

Installation and Operating Manual
Overspeed Governors Type 7/8/9
Release 07.02



BODE Components GmbH
Eichsfelder Straße 29
40595 Düsseldorf
Phone: +49 (0) 211/ 77 92 75 – 0
Fax: +49 (0) 211 / 77 92 75 22
info@bode-components.com
www.bode-components.com

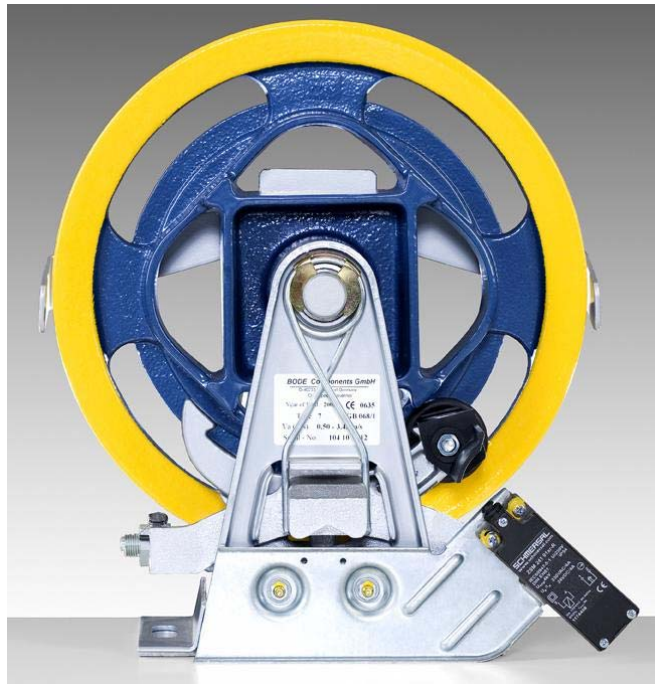


Figure: Overspeed Governor Type 7 / Electro-magnetically resettable pre-cutoff

This manual may exclusively – even in parts – be reprinted or reproduced in any other way with the express written consent of BODE.

Any reproduction, dissemination or storage on data carriers of whatever type and form without the prior consent of BODE represents an infringement of the statutory copyrights and will be prosecuted. Technical modifications serving for enhancing the products or increasing the safety standard are expressly reserved – even without separate notification.

All rights reserved
© Copyright by:
BODE – Components GmbH
Eichsfelder Straße 29
40595 Düsseldorf
Germany

1. General

1.1 General Notes on Safety

The knowledge of the basic safety regulations and instructions on safety included in this manual are prerequisite for the safe handling and troublefree operation of the safety component.

The notes on safety included in this manual are to be observed by any person installing or operating this safety component.

In addition, all generally applicable rules and regulation on accident prevention are to be strictly observed.

The personnel working on or operating the governor must observe the instructions included in the respective chapter on safety as well as the warnings contained in this manual.

This manual is to be kept at the governor's place of installation.

1.2 Intended Use of the Governor

The governor has been produced to the state of technology and the generally acknowledged rules and regulations on safety. It must exclusively be employed as intended and in a safety-related flawless condition. The governor is intended to be exclusively employed as a safety component within the meaning of EN 81-1 and EN 81-2. Any other use is considered as non-intended.

1.3 Warranty and Liability

BODE Components GmbH's terms of delivery and payments apply.

Any claims for warranty or liability in case of injuries and damage are excluded if these are attributable to one or more of the following reasons:

- Improper installation, commissioning, operation and maintenance of the governor.
- Operation of the governor with defect and/or non-working safety and protection devices.
- Non-intended use of the governor.
- Non-observance of the notes on transport, storage, installation, commissioning, operation, and maintenance of the governor included in this manual.
- Unauthorized modification of the governor's preset release speed (damaging of the seal).
- Unauthorised constructional modifications of the governor.
- Poor inspection of parts being subject to wear.
- Improper installation of additional or spare parts.
- Improper electrical wirings.
- External impact, disaster or force majeure.

Any repairs must be exclusively made by the manufacturer.

The governor has been factory set to the release speed indicated on the type plate and has then been sealed. The settings of the various safety switches have been colour-sealed. As the governors are type approved safety components these setting must not be changed.

2. Transport and Storage

2.1 Packaging

The governor is supplied in suitable packaging, normally in a reinforced cardboard box. Please observe the notes on the packaging. The packaging is non-returnable and must be disposed of in an environmentally friendly way.

