



OPERATING INSTRUCTIONS

(Translation)



Spindle support Typ
2044.0,5/1/3 2047.0,5/1/3 2048.0,5/1/3
2083.0,5/1/3 2087.0,5/1/3 2088.0,5/1/3
3208.3 8223.0,5/1

1. USER GROUPS

	Duties	Qualifications
Operator	Operation, visual inspection	Instruction by means of the operating instructions; Authorised person 1
Specialist personnel	Assembly, disassembly, repair, maintenance	Mechanic
	Tests	Authorised person 2 per TRBS-1203 (Technical expert)

2. SAFETY INSTRUCTIONS

Where to use this winch

Ergonomic fit and support, displacement and leveling to the nearest millimeter with manually operated spindle supports in different variations.

- Operate the equipment in accordance with the information in these operating instructions.
- Only use to lift, lower and pull freely-movable loads.
- Exception: type 3208/8223 can be push and pull loaded.
- Only use when in perfect working order.
- Only allow to be operated by personnel instructed on how to do so.

Safe working practices

- First read the operating instructions.
- Always be conscious of safety and hazards when working.
- Observe lifting device and load during all movements.
- Immediately report any damage or defects to the person in charge.
- Repair equipment first before continuing work!
- Do not leave the load suspended without supervision.
- Transport device protected against impacts and shocks, falling over or toppling.

Do not

- Overload (--> technical data, type plate, payload plate)
- Mechanical propulsion.
- Impacts, blows.
- Work in and on loads at heights > 400 mm without additional safety equipment.

Use exclusions

- Not suitable for permanent operation and vibration stress.
- Not approved for use as builders' hoist (DGUV-R 100-500-2.30).
- Not approved for use in explosive areas/environments.
- Not suitable for aggressive environments.
- Not suitable for lifting hazardous loads.

Organisational measures

- Ensure that these operating instructions are always at hand.
- Ensure that only trained personnel work with the equipment.
- Check at regular intervals whether it is being used in a safety and hazard conscious manner.

Installation, service and repair

Only by specialist personnel!

Only use original spare parts for repairs.

Do not modify or alter safety-relevant parts!

Additional attachments must not impact safety.

Further regulations to be observed are

- German Industrial Health and Safety Ordinance (BetrSichV).
- Country-specific regulations.
- German Accident prevention regulations (DGUV-V 54).

3. TECHNICAL DATA

Type		2044.0,5 2047.0,5 2048.0,5	2083.0,5 2087.0,5 2088.0,5	2044.1 2047.1 2048.1	2083.1 2087.1 2088.1	2044.3 2047.3 2048.3
O / N		203466 203468 202620 203469	203467 203472 202578 203474	203522 203565 203652 203566	203520 203473 202579 203475	203509 202616 203567
Permitted load	kN	5		10		30
Lift	mm	300	300	300	300	350
Drop lift	mm		200	-	300	-
O/A height	mm	500	550	525	585	670
Spindle thread		Tr 22x3		Tr 22x3		Tr 30x4
Crank force at full load	N	140		140		260
Gear ratio		1		1,6		1,83
Lift/crank turn	mm	3		1,875		2,18
Weight	kg	4	4,5	5,5	7,5	16

Type		2083.3 2087.3 2088.3	3208.3	8223.0,5	8223.1
O / N		203323 202223 203477	203661	205322	210178
Permitted load	kN	30	30	5	10
Lift	mm	350	400	400	300
Drop lift	mm	300			
O/A height	mm	720	860	700	655
Spindle thread		Tr 30x4	Tr 30x4	Tr 22x3	Tr 22x3
Crank force at full load	N	260	260	140	140
Gear ratio		1,83	1,83	1	1,6
Lift/crank turn	mm	2,18	2,18	3	1,9
Weight	kg	20	16	6	7

For customized products, the data of the enclosed drawing is valid.

4. GENERAL

Ergonomic fit and support, displacement and leveling to the nearest millimeter with manually operated spindle supports in different variations. The sturdy square tube, which is easy to mount, warrants built-on and built-in for multi-purposes. The self-locking trapezoid spindle and the maintenance-free bevel gears enable easy and reliable operation.

