

USER MANUAL

CRANKSET & CHAINRING

CLASSIFIED

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1. Introduction

1.1. Symbols used

The following symbols are used in this user manual:



TIP

Provides the user with suggestions and advice completing a procedure more easily or conveniently.



NOTE

A general comment that may improve economic usage.



ENVIRONMENT

Guidelines to be followed when using hazardous substances and when recycling products and materials.



WARNING

*Indicates a hazardous situation where not following the safety instructions **may** result in minor to moderate injury and/or damage to the product or its surroundings.*



CAUTION

*Indicates a hazardous situation where not following the safety instructions **may** result in serious injury or death and/or serious damage to the product or its surroundings.*



DANGER

*Indicates a hazardous situation where not following safety instructions **will** result in serious injury or death.*

1.2. Abbreviations used

Abbreviation	More info
BB	Bottom bracket The bottom bracket bearing

1.3. Intended use

The product is a pedal set with one chainring that you can fit on road and gravel bikes.

The product should only be used on a bicycle:

- With a single drivetrain. (Crankset and chainring are not compatible with a front derailleur).
- With compatible chain.



TIP

Refer to the compatibility matrix on page 10



CAUTION

Using a different chain can negatively affect durability, chain noise and chain retention.

- With compatible bottom bracket bearing



TIP

Refer to the compatibility matrix on page 11



CAUTION

Use of other bottom bracket bearings may adversely affect crankset durability and alignment.

- As a combination of chainring and Crankset with “RF CINCH” interface.
- For a frame with an install width for the rear wheel of 142 mm or 148 mm
- At an ambient temperature (in use) between -15 °C and +50 °C
- With a chainring that falls within the minimum/maximum tooth numbers specified by the frame manufacturer, taking into account a minimum required play between chainring and frame.

**CAUTION**

Minimum play between chainring and frame:

- *Minimum play of 5 mm (unless otherwise specified by the frame manufacturer).*
- *The play can be adjusted by using shims and/or alternative cranksets (Refer to compatibility matrix on page 11)*

1.4. Prohibited uses

It is prohibited to use the product for purposes other than those specified in this manual, the safety markings or other safety documents provided with the product.

Any modification to the product may affect safety and the warranty.

Using combinations other than those described in the intended use section is prohibited.

Installing parts on the product that are not approved by Classified Cycling is prohibited. These may:

- diminish or prevent the operation of the product
- compromise the safety of the user or other people
- reduce the lifespan of the product
- void compliance with CE directives

1.5. Part types

The various Classified parts are labelled with an indication of their type, size and tightening torque.

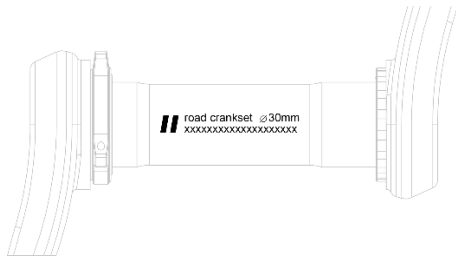


Fig. 1: Crankset inscription



Fig. 2: Chainring inscription



Fig. 3: Chainring locking ring inscription

1.6. Tightening torques

The table lists the tightening torque for the different parts.



NOTE

Failure to respect the tightening torques may cause damage to the bike and its components. This also voids the warranty.

Part	Tool	Torque (Nm)	Moment (lbf in)
Chainring locking ring	ISIS bottom bracket tool	40	354
Crank arm drive side	10 mm Allen key	50	442
Pre-load adjustor	/	Remove any play in the system by tightening the pre-load adjustor until it stops or contacts the bearing shield.	
Pre-load adjustor bolt	2 mm Allen key	Tighten the bolt until the edges of the regulator make contact.	

2. Safety

2.1. Safety regulations



WARNING

Read the user manual carefully before using the product! Keep this user manual for future reference. Also keep the supplied accessories and tools for later use.



CAUTION

In addition to the intended and prohibited uses, maintenance instructions must also be followed carefully. Failure to follow these correctly may cause damage to the Classified crankset, chainring and/or chain. This can cause serious injuries.

2.2. Hazardous substances

The lubricant is a hazardous substance. (It lubricates the chain and thus indirectly lubricates the chainring.) The assembly grease, which is used to fit the crankset, is a hazardous substance. Read the safety instructions of these products carefully.