2.2 Inspection upon Receipt

The goods and packaging supplied must be inspected with view to completeness and damages.

! In case of any complaints the governor's serial number must always be stated.
! Damages in transport are to be documented and the forwarder chosen by the customer is to be immediately notified.

2.3 Intermediate Storage

If the governor is not directly installed after receipt it is to be stored in a way protecting it against wetness, moisture, dirt, and damages.

! The regulations on machine and pulley rooms also apply to the ambient conditions at the governor's place of installation.

3. Description: Overspeed Governor

3.1 Standard Version

- Setting range of the release speed: 0.50 – 3.43 m/s
- Release in upward and downward direction of travel
- Rope distance: 200 or 300 mm
- Rope diameter at 200 mm: 6-6.5 mm; at 300 mm. 6-8 mm
- Condition of rope groove:
 - 40° v-groove with undercut
 - if requested, with hardened edge (indispensable for catching in upward direction)
- Safety switch acc. to EN 81 (IP 67)
 - up to $V_n = 1,00$ m/s non-latching
 - up to $V_n = 1,00$ m/s latching as pre-cutoff
- Rope jump off protection

3.2 Functional Description

The overspeed governors type 7/8/9 are safety components having been type approved in accordance with EN 81. They serve for engaging the safety gear and shutting down the lift system at overspeed in upward or downward direction of travel. The release speed (V_a) has been factory set in accordance with EN 81-1 and the governor has then been sealed.

The governor works on the pendulum principle.

The safety switch on the overspeed governor is actuated at a speed of:

- V_n up to 1.00 m/s simultaneously with the mechanical gear
- V_n above 1.00 m/s at max. 10% below the mechanical gear as a pre-cutoff, and the lift system's safety circuit is interrupted.
The force required for engaging the safety gear or the breaking system is achieved by the employment of a corresponding tension weight.

The safety governors may be used for releasing safety gears installed on the cabin, the counterweight or balance weight.



- The tensile force in the governor rope generated by the overspeed governor must correspond to the higher one of the following values:
 - a) the double of the force required for engaging the safety gear or
 - b) min. 300 N
- The release speed for the governor on the counterweight is set to 10% more than the one of the cabin. No pre-cutoff is required at a V_n of above 1.00 m/s.
- For tensioning the governor rope a suitable tension weight is to be used. A slack-rope switch must be installed on the tension weight.

Description of the release function:

By means of a pressure spring that is routed through a bolt and acts on the pendulum the pendular roller is pressed on the curve-shaped part of the governor wheel. When the preset release speed V_a is exceeded the pendular roller is lifted from the curved-shaped part by the centrifugal force.

By this, the following process is triggered:

- The arresting pendulum is moved so far that its catch engages in the cams of the governor wheel.
 - At a V_n of up to 1.00 m/s the safety switch is actuated by the sprag at the same time the mechanical gear is actuated.
 - At a V_n of more than 1.00 m/s the pre-cutoff is actuated by the switch cam before the mechanical gear is actuated.
- The governor wheel is blocked.
- The governor rope is clamped due to the v-shaped rope groove.
- By this the safety gear on the cabin or counterweight is pressed in.

! The lift system must not be retaken into operation until it has been checked and the cause of the failure has been eliminated by expert personnel.

Resetting is made as follows:

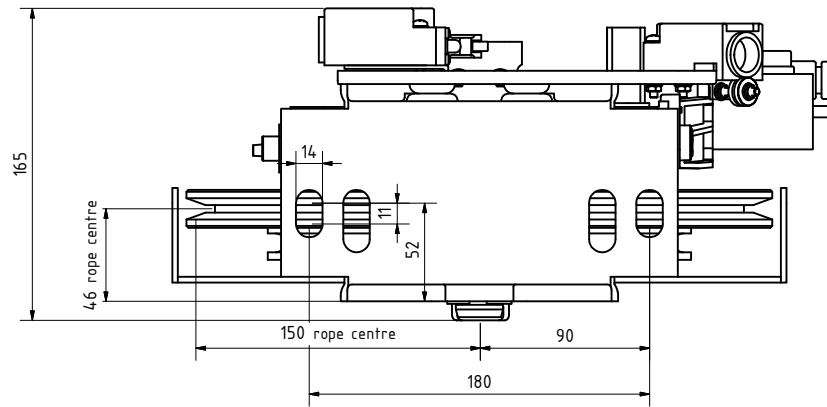
- Lift systems of V_n 1.00 m/s by travelling using the emergency control.
- Lift systems of V_n above 1.00 m/s by manually resetting the pre-cutoff or by electromagnetic reset and subsequent travel using the emergency control.

