

Ageo

OPERATING MANUAL

Machine No.:

Model:

DP 3000RS

Contents:

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



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Appendix : ratchet mechanism

Operating Instructions for Mandrel press AGEO – DP 3000RS with ratchet mechanism

1. Instruction

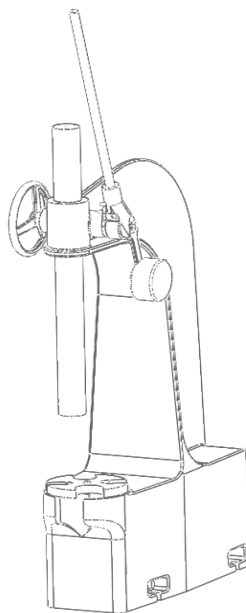
The AGEO-Mandrel press is a machine tool designed for daily operation, which has proven itself for decades. It is mainly used to push in or press out turning mandrels, bushings, roller bearings, bolts and pins, etc. and can also be used for assembly work.

Bending jobs can be achieved with the relevant special tools, and special broaching tools will efficiently work small keyways and similar profiles.

The length of the lever is so designed 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 are to be applied for the lifting and the 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 anticorrosive protection. The moving parts and the guides must always be lightly greased.

The ratchet lever and the hand wheel at the head of the press will operate the AGEO-Mandrel press. Operation of the ratchet lever drives the press plunger (ramtoothed rack) down to accomplish a working stroke.

When the stroke is completed, the operator must return the ratchet lever to the initial position, making sure that the release bolt (Pos. 8) falls into the gap on the cam plate (Pos. 6) (always keep the release bolt lightly greased).

The operator can now bring the press plunger into the desired position by using the hand wheel (Pos. 10). (Don't forget the preload force).

When the machine is not being operated, the press plunger must be lowered to a point where an accidental movement of the plunger is not possible.



Beware of crushing or cutting fingers or hands.

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

The plunger (ram/toothed rack) is prevented from unintentional sinking by 2 disc springs (Pos. 11), which are located between the press head and the hand wheel (Pos. 10). The disc springs are preloaded with a disc (Pos. 9) and a hexagonal screw M10 (SW17).

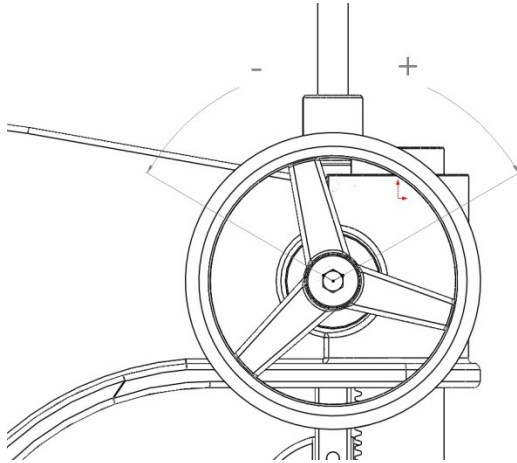
This preloading generates friction between pinion shaft (Pos. 1) and press head thus preventing the weight of the press plunger turning the pinion shaft and letting the rack down unintentionally.

(Pos. *) seeing blue print – "ratchet mechanism"

3.2. Adjustment of the preload force

Due to preloading, a higher operating force must be applied to move the press plunger up and down. If the preload force is not correctly adjusted in respect to the weight of the plunger and tool, it can move down unintentionally.

- Turn the adjusting screw M10 (hexagonal screw SW 17mm):



+ clockwise to increase preload

- counter clockwise to reduce preload

- Test the effectiveness of the preload force. If necessary repeat the operation.



Since this movement is uncontrolled, the danger of injuring the operator and others standing close to the machine is high.

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

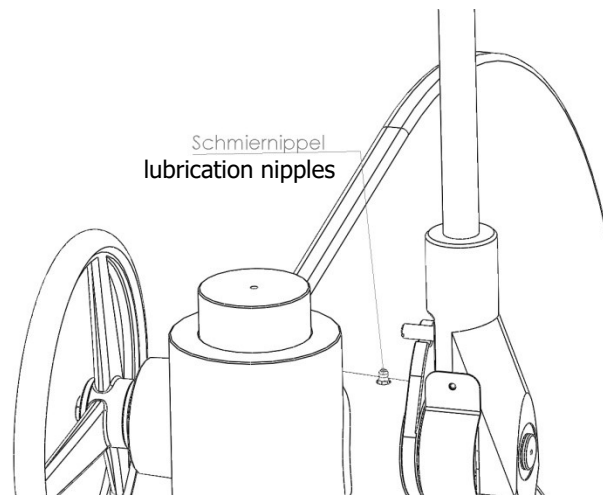
Performance

The AGEO DP3000RS press is devised for a maximum performance of

30kN (approx. 3.000 kg)

Maintenance

Every 10 to 14 days, the machine must be lightly greased with a grease press at the lubrication nipples. To lengthen the operating life of the press plunger (ram/toothed rack), the spindle and the table guides, they should be kept clean and lightly greased.



