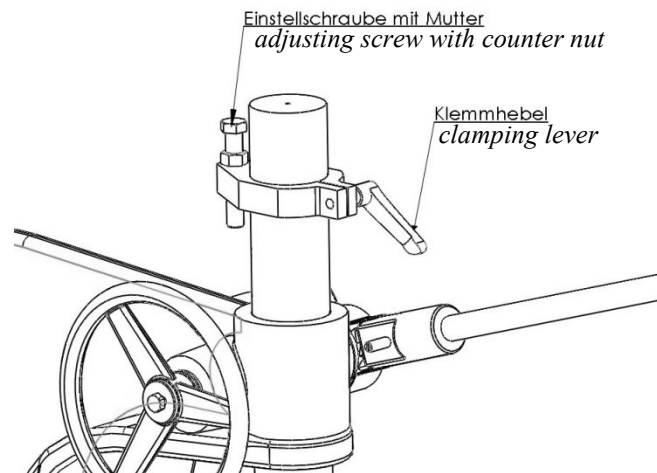
6.5. Depth stop adjustable

The adjustable AGEO depth stop for your mandrel press is solidly build and easy to use. It is generally used as a stroke limitation and can be adjusted to the needed dimension simply with only few hand movements.

By untightening the clamping lever the AGEO depth stop can be adjusted to the required level, tightening the clamping lever fixes the depth stop. Using a wrench (size depending on the mandrel press model) to loosen the adjusting screw with counter nut at the back of the depth stop is another possibility of adjustment.



After altering the position of the depth stop and initial operation the clamping lever and the counter nut of the adjusting screw must both be tested for stability to prevent unintentional and uncontrolled movement of the press or part of the press.



Beware: Danger of cutting and / or clamping of hands, fingers and body parts. Grave danger from flying parts!

7. Declaration of EG-Conformity and technical documents

Copyright

The copyright for this manual and the contents remains with the manufacturer. This manual is intended only for the user company and its operators.

You may copy the manual for your own use.

It contains regulations and details which may not, in full or in part,

- be copied,
- distributed, or
- disclosed to third persons.

Violations of these regulations may cause legal penalties.



Production and distribution

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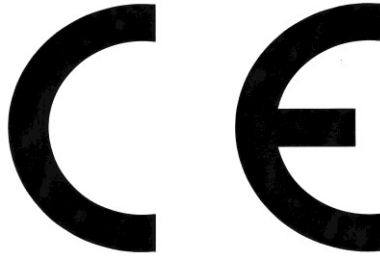
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EG – DECLARATION OF CONFORMITY

In accordance with standard procedure 2006/42/EG

This model:

Name of manufacturer: AGEO-Mandrel press

Model: DP6000RS with retched lever

has been developed and manufactured in accordance with standard guidelines EG 2006/42/EG and is the responsibility of:

**Ageo Press GmbH
Werner-von-Siemens-Str. 35
D- 64319 Pfungstadt
Germany**

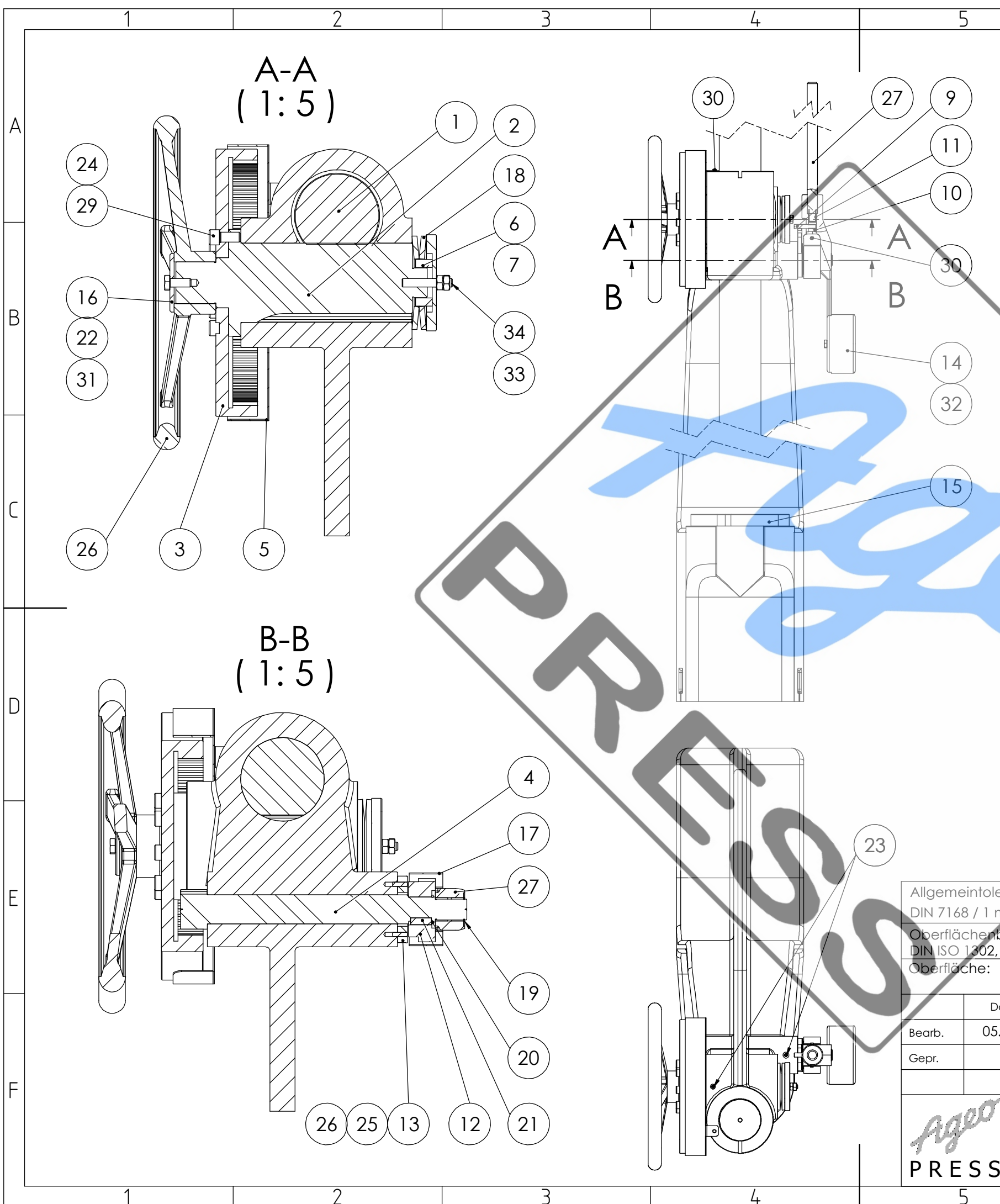
Following engineering standards have been applied:

