

**Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01**

BODE
COMPONENTS

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

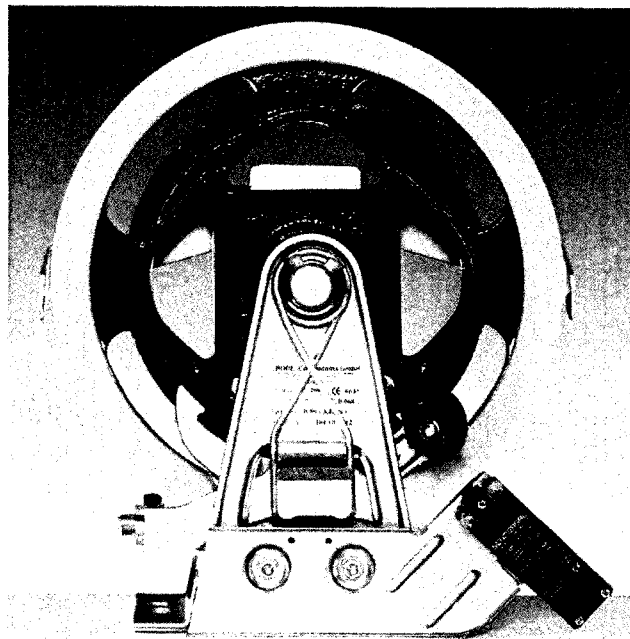


Figure: Overspeed Governor Type 7 / Electro-magnetically resettable pre-cutoff

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

**Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01**

BODE
COMPONENTS

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 V_a 0.50 – 3.43 m/s
- Setting range of nominal speed V_n 0,20 – 2,85 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

Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01

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.

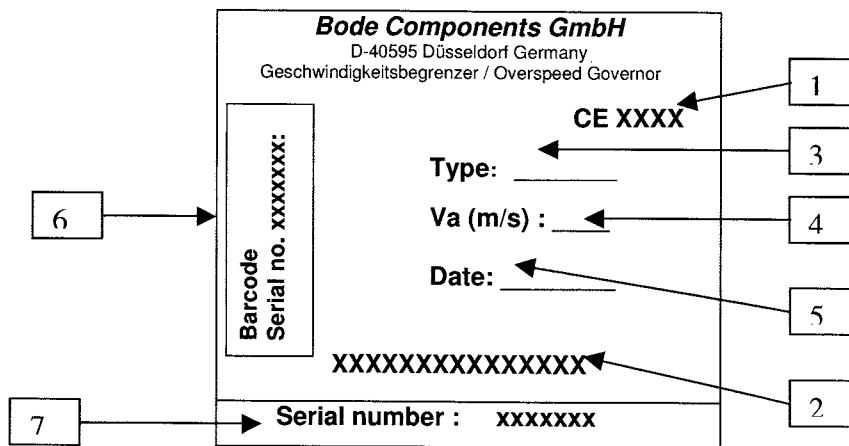
! The lift system must not be retaken into operation until it has been checked and the cause of the failure has been eliminated by expert personnel.

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
- 7 Manufacturer's serial number for remote release or anti creep protection

5. Installation Instruction

BODE overspeed governors can be installed in the following locations:

1. In the machine room
 - On the floor
 - On the substructure

Screws and dowels (not supplied) are required when the governor is installed on the floor. The governor or substructure must be installed on a clean and even surface. When tightening the mounting screws care must be taken not to distort the governor.

2. In the pit
 - Using a console on the guiding rail
 - On the pit ceiling
 - On the pit wall
 - On the pit wall (90° turned)

The console is mounted to the rail by means of clamping claws. The type plate is attached in accordance with the intended type of installation.

i Governors with a lateral rope departure or in suspended execution must be factory set accordingly. The type plate is attached in accordance with the intended type of installation.

3. On the pit floor
 - On the tension weight using a guide support

The tension weight is vertically mounted on the floor using screws and dowels (not supplied). The support surface must be clean and even.

i The governor is to be protected against the entering of foreign objects between cam wheel and rope (EN 81-1). A suitable cover can be supplied upon request.

The rope departure is to be made vertically from the governor to the rope mount of the safety gear. The wrap angle must always be 180°. When installed in the machinery room or pit head a suitable tension pulley must be used.

6. Commissioning

Before commissioning the following must be checked:

- Operability of the governor
- Operability of the attachments
- Mounting of the governor
- Connections of the safety switches
- Installation and connection of the additional parts.
- Unobstructed movement of the tension weight.
- Connection of the slack rope switch.
- Vertical rope departure.

Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01

BODE
COMPONENTS

① For testing purposes the governor must be jerkily engaged as otherwise the required frictional resistance is not achieved. At lower speeds the safety switch is reliably actuated when the release speed is reached.

7. Maintenance

Maintenance is to be done within the scope of the normal servicing of the lift system and is limited to the following:

All movable parts are to be inspected with view to their unobstructed movement.

Cam wheel, rope groove and O ring on the pendular roller are to be inspected with view to wear and damage.

The safety switches and additional parts are to be inspected with view to their operability.

Should the rope groove be run in towards the rope seat groove the governor does not need to be replaced as it features a free punch (EN 81-1; EN81-2). Replacement is required if this is below 3 mm.

8. Repair

As the governor's release speed has been factory set any on-site repair is impossible.

If repairs or settings are required these must be made at the manufacturer's or the governor has to be replaced. For this purpose, BODE will gladly provide you with a governor of the same type for the time of repair. When replacing the governor the governor rope does not need to be loosened.

Warranty and liability void if the seal on the setting nut and/or the colour seal on the safety switches is/are damaged.

9. Description and Wiring of the Safety Switches

① Electro-installation of the governor

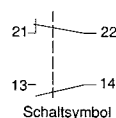
Following DIN EN 60204-1 (VDE0113-1) – Safety of Machines

Electrical equipment of machines Part 1: General Requirements, Chap.: 12.6 we recommend flexible wiring cables.