The governor is then operable again.

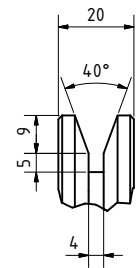
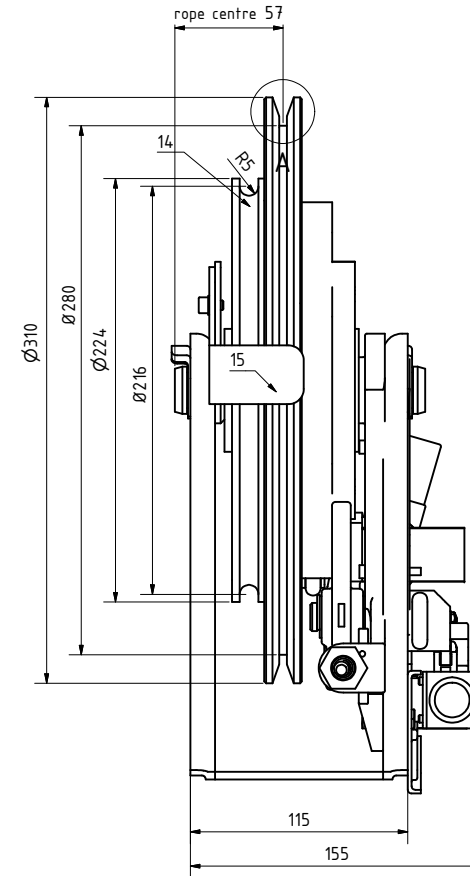
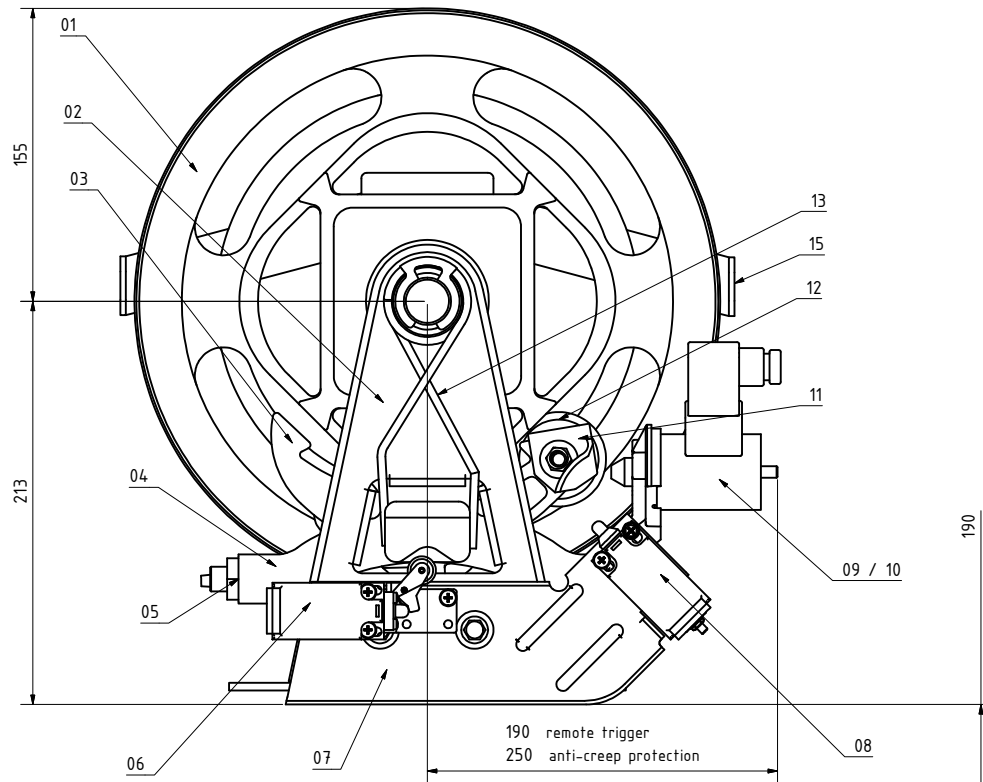
4 Description of Type Plate