- DIN EN 12100: Safety of machinery, appliances and plants.
- EN ISO 14121: Appraisal of risks.
- EN ISO 12100: Minimizing of risks.
- Complete technical documentation.
- The operating manual in English.

If necessary, special data pertaining to the machine may be submitted to official authorities.

Pfungstadt, 31.10.2018

Kirsten Press
General Manager



Pos.	Ersatzteile	Spare parts	Pièces de rechange
1	Zahnstange	shaft	crémaillère
2	Ritzelwelle	pinion shaft	pignon
3	Innenzahnrad	internal gear	roue d'engrenage pour l'intérieur
4	Ritzelwelle (klein)	pinion shaft (small)	pignon (petite)
5	Schutz (groß)	protection plate (big)	tôle de protection (grande)
6	Hülse	bushing	douille
7	Andruckscheibe	pressure plate	rondelle de pression
9	Bolzen	bolt	broche à filet
10	Sperrklinke	pawl	cliquet
11	Druckfeder	compressing spring	ressort de pressio
12	Sperrrad	ratchet wheel	roue à rochet
13	Kurvenscheibe	plate cam	disque à courbe
14	Gewichtscheibe	weight	disque à poids
15	Schlitzscheibe (Ø235mm)	slitting disc	disque à fentes rotatoire
16	Scheibe	plate	rondelle
17	Schutz für Sperrrad	protection plate	tôle de protection
18	Tellerfeder	plate spring	ressort à disque
19	Sicherungsring (klein)	circlip (small)	circlip (petite)
20	Sicherungsring	circlip	circlip
21	Passfeder (klein)	feather key (small)	clavette (petite)
22	Passfeder	feather key	clavette
23	Kegelschmiernippel	lubricating nipple	raccord fileté de graissage
24	Kegelstift	conical pin	goupille conique
25	Kerbstift	grooved pin	goupille cannelée
26	Handrad (Ø400mm)	handwheel	volant
27	Handhebel	hand lever	levier manuel
28	Zylinderschraube (M8x16)	fillister socket head screw	vis cylindrique à six pans creux
29	Zylinderschraube (M12x25)	fillister socket head screw	vis cylindrique à six pans creux
30	Sechskantschraube (M4x8mm)	hexagon head screw	vis à tête hexagonale
31	Sechskantschraube (M10x25)	hexagon head screw	vis à tête hexagonale
32	Sechskantschraube (M10x30)	hexagon head screw	vis à tête hexagonale
33	Sechskantmutter (M10)	hexagon nut	écrou hexagonal
34	Gewindebolzen (M10x60)	screwed bolt	boulon fileté

Allgemeintoleranzen DIN 7168 / 1 mittel		entstand aus					
Oberflächenbeschaffenheit DIN ISO 1302, Reihe 3		Kanten entgratet					
Oberfläche:		Gruppe	Pos.-Nr.	mal	Index	Änderung	Datum
	Datum	Name	Maßst.	"Schutzvermerk nach DIN 34 beachten"			
Bearb.	05.05.14	Weyhmüller	1:10				
Gep.			Benennung Ersatzteile DP6000RS Ausführung mit Ratschenhebel				
Ageo-Press GmbH Werner von Siemens Str. 35 D-64319 Pfungstadt / BRD www.dornpresse.de		Zeichn.-Nr. DP00-0-08(3)		Blatt 1 von 1		A3	
Ers. für		Ers. durch		Gewicht: 553,72 kg			