To ensure a troublefree functioning of the switches the internal wiring of the safety switch must be made directly, i.e. without loop in the switch housing.

9.1 Safety Switch 1563 (without arrest)

Switch 1563 is standard employed with governors of a nominal speed of up to 1.00 m/s. It is non-arresting and when sliding out of the safety gear the break contact is automatically closed. Triggering is made via an indent in the sprag.



Forced opening of the break contact acc. to
DIN EN 60947-5-1 IEC 947-5-1

Contact type: 1 NCC, 1 NOC

Ambient temperature: -30°C to + 80 °C

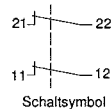
Protection type: IP 67 acc. to DIN 60529

**Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01**

9.2 Safety switch 1562 >2 openers< (without arrest)

Switch 1562 works as switch 1563.

One break contact each for breaking the safety circuit and triggering an additional brake.



Forced opening of the break contacts acc. to DIN EN 60947-5-1 IEC 947-5-1

Contact type: 2 NCC

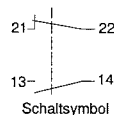
Ambient temperature: -30°C to + 80 °C

Protection type: IP 67 acc. DIN 60529

9.3 Safety switch 1564 (with arrest)

Switch 1564 is used on the governor and as a slack rope switch on the tension weight. It must be manually reset.

When used as an auxiliary current emergency limit switch on the substructure the switch is actuated by means of a wooden cone or spiral spring that is mounted to the governor rope.



Forced opening of the break contacts acc. to DIN EN 60947-5-1 IEC 947-5-1

Contact type: 1 NCC, 1 NOC

Ambient temperature: -30°C to + 80 °C

Protection type: IP 67 acc. to DIN 60529

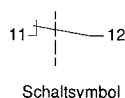
9.4 Pre-cutoff 1489 (latching)

As required by EN 81 a pre-cutoff must be used at nominal speeds of above 1.00 m/s. This switch is latching and must be manually reset. It is factory set to max. 10% below the indicated release speed and triggered via the switch cam on the arresting pendulum.

If the governor is inaccessible, e.g. when installed in the pit, switch 1563 is additionally installed. If switch 1489 triggers it has to be bridged for resetting. In order to ensure the safety despite the bridge switch 1563 is active.

! When connecting the switch please note that the cables must be most directly routed to the terminals.

Not retrofittable.



Forced opening of the break contacts acc. to DIN EN 60947-5-1 IEC 947-5-1

Contact type: 1 NCC,

Ambient temperature: -30°C to + 80 °C

Protection type: IP 67 acc. to DIN 60529

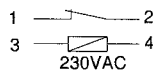
Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01

9.5 Electro-magnetically resettable pre-cutoff 2239 >1 NCC< (latching)

The switch is used at nominal speeds of above 1.00 m/s. It works the same way as switch 1489; however, it can be electro-magnetically reset by means of a pushbutton in the machine room. As no second safety switch is necessary the assembly requires little effort.

Not retrofittable.

Anschluss-Schema



Forced opening of the break contacts acc.
DIN EN 60947-5-1 IEC 947-5-1

Contact type: 1 NCC

Ambient temperature: -30°C to + 80 °C

Protection type: IP 54 acc. DIN 60529

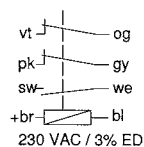
Switch no longer supplied (replaced by 2240)

9.6 Electro-magnetically resettable pre-cutoff 2240 >2 NCC/1 NOC< (latching)

This switch works as switch 1489 is, however, electro-magnetically resettable via a pushbutton in the machine room. As no second safety switch is necessary the assembly requires little effort.

One break contact each serves for breaking the safety circuit and for triggering an additional brake.

Not retrofittable.



Forced opening of the break contacts acc.
DIN EN 60947-5-1 IEC 947-5-1

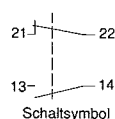
Contact types: 2 NCC / 1 NOC

Ambient temperature: -30°C to + 80 °C

Protection type: IP 54 acc. DIN 60529

9.7 Switch for EX-systems

Governor VN up to 1.00 m/s, tension weights and substructures can also be equipped with an EX-switch. When using the EX-switch on tension weights with sliding bracket switching must be made via a self-locking auxiliary contactor (not supplied).



Forced opening of the break contacts acc.
PTB 03 ATEX 1068X

Contact types: 1 NCC, 1 NOC

Ambient temperature: -30°C to + 80 °C

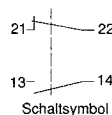
Protection type: IP 65 acc. DIN 60529

Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01

9.8 Direction-dependent switch for an additional brake

If additional braking in only one direction (direction-dependent) is required an additional switch can be installed on the governor. At all speeds, this switch does not switch until the release speed (V_a) is reached.

Only limitedly retrofittable.



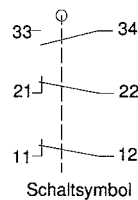
Forced opening of the break contacts acc,
 DIN EN 60947-5-1 IEC 947-5-1
 Contact types: 1 NCC, 1 NOC
 Ambient temperature: -30°C to + 80 °C
 Protection type: IP 67 acc. DIN 60529

or latching switch

Forced opening of the break contacts acc.
 DIN EN 60947-5-1 IEC 947-5-1
 Contact types: 1 NCC, 1 NOC
 Ambient temperature: -30°C to + 80 °C
 Protection type: IP 67 acc. DIN 60529

9.9 Safety switch 1570 (without arrest)

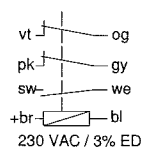
Switch 1570 works as switch 1563. It features, however, two NCC and one NOC which can be used for triggering other functions (e.g. additional brake for catching in upwards direction) in addition to the safety circuit.



