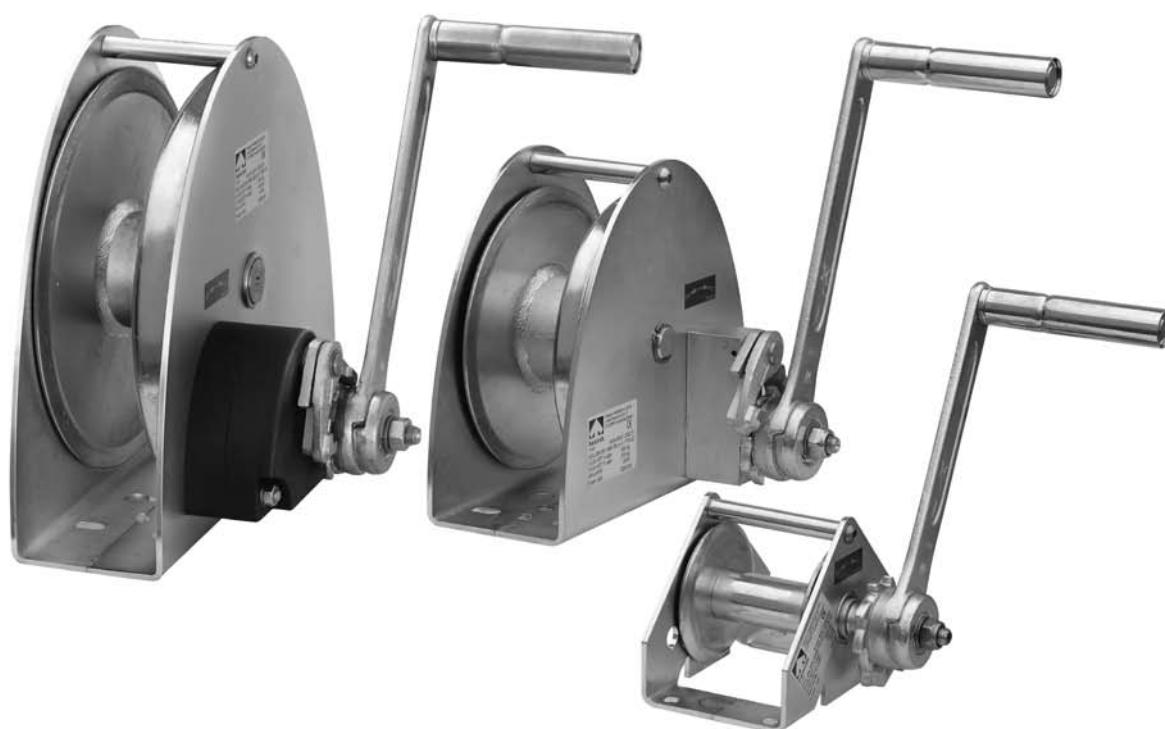


Mounting instruction

Hand rope winch

Type	KWE 250	KWW 300
	KWE 650	KWW 650
	KWE 1000	KWW 1250



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- 1. Kind of user 2
- 2. Safety Instructions..... 2
- 3. Technical data 2
- 4. General 2
- 5. Mounting 2
- 6. Rope mounting 3
- 7. Operation 3
- 8. Verification..... 3
- 9. Maintenance..... 3
- 10. Operation failures and their causes 3
- 11. Dismounting and waste disposal 3

1. Kind of user

	Task	Qualification
Operator	Operation, Visual testing	Instruction based on manual; Qualified person 1
Trained personal	Mounting, Dismounting, Repair, Maintenance	Metalworker, Mechanician
	Check	Qualified person 2 according to RBS-1203a (Expert)

2. Safety Instructions

Where to use this equipment

This equipment may only be used in accordance with the following operating instructions.

- to be used only to lift and lower freely moving loads.
- to be used only if in perfect technical condition.
- to be used by trained personnel only.

