WITTENSTEIN | alpha

Metal bellows coupling

BCH / BCL / BC2 / BC3 / BCT / BCT HIGH TORQUE

Assembly instructions

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Revision: 03

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Table of Contents

1 About this manual

This operating manual contains necessary information to safely operate the coupling.

If this manual is supplied with any amendments (e.g. for special applications), the information in the amendments is primarily and exclusively valid.

The operator must ensure that this operating manual is read and fully understood by all persons assigned to install, operate, or maintain the coupling.

This manual should be stored where it can be easily accessed near the coupling.

Inform colleagues who work in the area around the machine about the **safety and warning notices** to avoid injuries.

The original instructions were prepared in German; all other language versions are translations of these instructions.

1.1 Information symbols and cross references

The following information symbols are used:

- Indicates an action to be performed
  - ➲ Indicates the results of an action
- ⓘ Provides additional information about the action

A cross reference refers to the chapter number and the header of the target section (e. g. 2.3 "Intended use").

A cross reference on a table refers to the table number (e. g. Table "Tbl-15").

1.2 Scope of delivery

- Check the completeness of the delivery against the delivery note.
  - ⓘ Missing parts or damage must be notified immediately in writing to the carrier, the insurance company, or **WITTENSTEIN alpha GmbH**.

2 Safety

These instructions, especially the safety and warning notices and the rules and regulations valid for the operating site, must be observed by all persons working with the coupling.

The following, especially, must be strictly adhered to:

- Observe the instructions for transport and storage.
- Use the coupling only in accordance with its intended use.
- Carry out maintenance and repair work appropriately and professionally in conformity with the specified intervals.
- Always mount, dismantle, and operate the coupling properly (e.g. even test run only with secure mounting).
- In accordance with his risk assessment, the manufacturer of the higher-level machine shall, if necessary, install protective devices and equipment to protect the user from the residual hazards of the coupling. Operate the coupling only if these protective devices and guards are intact and active.
- Prevent the coupling from becoming extremely soiled.
- Only carry out modifications or reconstructions when these are approved in writing by the **WITTENSTEIN alpha GmbH**.

Personal injuries or material damage, or other claims arising from non-observance of these minimum requirements, are the sole responsibility of the operator.

In addition to the safety-related information in this manual, also observe any legal and otherwise applicable rules and regulations, particularly for accident prevention (e.g. personal safety equipment) and environmental protection.

2.1 Product conformity

2.1.1 Machine safety

The coupling is considered a "machine component" and is therefore not subject to the EC Machinery Directive 2006/42/EC.

Startup is prohibited within the scope of the EC directive until it has been determined that the machine in which this coupling is installed corresponds to the regulations within this directive.

2.2 Personnel

Only technicians who have read and understood this operating manual may perform work on the coupling. Based on their training and experience, technicians must be able to evaluate the tasks assigned to them in order to recognize and avoid risks.

2.3 Intended use

The coupling is used for torque transmission and is intended for mounting on shafts while complying with the performance data. It is suitable for all industrial applications.

The coupling may not be operated in potentially explosive atmospheres.

The coupling has been constructed according to current technological standards and accepted safety regulations.

- To avoid any hazard to the operator or damage to the machine, use the coupling only in accordance with its intended use and in a technically flawless and safe condition.
- If you notice any altered operating behavior, check the coupling in accordance with chapter 8 "Malfunctions".
- Read the general safety instructions before starting any work (see chapter 2.5 "General safety instructions").

2.4 Reasonably foreseeable misuse

Any use is prohibited if

- it contradicts the requirements of chapter 2.3 "Intended use",
- it exceeds the permissible technical data, e.g. speed, force and torque load, temperature, service life (see also chapter 3.3 "Dimensions and performance data").

2.5 General safety instructions

The functioning of the coupling involves residual risks even when adhering to the intended use.

Rotating components can cause serious injuries:

- Before startup, remove objects, loose components, and tools from the coupling, in order to avoid danger from thrown parts.
- Keep a sufficient distance to moving machine components when the coupling is running.
- Secure the higher-level machine against restarting and unintentional movements during assembly and maintenance work (e.g. uncontrolled lowering of lifting axes).

A **hot coupling** can cause serious burns:

- Only touch the hot coupling with protective gloves.

Loose or overloaded screw connections can cause damage to the coupling:

- Use a calibrated torque wrench to tighten and check all screw connections for which tightening torques have been specified.

Solvents are flammable, can cause skin irritation, and can pollute soil and water:

- In case of fire: Do not use a jet of water to extinguish.
  ⓘ Suitable extinguishing agents are powder, foam, water mist and carbon dioxide.
- Use protective gloves to avoid direct skin contact with solvents.
- Use and dispose of solvents properly.

