



OPERATING INSTRUCTIONS

Rack & Pinion Jack
 Typ(e) 1624.1,5 1624.3 1624.5 1624.10
 1658.1,5 1658.3 1658.5 1658.10

Manufactured by Haacon Hebeteknik GmbH



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1. SAFETY INSTRUCTIONS

Where to use this winch

This rack & pinion jack may only be used in accordance with the following operating instructions.

- To be used only if in perfect technical condition.
- To be used by trained personnel only.
- To be used only for the recommended application (i.e. pulling or pushing).
- To be fixed with securing pin in the final position when used for winding or lengthening load surfaces.

Safe working practices

Read these operating instructions carefully before using the rack jack.

Work safely and be aware of dangers at all times.

Inform your supervisor immediately of any damage or faults to the rack & pinion jack. Do not operate the rack & pinion jack 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 below or on the lifted load.

Winch Application

- Not to be used continuously.

Supervision

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

Maintenance and Repair

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.

2. TECHNICAL DATA

Type		1624.1,5	1624.3	1624.5	1624.10
Type		1685.1,5	1685.3	1685.5	1685.10
Permitted load	t	1,5	3	5	10
Lift per crank turn	mm	13,9	8	3,9	4
Crank force	N	220	240	210	360
Weight (lift 800 mm)	kg	15	25	35	58

haacon policy is one of continuous development. We reserve the right to amend specifications without notice or obligation.

3. GENERAL

These high quality rack & pinion jacks, produced for decades, are robust and reliable. They are capable of producing lifting, pulling, shifting and pushing forces from 1,5 to 10 tonnes. Suitable for safe adjustment of belt conveyors to any level and widening/lengthening of load bearing surfaces.

4. CONSTRUCTION

These rack & pinion jacks are a derivative of haacon's proven rack jack range, type 11.1,5 - 11.10. Spur gear in special steel, hardened or tempered. Gear mechanism of this rack jack range complies with German VBG 8 safety regulations for lifting and pulling equipment.

The rack jacks are available with either "SIKU" safety cranks or "RAKU" ratchet cranks.

SIKU = Safety crank with self-acting friction type load brake with two-part spring loaded detent lever secures the load at any height. By rotating the crank clockwise the load is lifted and vice versa.

RAKU = Ratchet crank. A ratchet mechanism has been added to the above mentioned SIKU crank which allows either lift or lower positions to be selected. Especially useful in areas with restricted head room.

5. OPERATION

For use as a lifting device

Unfold the crank handle. 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.

For extending or retracting load surfaces

The load is moved by rotating the crank clockwise or anti-clockwise. The extended or retracted parts must be fixed in the desired position with securing pins.

6. MAINTENANCE

The rack & pinion jack should be checked regularly by trained personnel depending on usage and conditions, but at least once a year.

Trained personnel are people who by virtue of training and experience have gained sufficient knowledge in the field of rack and pinion jack, lifting and pulling equipment and who are adequately acquainted with national standards of accident prevention and safety regulations and who are able to judge the condition of lifting and pulling equipment where working safety is concerned.

Gear wheels and pinions

The gearbox has been filled with high quality long-life grease by the manufacturer.

For normal use, lubricate annually via grease nipple.

If the winch is used frequently then the gearbox should be opened every 2 years, worn parts exchanged and new grease applied.

Safety crank

If the crank offers resistance when lowering a load, apply a few drops of oil into the recesses on the crank hub.

Grease all moving parts on the crank handle if necessary.

The replacement of worn friction discs (aperture > 30°) and repair of faulty cranks may only be carried out by the manufacturer.



WARNING!!

Do not uncouple crank or detent lever or pawl when rack & pinion jack is loaded.

Last but not least

If the crank cannot be moved after a long period of non-use or due to bad weather try to turn anti-clockwise. Add a drop of oil into the recesses, turn up and down several times until the corrosion inside the brake has been cleared and the crank turns normally. Follow these instructions and you too will continue to be pleased with your haacon rack & pinion jack.

