



OPERATING INSTRUCTIONS

(Translation)



Rope winch

Type	220.0,3	220.0,5	220.0,75
	220.1	220.2	220.3
	421.0,125	4210.0,08	4210.0,125

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

Appropriate use

Operate the equipment in accordance with the information in these operating instructions.

- Only use to lift, lower and pull freely-movable loads.
- Only use when in perfect working order.
- Only allow to be operated by personnel instructed on how to do so.

Safety-conscious work

- 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.

The following are not allowed:

- Overload (→ technical data, type plate, payload plate)
- Mechanical propulsion.
- Impacts, blows.

Use exclusions

- Not suitable for permanent operation and vibration stress.
- Not approved for use as builders' hoist (BGV D7).
- Not approved for use on stages or in studios (BGV C1).
- Not approved for use as a retractable transportation device for personnel (BGR 159).
- 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 (BGV D8).

Load

- Do not leave suspended without supervision.
- Do not allow to swing.
- Do allow to fall in the rope.

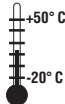
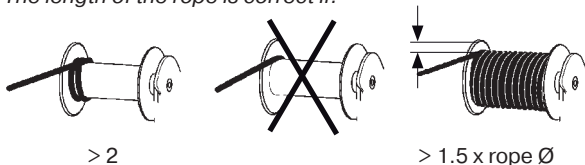
Rope

- Compliant with EN 12385-1 and EN 12385-4 and the technical data
- Maintain rope deviation angle non-rotating rope $\leq 3^\circ$ (standard) rotation-resistant rope $\leq 1.5^\circ$
- Use a rotation-resistant rope for unguided loads. This can reduce the resting period of the rope (drive mechanism group).



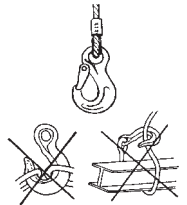
Wind up the wire rope under pretension, e.g. fully wind up the rope and adjust the rope length to the lift.

The length of the rope is correct if:



Lifting equipment

- Ensure sufficient load-bearing capacity.
- Only use load hooks with a safety flap.
- Use the approved load hooks with rope thimbles and rope clip.
- Attach the load properly.
- Do not use the winch rope to secure the load.



3. TECHNICAL DATA

Type		220.0,3	220.0,5	220.0,75	220.1	220.2	220.3
Order number		200047	200048	205047	200815	200051	200052
Order no. galvanised		200335	200048	200049	203241		
Perm. load, first rope layer	kg	300	500	750	1,000	2,000	3,000
Perm. load, last rope layer	kg	203	330	580	750	1,700	2,500
Max. number of layers		4	4	3	3	2	2
Crank force	N	190	210	200	180	320	300
Minimum load	kg	30	30	50	50	50	100
Lift / crank rotation	mm	74	30	28	18.8	16	10
Weight without rope	kg	10	10	14	15	23	32
Rope take-up	m	11	10	12	10	8	7
Rope diameter	mm	6	6.5	8	9	12	13
Min. rope breaking force	kN	9.5	16	24	32	64	96

Type		421.0,125	4210.0,08	4210.0,125
Order number		200044	203717	203718
Order no. stainless steel				210712
Perm. load, first rope layer	kg	125	80	125
Perm. load, last rope layer	kg	65	45	65
Max. number of layers		6	6	6
Minimum load	kg	30	30	30
Crank force	N	170	170	170
Lift / crank rotation	mm	138	135	138
Weight without rope	kg	4	2.5	2.5
Rope take-up	m	15	20	15
Rope diameter	mm	4	3	4
Min. rope breaking force	kN	4	2.6	4

Subject to design and implementation changes.

4. CONSTRUCTION

Rope winches with/without spur gear unit, recoilless safety crank and maintenance-free slide bearings.

5. INSTALLATION

The winches' construction is sufficiently dimensioned, with flat mounting surfaces. Fit the rope winch with bolts, washers and nuts and secure to prevent from coming undone.

- Type 421.0,125+4210.0,08+4210.0,125 2 x M8 bolts, min. 8.8
- Type 220.0,3 + 220.0,5 4 x M12 bolts, min. 8.8
- Type 220.0,75 + 220.1 4 x M14 bolts, min. 8.8
- Type 220.2 + 220.3 4 x M16 bolts, min. 8.8

6. FITTING THE ROPE

! If rope is fed in incorrectly --> (spare parts diagrams) the brake is ineffective!

It is best to hard-solder the end of the rope and lock it to the rope drum.

When the crank is turned in a clockwise direction, the rope should **wind up**.