A **damaged coupling** can cause accidents and injury:

- Immediately shut down the coupling that has been overloaded due to misuse or a machine crash (see chapter 2.4 "Reasonably foreseeable misuse").
- Replace the damaged coupling, even if no external damage is visible.

2.6 Signal words

The following signal words are used to indicate possible hazards, prohibitions, and important information:

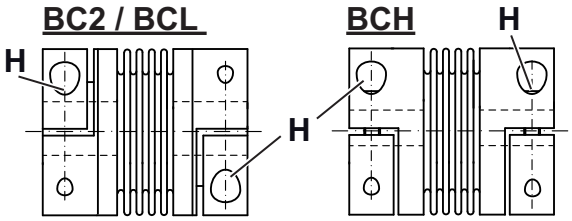
	⚠ DANGER **This signal word indicates an imminent danger that will cause serious injuries or even death.**
	⚠ WARNING **This signal word indicates a potential hazard that could cause serious injuries and even death.**
	⚠ CAUTION **This signal word indicates a potential hazard that could cause minor or serious injuries.**
	NOTICE **This signal word indicates a potential hazard that could lead to material damage.**
	A note without a signal word indicates application hints or especially important information for handling the coupling.

3 Coupling description

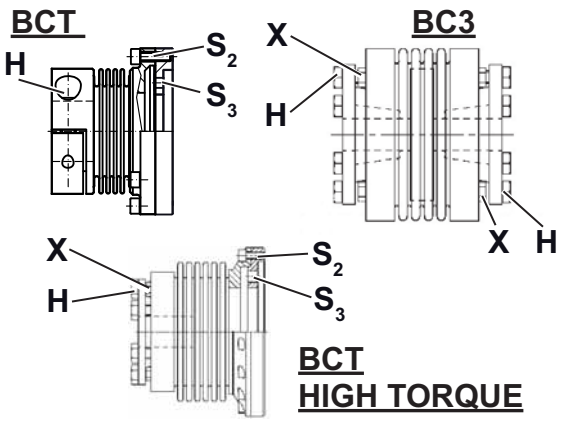
The transmission of torque of the metal bellows coupling takes place free of backlash and with torsional rigidity via the attached metal bellows (thin walls, stainless steel), attached by various hubs. The input and output side of the coupling differ in their geometry (flange or shaft) as well as the mounting shape (design of the clamping hub). The metal bellows as intermediate element compensates for axial, angular, as well as lateral shaft misalignments.

For the use of the coupling, both external conditions (e.g. dust, high humidity, temperature, etc.) as well as the technical design (torque to be transmitted, maximum speeds, shaft diameter, etc.) should be inspected for compliance with the maximum permissible values listed in our accessories product catalog (www.wittenstein-alpha.de).

3.1 Overview of coupling components

		Coupling components
	BC2 / BCL	Bellows coupling with clamping hub
	BCH	Bellows coupling with split clamping hub
	H	Clamping screw

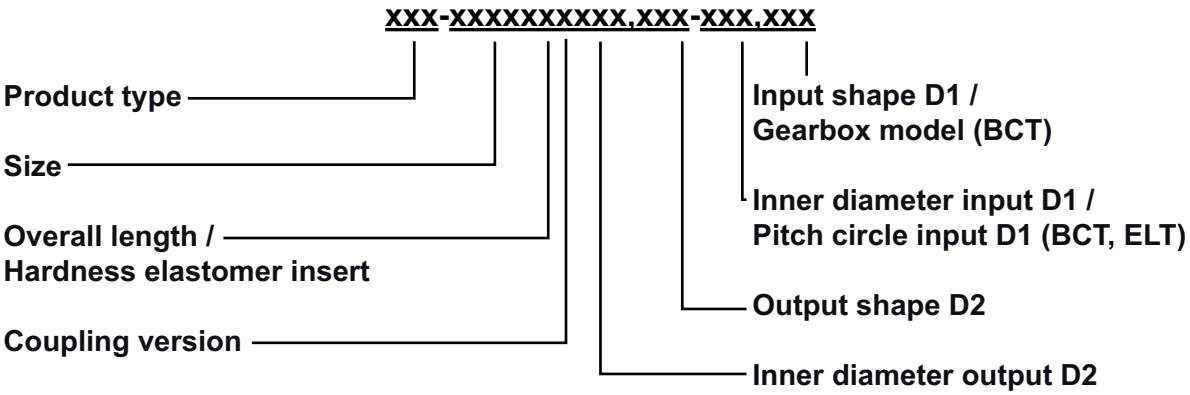
Tbl-1: Overview of coupling components BC2 / BCH / BCL

		Coupling components
	BC3	Bellows coupling with tapered clamping hub
	BCT	Bellows coupling with flange connection (Standard clamping hub)
	BCT HIGH TORQUE	Bellows coupling with flange connection (Tapered clamping hub)
	H	Clamping screw
	S_2	Fastening screw ISO 4762
	S_3	Fastening screw ISO 4017
	X	Forcing screw

Tbl-2: Overview of coupling components BC3 / BCT / BCT HIGH TORQUE

3.2 Ordering code

ⓘ The ordering code is specified on the delivery note.