Safe working practices

Read these operating instructions carefully before using the winch. Work safely and be aware of dangers at all times.

Inform your supervisor immediately of any damage or faults to the winch.

Do not operate the winch again until the damage or fault has been repaired.

Do not

- Exceed the maximum load (see tech. data and type-/capacity number plate).
- Transport people.
- Work under a suspended load.
- Power operation.
- Never touch moving parts.
- Grease or lubricate the brake mechanism.

Winch Application

- Not to be used continuously and vibration.
- Not to be used as a lift on construction sites.
- Not to be used for stage or studio.
- Not to be used for the transport of people.
- Not suitable for use in explosive danger area.
- Not suitable for use in corrosive atmosphere.
- Not suitable for major transformations of energy during lowering operation.

Supervision

- Ensure that these operating instructions are always at hand.
- Do not allow this winch to be operated by untrained staff.
- Check regularly that the winch is operated safely and according to these instructions.

Installation, Maintenance and Repair

Installation, maintenance and repair may only be carried out by trained personnel.

Use only original manufacturer's replacement parts.

No changes or modifications may be carried out on parts relevant to safety. Additional equipment must not infringe on safety.

Additional instructions to be adhered to

- Safety and accident prevention regulations.
- National regulations, safety standards and guidelines.

The load

- must not be left suspended without supervision.
- must not be allowed to swing.
- must not fall into the wire rope.

Winch

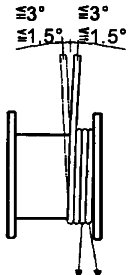
Do not exceed the capacity of each rope layer.

Before taking into operation, a competent person must check:

The lifting device, the load bearing parts of the structure, the carrying medium and mounting.

The rope

- should only be used for lifting, lowering or pulling of loads.
- at least 2 full turns of rope should remain on the drum when loaded.
- max. fleet angle (see picture) for standard wire rope $\leq 3^\circ$ for special rope $\leq 1,5^\circ$

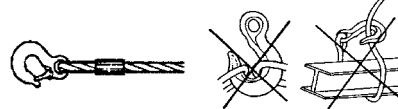


To prevent rope wear, first unwind the wire rope completely and then wind it up again layer by layer under load.

- Only handle with safety gloves.
- In case of unguided loads use a non twisting rope. This may however reduce the useful life of the rope (FEM-Rating).

Load attachment device

- check, if it has sufficient carrying capacity.
- loads hooks must have safety catches.
- load hooks must be secured to the rope with a solid eye and high pressure rope clamp and tested according to the regulations.
- Fix the charge correctly!
- do not use the winch rope as a hitching device.



3. Technical data

Type		KWE	KWV	KWE	KWV	KWE	KWV
Nominal load [kg]		250	300	650	650	1000	1250
1 st Layer	W.L.L [kg]	250	300	650	650	1000	1250
	Storage [m]	3,4	2,8	3,4	3,2	3,4	3,2
max. no. of layers		6	6	6	7	9	9
Last layer	W.L.L [kg]	125	150	340	330	390	490
	Storage [m]	22	22	16	23	28,5	28,5
Rope Ø [mm]		4	4	7	6	8	8
FEM Rating ¹		1Em	1Em	1Em	1Em	1Em	1Em
Breaking load [kN]		7,4	8,9	19,2	19,2	29,5	36,8
Crank force [N]		220	270	250	240	200	240
Weight [kg] w.o. rope		3,9	3,9	6,3	5,9	16	16

1) FEM Rating according to DIN 15020 resp. FEM 9.511 for ordinary rope

4. General

The hand winches are drum type winches. They are driven by a single reduction pair of straight cut internal spur gear or direct. The load is safely supported in any position by means of an automatic mechanical brake.