3. Description

3.1. Part names

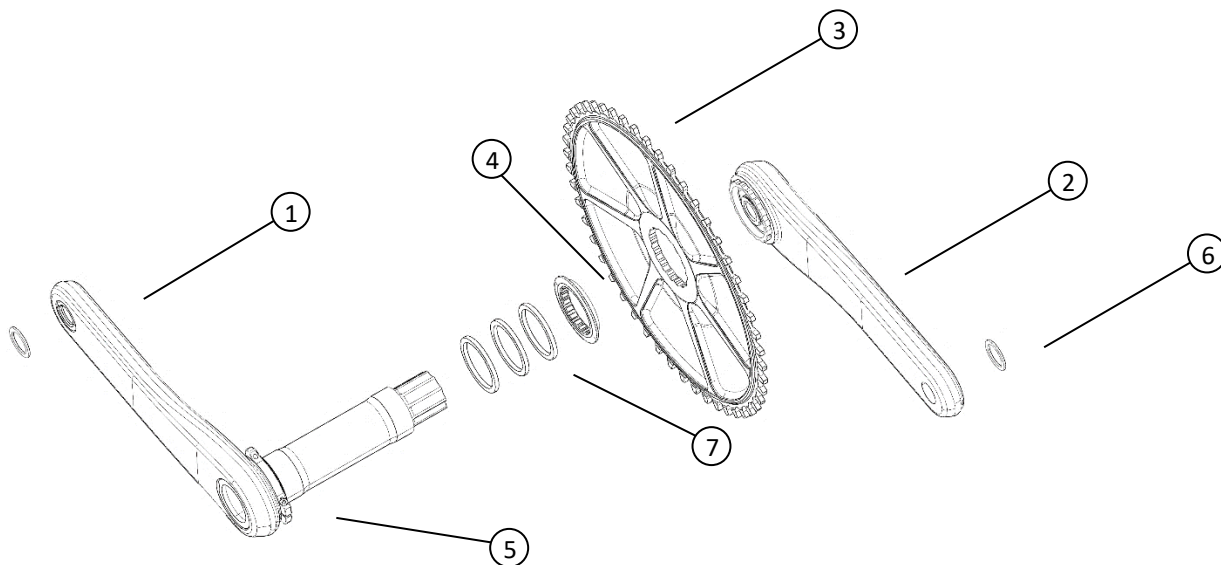



Fig. 4: Parts

No.	Part	No. variant	Variant	Description
1	Crank arm (non-drive side)	1.1	Road	Crank arm for the non-drive side with the spindle attached (spindle diameter 30 mm). The road crankset has a long spindle and Q-factor of 146 mm. Various lengths are available.
		1.2	Gravel	Crank arm for the non-drive side with the spindle attached (spindle diameter 30 mm). The gravel crankset has a long spindle and Q-factor of 151 mm. Various lengths are available.
2	Crank arm (drive side)	2.1	-	Drive-side crank arm with RF CINCH interface for installing chainring. Various lengths are available. NOTE The length of the crank arm (drive side & non-drive side) must be identical.
3	Chainring	3.1	-	Chainring with RF CINCH interface. Different sizes and tooth profiles are available for the chainring. NOTE Select the proper type of chainring based on the type of drivetrain and the frame it will be combined with.

4	Chainring locking ring	4.1	-	Locking ring for fastening the chainring to the crank arm (drive side).
5	Pre-load adjustor	5.1	-	Adjustor for pre-tensioning the crankset after fitting it in the frame. The pre-load adjustor is delivered fitted on the crank arm (non-drive side)
6	Pedal ring	6.1	-	2 rings to protect the interface between the carbon crank arm and the pedal.
7	Crankset spacer	7.1		Spacers of width 2.5 mm. These are used to align the crankset to the bottom bracket and the bike frame.  NOTE Refer to the configuration matrix on page 11.

4. Operation

4.1. Crankset & chainring operation

The Classified crankset and chainring transfer torque between the rider's pedal motion and the chain. Pedalling applies force to the pedals (not included) that is transmitted via the crank arms to the chainring, which engages with the chain that drives the bike.

Crankset and chainring are designed to maximise the efficiency of this transfer of force. The chainring is designed with a narrow-wide tooth profile that optimises chain retention.

5. Configuration

5.1. Crankset & chainring interface

The crank arm (drive side) and the chainring are connected using the centre mount “RF CINCH” interface. The chainring locking ring is used to fasten the chainring onto the crank arm (drive side).

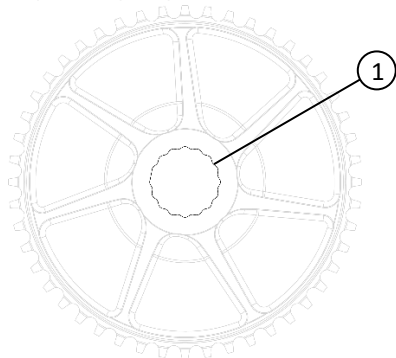


Fig. 5: RF CINCH interface (1)



NOTE

We recommend you only combine Classified-specific cranksets and chainrings.