More information is available in our catalog or at www.wittenstein-alpha.de.

3.3 Dimensions and performance data

The dimensions, the maximum permissible speeds and torques, and information on the service life can be found

- in our accessories product catalog,
- under www.wittenstein-alpha.de
- in the **cymex®** design software,
- in the respective customized performance data (X093–D...).

Consult our Customer Service department if the coupling is older than one year. The user will then receive the valid performance data.

4 Transport and storage

4.1 Packaging

The coupling is delivered packed in foil and cardboard boxes.

- Dispose of the packaging materials at the recycling sites intended for this purpose. Observe the applicable national regulations concerning disposal.

4.2 Transport

⚠ WARNING

Suspended loads can fall and can cause serious injuries and even death.

- Do not stand under suspended loads.
- Secure the coupling before transport with suitable fasteners (e.g. belts).

NOTICE

Hard knocks, for instance because of falling or hard dropping, can damage the coupling.

- Only use hoisting equipment and lifting accessories with sufficient capacity.
- Never exceed the maximum permissible load for hoisting equipment.
- Slowly put down the coupling.

The table "Tbl-3" specifies the maximum coupling weights. Depending on the version, the actual weight can be considerably less.

Size BC.	2	4.5	10	15	30	60	80	150
Maximum weight [kg]	0.02	0.05	0.06	0.3	0.4	0.7	0.8	1.85
Size BC.	200	300	500	800	1500	4000	6000	10000
Maximum weight [kg]	2.65	4.0	7.5	7.0	12	28.8	49.4	80.9

Tbl-3: Maximum weight [kg]

4.2.1 Transport of couplings up to and including series 1500

No special transport mode is prescribed for transporting the coupling.

4.2.2 Transport of couplings as of series 2500

For series 2500 and higher, we recommend the use of hoisting equipment.

4.3 Storage

Store the coupling in a dry area in the closed original packaging.

For storage logistics, we recommend the "first in - first out" method.

5 Assembly

- Read the general safety instructions before beginning to work (see Chapter 2.5 "General safety instructions").
- If you have questions about correct mounting, consult our Customer Service department.

5.1 Preparations

	**⚠ CAUTION** **Burrs can damage components and cause injury.** ● Remove burrs and dirt from components to be connected, such as shafts and couplings, before assembly. ● Wear protective gloves.

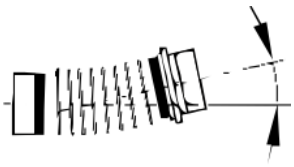
	Lubricants can reduce the transmission of force in the area of the coupling (slippage). ● Do not use any oils/greases with molybdenum disulfide or other high-pressure additives or gliding pastes.

- Clean/de-grease the following components with a clean and lint-free cloth and grease-dissolving, non-aggressive detergent:
  - All fitting surfaces to neighboring components
  - Bores, hubs and the shafts to be connected
- In addition, check the fitting surfaces for damage and impurities.
- Check all connection dimensions (e.g. shafts) and check tolerances (e.g. key dimensions). The coupling has a H7 fit. The fit tolerance of the shaft/hub connection has to lie between 0.01 and 0.05 mm.
- Check that the coupling runs smoothly on the shaft.

During assembly and disassembly, the coupling must not be displaced by more than 1.5 times the permissible misalignment values specified in the catalog.

- Avoid applying any type of force.