Forced opening of the opener contacts acc.
 DIN EN 60947-5-1 IEC 947-5-1
 Contact types: 2 NCC / 1 NOC
 Ambient temperature: -30°C to + 80 °C
 Protection type: IP 67 acc. DIN 60529

9.10 Electro-magnetically resettable safety switch 1475 >2 NCC/1 NOC< (latching)

The switch is used at nominal speeds of up to 1.00 m/s. Switch 1475 works as switch 2240. It features two NCC and one NOC which can be used for triggering other functions (e.g. additional brake for catching in upwards direction) in addition to the safety circuit. The contact is triggered when the release speed is reached.



Forced opening of the opener contacts acc.
 DIN EN 60947-5-1 IEC 947-5-1
 Contact types: 2 NCC / 1 NOC
 Ambient temperature: -30°C to + 80 °C
 Protection type: IP 54 acc. DIN 60529

**Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01**

BODE
COMPONENTS

10. Installation of additional components

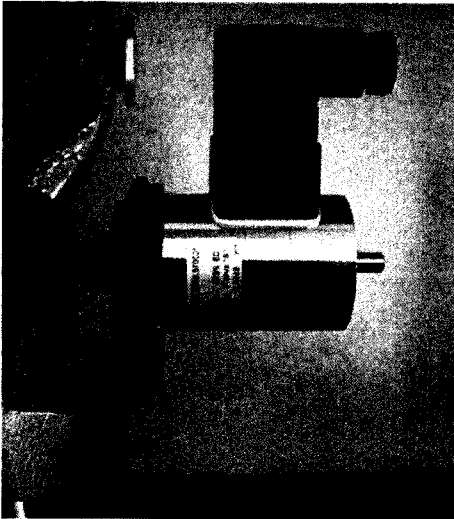
10.1 Governor with remote triggering device (FA) 230V or 110V

Supply voltage 230V 50Hz S 15% ED or 110V 50Hz S 15% ED.

When mounting the governor in the pit it can be equipped with a remote triggering device (FA). For testing purposes the FA can be released via a key switch.

Functional description:

When actuating the key switch (pushbutton) outside the pit a magnetic coil is excited and the push bar is pressed in the direction of the switch cams. The so far free swinging arresting pendulum is thereby brought into the release position and blocks the governor's cam wheel. Now the safety gear is released.



Installation instructions:

The remote triggering device has been factory fixed in position by means of a heavy duty dowel pin. When installing, the holder's M8 screw is inserted in the right hole of the sprag and tightened with a torque of 23 N/m.

Governors with FA are always equipped with the non-latching safety switch 1563. If a pre-cutoff is required, switch 1489 or only switch 2240 is installed.

After actuating the FA and latching of the governor switch 1489 must be bridged and manually reset.

The FA's coil can be ordered separately as a spare part.

! When retrofitting the governor with a remote triggering device adaptations are required. If necessary an indent has to be filed in the switch cam so that the pendulum is pressed down by the FA's cone. Laterally, the FA has to be properly positioned. The FA's functionality is to be tested.

- !**
- **When actuating the FA, the max. ED of 15% must not be exceeded.**
 - **The FA's switch is to be clearly identified by means of a warning sign.**

10.2 Governor with Anti-Creep Protection (AS) for Compliance with EN81-1/2:1998+A3:2009

Supply voltage 12V 11 Watt 100% ED or 24V 11 Watt 100% ED.

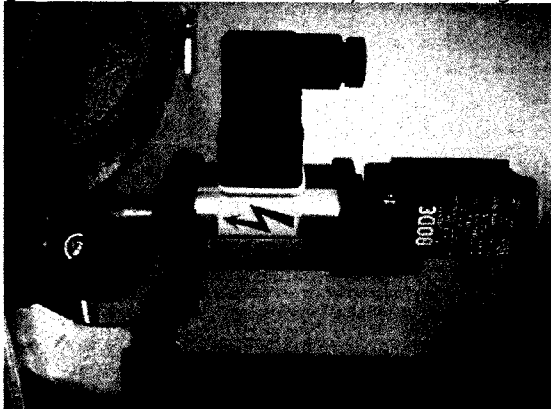
! ***It is necessary to ensure that the specified operating voltage on the solenoid is available.***

The governor can be equipped with an anti-creep protection (AS). The AS can serve for various functions.

Functional description of standstill monitoring according to EN81-1/2:1998+A3:2009

A magnetic coil with push bar is additionally installed on the governor. During the controlled cabin movement the magnetic coil is excited and keeps the push bar in its end position. The arresting pendulum can swing freely. When the cabin comes to a halt the magnetic coil is switched to zero potential and de-energised after a delay preset via a time relay. Depending on the position of the cam disk the magnetic coil's push bar abuts on the switch cams or slides over it. If the cabin starts creeping due to overloading or for other reasons the push bar keeps the arresting pendulum in the release position. The cam wheel is blocked and engages the safety gear. Until the locking of the cam wheel, a way of 50 to 70mm can be covered. Within this way maybe a readjustment of the car without the pull rod of the solenoid coil must be moved. The elevator is located during the retrieval in the secured state. The safety circuit is interrupted via the switch on the AS and the safety-switch 1563. The operability of the anti-creep protection can be checked via the lift control each time the lift magnet is de-energised. For this, there is a second contact in the AS switch. In case of malfunction the lift system should be taken out of operation.

The governor can be used as one of the safety components protecting the car against uncontrolled movements. In this case the maximum travel until the activation of the safety gear is 350mm with a delay of the magnet of 10ms.



Functional description when used as safety component during installation:

With lift systems where the drive is installed in the pit the AS can be used for protecting the service technician in the pit. When opening the lower lift door in the pit for maintenance purposes the magnetic coil is switched to zero potential and de-energised.