- 1 Number of the Certification Body
- 2 Number of type approval certificate
- 3 Type
- 4 Preset release speed
- 5 Year of production
- 6 Manufacturer's serial number

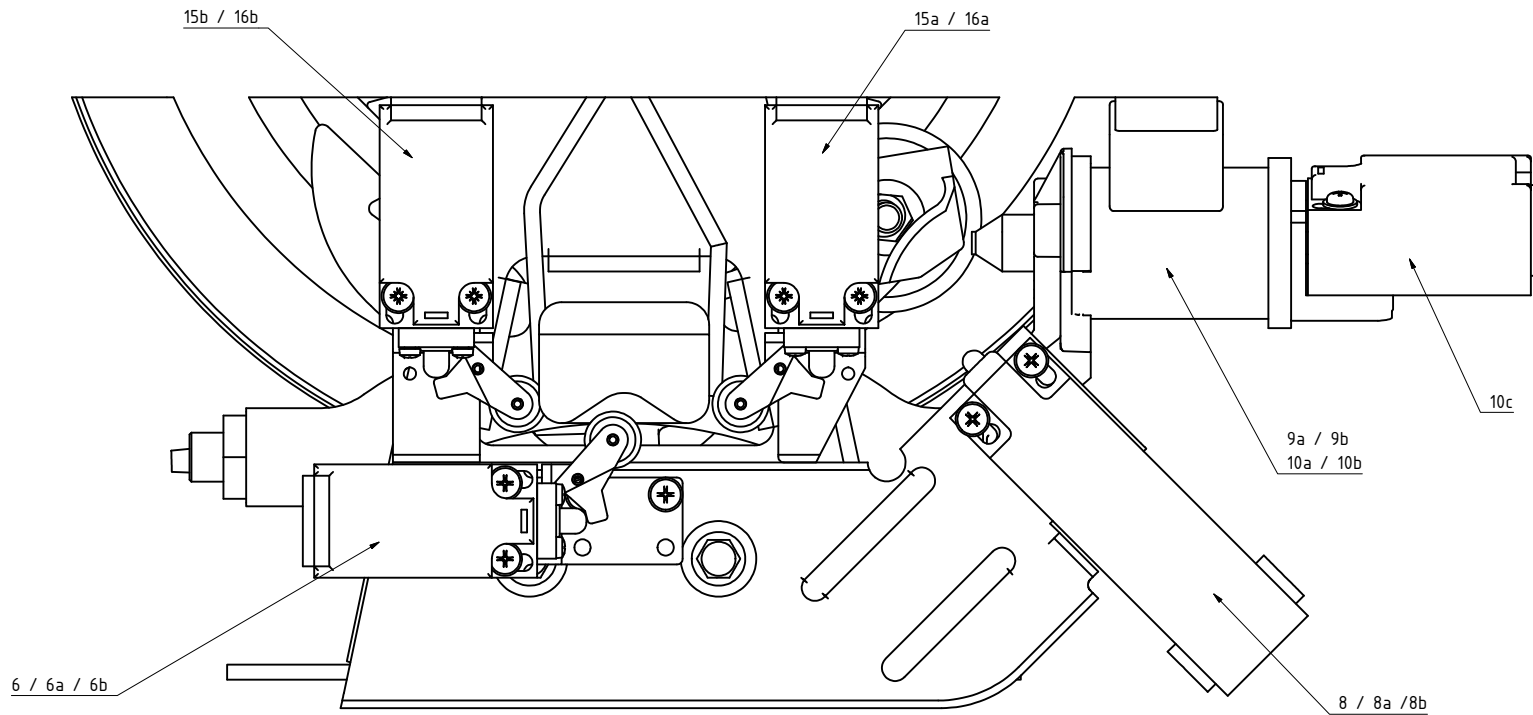


individual components			
No.	description	No.	description
01	cam wheel	08	safety switch from $V_n = 1,01$ m/s
02	governor stand	09	remote trigger
03	release pendulum	10	anti-creep protection
04	leg tab	11	switch cam
05	adjustment spring/nut	12	pendular roller
06	safety switch up to $V_n = 1,00$ m/s	13	leg spring
07	switch plate	14	test groove
		15	rope jump off protection