5.1.1 Types of misalignment

Axial misalignment (ΔKa)	Angular misalignment (ΔKw)	Lateral misalignment (ΔKr)
		
The axial misalignment is the term for the misalignment in the length of an axis or shaft, i.e., in the axial direction. [specification in mm]	The angular misalignment is the term for the angular misalignment of two shafts in relation to each other. [specification in °]	The lateral misalignment is the term for the misalignment parallel to the shaft axis. [specification in mm]

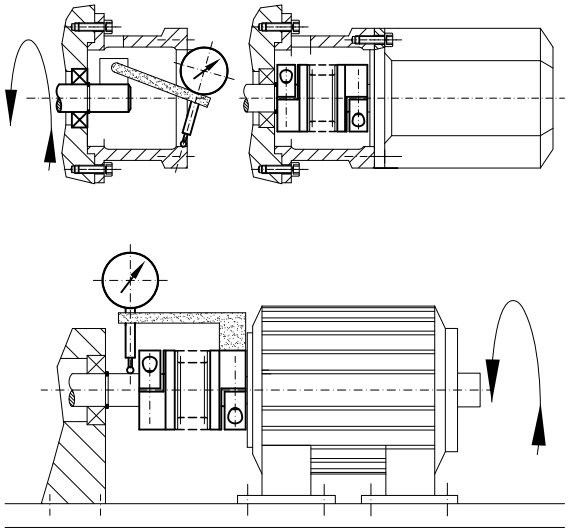
Tbl-4: Types of misalignment

	Observe maximum values to offset. ● Ensure that the maximum values are not exceeded during operation. ● Refer to the catalog for the maximum values of the misalignments (lateral, axial, angular) under www.wittenstein-alpha.de.

	The lateral misalignment is detrimental to the service life of the metal bellows / elastomer insert. **Accurate alignment of the coupling significantly increases the service life of the metal bellows / elastomer insert. The loads for the neighboring bearings are reduced and the smooth running of the entire drive train is influenced positively.** **For inputs with very high speeds, we recommend aligning the coupling with a dial gauge.**

5.2 Mounting of the coupling

- When mounting the coupling, observe the different types of mounting:



Installation with intermediate housing

When the coupling is installed in a housing:

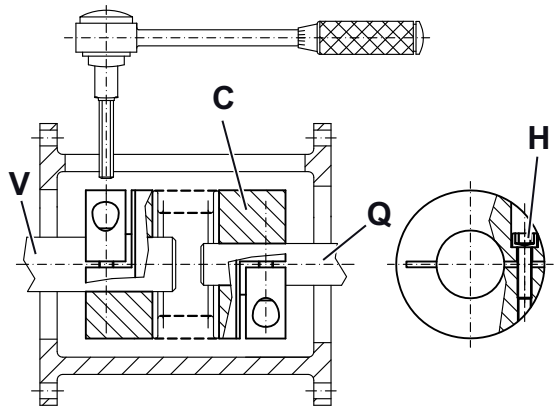
- Arrange the centering of the fit and the plane parallelism of the machine/housing and housing/input as precisely as possible, in order to minimize misalignments.

Open installation

For open installation of the coupling between gearbox/motor with feet as well as installation of the connecting load shaft.

- Carefully and thoroughly perform the alignment using a dial gauge, straight edge, or sensing gauge.

5.2.1 Mounting of bellows coupling with clamping hub (BC2 / BCL)

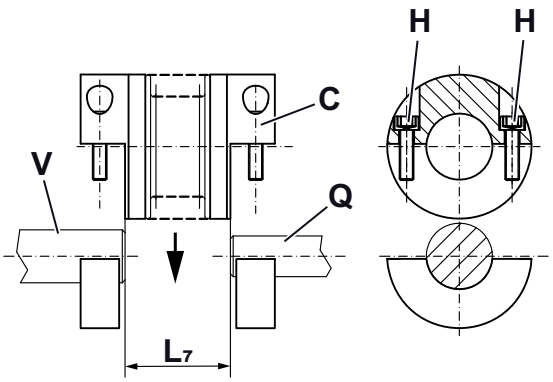


- Slide the complete coupling [C] onto the motor shaft/gearbox shaft stub [Q] until the correct axial position is reached.
- Tighten the clamping screw [H] with a torque wrench.
  - ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".
- Guide the ball screw/load shaft stub [V] into the coupling until the correct axial position is reached.
- Tighten the clamping screw [H] on the output side with a torque wrench.
  - ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".
  - ➲ The coupling must lie flush across the entire fitting length.

For information on **disassembly** of the coupling:

- Loosen the clamping screws [H].

5.2.2 Mounting of bellows coupling with split clamping hub (BCH)



- Exactly align the shafts [Q, V] in compliance with the catalog specifications.
- Slide the complete coupling [C] onto the motor shaft/gearbox shaft stub [Q] until the correct axial position is reached.
- Tighten the clamping screws [H] with a torque wrench.
  ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".
- Guide the ball screw/load shaft stub [V] into the coupling until the correct axial position is reached.
  ⓘ Maintain an insert length of L_6 between the faces of the stub shafts.
- Tighten the clamping screws [H] on the output side with a torque wrench.
  ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".
  ➲ The coupling must lie flush across the entire fitting length.