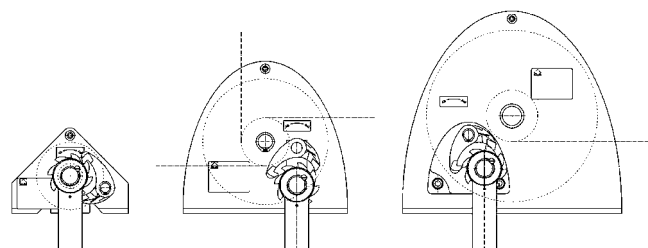
5. Mounting

- the mounting structure must be designed to sustain the max forces imposed by the winch
- pay careful attention that the mounting surface is flat and true
- use always 4 screws size M10 (min. quality 8.8)
- tighten the screws evenly and secure screws
- ensure that the crank is free running (crank clearance).

6. Rope mounting



With wrong rope coiling the brake is not effective!



250 - 300 kg

650 kg

1000 - 1250 kg

Wire rope fixing



Grease slightly the drum, before fixing the wire rope.

- For rope selection pay attention to the technical data for the rope!
- Calculate the rope length in such a way that at least 3 full turns of rope remain on the drum in lowest load position.

Hard solder the rope end clamp to the rope drum with a hexagonal wrench (SW 4 with 6 Nm, SW 5 with 5 Nm) (fig 1 and fig. 2). After rotating the crank in clockwise direction, the rope must reel up on the drum as illustrated in fig. 3.

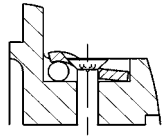


fig. 1

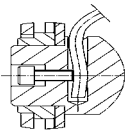


fig. 2

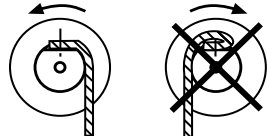


fig. 3



A functional test must always be accomplished before beginning work.

7. Operation

Turn crank clockwise to lift the load.

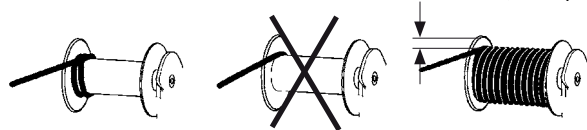
To lower the load, turn crank anti-clockwise.

If the crank is not turned the load is suspended safely. When lifting a load, do not wind rope beyond the point where at least 1,5 x rope diameter is left free on drum flanges above outermost layer.

The rope length is correct if:

> 2

$> 1,5 \times \text{rope-}\varnothing$



When loaded, at least 3 turns of the rope must remain on the drum. The capacity of the first layer corresponds to the nominal capacity of the winch. This means that the capacity decreases with every further layer (refer to type-/ capacity number plate for capacity of first and last layer).

8. Verification

However, the equipment must be tested by a second skilled person as per TRBS 1203 (expert) at least once a year, depending on the usage conditions (test as per BetrSichV, §10, Sect. 2 corresponds to implementation of the EU guidelines 89/391/EWG and 95/63/EG or an annual operational safety inspection as per BGV D8, §23, Sect.2 and BGG956). These tests/inspection must be documented:

- prior to initial start-Up.
- following significant changes prior to start-up at least once a year.
- In case of extraordinary events, which may have compromised the safety of the winch (extraordinary testing, e.g. following extended non-use, accidents, natural events).
- following repairs, which may influence the safety of the winch.

Experts (BP2) are persons who possess sufficient knowledge in the field of winches, lifting and drawn equipment based on their professional training and experience and who are familiar enough with the current state-regulated work safety regulations, accident prevention guidelines, general guidelines and commonly applicable regulations of engineering (e.g. DIN-EN standards) to be able to evaluate the safe condition of winches, lifting and drawn equipment. Skilled persons (BP2) must be appointed by the operator of the equipment. The performance of annual service safety inspections, as well as training for the certification of the above-mentioned knowledge and skills is offered by haacon hebetchnik.

9. Maintenance

At least after a period of 10 years we recommend a general overhaul effected by the manufacturer.

For operation, maintenance and replacement of worn wire ropes refer top regulation DIN 15020, part 2.



Before carrying out inspection and maintenance works ensure the winch is unloaded.

