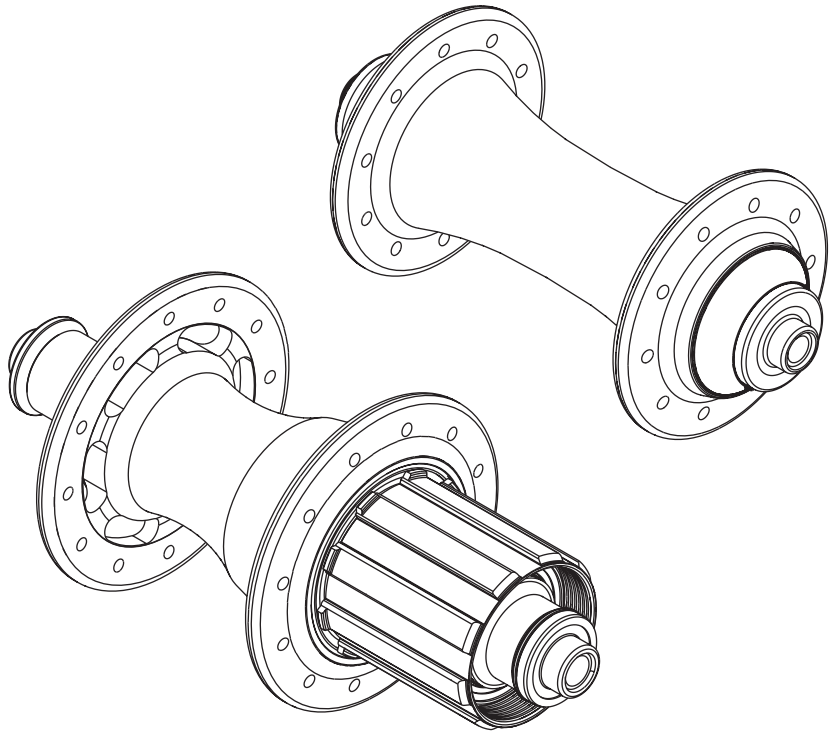
R45 Road Racing Hub Instructions

R45 hub specifications and wheel building information

	R45 front	R45 rear
axle type	R45, two piece	R45, one piece
axle width (mm)	100	130
flange diameter - drive side (mm)	39.78	50.95
flange diameter - non drive side (mm)	39.78	50.95
center to flange - drive side (mm)	34.80	18.86
center to flange - non drive side (mm)	34.80	34.58
frame attachment	quick release only	quick release only
available spoke hole configurations	20, 24, 28, 32	24, 28, 32
spoke gauge	13, 14, 15	13, 14, 15
spoke hole diameter (mm)	2.54	2.54
weight (g)	102	215



Additional Support

Check our web site often for updated technical information produced in an effort to help you, our customers, stay on your bike. Visit: http://chrisking.com/tech

Additional questions? Please email us at info@chrisking.com or call the Customer Service hotline at 800-523-6008.

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CHRIS KING® PRECISION COMPONENTS

A note on this manual

This R45 road race hub manual serves as a supplement to our Classic Hub Instruction manual. Consult the Classic Hub Instruction manual for full details regarding hub maintenance and warranty information. Manuals can be found online here: http://chrisking.com/tech/tech_PDF

Lubrication of the Ti RingDrive™ and bearings

Use only RingDrive II lube on the Ti RingDrive assembly. The use of original RingDrive Lube may cause premature wear on the titanium drive and driven rings.

If Chris King RingDrive II lube is not available, a quality 10w synthetic oil such as Pedros® SynLube or Mobil 1® may be used. Do not subistitute other brands of grease as they may be too sticky for the helix of the RingDrive and cause freewheel engagement problems.

Radial lacing

The R45 hubshell has been designed with the most common lacing patterns in mind. We recommend special care be taken when building and using radial laced wheels. The undersides of spoke heads may sometimes have considerable seam lines that can make an impression or "cut line" in the hubshell hole chamfer. Please inspect and selectively sort out these spokes to minimize this possibility. Nipples on radial spokes may have a tendency to unthread themselves if a spoke preparation compound is not used on spoke threads. Radial laced wheels are also more sensitive to over- or under-tensioning, thus proper wheel building practices must be followed. Please follow the spoke manufacturer's recommended tension specifications when building wheels. Inspect hubs and check spoke tension at regular intervals.

R45 front hub maintenance

Follow "Disassembly, Reassembly and Adjustment of two piece axle on front Classic hub" instructions on pages 4 and 5 in Classic Hub Instruction manual.