The spindle support complies with the accident-prevention rule DGUV-V 54.

5. CONSTRUCTION / FUNCTION

The trapezoid spindle is driven by the crank handle across one spur bevel gearing. This spindle converts the rotation into a longitudinal motion, due to the stationary nut. To protect from mechanical damages, the spindle and gear parts are housed in telescopic square tubes, which additionally provide a high stability.

The heights of lift can promptly be bridged by means of supports equipped with one additional telescopic tube.

6. INSTALLATION

The spindle support can be built-on and built-in in any position.

It should be noted, that:

- the spindle support will only be push loaded (not on pull). (Exception: type 3208/8223 is capable to be push loaded as well as pull loaded.)
- the safety, the maneuverability and the possibility of relubrication will not be impaired.
- the connection should be sufficiently dimensioned.

7. OPERATION

The extension of the spindle support is made by turning the crank clockwise. To pull in the spindle support it must be turned counter-clockwise. When the lift stop is reached (rise of the crank compression-force!), the cranking has to be stopped, in order to avoid damages of the spindle support. When the crank is released, the load will be maintained in any position by the self-locking spindle.

Spindle supports with drop leg can be extended additionally by opening a locking mechanism (spring bolt) and extending the drop tube.



ATTENTION!

The locking mechanism is only to be released, when the spindle support is unloaded. Pay attention to the dead weight of the downpipe! The drop tube can fall out of the spindle support, if the section to be bridged is longer than the spindle support.

Drawing-out of the drop tube is only allowed to the last hole (max. drop lift).

Before the spindle support is loaded, it must be secured by means of the spring bolt which must visibly be engaged.



8. INSPECTION

The equipment must be inspected in accordance with the conditions of use and the operating conditions at least once per year by an authorised person 2 per TRBS 1203 (Technical expert) (testing per BetrSichV, § 10, sect.2 represents implementation of EC Directives 89/391/EEC and 95/63/EC and the annual occupational safety inspection per DGUV-V 54, §23, sect. 2 and DGUV-G 309-007). These inspections must be documented:

- Before commissioning.
 - After significant alterations before recommissioning.
 - At least once per year.
 - In the event of unusual occurrences arising that could have detrimental effects on the safety of the winch (extraordinary tests, e.g. after a long period of inactivity, accidents, natural events).
 - After repair works that could have an influence on the safety of the winch.
- Technical experts (AP2) are persons, who have sufficient knowledge based on their specialist training and experience, in the areas of winches, lift and pull systems and the relevant official occupational health and safety rules, accident prevention regulations, guidelines and generally accepted engineering rules (e.g. EN standards), to evaluate the operational safety of winches, and lift and pull systems. Technical experts (AP2) are to be nominated by the operator of the equipment. Performance of the annual occupational safety inspection as well as the training required to obtain the aforementioned knowledge and skills can be provided by haacon hebetechnik.

9. MAINTENANCE RECOMMENDATION

The operator determines the intervals themselves based on frequency of use and the operating conditions.

- Regular cleaning, no steam jets!
- General overhaul by the manufacturer after 10 years at the latest.

**CAUTION!**

Only perform inspection, maintenance and repair work on an unloaded hoist. Only allow work on brakes and locks to be performed by qualified specialist personnel.

Maintenance and inspection work	Intervals
Visual and functional tests	Before every use
Brake function under load	
Lubricate (grease nipple), at the same time drive out and in over the complete stroke	Semi-annually
Check spindle and nut for wear, grease and replace if necessary	Annually
Check type plate for legibility	
Professional inspection	

Maintenance and inspection work	Intervals
Check gear parts, grease and replace if necessary	Every 2 - 5 years

Lubricant recommendations: Multi-purpose grease per DIN 51502 K3K-20

10. REPLACEMENT PARTS

When ordering replacement parts please always provide:

- The type and serial number of the equipment / item and part number.
- When ordering parts for equipment with differing type numbers please contact the manufacturer.

11. DISASSEMBLY, DISPOSAL

- Make sure to observe the safety instructions.
- Dispose of the equipment and the substances within it in an environmentally responsible manner.