7. OPERATION

Move the crank handle 90° into the working position.

To lift the load: turn the hand crank clockwise.

To lower the load: turn the crank anticlockwise.

If the crank is released during lifting or lowering, the load ($\leq$ minimum load!) is held in its current position.

Do not wind up the rope under load beyond the point where the rims project at least 1.5 times the rope diameter above the coiled rope. This avoids overloading the winch and prevents the rope from coming off the drum at the side.

At least 2 winds of the rope must remain on the drum at all times.

The rope pulling force of the first layer is the same as the nominal pulling force of the winch. The pulling force decreases for each additional layer of rope (→ type plate, pulling force for first/last layer of rope).

Free running crank

– Operation under load:

Pull crank arm away from winch and rotate until the two coupling pins engage into the coupling disc. Load can now be lifted or lowered.

– Free running operation:

Disengage coupling pins from disc by pushing crank arm towards the winch. The crank is now free running and operational when there is no load on the winch.



Warning!

The crank in free running position may only be used when there is no load on the winch.

LOUIS REYNERS
EXCELLEREN IN HIJSEN, HEFFEN EN VALBEVEILIGING



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 BGV D8, §23, sect. 2 and BGG956). 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!
- Carry out visual check on inaccessible brakes / locks every 5 years at the latest, replace brake pads as required.
- General overhaul by the manufacturer after 10 years at the latest.



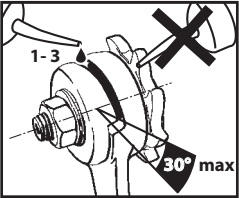
CAUTION!

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 check of the rope hooks (load carrier)	Before every use
Function of the winch	
Condition of the rope and lifting equipment	
Brake function under load	
Grease bearing of drive pinion	Quarterly Annually
Check rope for wear acc. to DIN ISO 4309 and service	
Check fastening bolts for secure seating	
Check all parts of the winch and crank for wear, if applicable, replace defective parts and lubricate.	Annually
Check type plate for legibility	
Have an inspection performed by an expert	

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

Safety crank



If sluggishness occurs during lowering, pour a few drops of oil into the gap in the crank cam.
Safety cranks with a gap aperture >30° should be replaced. Repair must be carried out by only by the manufacturer.



CAUTION!

Only disassemble the crank, ratchet brace and locking pawl when the equipment is not under load!
Do not oil or grease the brake pads!

10. SPARE PARTS

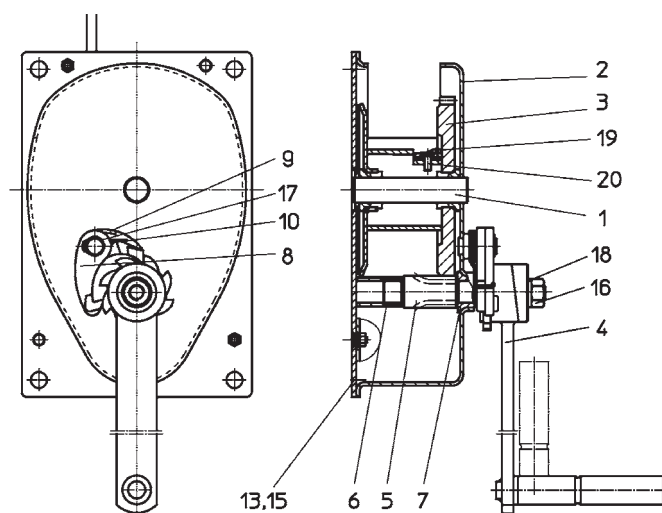
When ordering spare parts it is essential to quote:

- The type and serial number of the equipment / item and part number

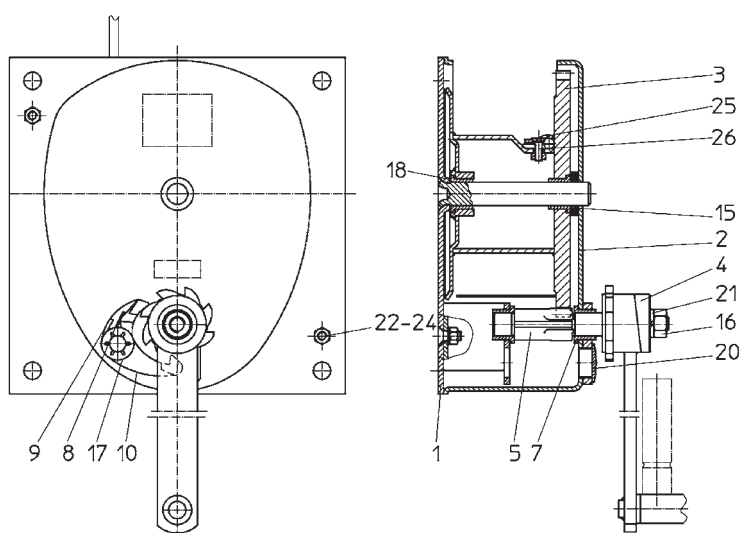
11. DISASSEMBLY, DISPOSAL

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

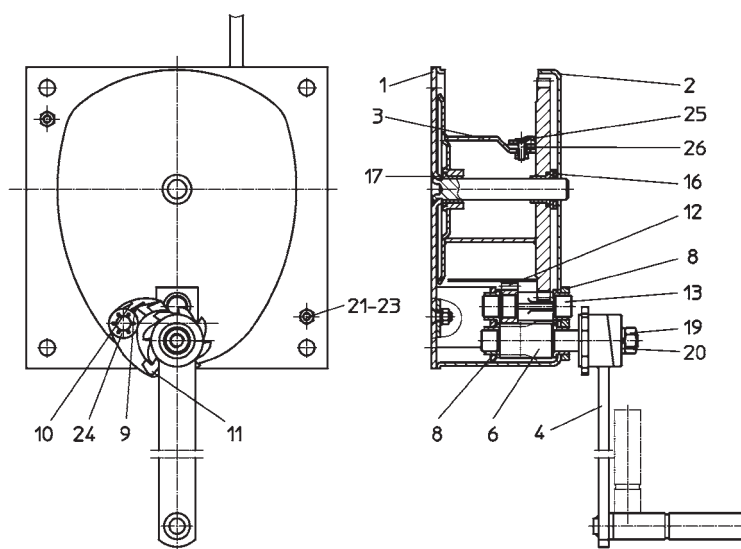
Typ 220.0,3 + 220.0,5						
O/N*	200 047 200 048	200 335	200 336			
1	123 575	113 585	113 585			1
2	102 719	113 588	113 588			1
3	113 594 113 590	113 594	113 596			1
4	101 397	101 397	101 397			1
5	102 714 102 729	113 595	113 596			1
6	100 500	100 500	100 500			1
7	104 509	104 509	104 509			1
8	115 082	115 082	115 082			1
9	115 081	115 081	115 081			1
10	101 137	101 137	101 137			1
13	100 634	100 364	100 634	M 6x12	ISO 10642	4x
15	100 350	100 350	100 350	M 6	ISO 4032	4x
16	101 672	101 672	101 672	M 14	ISO 4032	1
17	100 722	100 722	100 722	A 14x1	DIN 471	1
18	100 461	100 461	100 461	A 14	DIN 137	1
19	112 982	112 982	112 982			1
20	100 636	100 636	100 636	M 6x16	ISO 10642	1



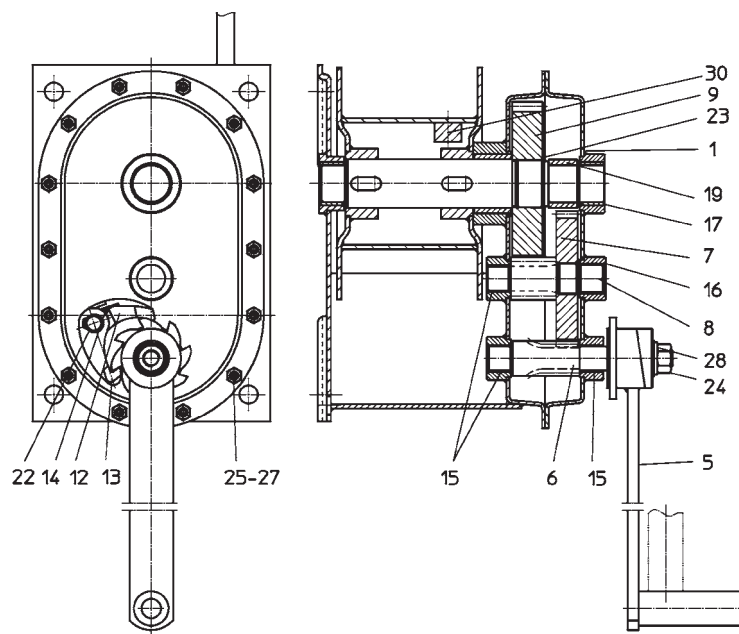
Typ 220.0,75						
O/N*	205 047	200 049				
1	104 640	104 639				1
2	124 578	104 644				1
3	109 990	109 990				1
4	101 397	101 397				1
5	104 651	104 651				1
7	100 518	100 518				2x
8	101 137	101 137				1
9	115 081	104 872				1
10	115 082	104 871				1
15	100 416	100 416	A 21	ISO 7089	2x	
16	100 365	100 365	M 12	ISO 4032	1	
17	101 243	101 243	13,6x28		1	
18	101 271	101 271	20x28x1	DIN 988	1	
20	101 975	101 975	GPN 350	135	1	
21	100 459	100 460	A 12	DIN 137	1	
22	100 356	100 356	M 8	ISO 4032	2x	
23	101 266	101 266	M 8x16	ISO 10642	2x	
24	100 455	100 455	A 8	DIN 137	2x	
25	112 982	112 982			1	
26	101 705	101 705	M 6x20	ISO 10642	1	