7. SPARE PARTS

The following data should be given with each order:

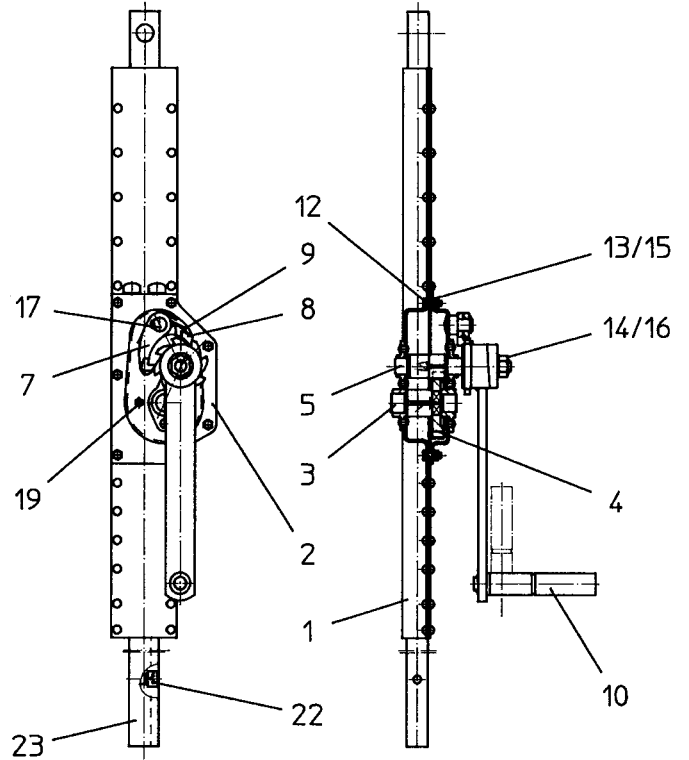
- Type number and serial number of rack jack / Pos. and Part number.

Power Jacks Ltd.
 Maconochie Road
 Fraserburgh
 AB43 8TE
 Scotland
 Tel: +44 (0) 1346 513131
 Fax: +44 (0) 1346 516827
 email: sales@powerjacks.co.uk
 http://www.powerjacks.com

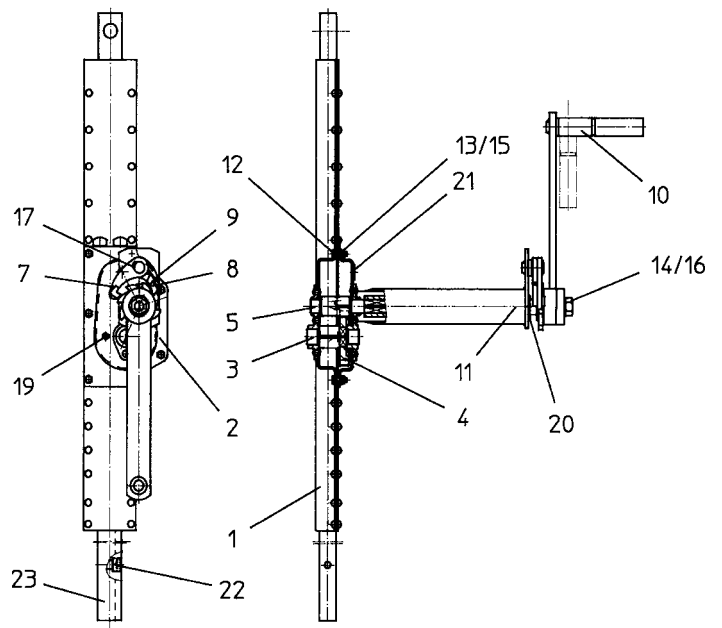
Power Jacks Ltd. Authorised Distributor of Equipment
 Manufactured by Haacon Hebeteknik GmbH