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 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 advise the

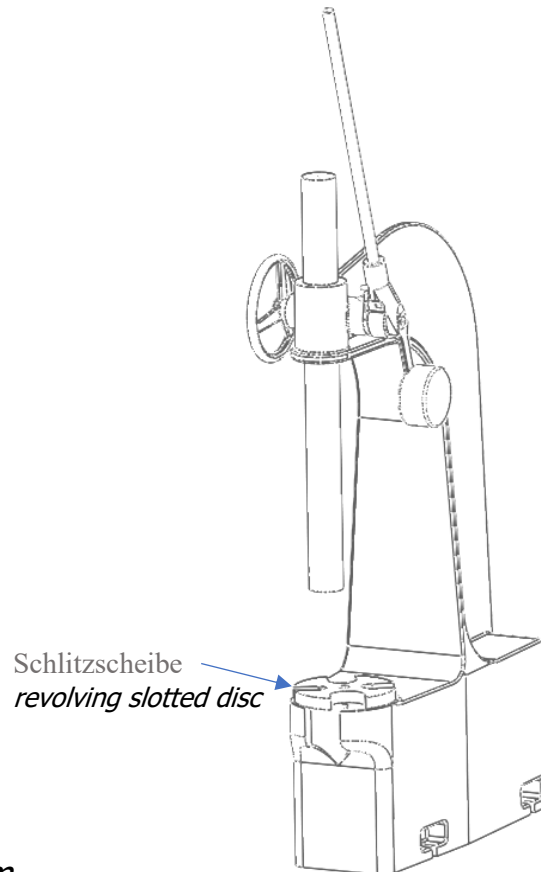
- model of the press
- machine number
- year of construction

This information can be found on the machine's 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 (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 3000RS - 35, 50, 65, 80 mm



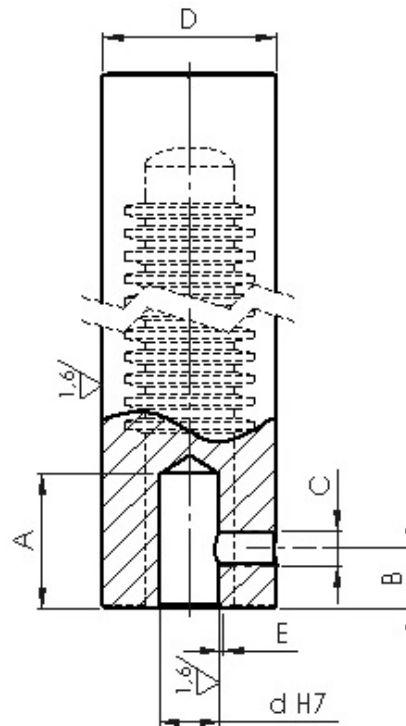
Beware of crushing or cutting fingers or hands.

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


The plunger (ram/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.