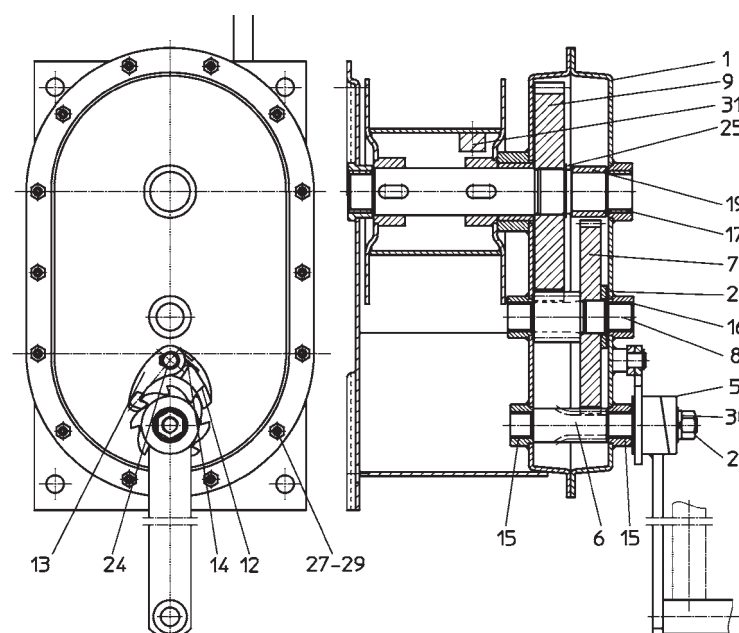
Typ 220.1						
O/N*	200 815	203 241				
1	104 640	104 639				1
2	124 578	104 644				1
3	109 990	109 990				1
4	101 397	101 397				1
6	114 450	114 450				1
8	100 518	100 518				2x
9	101 137	101 137				1
10	115 081	104 872				1
11	115 082	104 871				1
12	104 653	104 653				1
13	104 654	104 654				1
16	100 416	100 416	A 21	ISO 7089	2x	
17	101 271	101 271	20x28x1	DIN 988	1	
19	100 365	100 365	M 12	ISO 4032	1	
20	100 459	100 460	A 12	DIN 137	1	
21	100 356	100 356	M 8	ISO 4032	2x	
22	101 266	101 266	M 8x16	ISO 10642	2x	
23	100 455	100 456	A 8	DIN 137	2x	
24	101 243	101 243	13,6x28		1	
25	112 982	112 982	A 2		1	
26	101 705	101 705	M 6x20	ISO 10642	1	



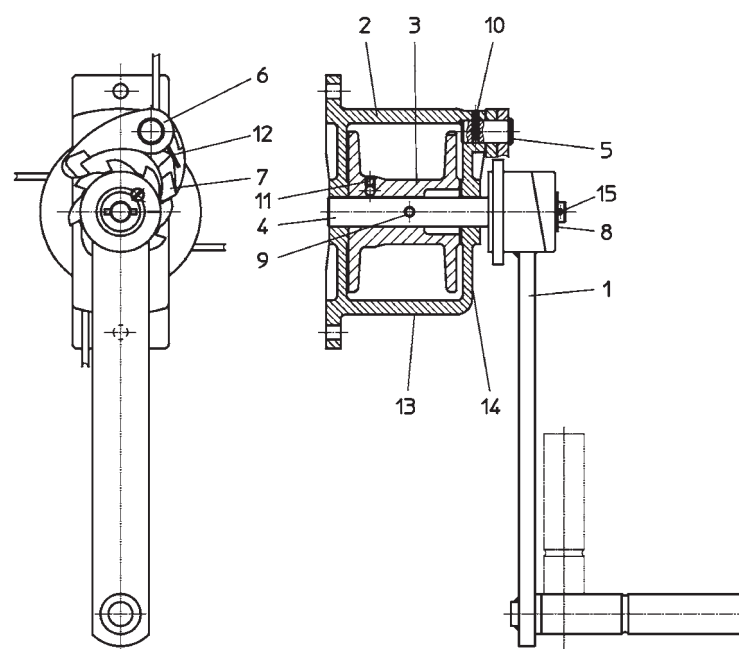
Typ 220.2				
O/N°	200 051			
1	102 746			1
5	101 399			1
6	102 756			1
7	107 383			1
8	102 757			1
9	101 384			1
12	102 174			1
13	102 152			1
14	101 137			1
15	101 502			3x
16	100 501			1
17	102 781			2x
19	102 760			1
22	100 721	A 14x1	DIN 471	1
23	100 740	A 42x1,75	DIN 471	1
24	100 369	M 16	ISO 4032	1
25	101 879	M 8x16	ISO 4017	14x
26	100 355	M 8	ISO 4032	14x