Typ 1624.1,5

Typ/ Type	1624.1,5 Teile-Nr. Part-No. Référence	1685.1,5 Teile-Nr. Part-No. Référence	Abmessung/DIN-Nr. Dimensions/DIN-No.		Stück Qty. Pièce
1	102 082	102 082			1
2	107 822	108 109			1
3	103 759	103 759			1
4	102 086	102 086			1
5	102 087	102 087			1
7	102 152	102 152			1
8	102 131	102 131			1
9	101 137	101 137			1
10	101 396	101 396			1
11		102 012			1
12	100 246	100 246	M 6 x 16	DIN 933	7
13	100 351	100 351	M 6	DIN 934	7
14	100 368	100 368	M 14	DIN 934	1
15	100453	100 453	A 6	DIN 127	7
16	100 461	100 461	A 14	DIN 127	1
17	100 721	100 721	A 14 x 1	DIN 471	1
19	100 264	100 264	AS 6 x 1	DIN 71412	1
20		100 507			1
21		101 188	GPN 300 F11		1
22	100 069	100 069	M 12 x 20	DIN 912	1
23	Zahnstange: Gesamtlänge angeben advise total length of rack veuillez indiquer longueur totale de la crémaillère				



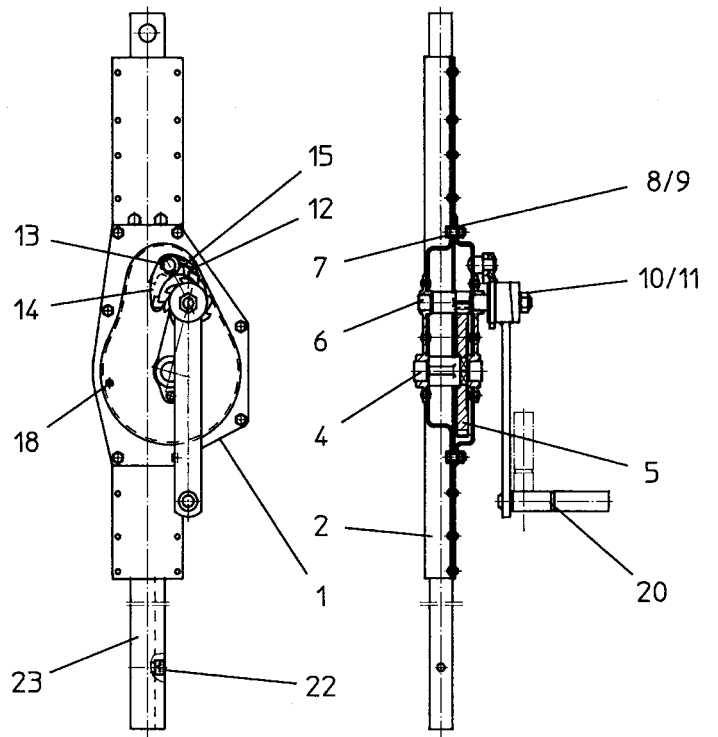
Typ 1685.1,5



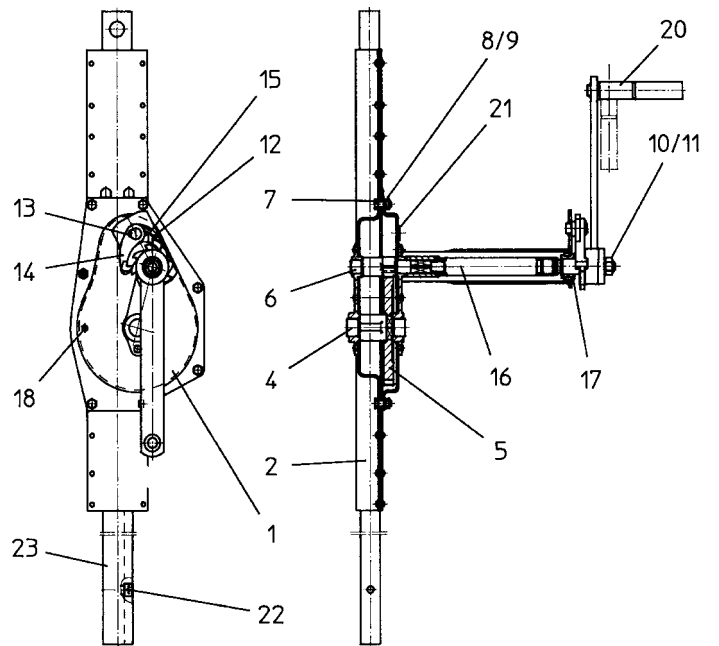
- (D)** Bei Sonderbauformen entnehmen Sie die Teilnummern aus der beigefügten Ersatzteilzeichnung.
- (GB)** For special versions the part numbers are indicated in the spare parts drawing attached.
- (F)** Pour des versions spéciales, veuillez trouver les numéros d'article dans le plan des pièces détachées en annexe.