For information on **disassembly** of the coupling:

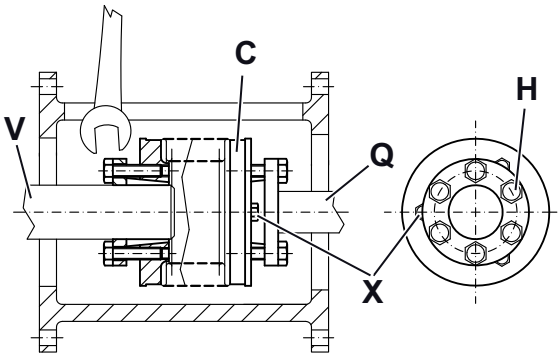
- Unscrew the clamping screws [H].

5.2.3 Mounting of bellows coupling with tapered clamping hub (BC3)

NOTICE

Risk of destruction of the clamp connection.

- Tighten the clamping screws [H] in several cycles.
- Do not tighten coupling any further. This is possible and can damage the coupling.



- Slide the complete coupling [C] onto the motor shaft/gearbox shaft stub [Q] until the correct axial position is reached.
- Tighten the clamping screws [H] on the input side as follows:
  - using the torque wrench
  - in order
  - in three circular passes with 1/3, 2/3 and the entire prescribed tightening torque
- The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".
- Guide the ball screw/load shaft stub [V] into the coupling until the correct axial position is reached.
- Tighten the clamping screws [H] on the output side, following the procedure described above.

The clamping process is finished. Further tightening of the clamping screws [H] may damage the coupling.

For information on **disassembly** of the coupling:

- Evenly loosen the clamping screws [H].
- Evenly screw the forcing screws [X] into the tapered clamping hub. Use it to push off the tapered clamping hub.
- Screw the forcing screws [X] back immediately.

5.2.4 Mounting of bellows coupling with flange connection (BCT / BCT HIGH TORQUE)

BCT and BCT HIGH TORQUE coupling models are technically and geometrically tailored to our flanged gearboxes:

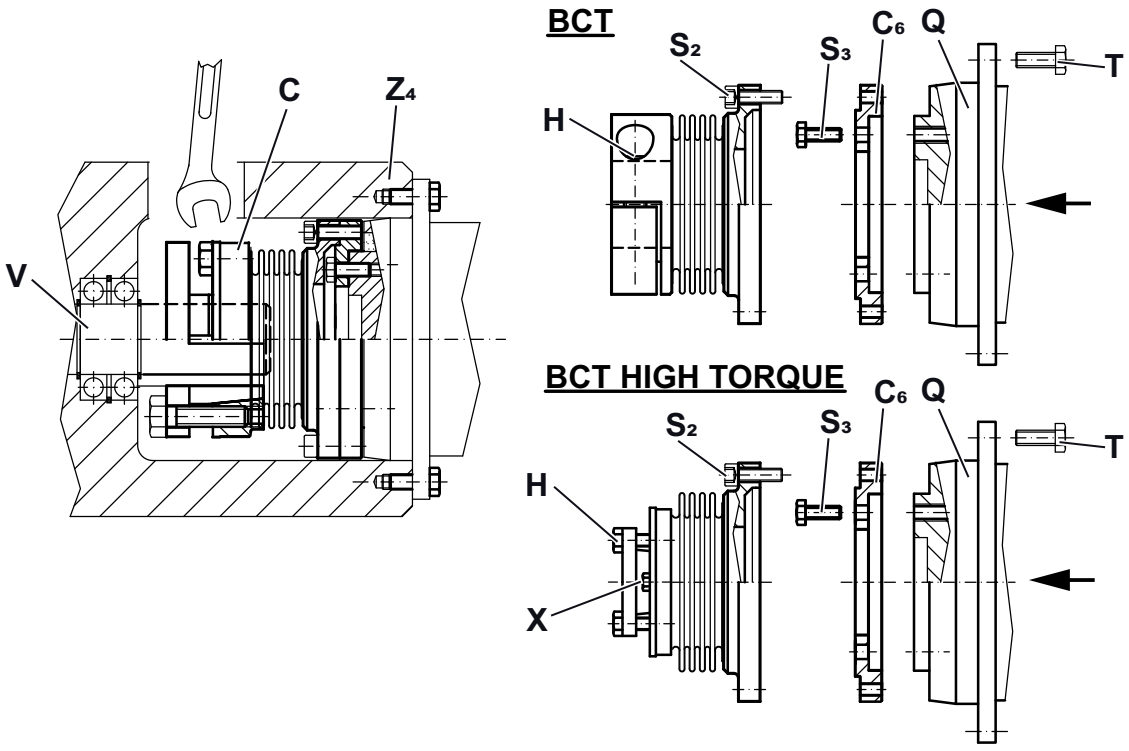
Product type	**BCT**								
Gearbox	TP+, TPK+, TK+, TPC+, TPM					VT+			
Gearbox size	004	010	025	050	110	050	063	080	100
BCT Size	15	60	150	300	1500	60	150	300	1500
Product type	**BCT HIGH TORQUE**								
Gearbox	TP+, TPK+								
Gearbox size	010	025/050	110	300	500				
BCT Size	150	300	1500	4000	6000	10000			