5.2. Chainring & chain compatibility

When selecting chainring and chain always consider the compatibility matrix below. Also consider the compatibility of the chain with the cassette and shifter.

Chainring type (see part types)	Chain type
Drop-Stop ST	12 speed x12 KMC
	12 speed Shimano HG+
Drop-Stop B	12 speed SRAM Eagle
	12 speed SRAM Road and Transmission (T-type flat top chain)
	12 speed Campagnolo
	12 speed Wippermann Connex
	All 9, 10, 11 speed chains

The chainring has a narrow-wide tooth profile. For correct fitting, align the wide link of the chain with the wide tooth of the chainring.

5.3. Bottom bracket compatibility

1. Determine the type of bottom bracket according to the technical information supplied by the frame manufacturer.
2. For frame standards other than BB86.5 or BSA, consult your dealer, frame manufacturer and/or bottom bracket manufacturer for the correct type of bottom bracket and number of spacers required.
3. Use the compatibility matrix below to determine how many crankset spacers are required for BB86.5 and BSA bottom brackets.

BB86.5 press fit bottom bracket:

BB shell width	Crankset type	Spindle length	Spindle spacer (non-drive side)	BB spacer (non-drive side)	BB spacer (drive side)	Spindle spacer (drive side)
86.5 mm	Road	91 mm	2.5 mm	/	/	2.5 mm
92.0 mm	Gravel	96 mm	1.5 mm	/	/	2.5 mm

Threaded **BSA** bottom bracket:

BB shell width	Crankset type	Spindle length	Spindle spacer (non-drive side)	BB spacer (non-drive side)	BB spacer (drive side)	Spindle spacer (drive side)
68 mm	Road	91 mm	2.5	/	/	2.5 mm
	Gravel	96 mm	2.5 mm	2.5 mm*	2.5 mm*	2.5 mm
73 mm	Gravel	96 mm	2.5 mm	/	/	2.5 mm



NOTE

The spindle diameter of the Classified crankset is 30 mm and requires the use of compatible bottom bracket bearings with a 30 mm inside diameter.

* BB spacers are not provided by Classified.

5.4. Chain line

The chain line is measured from the centre of the frame to the centre of the chainring. Using the specified number of spacers results in the chain line listed in the matrix below.

Chainring tooth number	Chain line road crankset (mm)	Chain line gravel crankset (mm)
46	47.2	49.7
48	47.2	49.7
50	45	47.5
52	45	47.5
54	45	47.5

5.5. Frame & Classified Powershift Hub compatibility

Consult the frame manufacturer's specifications before selecting the crankset and chainring. In many cases, restrictions apply to the use of minimum/maximum chainring size.



CAUTION

Minimum play between chainring and frame:

- *Minimum play of 5 mm (unless otherwise specified by the frame manufacturer).*
- *The play can be adjusted by using spacers and/or an alternative crankset (Refer to the compatibility matrix on page 11).*



CAUTION

Consult the Classified Powershift Hub user manual for chainring size restrictions.



NOTE

Using the gravel crankset instead of the road crankset has a positive effect on the play between the chainring and the frame. In some cases, this may allow a larger chainring to be fitted (allowing for the minimum play prescribed by the frame manufacturer). However, moving the chainring outwards can have a negative effect on the shifting performance of the cassette and chainring chain noise.

6. Storage and transport

6.1. Storing and transporting the Classified crankset & chainring

The storage temperature (when not in use) or for transport is minimally -15 °C and maximally 60 °C.

The Classified crankset and chainring do not contain batteries that need recharging.

7. Assembly and installation

7.1. What is included?

The Classified crankset and chainring are products to be purchased separately. After purchase, check that the following items are included. If not complete, contact your distributor.

- The Classified crankset, consisting of:
 - Crank arm non-drive side (including pre-load adjustor)
 - Crank arm drive side (including chainring locking ring)
 - Crankset spacers (3 pieces)
 - Pedal rings (2 pieces)
- The Classified chainring

**NOTE**

Check that all parts are undamaged. If not, contact your dealer.