Functional description when used as a safety device during cabin increase without changing the load capacity:

If the cabin is increased in size without changing its load capacity the AS can be activated – in combination with a weighing system – when the nominal load is exceeded. The safety gear prevents the creeping and further travelling of the cabin.

Functional description when used for the safety in the room in the pit above the top halt:

The AS can be used as a safety component if the safety space is reduced. For this, a contact has to switch the AS to zero potential when the safety space is reached so that the governor is blocked and the safety gear is retracted.

**Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01**

BODE
COMPONENTS

! *When retrofitting the governor with an AS adaptations are required. If necessary an indent has to be filed in the switch cam so that the pendulum is pressed down by the AS's cone. Laterally, the FA has to be properly positioned. The AS's functionality is to be tested.*

Installation instructions:

- When using an anti-creep protection no remote triggering device can be installed additionally. However, the anti-creep protection may be used as a remote triggering device if it is switched to zero potential during travel.
- The switch serving for remote triggering is to be clearly identified by means of a warning sign.
- The AS should be battery buffered as it would otherwise block the governor in the event of a power failure.
- The coil of the AS and the switch (521634) can be individually ordered as spare parts.
- When the lift is travelled using the emergency control at the stop the anti-creep protection does not need to be activated.

**An upgrade of an Anti Creep Protection to the governor does not meet the standard
EN 81-1/2:1998+A3:2009**

10.2.1 Test procedure for the Governor with Anti-creep Protection according to
EN 81-1/2:1998+A3:2009

For testing the functionality of the governor the car must be brought to a stop and the coil of the anti-creep protection must be deenergized. The deadbolt of the anti-creep protection is stands out and this must be indicated by a signal on the lift control.

For measuring the way from the detection of an uncontrolled movement until the release of the safety gear the markings must be set as follows:

1. Governor is in the machine room:
A mark has to be applied to the governor rope and the distance travelled until the safety circuit is interrupted is to be measured.
2. Governor is in the pit:
A mark has to be applied both on the guiding rail and on the car frame. Deenergize the anti-creep protective system so that the pushrod of the magnet at the governor is driven out. Now travel the car upwards or downwards respectively using the inspection control until the safety switch on the governor has disconnected the safety circuit. Measure the distance travelled with the help of the marking on the guiding rail.

The maximum distance until the safety gear is activated by :

Governor Type 7 / 9	350 mm
Governor Type 8	250 mm

To determine the values permitted by EN 81-1/2:1998+A3:2009 9.11.5 now the safety distance of the respective safety gear must be added. The safety gear also has to be EN 81-1/2:1998+A3:2009 certified.

The pre switch (1489 oder 2240) would not be pressed during function of standstill monitoring because he is so adjusted that it responds only to excess speed. To break the engagement of the safety circuit, the safety switch 1563 is provided.

Installation and Operating Manual
Overspeed Governors Type 7/8/9
Version 12.01

10.3 Encoder Installation

An encoder can be mounted to the governor, the tension pulley or diverter pulley. For this purpose the tension pulley and diverter pulley must feature a v-groove. Retrofitting the components with the encoder assembly is not possible.

Scope of delivery

- Adapter plate mounted to the governor.
- Toothed belt disc, 44 teeth mounted on the cam wheel.
- Toothed belt disc on the toothed belt disc.
- Transmission ratio 1:4, pinion 11 teeth shaft diameter 6mm or
Transmission ratio 1:2, pinion 22 teeth shaft diameter 10mm (in bag).
- 3 mounting screws M4 (in bag)

Mounting instructions

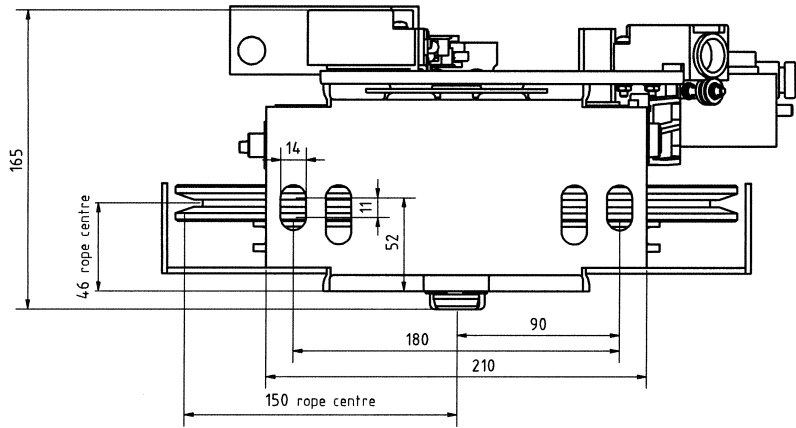
Remove the adjustable adapter plate from the support. Mount the encoder on the adapter plate using the countersink screws supplied. Shift the pinion onto the encoder's axle and gently fix it using the M4 stud screw. Move the pinion on the axle so that the toothed belt is properly aligned in both rotating directions of the cam wheel.

Then remove the adapter plate with the encoder again and tighten the stud screws on the pinion. Secure the stud screws using a screw locking device.