Tbl-5: Assignment of BCT bellows coupling – flanged gearbox

NOTICE

Risk of destruction of the clamp connection.

- Tighten the clamping screws [H] in several cycles.
- Do not tighten coupling any further. This is possible and can damage the coupling.



- Slide the intermediate flange [C_6] onto the gearbox flange [Q] and tighten the included fastening screws [S_3] crosswise.
- Connect the coupling [C] with the intermediate flange [C_6] and tighten the included fastening screws [S_2] crosswise.

  ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".
- Slide the coupling into the flange bell [Z_4] and onto the load shaft/ball screw [V] until the correct axial position is reached.

- Tighten the flange screws [T] of the flange bell and gearbox.

Only for product type **BCT**:

- Tighten the clamping screws [H] on the output side with a torque wrench.
  ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".

Only for product type **BCT HIGH TORQUE:**

- Tighten the clamping screws [H] on the input side as follows:
  - using the torque wrench
  - in order
  - in three circular passes with 1/3, 2/3 and the entire prescribed tightening torque

  ⓘ The screw size and specified tightening torque can be found in chapter 9.1 "Information for mounting the coupling".

The clamping process is finished. Further tightening of the clamping screws [H] may damage the coupling.

For information on **disassembly** of the coupling:

- Evenly loosen the clamping screws [H].
- Only for product type **BCT HIGH TORQUE:**
  Evenly screw the forcing screws [X] into the tapered clamping hub. Use it to push off the tapered clamping hub.
- Loosen the flange screws [T] and axially pull out the complete gearbox coupling unit.
- Only for product type **BCT HIGH TORQUE:**
  Screw the forcing screws [X] back immediately.

6 Startup and operation

- Read the general safety instructions before beginning to work (see Chapter 2.5 "General safety instructions").

Improper use can cause damage at the coupling.

- Make sure that the **operating temperature** is not exceeded.
  ⓘ Information about your coupling is available in the catalog under www.wittenstein-alpha.de, or from our Customer Service / Sales department.
- Use the coupling only up to its maximum limits, see chapter 3.3 "Dimensions and performance data". For other conditions of use, consult our Customer Service department.

7 Maintenance and disposal

- Read the general safety instructions before beginning to work (see Chapter 2.5 "General safety instructions").

7.1 Maintenance schedule

Maintenance work	At startup	First time after 2200 operating hours	Yearly
Visual inspection	X	X	X
Checking the tightening torques	X	X	X
Checking the shaft-hub connection	X		

Tbl-6: Maintenance schedule

7.2 Maintenance work

7.2.1 Visual inspection

- Check the coupling for external damage.

7.2.2 Checking the tightening torques

- Check the tightening torque of the clamping bolt. If you discover while checking the tightening torque that the clamping bolt can be turned further, tighten it with the prescribed tightening torque.

ⓘ The prescribed tightening torques can be found in chapter 9.1 "Information for mounting the coupling".

7.2.3 Checking the shaft-hub connection

- Check the fit tolerance of the shaft-hub connection. The fit tolerance must be between 0.01 and 0.05 mm.

7.3 Disposal

Additional information on disassembly of the coupling can be found in chapter 5.2 "Mounting of the coupling" or contact our customer Service.

- Dispose of the coupling at the recycling sites intended for this purpose.

ⓘ Observe the applicable national regulations concerning disposal.

8 Malfunctions

NOTICE

A changed operational behavior can be an indication for an existing damage of the coupling or cause a damage to the coupling.

- Do not put the coupling back into operation until the cause of the malfunction has been rectified.

Rectifying of malfunctions may only be done by specially trained technicians.