Disassembly of R45 rear hub

1. Remove skewer, cog lock ring and cassette from hub.
2. Loosen 2.5mm hex bolt on adjusting clamp.
3. Remove R45 QR insert from main axle assembly by pulling it directly out of the non-drive side of axle.
4. Unscrew adjusting clamp and remove it from axle.

   Tech Tip: if adjusting clamp is difficult to remove, first insert a 5mm hex key into drive side axle end to keep axle stationary. Then insert a 2.5mm hex key into hole on adjusting clamp adjacent to 2.5mm hex bolt. Use 2.5mm hex key as a lever to unscrew adjusting clamp.
5. Remove axle from the main hub assembly by pulling it from drive side of hub. Tech note: the outboard driveshell bearing may or may not remain on the axle as it is pushed out of the hubshell assembly.
6. Remove driveshell by holding hubshell or wheel in one hand and with other hand pull driveshell straight out of hubshell assembly.

Clean and relubricate all bearings and RingDrive by following the procedure on pages 9 to 11 in the Classic Hub Instruction manual. Remember to use RingDrive II lube, not original RingDrive lube.

Tech Tip: low drag bearing seals in the R45 hubset may dimple or slightly deform when removing bearing snapring and seal from bearing. Flatten any deformities with fingernail before reinstalling onto bearing surface. Replacement seals are available if seals are damaged beyond repair.

Further disassembly requires the Chris King R45 Hub Service Tool, which will be available in spring 2010 from any authorized Chris King dealer, or directly from Chris King Precision Components.

Reassembly of R45 rear hub

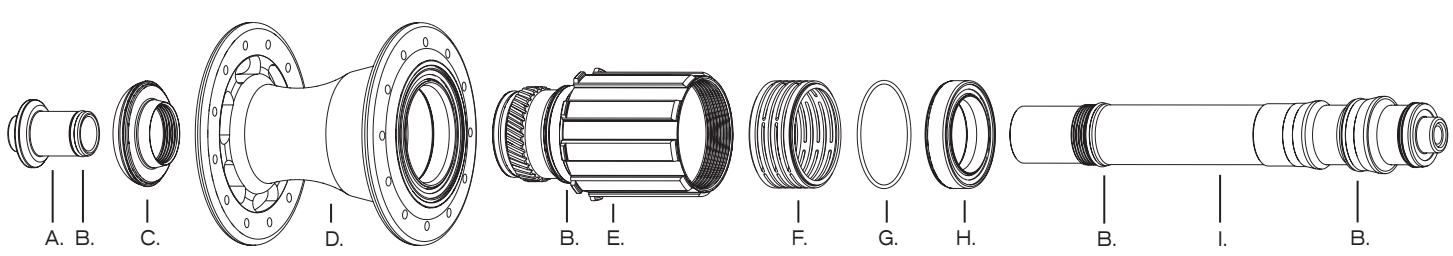
1. Lightly lubricate all O-rings and lightly grease threads on axle.
2. Insert driveshell into the hub shell; turn in a clockwise motion while letting it pull itself in. A distinctive click sound will indicate that the driveshell is firmly seated.
3. If outboard driveshell bearing is separated from axle, slide it onto axle with the black seal and silver snapring facing the driveside and the white bearing retainer facing the non-driveside.
4. Insert main axle, threaded (non-driveside) end first into driveshell. Continue until axle is through the hub and driveside end is firmly seated in driveshell.
5. Thread adjusting clamp onto the protruding threads on the non-driveside of axle.
6. Insert R45 QR insert into non-driveside axle end.
7. Snug adjusting clamp up to bearing.
8. Proceed to "**Adjustment of R45 rear hub**", below.

Adjustment of R45 rear hub

The R45 rear hub features an adjusting clamp and bearing spacer spring that maintain proper bearing preload and seating.

1. Place the hub or wheel onto a flat, firm surface with the non-driveside facing up.
2. Push downward on the hubshell. This compresses the bearing spacer spring in the drive shell and ensures proper bearing seating.
3. While maintaining firm downward pressure on the hubshell, tighten the adjusting clamp onto axle until it stops against bearing. Do not overtighten.
4. Once adjusting clamp is in position, tighten adjusting clamp hex bolt to **10 inch-pounds** using a **2.5mm** hex wrench.
5. Double check adjustment by attaching wheel to bicycle frame. Check for bearing play or binding, and readjust adjusting clamp if needed.

Note: Correct adjustment of the rear hub is necessary for proper engagement of the RingDrive. If the hub is run loose, the RingDrive may not engage properly and could lead to permanent damage of the internal parts.



A. R45 QR insert
B. O-ring
C. R45 adjusting clamp
D. R45 hubshell assembly
E. R45 driveshell assembly
F. R45 bearing spacer spring
G. bearing spacer spring O-ring
H. outboard driveshell bearing
I. R45 rear axle