7.2. Fitting the chainring on the crank arm

Required tools:

- Torque wrench
- ISIS bottom bracket tool

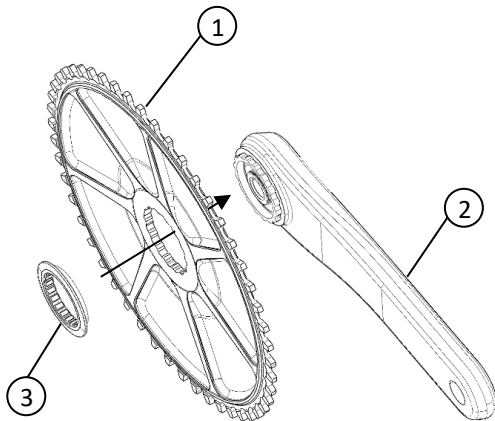


Fig. 6: Fitting the chainring

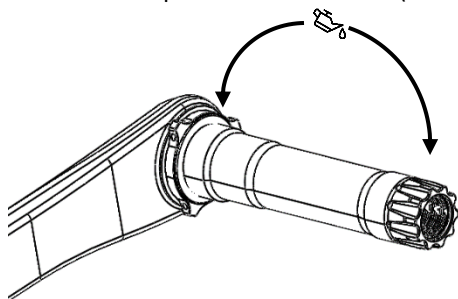
1. Position the chainring (1) on the crank arm (drive side) (2) by aligning the "RF CINCH" interface. Ensure the Classified logo on the front of the chainring is correctly aligned with the crank arm.
2. Screw the cassette locking ring (3) hand-tight onto the screw thread in the crank arm (drive side)
3. Use an ISIS bottom bracket tool and torque wrench to tighten the cassette locking ring to a torque of 40 Nm.

7.3. Install the crankset on the bike

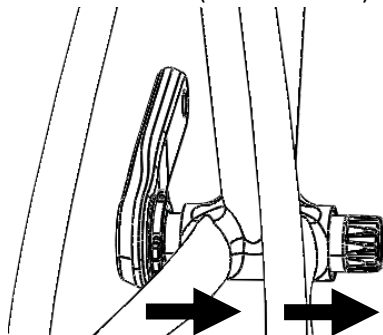
Required tools:

- Torque wrench
- 10 mm Allen key
- 2 mm Allen key
- Assembly grease
- Assembly paste

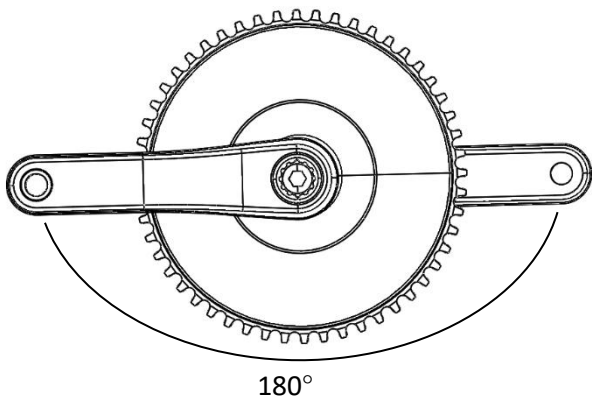
1. Measure the frame width. Consult the Classified bottom bracket compatibility matrix to ensure that the correct type of bottom bracket is fitted on the frame.
2. Tighten the pre-load adjuster until it contacts the crank arm (non-drive side).
3. If necessary, install the spindle spacer (non-drive side).
4. Ensure the bearing shield is in place on the bottom bracket bearings (drive side and non-drive side).
5. Apply assembly grease to the spindle bearing seats (drive side and non-drive side) and the spline interface between the spindle and crank arm (drive side).



6. Fit the crank arm (non-drive side) on the frame.



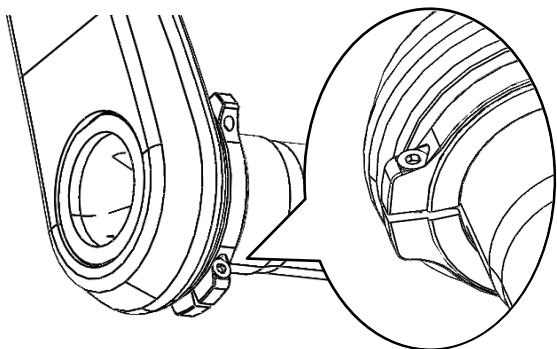
7. If necessary, install the spindle spacer (drive side).
8. Install the crank arm (drive side).



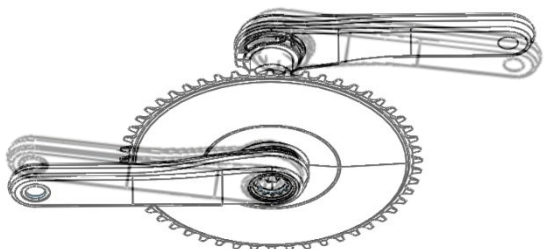
NOTE

Ensure the crank arms are aligned so the angular difference is 180°.