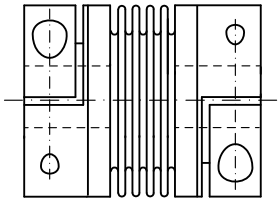
Fault	Possible cause	Solution
Operating noise	Input system overloaded	Carry out the motor mounting again.
Bellows breakage / elastomer failure	Lateral misalignment	Consult our Customer Service department.
	Angular misalignment	
	Torque overload	

Tbl-7: Malfunctions

9 Appendix

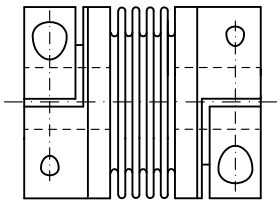
9.1 Information for mounting the coupling

9.1.1 Bellows coupling with clamping hub BC2

Product type: Bellows coupling with clamping hub BC2				
	Size	Screw size	Tightening torque [Nm]	
			Standard screw ISO 4762 / Property class 12.9	Corrosion-resistant screw * ISO 4762 / Property class A2/A4-80
	**15**	M5	8	7
	30	M6	15	11.8
	60	M8	40	28.7
	80	M10	50	50
	150	M10	70	58
	200	M12	120	100
	300	M12	130	100
	500	M16	200	200
	800	2 x M16	250	245
	1500	2 x M20	470	470
	4000	2 x M24	1200	–
	6000	2 x M24	1200	–
	10000	2 x M30	2400	–
	* Stainless steel hub, welded			

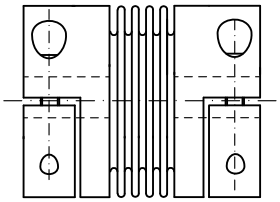
Tbl-8: Information for mounting the coupling BC2

9.1.2 Bellows coupling with clamping hub BCL

Product type: Bellows coupling with clamping hub BCL			
	Size	Screw size / Property class 12.9	Tightening torque [Nm] Standard screw ISO 4762
	**2**	M3	2.3
	4.5	M4	4
	10	M4	4.5
	15	M5	8
	30	M6	15
	60	M8	40
	80	M10	70
	150	M10	85
	300	M12	120
	500	M16	200

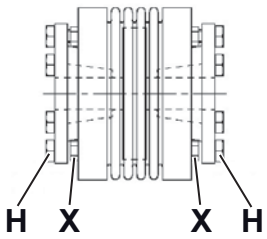
Tbl-9: Information for mounting the coupling BCL

9.1.3 Bellows coupling with split clamping hub BCH

Product type: Bellows coupling with split clamping hub BCH			
	Size	**Screw size / Property class 12.9**	**Tightening torque [Nm] Standard screw ISO 4762**
	**15**	2 x M5	8
	30	2 x M6	15
	60	2 x M8	40
	80	2 x M10	50
	150	2 x M10	70
	200	2 x M12	120
	300	2 x M12	130
	500	2 x M16	200
	800	2 x M16	250
	1500	2 x M20	470
	4000	2 x M24	1200

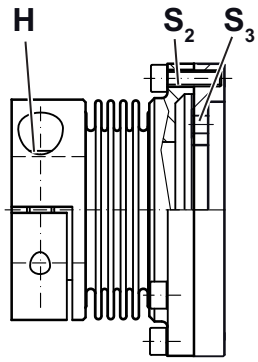
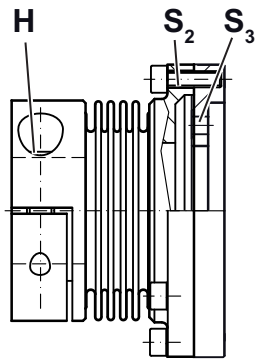
Tbl-10: Information for mounting the coupling BCH

9.1.4 Bellows coupling with tapered clamping hub BC3

Product type: Bellows coupling with tapered clamping hub BC3					
	Size	**Clamping screw ISO 4017 [H]**			**Forcing screw ISO 4017 [X] / Property class 10.9**
		Screw size	**Tightening torque [Nm]**		
			Standard screw / Property class 10.9	**Corrosion-resistant screw * / Property class A2/A4–70**	
	**15**	6 x M4	4	2.6	6 x M4
	30	6 x M5	6	5.1	6 x M4
	60	6 x M5	8	5.1	6 x M5
	150	6 x M6	12	8.8	6 x M5
	200	6 x M6	14	8.8	6 x M6
	300	6 x M8	18	21.4	6 x M6
	500	6 x M8	25	21.4	6 x M6
	800	6 x M10	40	44	6 x M8
	1500	6 x M12	70	74	6 x M8
	4000	6 x M16	120	183	6 x M10
	6000	6 x M16	150	183	6 x M10
	10000	8 x M16	160	183	8 x M10
	* Stainless steel hub, welded				