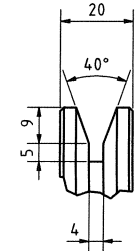
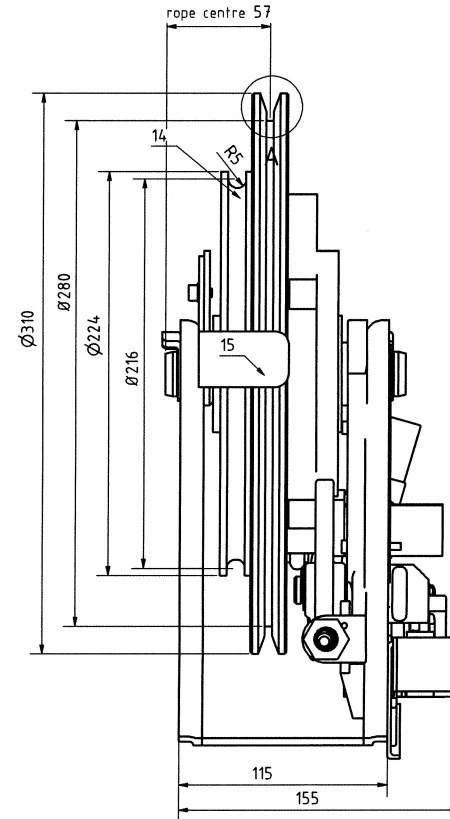
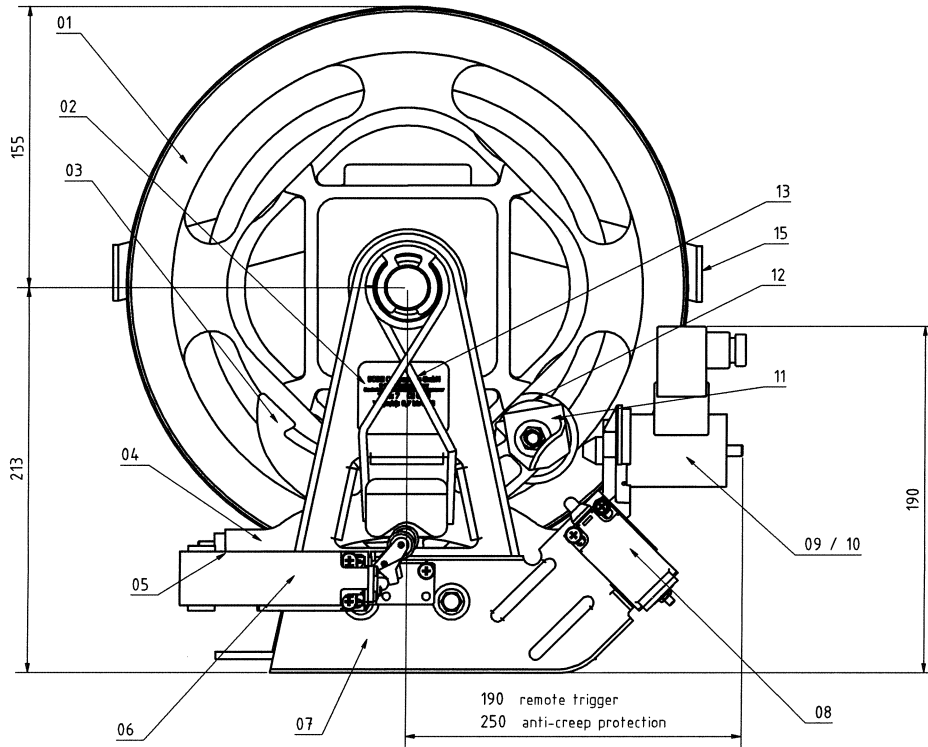
Now the adapter plate can be finally installed.



- When sliding the pinion on please ensure that the stud screws do not protrude into the bore hole.
- Tighten the toothed belt only slightly.