EU Installation Declaration

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

haacon
group

Manufacturer:

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

Phone +49 (0) 9375 / 84-0

Fax +49 (0) 9375 / 8466

The product

Product name:

Spindle support

Type:

2044	2047	2048	2083	2087	2088	2758	2843
2854	2949	3090	3091	3092	3094	3114	3124
3188	3208	3235	3290	3293	3298	3364	3378
3379	3394	8207	8208	8209	8210	8220	8223
8230	8255	8304	8306	8682	207614		

Load capacity range: 0,3 – 10 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, 05.09.2013


on behalf of Robert Miltenberger


on behalf of Theo Müller

gb

Edition 10; 09/13

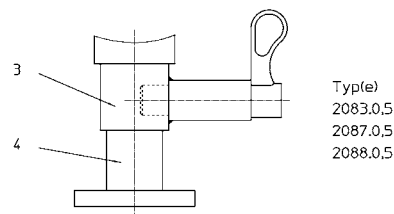
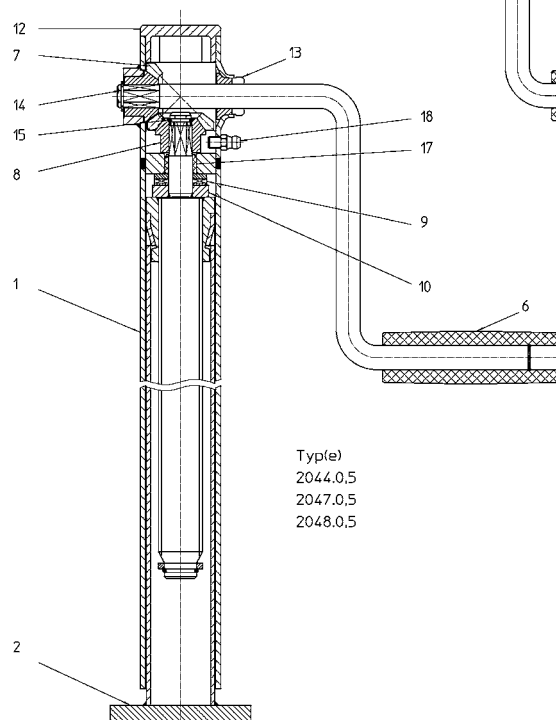
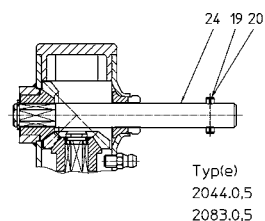
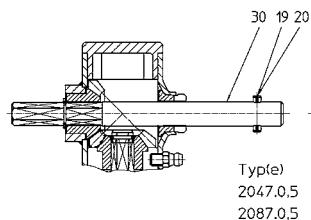
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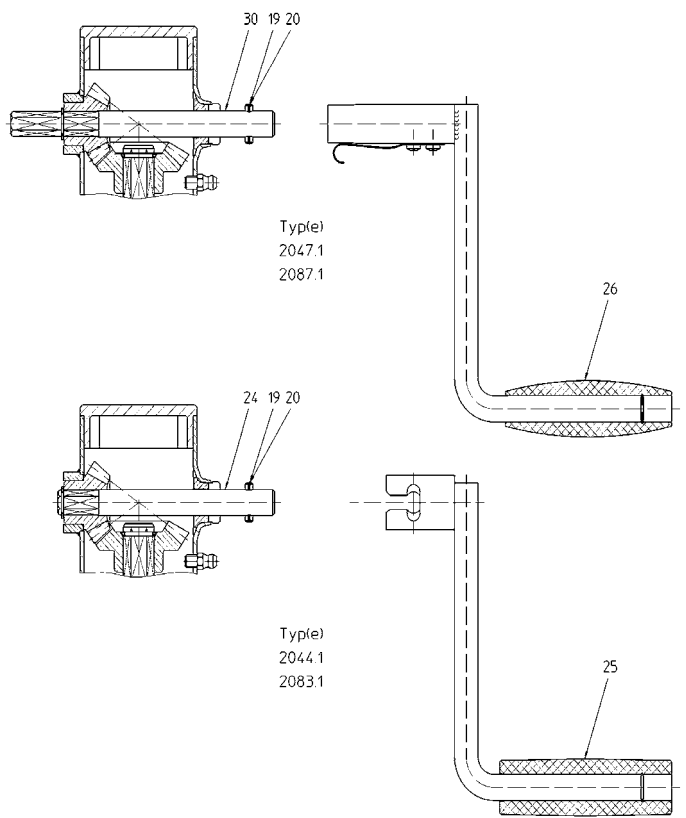
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Type 2044/2047/2048.0,5						
Pos	Order No.					
	203 468 202 573	203 469	203 466			
1	113 225	113 225	113 225			1 x
2	119 786	119 786	119 786			1 x
6			114 230			1 x
7	106 949	106 949	106 949			1 x
8	119 784	119 784	119 784			1 x
9	100807 100803 100810	100807 100803 100810	100807 100803 100810			1 x
10	110 370	110 370	110 370			1 x
12	101 201	101 201	101 201	40x40		1 x
13	106 870	106 870	106 870			1 x
14	106 832	106 832	106 832	A10x1	DIN 471	1 x
15	120 386	120 386	120 386			1 x
17	106 872	106 872	106 872			1 x
18	100 264	100 264	100 264	AS6x1	DIN71412	1 x
19	100 076	100 076		2,5x18	ISO 8752	1 x
20	106 296	106 296		4x18	ISO 8752	1 x
24	115 146					1 x
25	200 374	200 374				1 x
26	201 432	201 432	201 432			1 x
30		115 147				1 x

