VBC v2 2x Chainring Assembly Instructions

Tools for chainrings:

- 2.5mm hex key
- 5mm hex key
- Torque wrench (10 Nm)
- 5mm hex bit for torque wrench
- Grease

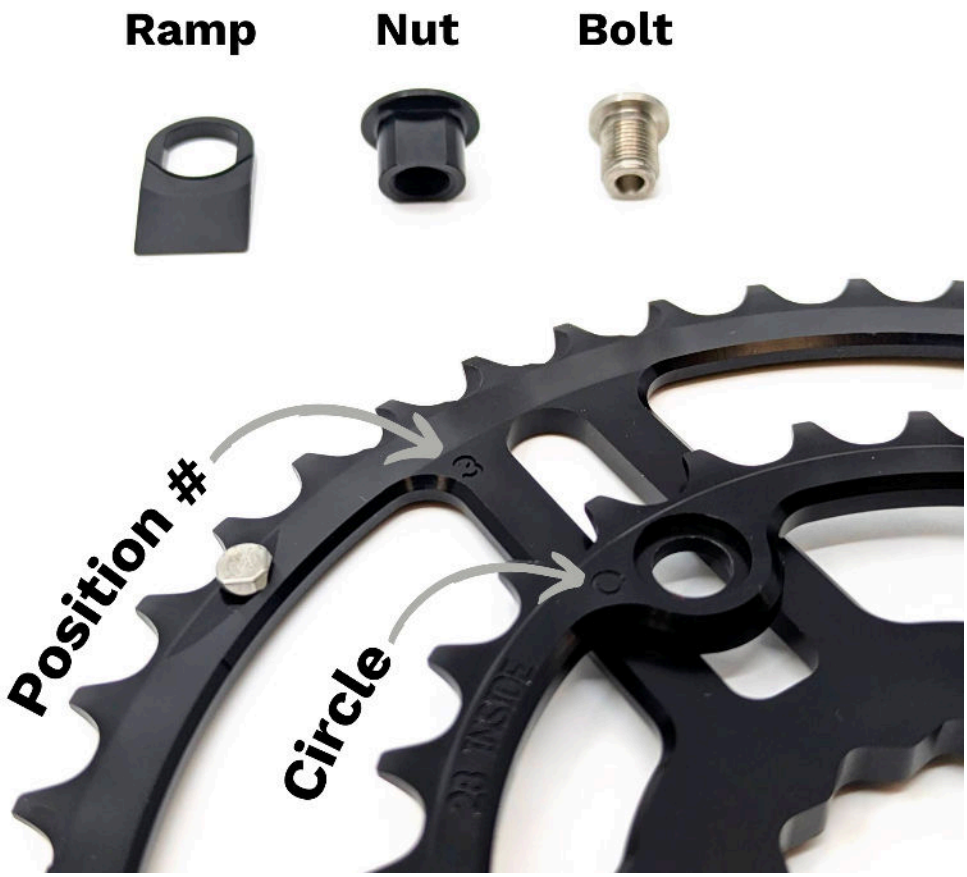
Tools for chainring lockrings:

- For MR30 cranks
    - Park BBT-22 or Shimano BBT-32
- For square taper cranks
    - Park BBT-19.2 or any 16 notch/44mm tool
    - Or White Industries LRTOOL (3 notch tool)
- Torque wrench (40 Nm)

Pre-prep:

- Do a quick read-through of the instructions and refer to the chainring assembly chart on the last page of this document to find the correct assembly position/number for your inner and outer chainring combination.
- The numbers are engraved on the inside of the outer chainring, and the alignment circle is engraved on the inside of the inner chainring, next to one of the chainring bolt holes.
- For this guide we are using a 44/28 combination which is assembly position “3” for the inner chainring.
- Lay out the parts within arm’s reach and put a dab of grease on the threads of each chainring bolt.