9. Tighten the crank arm (non-drive side) with a torque of 50 Nm using a 10 mm torque wrench.
10. Gently tap the crank arm on the drive side with a rubber or plastic hammer until it is firmly seated.
11. Remove any play in the system by turning the pre-load adjuster anti-clockwise until it stops or contacts the bearing shield.
12. Tighten the bolt in the pre-load adjuster using a 2 mm Allen key until the edges of the adjuster make contact.

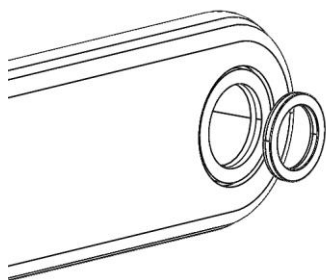


13. Check the crankset for play by moving the crank arms back and forth.

**CAUTION**

If there is play in the crankset, disassemble the crank arms and apply additional assembly grease to the axle. Tighten the pre-load adjuster anti-clockwise until it stops. Repeat the installation procedure until you have removed all play.

14. Install the pedal rings between the crank arm and the pedal. Unless otherwise specified by the pedal manufacturer, apply assembly paste to the pedal axle and tighten it to 54 Nm.

**NOTE**

The pedal hole on the crank arm (non-drive side) has left-hand threads

15. Place the chain on the chainring.

**NOTE**



The chainring has a narrow-wide tooth profile. For correct fitting, align the wide link of the chain with the wide tooth of the chainring.

8. Maintenance

8.1. Maintenance schedule


NOTE

The specified frequency depends on the use of the Classified crankset and chainring, and the conditions while cycling.

Action	Frequency	Procedure
Inspection	Before cycling	<p>Check the crankset and bottom bracket for play and, if necessary, tighten.</p> <p>Check regularly that the crankset bolt, chainring lock ring, and pre-load adjuster are tightened to the correct torque. Never ride with loose bolts.</p> <p> WARNING Failure to check the crankset bolt and chainring locking ring can lead to the crankset and chainring coming loose.</p>
Cleaning	After cycling	<p>Clean the crankset and chainring with water and mild soap. Do not use scouring sponges, abrasive cleaning agents, aggressive liquids (such as thinners) or solvents containing alkali or acid (such as rust cleaners).</p> <p>Regular cleaning extends the life of the crankset and chainring.</p> <p> WARNING NEVER use a high-pressure cleaner or steam cleaner.</p>
Grease	After cycling	<ol style="list-style-type: none"> 1. Clean the chain with a degreaser. 2. Dry the chain with a dry cloth. 3. Grease the chain.

8.2. Troubleshooting

Troubleshooting the crankset and chainring

Problem	Cause	Solution
<ul style="list-style-type: none"> - The crankset creaks - The crankset feels loose, but the fastening bolt is tight. 	Play between the crankset and bottom bracket.	Ensure that the pre-load adjuster is tightened according to the correct torque. Ensure that the correct number and type of spindle spacers have been used. If necessary, add a spindle spacer to ensure the crankset cannot move left-right in the frame.

<p>After performing the above steps, the crankset still creaks.</p>	<ul style="list-style-type: none"> - The chainring is not tightened properly. - There is dirt and too little grease between the chainring and the RF CINCH interface of the crank arm. - There is dirt and insufficient grease between the bottom bracket and the frame. 	<ul style="list-style-type: none"> - Remove the chainring and clean all surfaces. Now grease the RF CINCH interface and tighten the chainring to the correct torque (40 Nm). - Remove the bottom bracket from the frame. Clean all surfaces. Grease all contact surfaces and replace the bottom bracket (press in or screw in). Now replace the crankset according to the instructions.
<p>The right pedal has a lot of side play.</p>	<p>The crank arm fastening bolt is loose.</p>	<p>Tighten the fastening bolt to the prescribed torque (50 Nm) and then adjust the pre-load adjuster correctly (see above).</p>
<p>The crankset does not feel centred.</p>	<p>Bottom bracket and/or spacers are not properly aligned.</p>	

9. Recycling

9.1. Recycling the Classified crankset and chainring

Disassemble the various parts:

- Crankset
- Chainring

The chainring is an aluminium component. The crankset is a combination of carbon fibre and aluminium.

NEVER dispose of the products with household rubbish! Dispose of the products following the current local statutory requirements. In case of doubt, contact the local authority.

10. Appendices

10.1. Warranty



NOTE

The warranty is only valid for registered products when the service advice is followed.

The warranty is void in case of prohibited use. See Prohibited use on page 5.