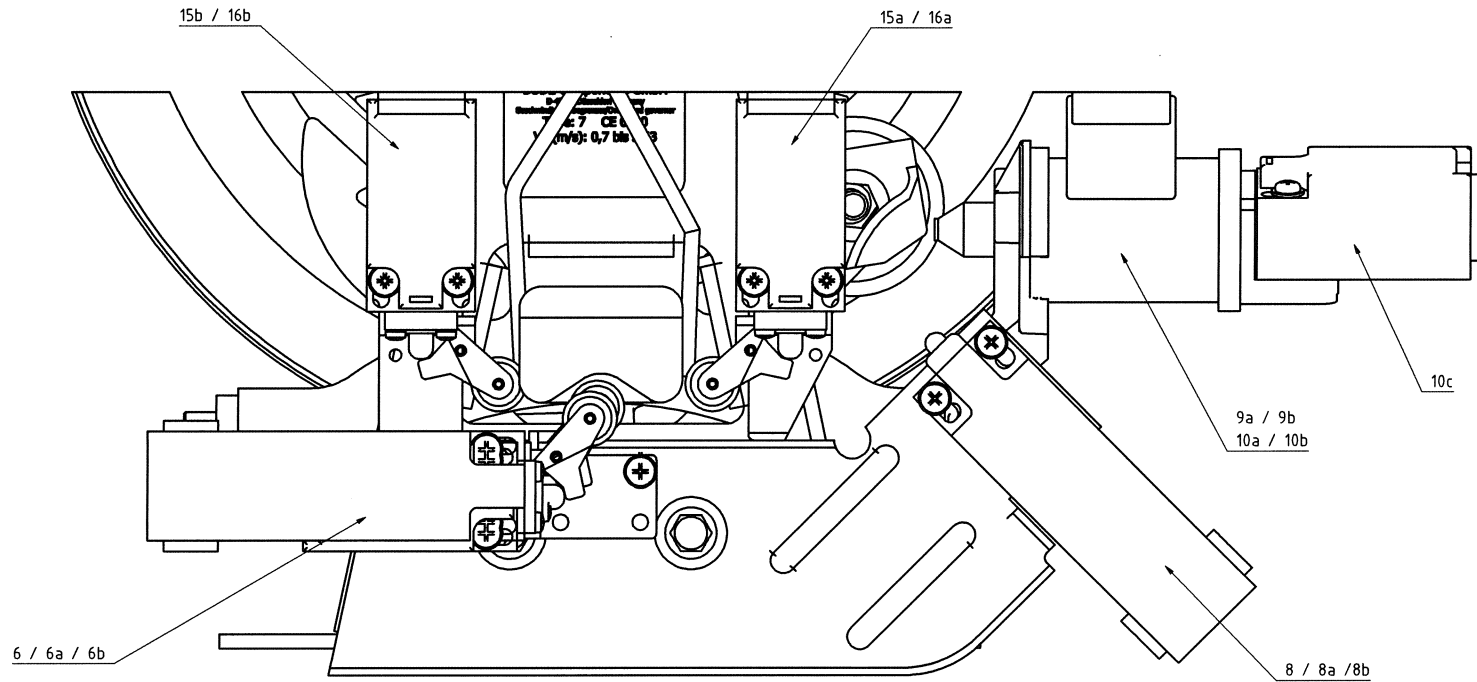


Individual parts			
No.	description	No.	description
01	cam wheel	08	safety switch from $V_n = 1,01$ m/s
02	governor stand	09	remote trigger
03	release pendulum	10	anti-creep protection
04	leg fab	11	switch cam
05	adjustment spring/nut	12	pendular roller
06	safety switch up to $V_n = 1,00$ m/s	13	leg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



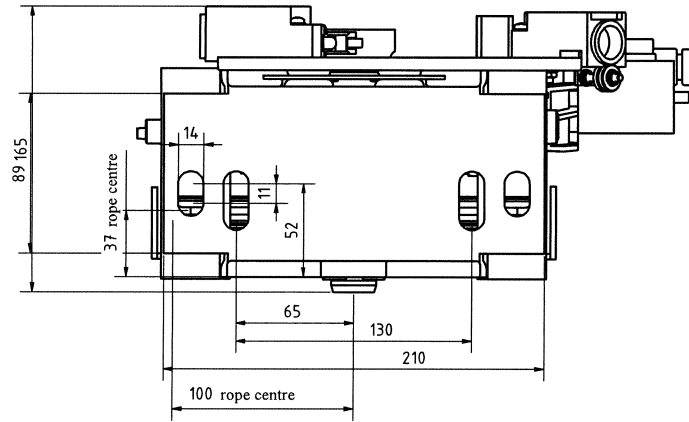
hardened rope groove 180 - 200 HB
unhardened rope groove 510 - 600 HV

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m		Material:	Gewicht:
				Overspeed governor Type 7	
		Datum	Name	Va = 0,70 - 3,43 m/s	
		09.02.2010	Ch. Leer		
		18.02.2010	Railer		
		Name		8 07 100301	
				Blatt: 1	
Status	Änderungen	Datum	Name	8 07 100301 Typ 7 EB:ldw	

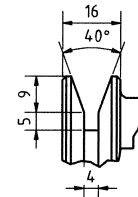
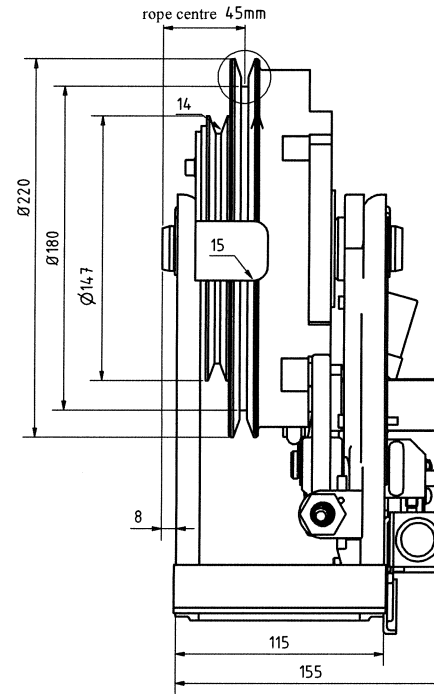
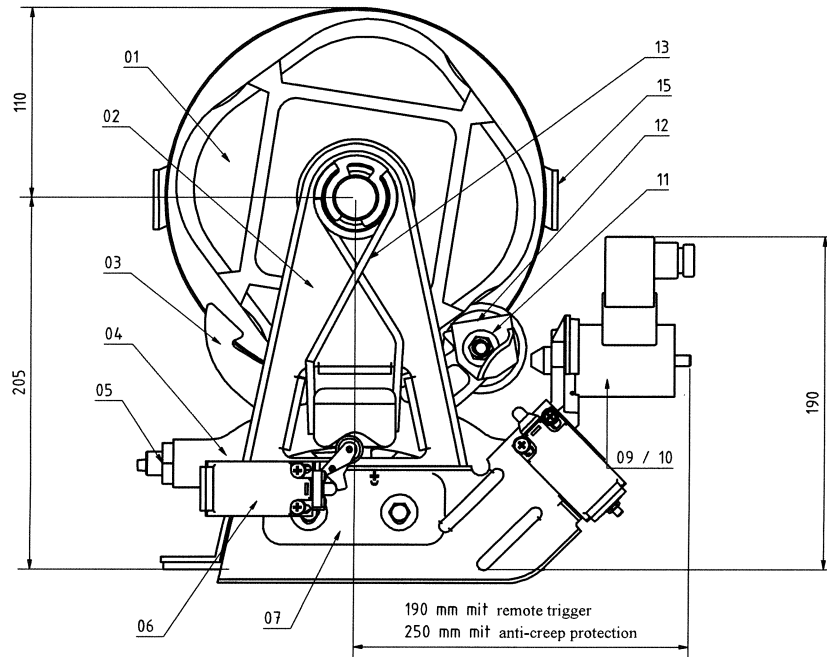


attachments				
No.	description	Type	article nu	remarks
6	safety switch 1 NNC/ 1 NOC (non-latching)	1563	521 563	
6a	safety switch 2 NNC (non-latching)	1562	521 562	
6b	safety switch 1 NNC/1 NOC (latching)	1564	521 564	
6c	electronically resettable safety switch 2 NNC/1 NOC (latching)	1475	521 475	
8	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		Allgemeintoleranz nach DIN ISO 2762 m		Material:	Gewicht:
Düsseldorf				Overspeed governor Type 7	
		Datum:	Name:	attachments	
		Gezeichnet: 09.02.2010	Ch. Leer		
		Konstruiert: 18.02.2010	Reiter		
		Note:		8 07 100301	
				Blatt: 2	
Status:	Änderungen:	Datum:	Name:	8 07 100301 Typ 7 GB:ldw	
				Blatt Anz.: 2	