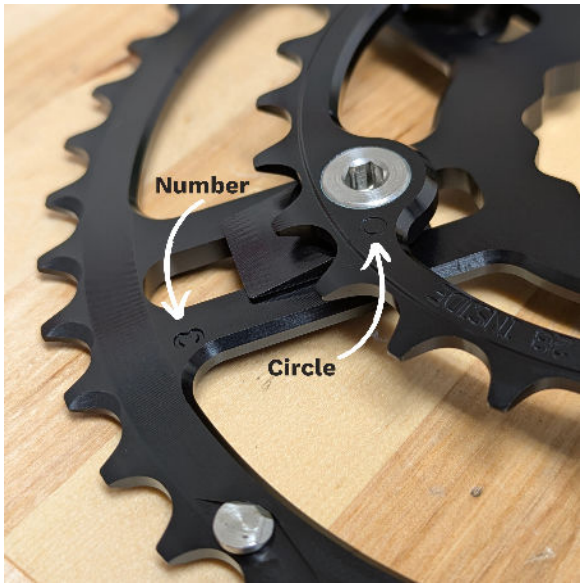
VBC v2 Chainring Parts

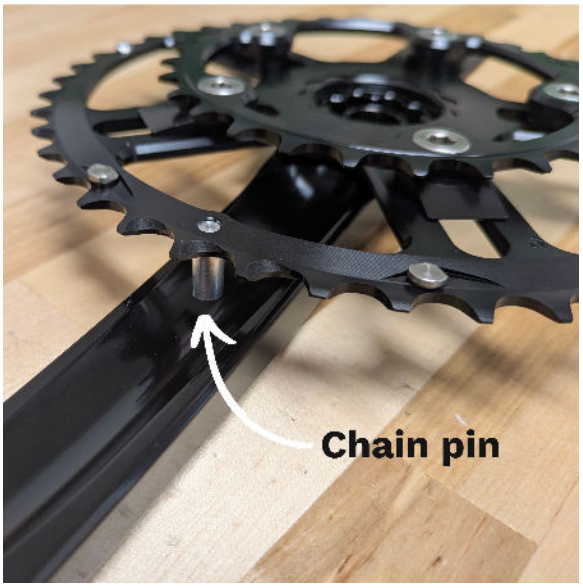


Assembly

Step 1	**Step 2**
Referring to the chainring assembly chart on the last page of this document, our assembly example 44/28 chainring combo has an assembly position/number “3” for the inner chainring alignment. Start the assembly process at this position to ensure proper assembly. Slide a chainring nut into the slot from the outside of outer ring, and hold in place with your fingers.	Position a shift ramp over the chainring nut with the bevel facing outward toward the chainring teeth, and continue holding the nut in place with your fingers.
	

Step 3	**Step 4**
Align the circle engraved on the inner chainring with the nut/ramp assembly and thread the chainring bolt into the chainring nut. Snug the bolt but leave the assembly loose enough to slide in the slot. Repeat steps 1-3 on the other 4 positions.	Using a 5mm hey key, snug all 5 chainring bolts evenly, making sure the shift ramps are sitting flat against the outer ring and pointing in the correct direction. Then torque bolts to 10 Nm. Over-tightening the bolts will deform and crack the nuts.
	

Step 4	**Step 5**
When you're done this is what the assembly should look like. Confirm that the circle on the inner chainring is aligned with the correct position/number on the outer chainring for your chainring combination, and that the shift ramps are sitting flat against the outer ring and pointing in the correct direction.	Using a 2.5mm hex key, install the chain pin on the outside face of the outer ring. A tiny bit past snug is all that's needed here so there is no torque spec.
	

Step 6	**Step 7**
When installing the rings on your crank, the chain pin will point outward and align with the crank arm to prevent the chain from slipping between the chainring and crank arm in the event of an overshift.	Grease the chainring lockring threads and torque to 30 ft lbs (40 Nm).
	

V2 VBC 2x chainrings must be mounted to the outer chainrings in specific positions to ensure proper shifting. Align the circle machined on the inner chainring with the corresponding number machined on the outer chainring. For example, a 44/28 combo requires alignment with the number 3. When mounted, the engraved sides of the chainrings face inward, toward the frame. VBC ring “sets” come pre-assembled with hardware.

		Inner Chainring (align machined circle to number machined on outer chainring)							
		24	**26**	**28**	**30**	**32**	**34**	**36**	**38**
Outer Chainring	**38**	3	3	NA*	NA*	NA*	NA*	NA*	NA*
	40	3	2	1	NA*	NA*	NA*	NA*	NA*
	42	4	3	3	1	NA*	NA*	NA*	NA*
	44	1	2	3	1	1	NA*	NA*	NA*
	46	NA*	4	1	1	2	2	NA*	NA*
	48	NA*	NA*	3	1	3	3	4	NA*
	50	NA*	NA*	NA*	1	3	3	4	2
	52	NA*	NA*	NA*	NA*	5	3	3	3

*These combinations are smaller than 12-tooth gaps or greater than 20-tooth gaps, neither of which we recommend. Greater than 20-tooth gaps are too big of a gap to shift well, and smaller than 12-tooth gaps can cause the chain to catch on downshifts and result in your rear derailleur being ripped off. Don’t try these combos!