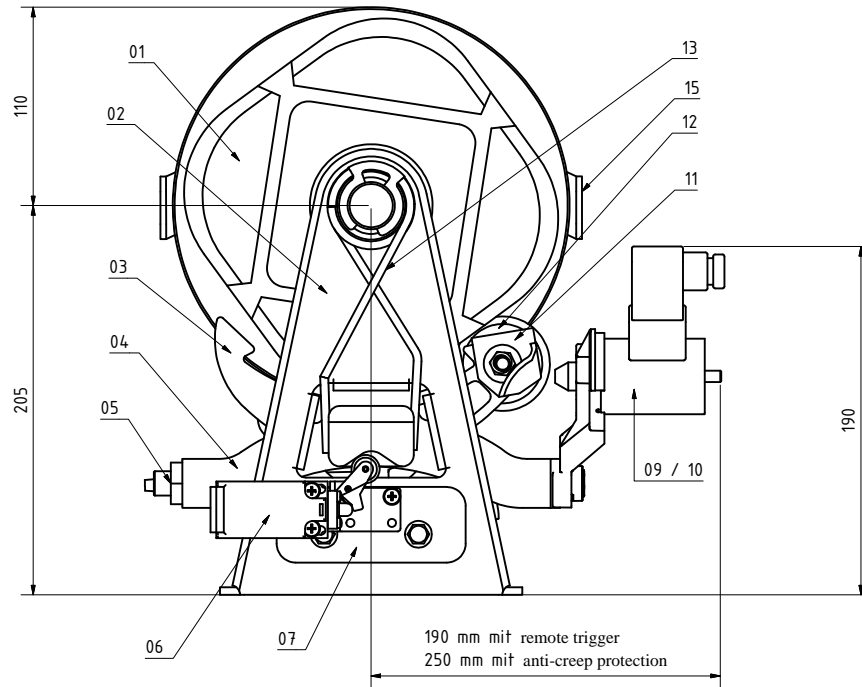
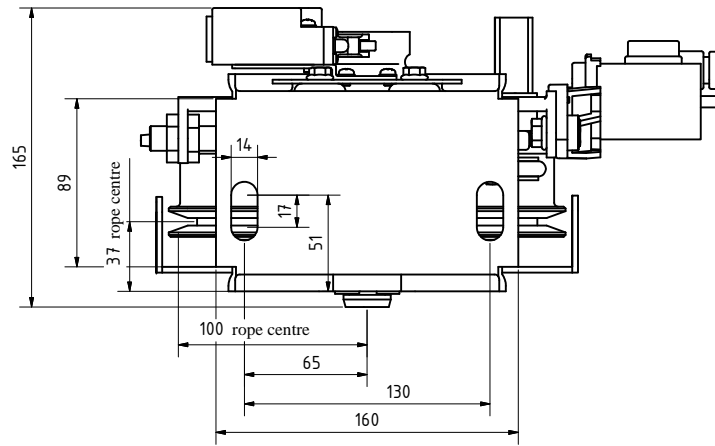
hardened rope groove 180 - 200 HB
unhardened rope groove 510 - 600 HV

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m	Material:		Gewicht:
			governor Typ 7		
		Datum	Name		
		09.02.2010	Ch. Loer		
		18.02.2010	Reiter		
		None			
			Va = 0,70 - 3,43 m/s		
			AGB 068/1		
			9 07 100301		Blatt: 1
Status	Änderungen	Datum	Name	Blatt Anz.: 2	
			9 07 100301 Typ 7 GB.idw		