Tbl-11: Information for mounting the coupling BC3

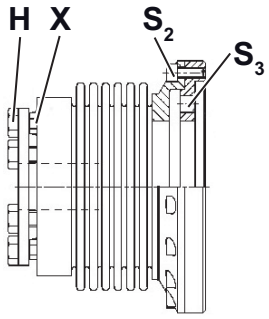
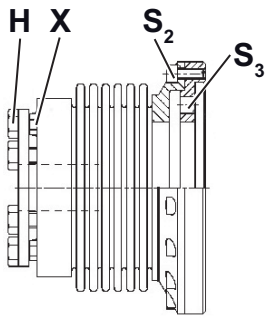
9.1.5 Bellows coupling with flange connection BCT

Product type: Bellows coupling with flange connection BCT							
Coupling version: Standard							
		Size	**15**	**60**	**150**	**300**	**1500**
	**H**	**Screw size ISO 4762** [1]	M5	M8	M10	M12	2 x M20
		Tightening torque [Nm]	8	45	80	120	470
	S_2	**Screw size ISO 4762** [1] **[ ] x [mm] x [mm]**	10 x M4 x 12	10 x M5 x 16	10 x M6 x 20	12 x M6 x 20	16 x M8 x 20
		Tightening torque [Nm]	4	8	14	14	35
	S_3	**Screw size ISO 4017** [2] **[ ] x [mm] x [mm]**	8 x M5 x 12	8 x M6 x 16	12 x M6 x 16	12 x M8 x 25	12 x M10 x 30
		Tightening torque [Nm]	7.6	13.2	13.2	32	62.5
Coupling version: Corrosion-resistant (Stainless steel hub, welded)							
		Size	**15**	**60**	**150**	**300**	**1500**
	**H**	**Screw size ISO 4762** [3]	M5	M8	M10	M12	2 x M20
		Tightening torque [Nm]	7	28.7	58	100	470
	S_2	**Screw size ISO 4762** [3] **[ ] x [mm] x [mm]**	10 x M4 x 12	10 x M5 x 16	10 x M6 x 20	12 x M6 x 20	16 x M8 x 20
		Tightening torque [Nm]	3.5	7	11.8	11.8	28.7
	S_3	**Screw size ISO 4017** [4] **[ ] x [mm] x [mm]**	8 x M5 x 12	8 x M6 x 16	12 x M6 x 16	12 x M8 x 25	12 x M10 x 30
		Tightening torque [Nm]	5.1	8.8	8.8	21.4	44

[1] Property class 12.9
[2] Property class 10.9
[3] Property class A2/A4–80
[4] Property class A2/A4–70

Tbl-12: Information for mounting the coupling BCT

9.1.6 Bellows coupling with tapered clamping hub BCT HIGH TORQUE

Product type: Bellows coupling with tapered clamping hub BCT HIGH TORQUE						
Coupling version: Standard						
		Size	**150**	**300**		**1500**
	**H**	**Screw size ISO 4017 ***	6 x M6	6 x M8	6 x M8	6 x M12
		Tightening torque [Nm]	12	18	18	70
	S_2	**Screw size ISO 4762 ** [ ] x [mm] x [mm]**	10 x M6 x 20	12 x M6 x 20	12 x M6 x 20	16 x M8 x 20
		Tightening torque [Nm]	14	14	14	35
	S_3	**Screw size ISO 4017 * [ ] x [mm] x [mm]**	12 x M6 x 16	12 x M8 x 20	12 x M10 x 25	12 x M12 x 25
		Tightening torque [Nm]	13.2	32	62.5	108
	X	**Screw size ISO 4017 ***	3 x M5	3 x M6	3 x M6	6 x M8
Coupling version: Standard						
		Size	**4000**	**6000**		**10000**
	**H**	**Screw size ISO 4017 ***	6 x M16	6 x M16		8 x M16
		Tightening torque [Nm]	120	150		160
	S_2	**Screw size ISO 4762 ** [ ] x [mm] x [mm]**	20 x M12 x 35	20x M12 x 35		24 M12 x 35
		Tightening torque [Nm]	120	120		120
	S_3	**Screw size ISO 4762 ** [ ] x [mm] x [mm]**	12 x M20 x 45	12 x M24 x 55		12 x M24 x 55
		Tightening torque [Nm]	520	890		890
	X	**Screw size ISO 4017 ***	6 x M10	6 x M10		8 x M10
* Property class 10.9 ** Property class 12.9						

Tbl-13: Information for mounting the coupling BCT HIGH TORQUE

Revision history

Revision	Date	Comment	Chapter
01	20.08.2013	New version	All
02	13.07.2017	Malfunctions; Standard	7, 8.6, 8.7
03	06.12.2022	BCL; Technical data; Layout	All

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