Typ 1624.3

Typ/ Type	1624.3 Teile-Nr. Part-No. Référence	1685.3 Teile-Nr. Part-No. Référence	Abmessung/DIN-Nr. Dimensions/DIN-No.		Stück Qty. Pièce
1	108 122	108 128			1
2	102 097	102 097			1
3	103 761	103 761			1
4	102 101	102 101			1
5	102 102	102 102			1
7	100 191	100 191	M 8 x 20	DIN 933	7
8	100 455	100 455	A 8	DIN 127	7
9	100 355	100 355	M 8	DIN 934	7
10	100 368	100 368	M 14	DIN 934	1
11	100 461	100 461	A 14	DIN 127	1
12	101 137	100 137			1
13	100 721	100 721	A 14 x 1	DIN 471	1
14	102 152	100 152			1
15	102 131	102 131			1
16		102 112			1
17		100 507			1
18	100 264	100 264	AS 6 x 1	DIN 71412	1
20	101 396	100 396			1
21		101 188	GPN 300 F11		1
22	100 069	100 069	M 2 x 20	DIN 912	1
23	Zahnstange: Gesamtlänge angeben advise total length of rack veuillez indiquer longueur totale de la crémaillère				

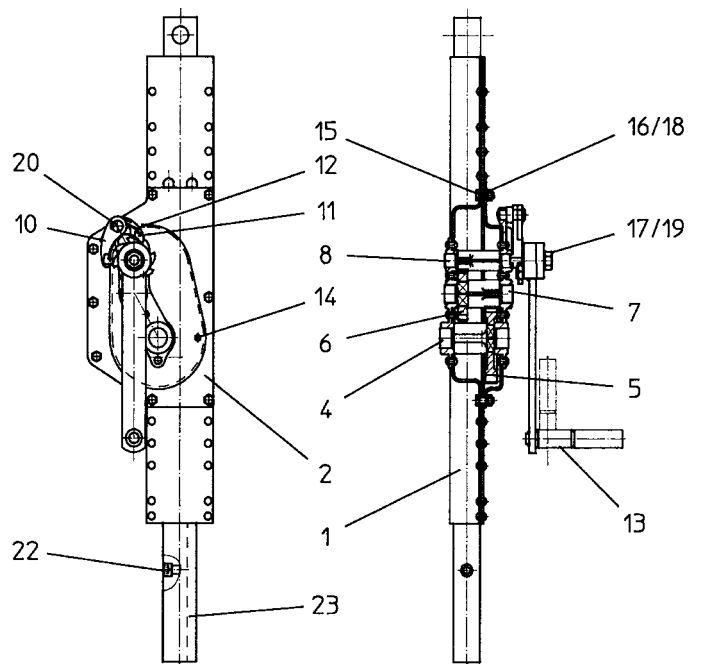


Typ 1685.3