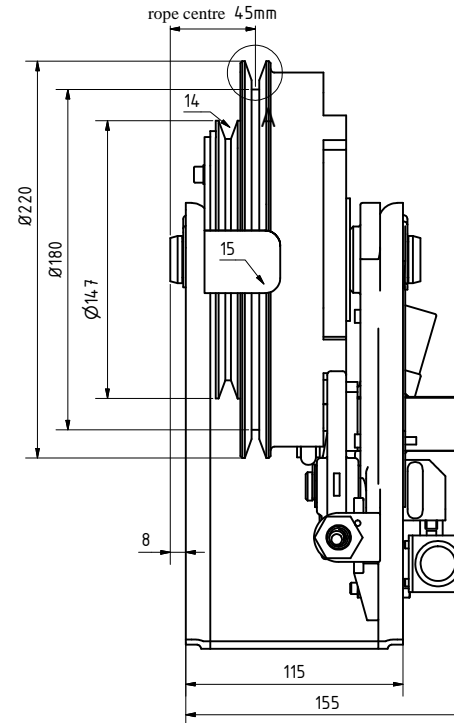


attachments				
No.	description	Typ	Art.-No.	remarks
6	safety switch 1 NNC/ 1 NOC (non-latching)	1563	521 563	
6a	safety switch 2 NNC (non-latching)	1562	521 562	
6b	safety switch 1 NNC/1 NOC (latching)	1564	521 564	
6c	electronically resettable safety switch 2 NNC/1 NOC (latching)	1740	521 740	
8	pre-cut off 1 NNC (latching)	1489	521 489	no retrofitting
8a	electronically resettable pre-cut off 1 NNC (latching)	2239	521 239	no retrofitting
8b	electronically resettable pre-cut off 2 NNC/1 NOC (latching)	2240	522 240	no retrofitting
9a	remote trigger 110V 15%ED	FA 110	580 157	
9b	remote trigger 230V 15%ED	FA 230	580 056	
10a	anti-creep protection 12V 100%ED	AS 12	580 042	
10b	anti-creep protection 24V 100%ED	AS 24	580 049	
10c	switch anti-creep protection 1 NNC/ 1 NOC (non-latching)	1634	521 634	
15a/b	switch for releasing in one direction 1 NNC/1 NOC (non-latching)	1563	521 563	
16a/b	switch for releasing in one direction 1 NNC/1 NOC (latching)	1564	521 564	

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m		Material: governor Typ 7		Gewicht:	
		Datum	Name	attachments			
		Gezeichnet	Ch. Loer				
		Kontrolliert	Reiter				
		None		9 07 100301		Blatt: 2	
Status	Änderungen	Datum	Name	9 07 100301 Typ 7 GB.idw		Blatt Anz.: 2	