Maintenance and inspection works	Intervals
Visual examination of rope hook (carrying device)	daily
Function of the winch	
Condition of the rope and loading device	
Function of brake	
Lubricate drive gearing	quarterly
Check the brake disc for wear	
Check and service rope for wear according to DIN 15020 page 2	
Check the fixing screws are tight	annually
Check all parts of the winch and crank for wear and, if necessary, replace and grease defect parts	
Check name-plate for legibility	
Arrange for an examination by a competent person	

10. Operation failures and their causes

Failure	Cause	Elimination
In unloaded state, it is difficult to turn the crank	Lubricant in bearing points is missing. Dirt or something similar has accumulated in the bearing	Execute maintenance works
	Winch was distorted during mounting.	
Load is not held	Wrong coiling of the rope winding direction for lifting was not correct. The brake is worn-out.	Lay the rope correctly. Check brake parts and replace worn-out parts.
	Too light load	
Brake does not release, load may only be lowered with high expenditure of force.	Brake discs or brake mechanism is distorted.	Release the brake by slightly striking against the crank arm with the flat of the hand in lowering direction.

11. Dismounting and waste disposal

- Safety instructions have to be observed.
- The disposal of the product and its components has to be according to environmental standards.

EU Installation Declaration

haacon hebetechnik gmbh
Josef-Haamann-Strasse 6
D-97896 Freudenberg/Main



Manufacturer: haacon hebetechnik gmbh
Josef-Haamann-Strasse 6
D-97896 Freudenberg/Main

Phone +49 (0) 9375 / 84-0
Fax +49 (0) 9375 / 8466

The product

Product name: Hand rope winches

Type:

220	241	421	462	468	4060	4185	4202
4210	4216	4235	4284	4321	4471	4472	4483
4491	4751	4821	4843	4862	209480	KWV	KWE
Tango	WA						

Load capacity range: 0,05 – 3 t

conforms with the basic requirements of the directive **Machines (2006/42/EG)**

Appendix I, article

- 1.1.2 Basic for the integration of safety
- 1.1.3 Materials and products
- 1.1.5 Construction of the machine regarding its handling
- 1.3.2 Risk of breakage during operation
- 1.3.4 Risks by surface, edges and corners
- 1.3.7 Risks caused by moving parts
- 1.3.9 Risk of uncontrolled movements
- 1.7 Information
- 4.1.2 Protective measures against mechanical hazards
- 4.3.3 Machines to lift loads
- 4.4 Operating instructions

The product is an incomplete machine as per machine directive (2006/42/EG). The product must not be taken into operation until it is determined that the machine, in which it is to be installed conforms with the machine directive (2006/42/EG).

If the product is changed significantly, it will lose this conformity declared by the manufacturer.

The manufacturer agrees to submit the specific documentation pertaining to this product to individual state institutions electronically, if so requested.


The specific technical documentation as outlined in Appendix VII Part B were compiled.

Responsible for the documentation: Construction

Signed by:

Freudenberg, 07.04.2010

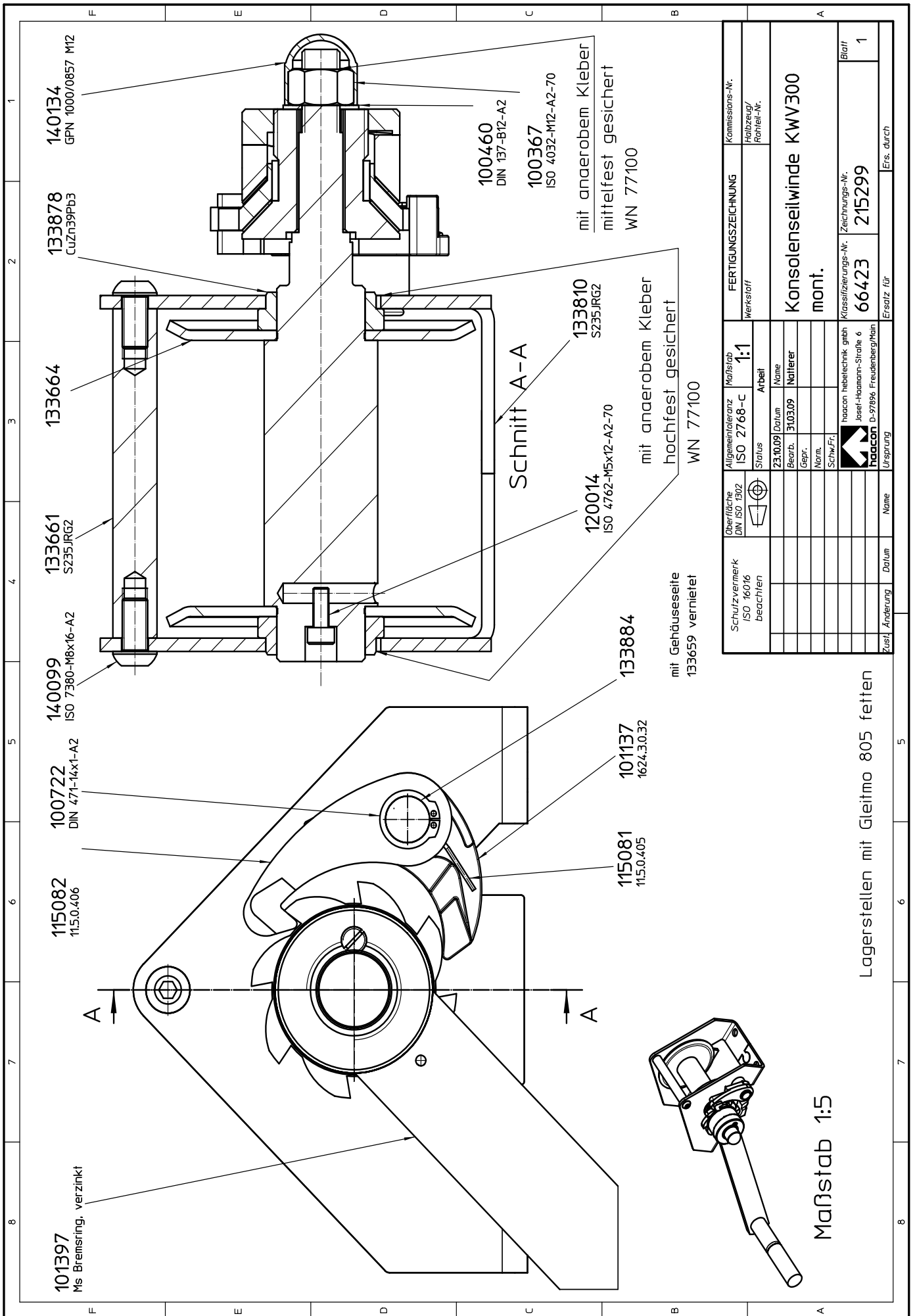

on behalf of Robert Mittelberger


on behalf of Theo Müller

gb Edition 3; 04/10

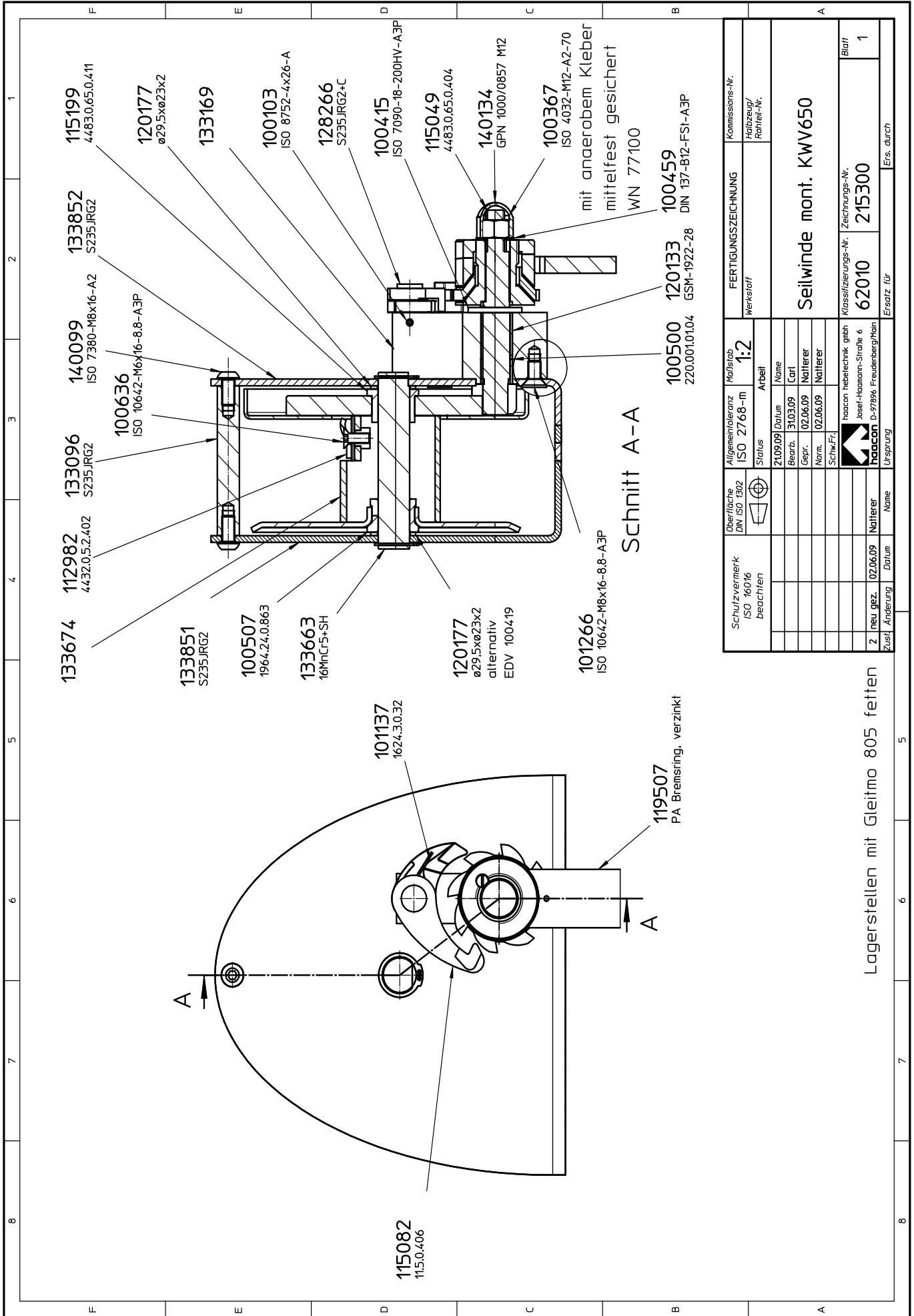
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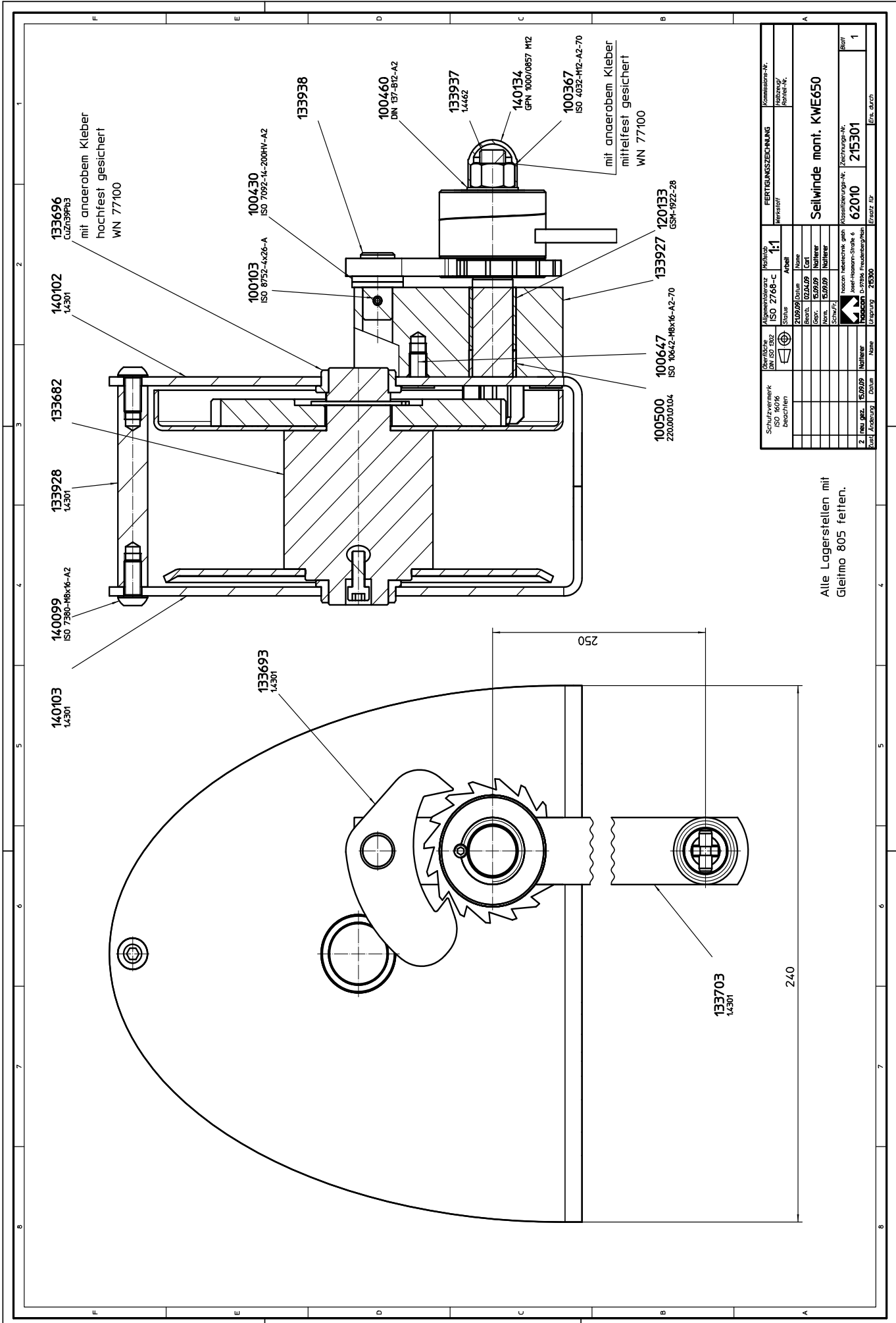
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	Gepr.		Natterer		
	Norm.				
	Schw.Fr.				
	haacon hebeteknik gmbh Joerl-Haamann-Stralle 6 D-97896 Freudenberg/Haan			Klassifizierungs-Nr.	Zeichnungs-Nr.
				66423	215299
Zust. Änderung	Datum	Name	Ursprung	Ersatz für	
				Ers. durch	
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				1	

Lagerstellen mit Gleitmo 805 fetten



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										Ers. durch	
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Lagerstellen mit Gleitmo 805 fetten



Schulzwerkzeug ISO 80/16 Beschreiben		Überfläche DIN ISO 1502	Maßstab ISO 2768-C	1:1	FERTIGUNGSZEICHNUNG Werkstatt	Kombi-Spann- platte-Nr.
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Alle Lagerstellen mit
Gleitmo 805 fetten.