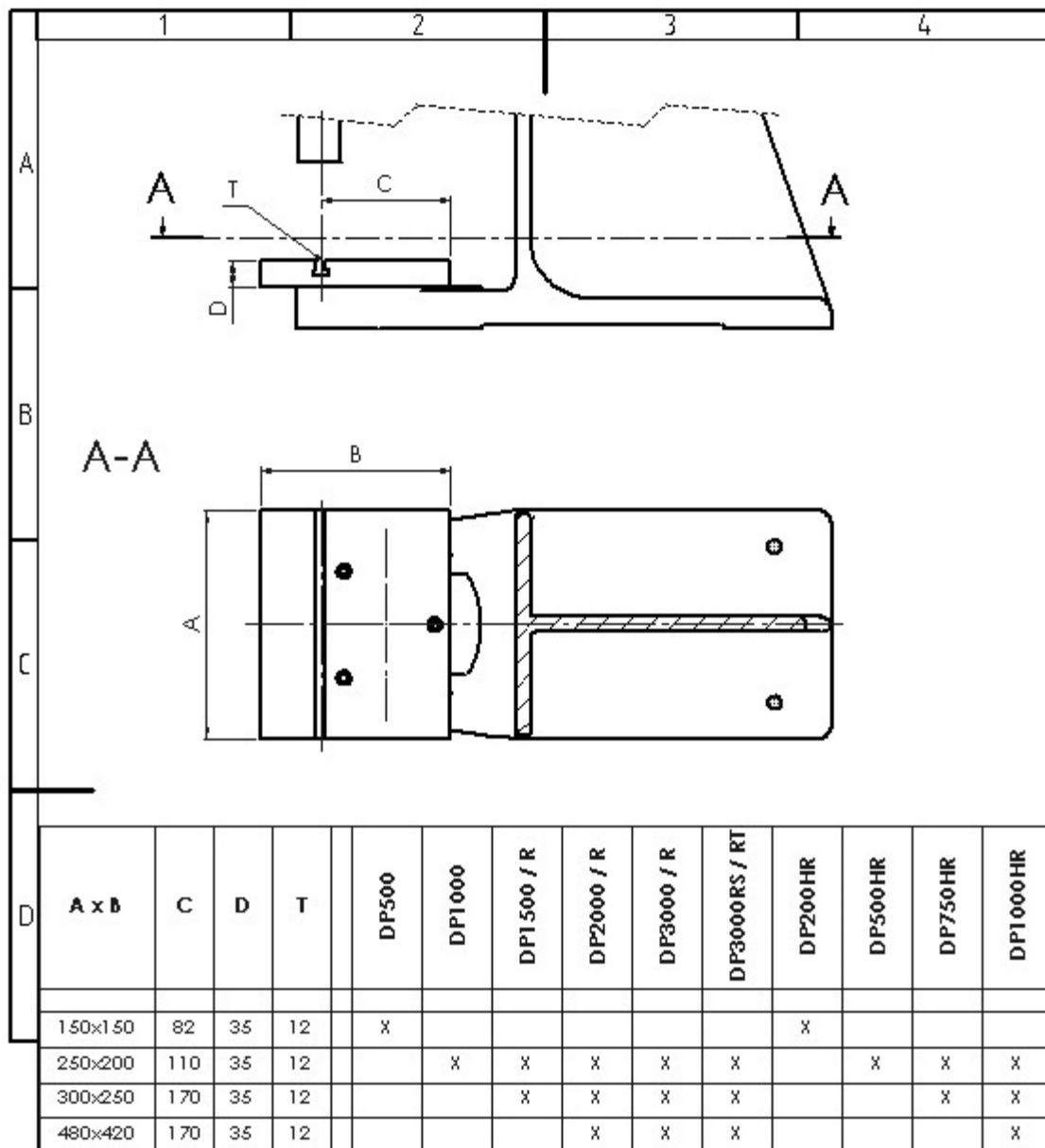
d H7	A	b	C	Possible in ram Ø				E
				D 32	D 40	D 58	D 78	
10	28	12	M 8	X	X	X	X	1x45°
12	32	12	M 8	X	X	X	X	1x45°
16	36	20	M 10	X	X	X	X	1x45°
20	45	20	M 12			X	X	1,6x45°
25	50	25	M 12			X	X	1,6x45°
32	60	28	M 16			X	X	1,6x45°
40	75	40	M 20				X	2x45°
50	85	40	M 20				X	2x45°

 Priority if no data

6.3. [Clamping plate with T-slot](#)

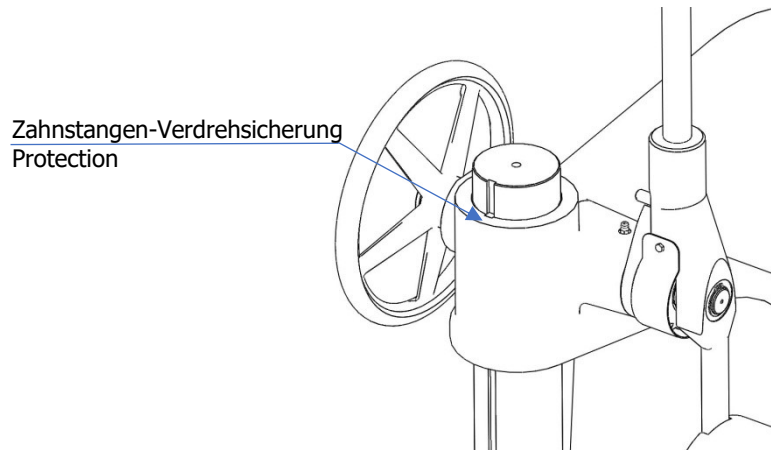
Instead of the slotted disc we can offer a clamping plate with T-slot (DIN 650) in different sizes. A clamping plate with T-slot is convenient for mounting special devices, equipments and tools.