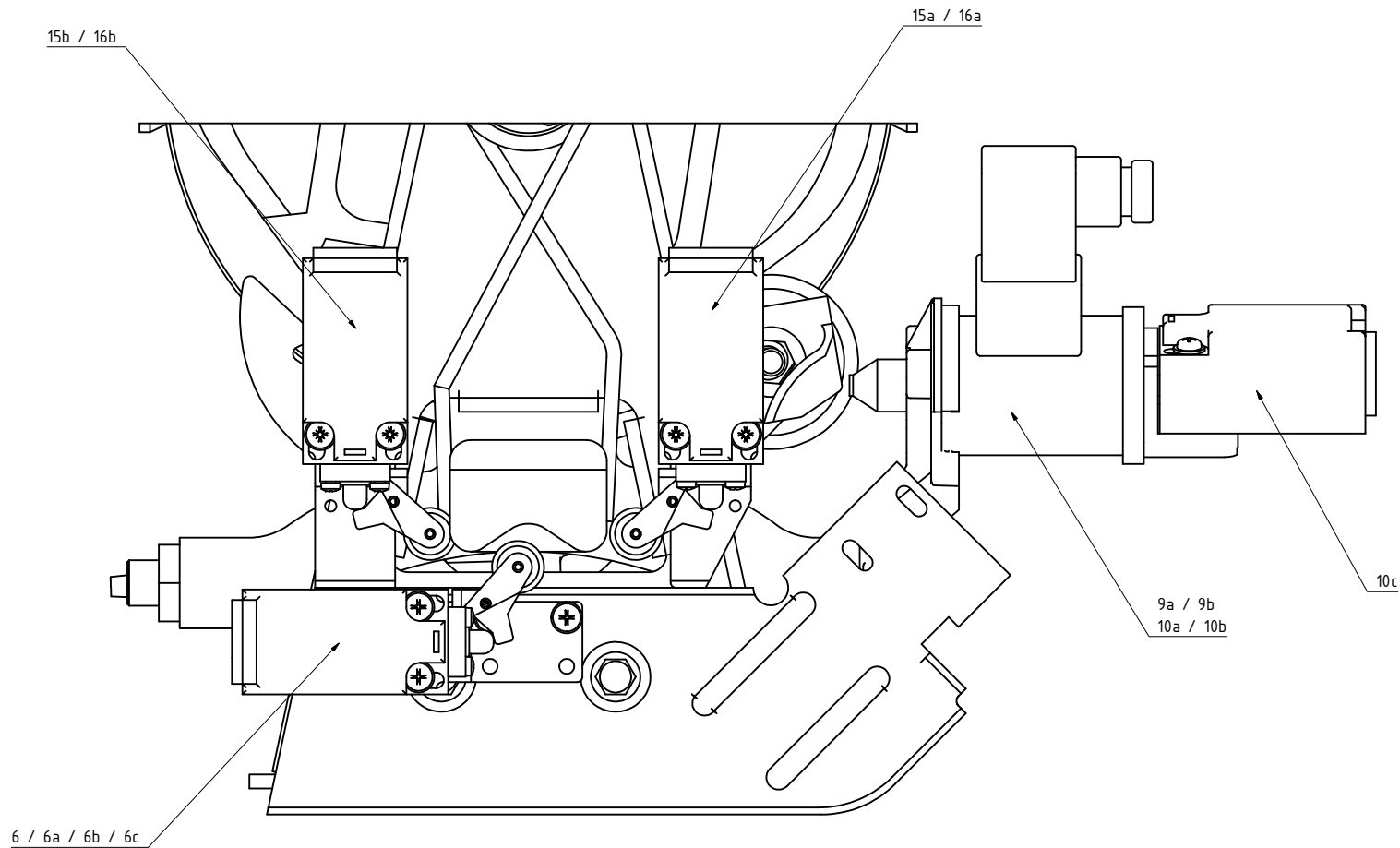


individual components			
Nr.	description	Nr.	description
01	cam wheel	09	remote trigger
02	governor stand	10	anti-creep protection
03	release pendulum	11	switch cam
04	leg tab	12	pendular roller
05	adjustment spring/nut	13	leg spring
06	safety switch up to $V_n = 1,00$ m/s	14	fest groove
07	switch plate	15	rope jump off protection



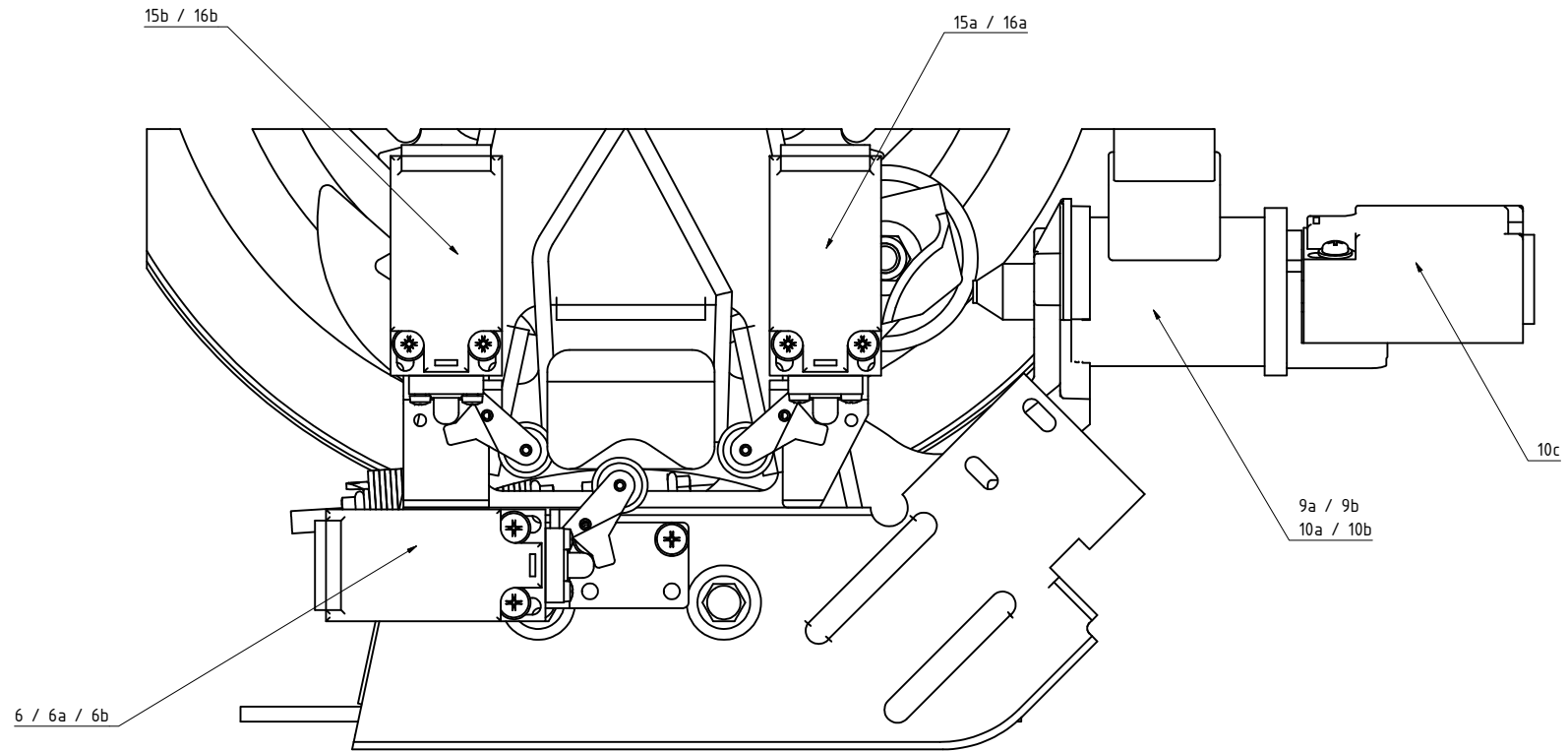
hardened rope groove 180 - 200 HB
unhardened rope groove 510 - 600 HV