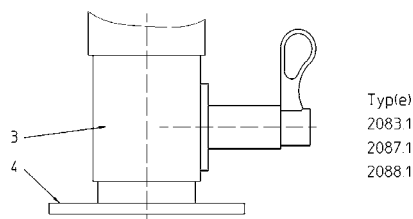
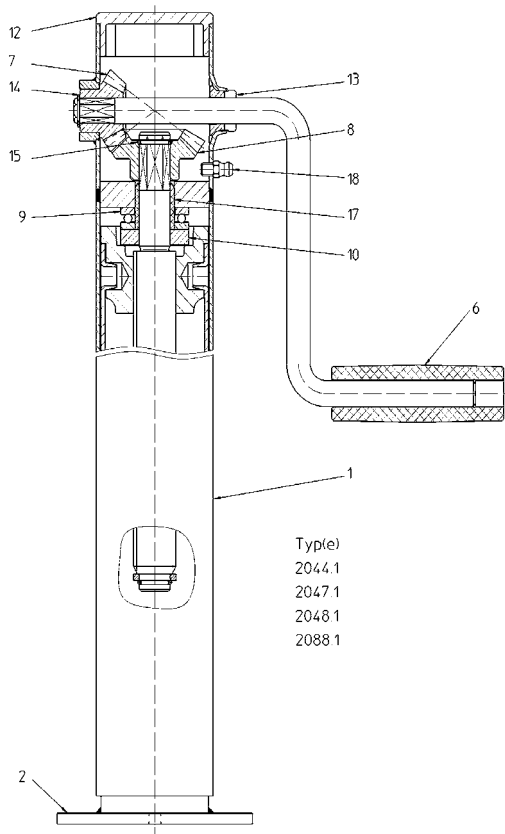
Type 2083/2087/2088.0,5						
Pos	Order No.					
	203472 202657	203474	203467			
1	113 225	113 225	113 225			1 x
3	119 788	119 788	119 788			1 x
4	108 075	108 075	108 075			1 x
6			114 230			1 x
7	106 949	106 949	106 949			1 x
8	119 784	119 784	119 784			1 x
9	100 807 100 803 100 810	100 807 100 803 100 810	100 807 100 803 100 810			1 x
10	110 370	110 370	110 370			1 x
12	101 201	101 201	101 201	40x40		1 x
13	106 870	106 870	106 870			1 x
14	106 832	106 832	106 832	A10x1	DIN 471	1 x
15	120 386	120 386	120 386			1 x
17	106 872	106 872	106 872			1 x
18	100 264	100 264	100 264	AS6x1	DIN71412	1 x
19	100 076	100 076		2,5x18	ISO 8752	1 x
20	106 296	106 296		4x18	ISO 8752	1 x
24	115 146					1 x
25	200 374	200 374				1 x
26	201 432	201 432	201 432			1 x
30		115 147				1 x



