# WHAT DO THOSE CODES ON A BEARING MEAN?

Here is a little quick reference guide that explains these bearing codes in detail.

Lets use a 6902 as an example:

**S 6902 2RS**
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**Prefix Code Suffix**

**Prefix:**

- K - Cage with roller elements
- L - Removable bearing ring
- R - Ring with roller set
- S - Roll body of stainless steel
- W - Stainless steel deep groove ball bearing

**Code:**

**(6)**902 - This first number relates to the bearing type, typically most bicycle bearings will be a “6” which is a “Deep Groove”. Occasionally you will find a “7” bearing which is a “Single Row Angular Contact”

6**(9)**02 - This second number relates the bearing series, which reflects the robustness of the bearing. As you go up the scale below from 9 to 4 the inner and outer race thickness will usually increase along with the ball size, this will be to help cope with extra load.

- 9 - Very thin section
- 0 - Extra light
- 1 - Extra light thrust
- 2 - Light
- 3 - Medium
- 4 – Heavy

69**(02)** - The 3rd and 4th digits of the bearing number relate to the bore size of the bearing, numbers 00 to 03 have a designated bore size depending on the number.

- 00 - 10mm
- 01 - 12mm
- 02 - 15mm
- 03 - 17mm

*Note: Numbers over 03 simply have a bore size which is 5 times that of the 3rd and 4th digit.

**Suffix:**

- 2 RS - Bearing with rubber seal on both sides. RS provides a better seal but more rolling friction than 2Z.
- RS - Bearing with rubber seal on one side, one side open.
- 2 Z / ZZ - Bearing with a metal seal on both sides.
- Z - Bearing with a metal seal on one side, one side open.
- E - Reinforced Design
- P2 - Highest precision
- K - Bearing with taper bore

# Why are your bearings C3?

Internal clearance being C3 means that the bearing has room for expansion if needed between the races of the bearing, whilst holding the outer ring and moving the inner ring in a radial movement you will detect a little amount of play between the two rings. All standard clearance bearings have this movement, it may only be a small amount of movement but is controlled by international standards. C3 means the bearing has more clearance than standard.

For example we may use C3 clearance on bearings where a cold start up application may cause the balls to heat up quickly, the heat needs to go somewhere. Some of the heat gets passed through the outer race to the housing and the inner race to the shaft, this causes expansion which closes up the clearance in the bearing. If you did not allow for this clearance the bearing would not have room for expansion and lead to bearing failure.

It is never advisable to replace a bearing with one having a lower initial clearance. By the same argument, it is usually safe to substitute a larger clearance when the desired clearance is not available.