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m		Material:		Gewicht:	
				Begrenzer Typ 8			
		Datum	Name	Va = 0,50 m/s - 1,33m/s AGB 069/1			
		Gezeichnet	Ch. Loer				
		Konstruiert	Reiter				
		None		9 08 100302		Blatt: 1	
Status	Änderungen	Datum	Name	9 08 100302 Typ 8 GB.idw		Blatt Anz.: 2	



article number				
Nr.	description	Typ	article nu	remarks
6	safety switch 1 NNC/ 1 NOC (non-latching)	1563	521 563	
6a	safety switch 2 NNC (non-latching)	1562	521 562	
6b	safety switch 1 NNC/1 NOC (latching)	1564	521 564	
6c	electronically resettable safety switch 2 NNC/1 NOC (latching)	1740	521 740	
9a	remote trigger 110V 15%ED	FA 110	580 157	
9b	remote trigger 230V 15%ED	FA 230	580 056	
10a	anti-creep protection 12V 100%ED	AS 12	580 042	
10b	anti-creep protection 24V 100%ED	AS 24	580 049	
10c	switch anti-creep protection 1 NNC/ 1 NOC (non-latching)	1634	521 634	
15a/b	switch for releasing in one direction 1 NNC/1 NOC (non-latching)	1563	521 563	
16a/b	switch for releasing in one direction 1 NNC/1 NOC (latching)	1564	521 564	

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m		Material:		Gewicht:	
				Begrenzer Typ 8			
				attachments			
				9 08 100302		Blatt: 2	
Status		Änderungen		Datum		Name	
				9 08 100302 Typ 8 GB.idw		Blatt Anz.: 2	



attachments				
No.	description	Type	article number	remarks
6	safety switch 1 NNC/ 1 NOC (non-latching)	1563	521 563	
6a	safety switch 2 NNC (non-latching)	1562	521 562	
6b	safety switch 1 NNC/1 NOC (latching)	1564	521 564	
6c	electronically resettable safety switch 2 NNC/1 NOC (latching)	1740	521 740	
9a	remote trigger 110V 15%ED	FA 110	580 157	
9b	remote trigger 230V 15%ED	FA 230	580 056	
10a	anti-creep protection 12V 100%ED	AS 12	580 042	
10b	anti-creep protection 24V 100%ED	AS 24	580 049	
10c	switch anti-creep protection 1 NNC/ 1 NOC (non-latching)	1634	521 634	
15a/b	switch for releasing in one direction 1 NNC/1 NOC (non-latching)	1563	521 563	
16a/b	switch for releasing in one direction 1 NNC/1 NOC (latching)	1564	521 564	

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m	Material:		Gewicht:
			governor Typ 9		
		Datum	Name		
		Gezeichnet	17.02.2010	Ch. Loer	
		Kontrolliert	18.02.2010	Reifer	
		Notiz			
			9 09 100303		Blatt: 2
Status	Änderungen	Datum	Name	9 09 100303 Typ 9 GB.idw	
				Blatt Anz.: 2	