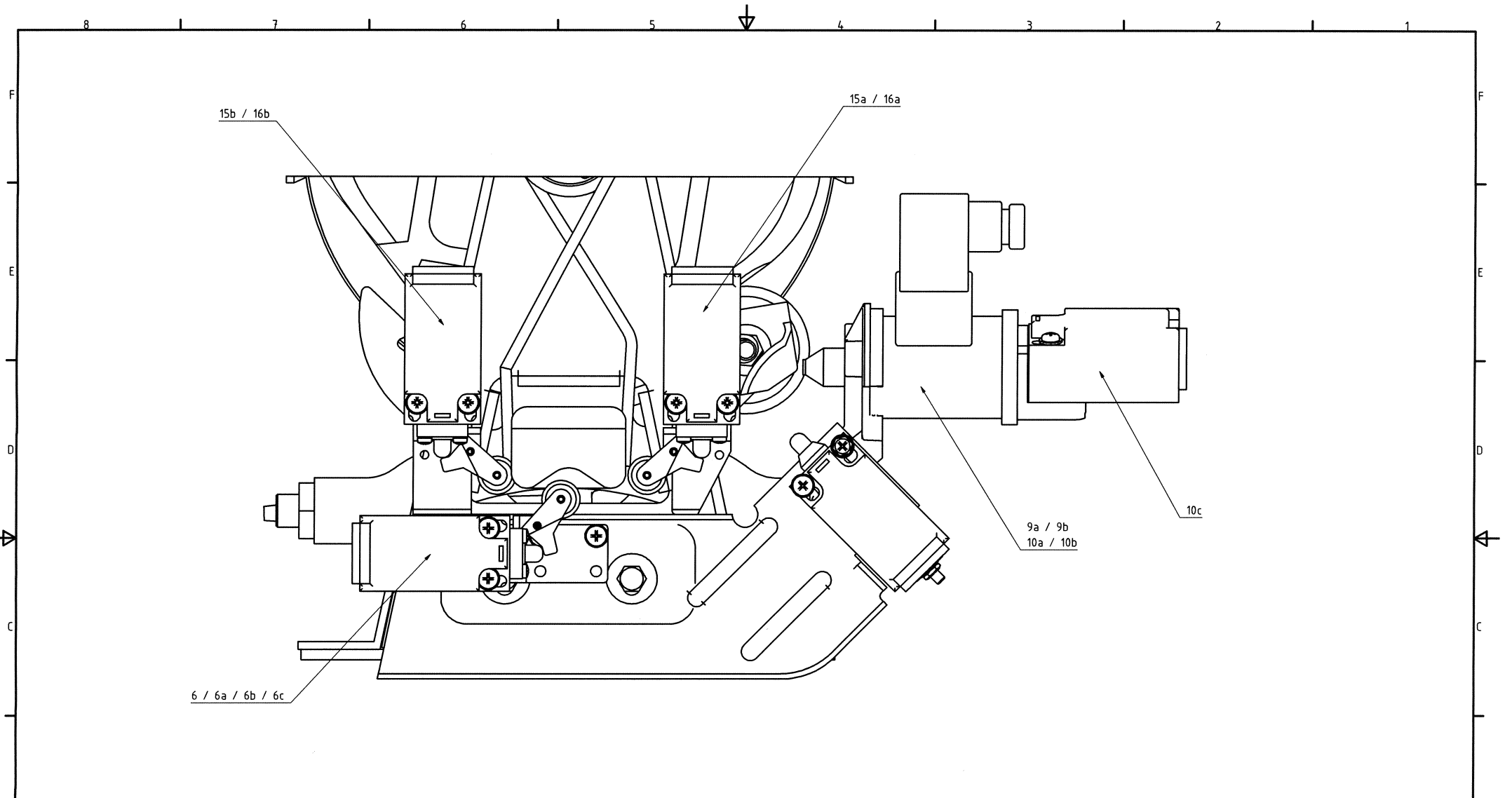


Individual parts			
No.	description	No.	description
01	cam wheel	09	remote trigger
02	governor stand	10	anti-creep protection
03	release pendulum	11	switch cam
04	leg tab	12	pendular roller
05	adjustment spring/nut	13	leg spring
06	safety switch up to $V_n = 1,00$ m/s	14	test groove
07	switch plate	15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