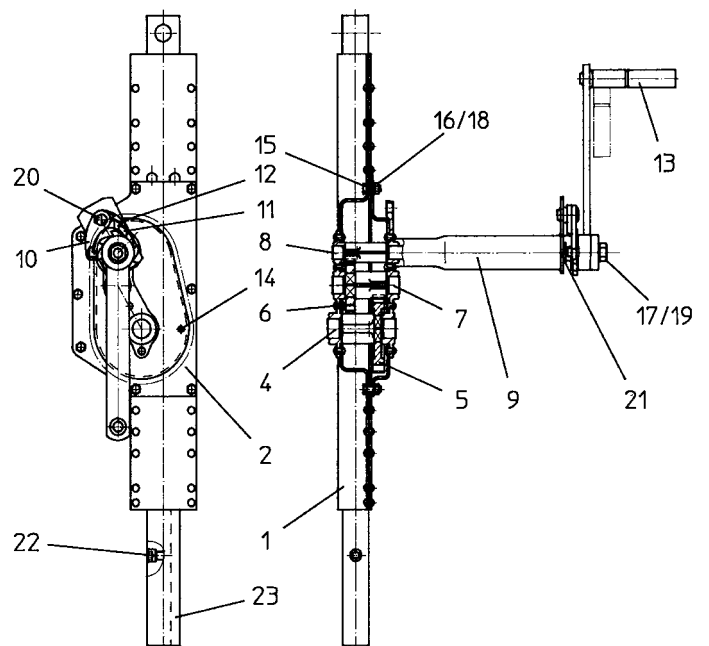


Typ 1624.5

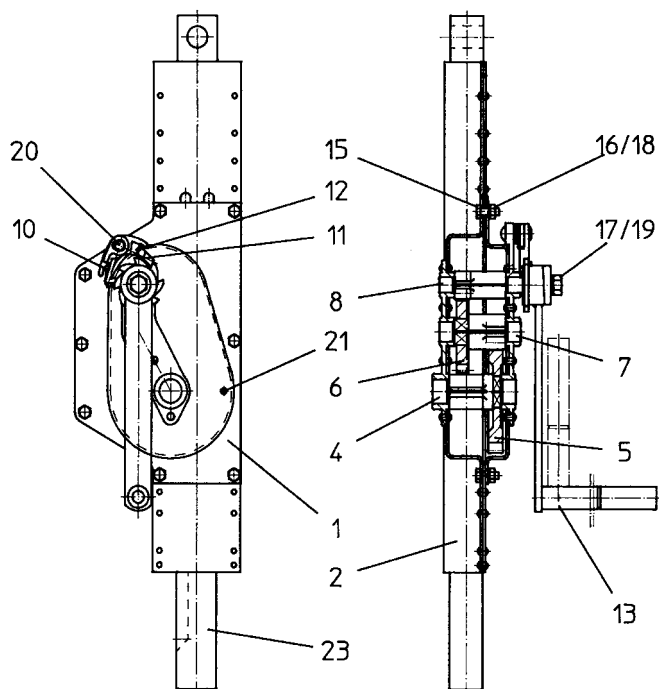
Typ/ Type	1624.5 Teile-Nr. Part-No. Référence	1685.5 Teile-Nr. Part-No. Référence	Abmessung/DIN-Nr. Dimensions/DIN-No.		Stück Qty. Pièce
1	113 213	112 115			1
2	108 131	114 462			1
4	102 481	102 481			1
5	102 119	102 119			1
6	102 112	102 122			1
7	102 123	102 123			1
8	102 120	102 120			1
10	102 152	102 152			1
11	102 131	102 131			1
12	101 137	101 137			1
13	101 396	101 396			1
14	100 264	100 264	AS 6 x 1	DIN 71412	1
15	100 191	100 191	M 8 x 20	DIN 933	8
16	100 455	100 455	A 8	DIN 127	8
17	100 461	100 461	A 14	DIN 127	1
18	100 355	100 355	M 8	DIN 934	8
19	100 368	100 368	M 14	DIN 934	1
20	100 721	100 721	A 14 x 1	DIN 471	1
21		100 507			1
22	100 069	100 069	M 12 x 20	DIN 912	1
23	Zahnstange: Gesamtlänge angeben advise total length of rack veuillez indiquer longueur totale de la crémaillère				