Type 2044/2047/2048.1						
Pos	Order No.					
	203 565 202 771	203 566	203 522			
1	113 230	113 230	113 230			1 x
2	119 725	119 725	119 725			1 x
6			114 230			1 x
7	106 948	106 948	106 948			1 x
8	119 726	119 726	119 726			1 x
9	100 899	100 899	100 899			1 x
10	109 993	109 993	109 993			1 x
12	101 202	101 202	101 202	60x60		1 x
13	106 870	106 870	106 870			1 x
14	106 832	106 832	106 832	A10x1	DIN 471	1 x
15	120 187	120 187	120 187			1 x
17	106 752	106 752	106 752			1 x
18	100 264	100 264	100 264	AS6x1	DIN71412	1 x
19	100 076	100 076		2,5x18	ISO 8752	1 x
20	106 296	106 296		4x18	ISO 8752	1 x
24	115 146					1 x
25	200 374	200 374				1 x
26	201 432	201 432	201 432			1 x
30		115 147				1 x

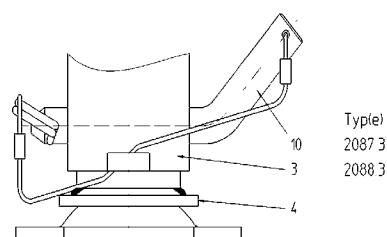
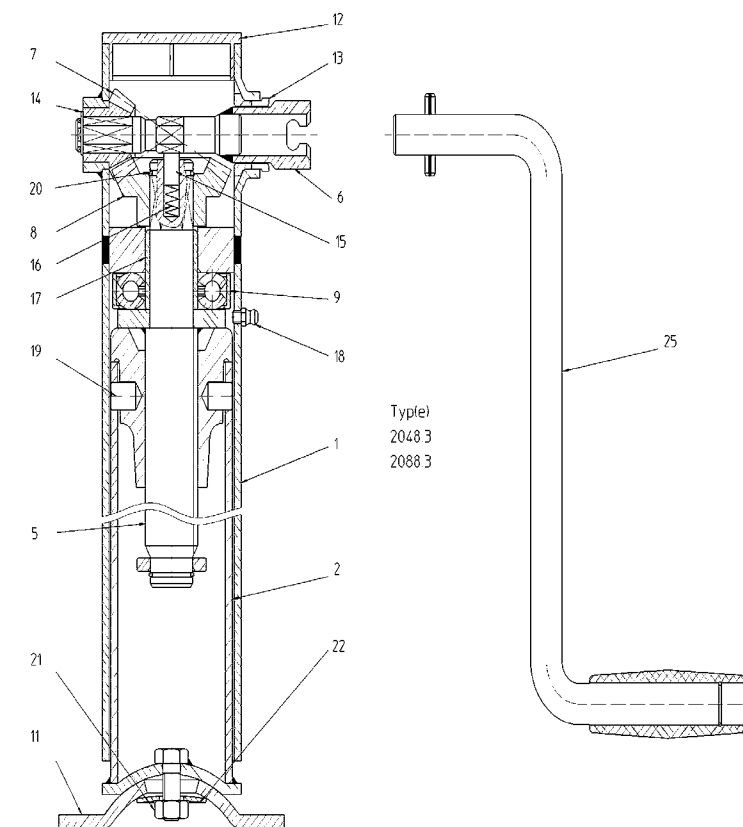
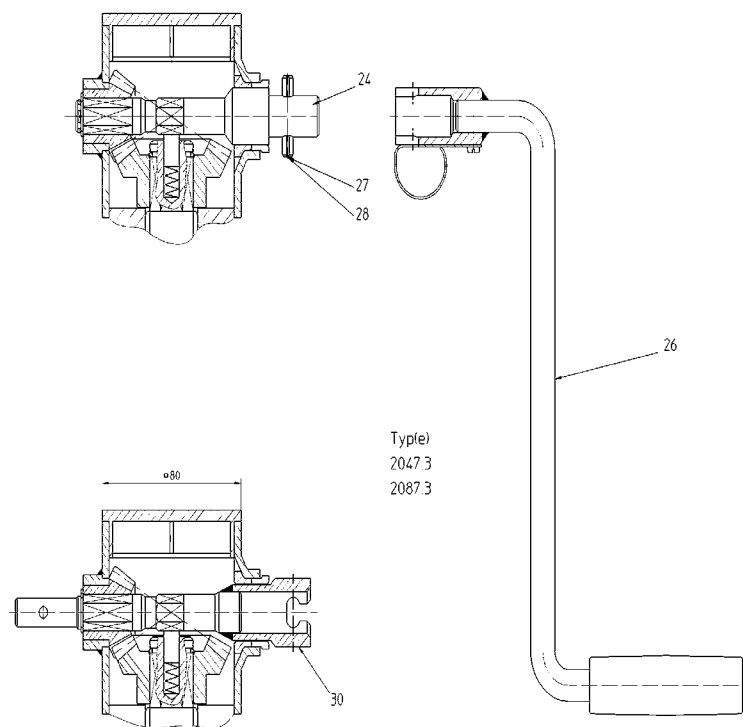