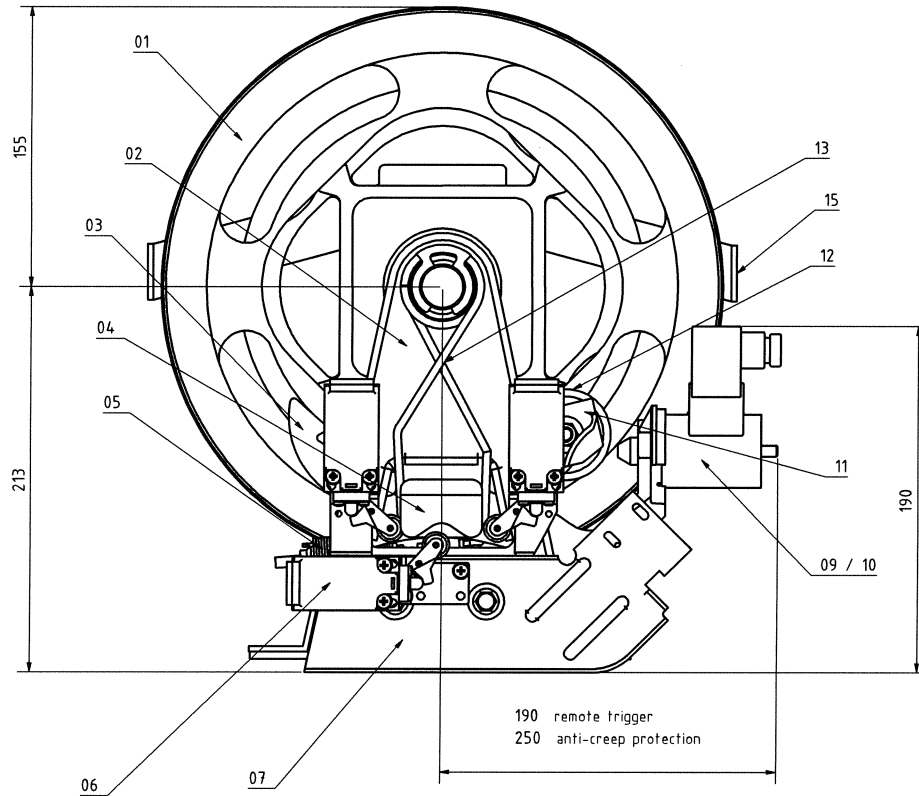
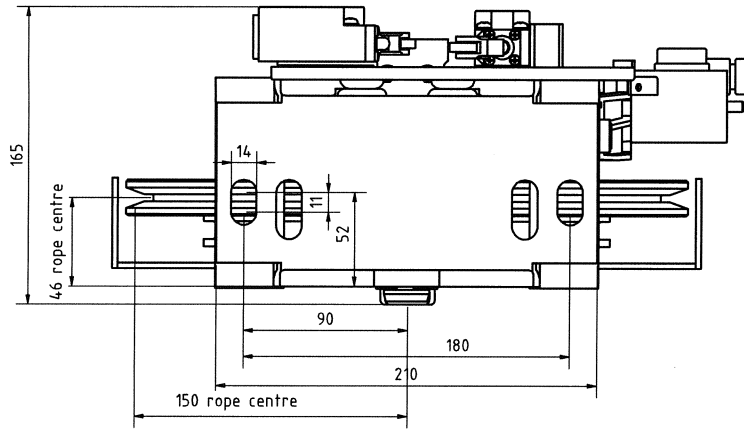
hardened rope groove 180 - 200 HB
unhardened rope groove 510 - 600 HV

BODE Components Düsseldorf		Allgemeintoleranz nach DIN ISO 2762 m		Material:	Gewicht:
				Overspeed governor Type 8	
		Datum	Name	Va = 0,50 m/s - 1,33m/s	
		10.02.2010	Ch. Loer		
		18.02.2010	Reiter		
		Name			
				8 08 100302	
				Blatt: 1	
Status	Änderungen	Datum	Name	8 08 100302 Typ 8 GB idw	
				Blatt Anz.: 2	



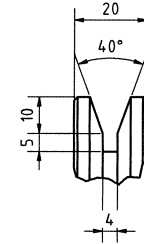
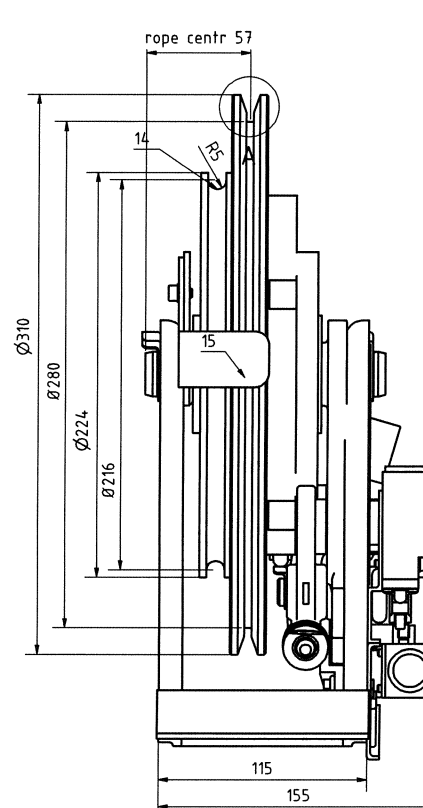
attachments				
No.	description	Type	article nu	remarks
6	safety switch 1 NNC/ 1 NOC (non-latching)	1563	521 563	
6a	safety switch 2 NNC (non-latching)	1562	521 562	
6b	safety switch 1 NNC/1 NOC (latching)	1564	521 564	
6c	electronically resettable safety switch 2 NNC/1 NOC (latching)	1475	521 475	
9a	remofe trigger 110V 15%ED	FA 110	580 157	
9b	remofe 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		Allgemeintoleranz nach DIN ISO 2762 m		Material:	Gewicht:
Düsseldorf				Overspeed governor Type 8	
		Datum	Name	attachments	
		Gezeichnet	Ch. Leer		
		Freigegeben	R. Reiter		
		8 08 100302 Typ 8 GB.rdw		8 08 100302	Blatt: 2
Status	Änderungen	Datum	Name	Blatt Anz.: 2	



190 remote trigger
250 anti-creep protection

Individual parts			
No.	description	No.	description
01	cam wheel	08	safety switch from Vn = 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 weight	12	pendular roller
06	safety switch up to Vn = 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:
				Overspeed governor Type 9	
	Datum	Name		Va = 0,50 - 0,80 m/s	
	Gezeichnet	Cl. Loer			
	Konstruiert	Reiter			
	Norm			8 09 100303	
Status	Änderungen	Datum	Rev.	8 09 100303 Typ 9 GB idW	Blatt: 1