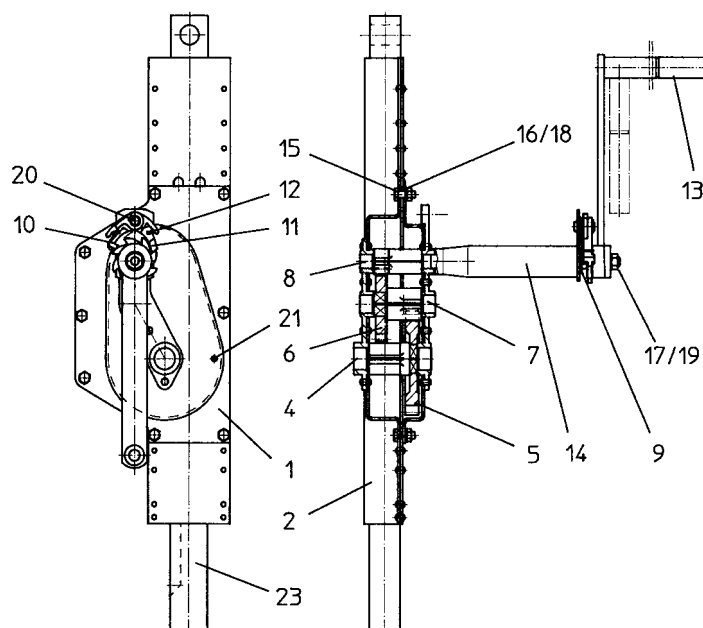
Typ 1685.5



Typ/ Type	1624.10 Teile-Nr. Part-No. Référence	1685.10 Teile-Nr. Part-No. Référence	Abmessung/DIN-Nr. Dimensions/DIN-No. Dimensions/DIN-No.		Stück Qty. Pièce
1	108 135	108 136			1
2	102 159	102 159			1
4	102 162	114 197			1
5	102 163	102 163			1
6	102 166	102 166			1
7	102 167	102 167			1
8	102 164	102 164			1
9		100 057			1
10	102 152	102 152			1
11	102 174	102 174			1
12	101 137	101 137			1
13	101 398	101 398			1
14		108 125			1
15	100 203	100 203	M 10 x 25	DIN 933	8
16	100 457	100 457	A 10	DIN 127	8
17	100 463	100 463	A 16	DIN 127	1
18	100 361	100 361	M 10	DIN 934	8
19	100 369	100 369	M 16	DIN 934	1
20	100 721	100 721	A 14 x 1	DIN 471	1
21	100 264	100 264	AS 6 x 1	DIN 71412	1
23	Zahnstange: (Gesamtlänge und Ausführung, Zug oder Druck angeben) advise total length of rack and wether push or pull application veuillez indiquer longueur totale de la crémaillère et si c'est pour charge en traction ou appui				



Typ 1685.10



SLIDING DEVICE

Version: Rack jack construction (see next page)

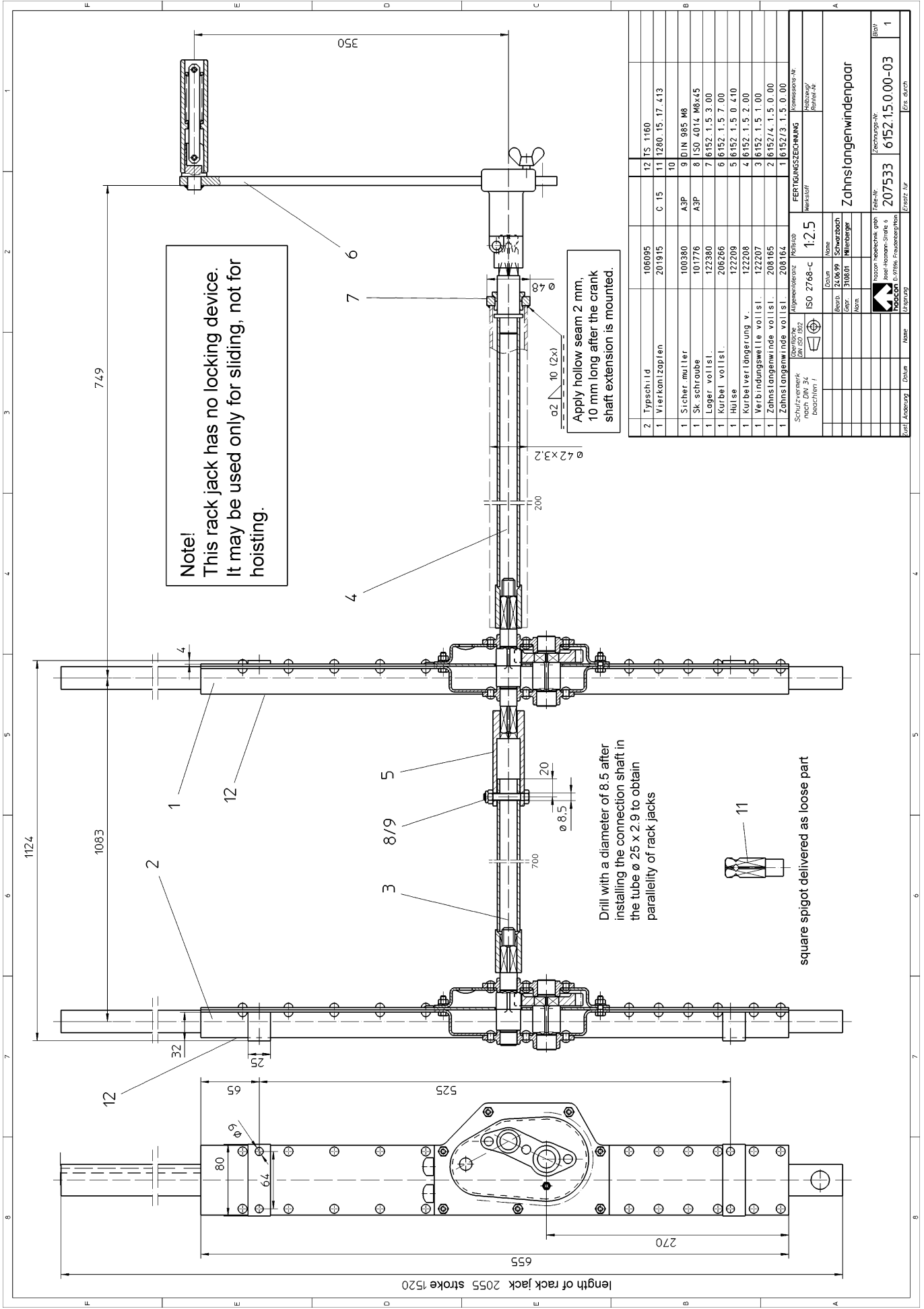
Notes on safety, installation and servicing:

1. The casing for the rack jacks must be securely mounted on the vehicle frame. The rack casings must also not move during operation.
2. The opposite drive journals on the crank drive unit must be flush.
3. The slide section must slide freely in the vehicle frame over the entire sliding area and must not stick.
4. The racks are pushed out individually and pinned and secured using bolts.
5. The racks must move parallel with each other in all planes.
6. Both parts of the connection shaft are to be pushed into each other loosely until the connection shaft can be placed on the square pin of the projecting gearbox part.
7. Predrill both connection shaft parts together, bolt them together and secure them.
8. Check and ensure that the slide section slides freely by connecting and disconnecting the crank.

Lubrication:

As required, but grease adequately at least once per week.

If you have any questions, our technical support team can be contacted at any time. Tel. 09375/84-0



Note!
 This rack jack has no locking device.
 It may be used only for sliding, not for
 hoisting.

Apply hollow seam 2 mm,
 10 mm long after the crank
 shaft extension is mounted.

Drill with a diameter of 8.5 after
 installing the connection shaft in
 the tube ø 25 x 2.9 to obtain
 parallelism of rack jacks

square spigot delivered as loose part

2	Typschild	106095	12	TS 1160
1	Vierkantzapfen	201915	C 15	11 1280.15.17.413
			10	
1	Sicher mutter	100380	A3P	9 DIN 985 MB
1	Sk schraube	101776	A3P	8 ISO 4014 M8x45
1	Lager vollst.	122380		7 6152.1.5.3.00
1	Kurbel vollst.	206266		6 6152.1.5.7.00
1	Hülse	122209		5 6152.1.5.0.410
1	Kurbelverlängerung v.	122208		4 6152.1.5.2.00
1	Verbindungsweite vollst.	122207		3 6152.1.5.1.00
1	Zahnslangenwinde vollst.	208165		2 6152/14.1.5.0.00
1	Zahnslangenwinde vollst.	208164		1 6152/13.1.5.0.00

Schulzwerk
 nach DIN 34
 beachten!

ISO 2768-c
 Maßstab
 1:2.5

FERTIGUNGSZEICHNUNG
 Name
 Datum
 Bearb. 24.08.99
 Liner. 31.08.01
 Millenberger
 Name

Zahnslangenwindenpaar

Teil-Nr. 207533
 Zeichnungs-Nr. 6152.1.5.00-03
 Blatt 1

ISO 9001
 ISO 14001
 ISO 45001

ISO 9001
 ISO 14001
 ISO 45001

ISO 9001
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 ISO 45001

ISO 9001
 ISO 14001
 ISO 45001