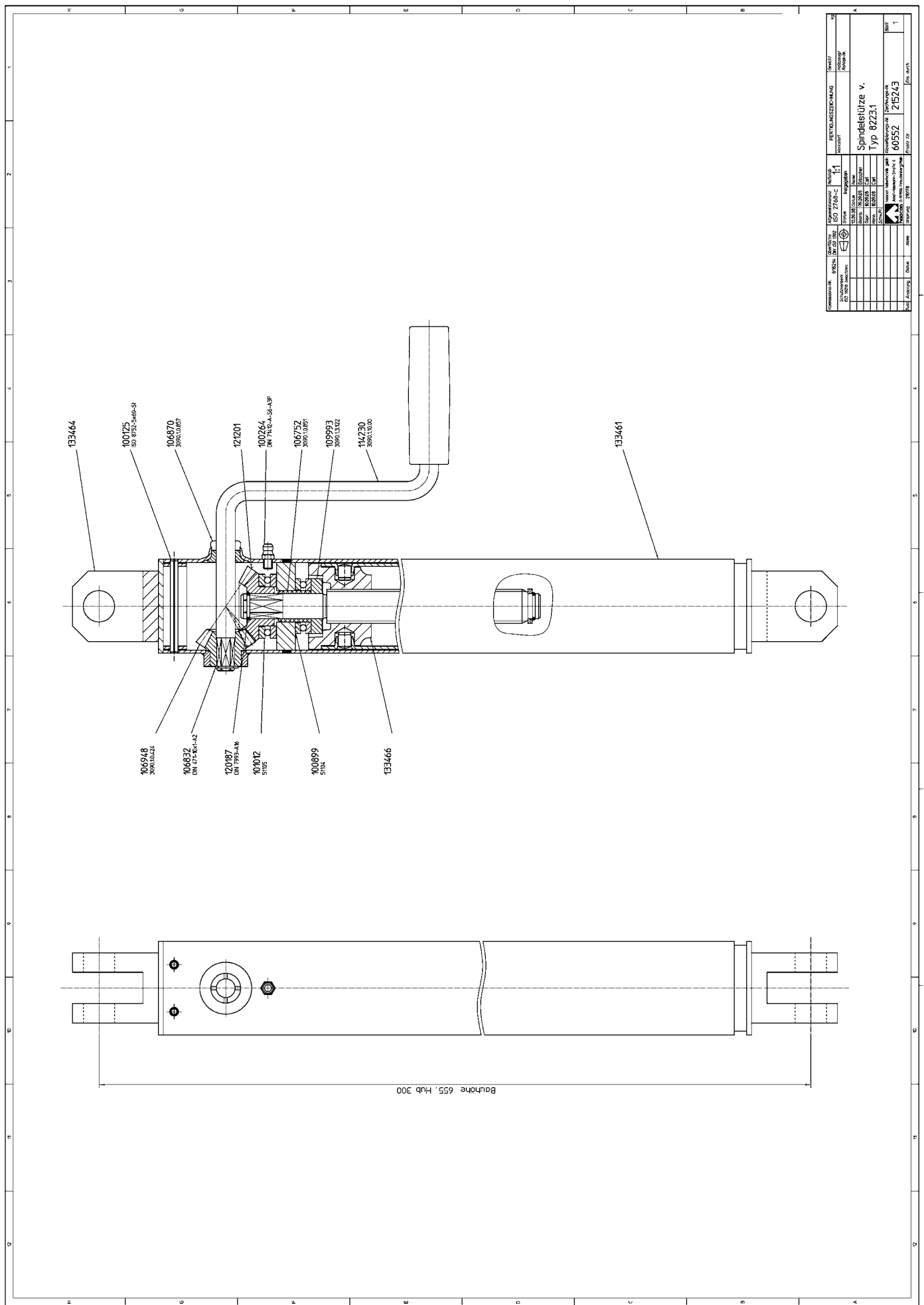
Type 2083/2087/2088.1						
Pos	Order No.					
	203 473 202 772	203 475	203 520			
1	113 230	113 230	113 230			1 x
3	119 728	119 728	119 728			1 x
4	116 226	116 226	116 226			1 x
6			114 230			1 x
7	106 948	106 948	106 948			1 x
8	119 726	119 726	119 726			1 x
9	100 899	100 899	100 899			1 x
10	109 993	109 993	109 993			1 x
12	101 202	101 202	101 202	60x60		1 x
13	106 870	106 870	106 870			1 x
14	106 832	106 832	106 832	A10x1	DIN 471	1 x
15	120 187	120 187	120 187			1 x
17	106 752	106 752	106 752			1 x
18	100 264	100 264	100 264	AS6x1	DIN71412	1 x
19	100 076	100 076		2,5x18	ISO 8752	1 x
20	106 296	106 296		4x18	ISO 8752	1 x
24	113 267					1 x
25	200 374	200 374				1 x
26	201 432	201 432	201 432			1 x
30		113 268				1 x