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



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

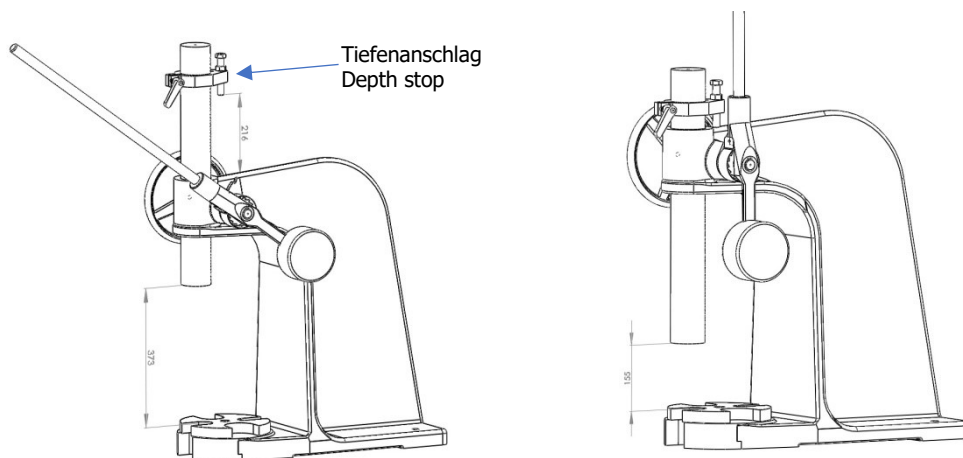
Bending, joining or assembling can lead to torsion forces. These torsion forces can alter the fitting accuracy of the tool and can also damage the plunger and / or pinion shaft. The protection against torsion for the plunger prevents this.



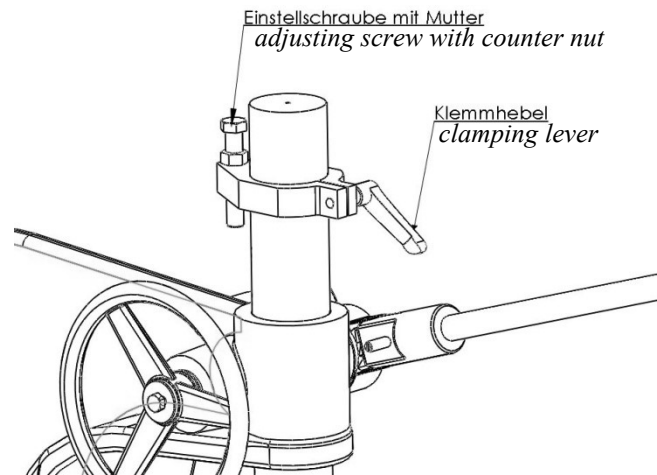
6.5. Depth stop adjustable

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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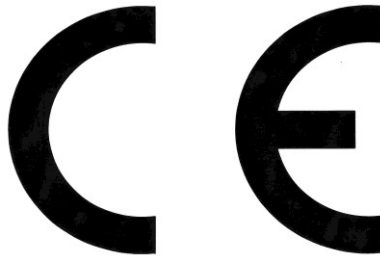
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EG – DECLARATION OF CONFORMITY

In accordance with standard procedure 2006/42/EG

This model:

Name of manufacturer: AGEO-Mandrel press

Model: DP3000RS 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**

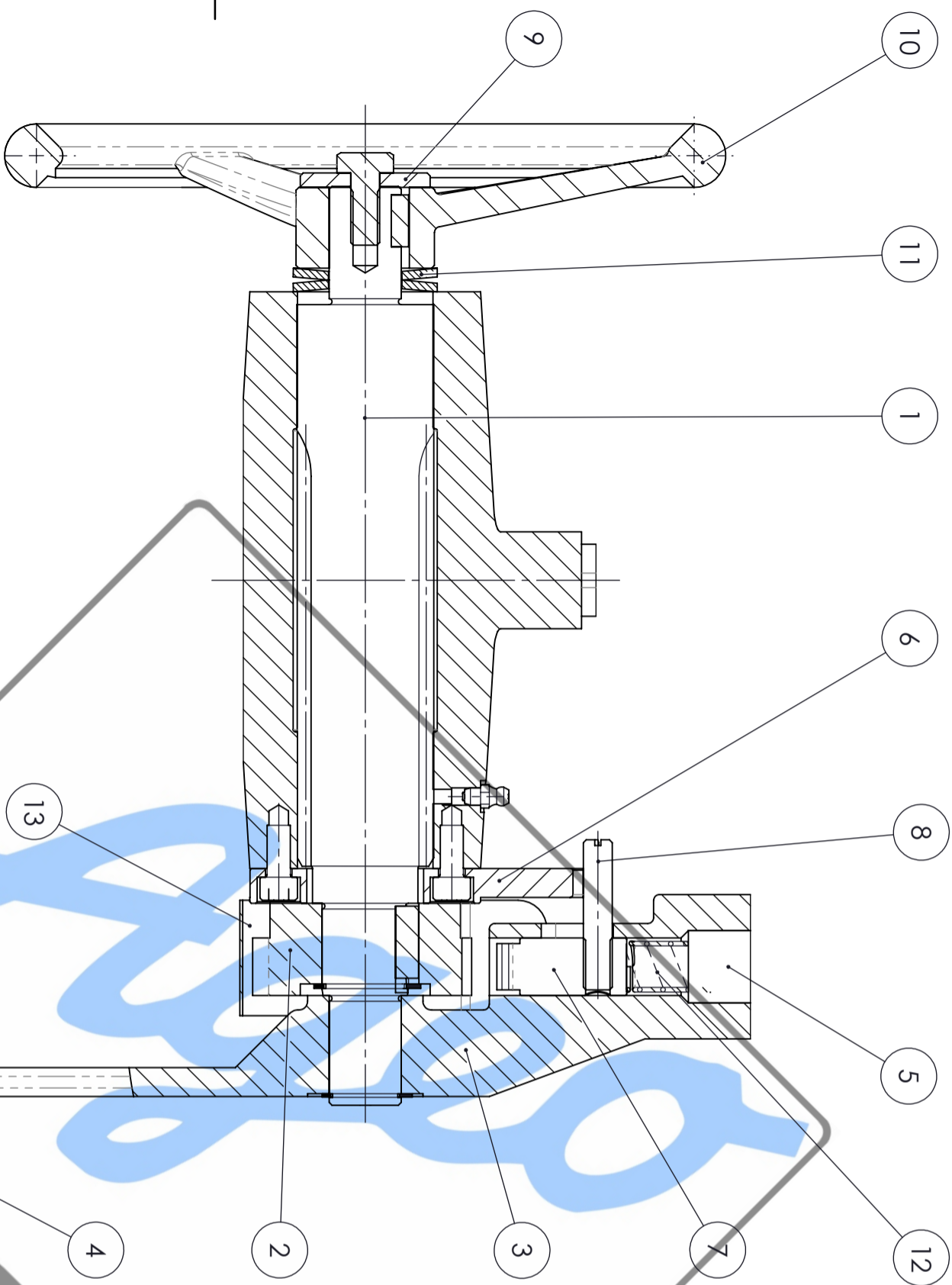
Following engineering standards have been applied:

- 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	Ritzelwelle	Pinion shaft	Pignon
2	Sperrrad	Ratchet wheel	Roue à rochet
3	Hebel	Lever	Lever
4	Gewichtscheibe	Weight	Digue à poids
5	Arm	Arm	Bras
6	Kurvenscheibe	Plate cam	Disque à courbe
7	Sperrkinke	Pawl	Cliquet
8	Bolzen	Bolt	Broche à filet
9	Scheibe	Plate	Rondelle
10	Handrad - Ø250	Handwheel - Ø250	Volant - Ø250
11	Tellerfeder	Plate spring	Ressort à disque
12	Druckfeder	Compressing spring	Ressort de pressio
13	Sperradschutz	Protection plate	Tôle de protection

Allgemeintoleranzen DIN 7168 / 1 mittel		entstand aus	
Oberflächenbeschaffenheit DIN ISO 1302, Reihe 3		Kanten entgratet	
Oberfläche:		Gruppe	Pos.-Nr.
Datum	Name	ml	Index
7.3.2012	Weyhmüller		Änderung
Gepr.			Datum
			Name

Benennung Ersatzteile für Ratschenantrieb
"Schutzvermerk nach DIN 34 beachten"


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 www.dornpresse.de

Zeichn.-Nr. DP00-0-07(3)
 Ers. für: Ers. durch: Gewicht: 190,21 kg

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