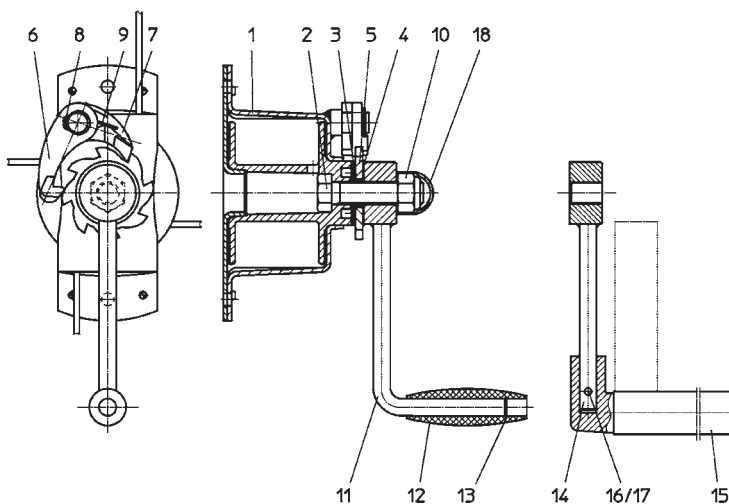
Typ 220.3				
O/N°	200 052			
1	102 761			1
5	101 399			1
6	102 777			1
7	107 385			1
8	102 778			1
9	107 386			1
12	102 174			1
13	102 152			1
14	101 137			1
15	100 502			2x
16	100 501			2x
17	102 781			2x
19	102 783			1
22	100 422	A 34	ISO 7089	1
24	100 721	A 14x1	DIN 471	1
25	100 740	A 42x1,75	DIN 471	1
26	100 369	M 16	ISO 4032	1
27	100 191	M 8x20	ISO 4017	14x



Typ 421.0,125				
O/N°	200 044			
1	101 396			1
2	103 306			1
3	103 307			1
4	103 308			1
5	128 266			1
6	102 152			1
7	102 131			1
8				
9	100 140	6 x 36	ISO 8752	1
10	100 099	4 x 18	ISO 8752	1
11	100 482	M 6 x 6	DIN 551	1
12	101 137			1
13	103 754			1
14	106 237			1
15	100 117	5 x 24	ISO 8752	1



Typ 421.0,08 + Typ 4210.0,125						
O/N'	203 717	203 718	210712			
1	111 155	111 155	131 684			1
2	140 050	140 050	140 049	M 16 x 65	ISO 4017	1
3	113 199	113 199	113 199			1
4	111 034	111 034	111 034			1
5	111 033	111 033	131 694			1
6	115 082	115 082	133 033			1
7	115 081	115 081	-			1
8	100 722	100 722	140 095	A 14 x 1	DIN 471	1
9	101 137	101 137	-			1
10	101 675	101 675	101 481	M 16	DIN 985	1
11	113 196	113 198	131 690			1
12	102 548	102 548	-			1
13	101 211	101 211	-	B 12	DIN 7993	1
14	113 559	113 195	-			1
15	110 434	110 434	-			1
16	106 934	106 934	-	5 x 24	ISO 8752	1
17	100 180	100 180	-	3 x 24	ISO 8752	1
18	100 300	100 300	100 300	GPN 1000/1075		1



EU Installation Declaration

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

haacon
group

Manufacturer:

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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	4585	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, 30.07.2013

Robert Miltenberger
on behalf of Robert Miltenberger

Theo Müller
on behalf of Theo Müller

gb Edition 5; 07/13

092079 of 30.07.2013

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