Type 2047/2048.3					
Pos	Order No.				
	203 567 202 815	203 509 202 616			
1	118 952	118 952			1 x
2	108 933	108 933			1 x
5	118 954	118 954			1 x
6		108 938			1 x
7	106 304	106 304			1 x
8	118 951	118 951			1 x
9	102 634	102 634			1 x
11	108 944	108 944			1 x
12	106 454	106 454	80x80		1 x
13	100 506	100 506			1 x
14	100 721	100 721	A14x1	DIN 471	1 x
15	106 223	106 223	8x14	DIN 5402	1 x
16	101 127	101 127			1 x
17	106 453	106 453			1 x
18	100 264	100 264	AS6x1	DIN71412	1 x
19	111 072	111 072			2 x
20	106 142	106 142	A24	DIN 7993	1 x
21	100 361	100 361	M 10	DIN 4032	1 x
22	101 118	101 118	40x14,3x2	DIN 2093	1 x
24		111 656			1 x
25	202 614	202 614			1 x
26		201 032			1 x
27		100 141	6x36	ISO 8752	1 x
28		100 096	3,5x36	ISO 8752	1 x
30	110 409				1 x

Type 2087/2088.3					
Pos	Order No.				
	203 477 204 572	203 323 207 514			
1	118 952	118 952			1 x
3	114 216	114 216			1 x
4	109 174	109 174			1 x
5	118 954	118 954			1 x
6		108 938			1 x
7	106 304	106 304			1 x
8	118 951	118 951			1 x
9	102 634	102 634			1 x
10	102 603	102 603			
11	108 944	108 944			1 x
12	106 454	106 454	80x80		1 x
13	100 506	100 506			1 x
14	100 721	100 721	A14x1	DIN 471	1 x
15	106 223	106 223	8x14	DIN 5402	1 x
16	101 127	101 127			1 x
17	106 453	106 453			1 x
18	100 264	100 264	AS6x1	DIN71412	1 x
19	111 072	111 072			2 x
20	106 142	106 142	A24	DIN 7993	1 x
21	100 361	100 361	M 10		1 x
22	101 118	101 118	40x14,3x2		1 x
24		111 656			1 x
25	202 614	202 614			1 x
28		201 032	3,5x36		1 x
27		100 141	6x36	ISO 8752	1 x
28		100 096	3,5x36	ISO 8752	1 x
30	110 409				1 x





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