

DESCRIPTION OF COMPONENTS: SEAMING CHUCKS

SPECIFICATION

- AISI 440C (corrosion resistant steel)
- Stoody (stellite) non interlocking
- Available coated or non-coated (CVD process)
- Available textured or non-textured chuck lip

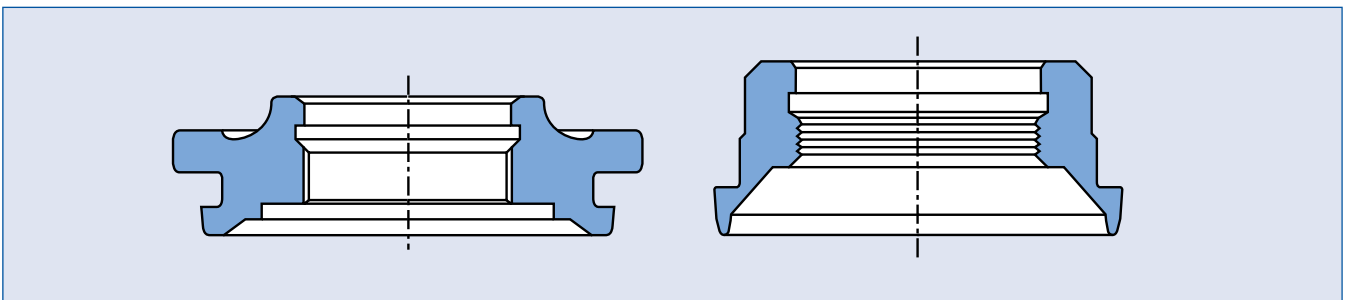
AISI 440C CHUCKS

Budget priced component produced in a corrosion resistant material. Seaming chuck is hardened to 54-56 R.C. and can be supplied as plain uncoated, textured or coated interlocking.

Each chuck is manufactured for a specific end design and is specially customised for end type if necessary, or can be supplied against a

recognised industry standard manufacturing drawing.

NOTE: Care should be taken when fitting and removing the chuck to use the correct pin spanner. Care must also be taken to ensure the chuck is dimensionally compatible with the seaming rolls to be fitted.



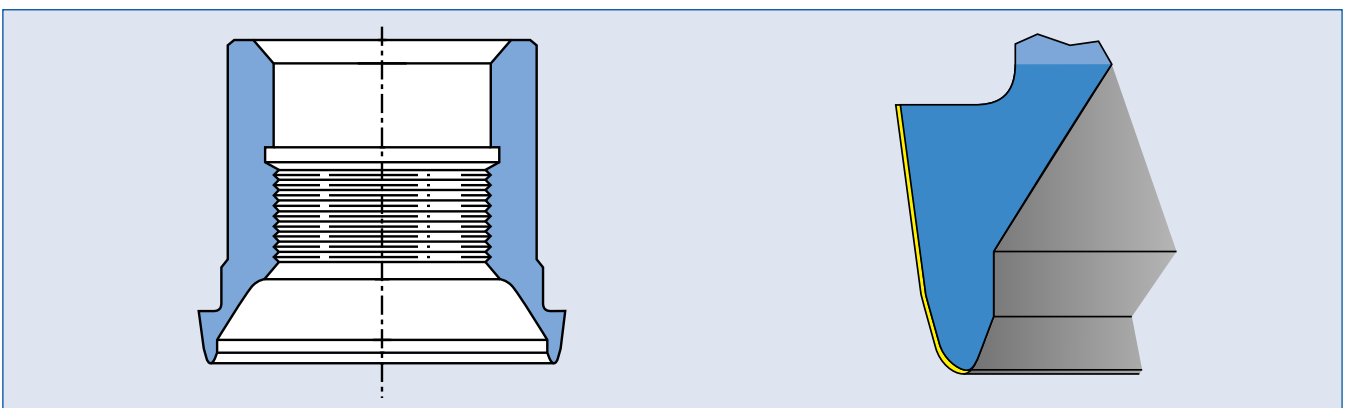
STOODY CHUCKS

The CMB approach is to manufacture Stoody chucks from a Bi-Metal composite material. The main body of the chuck is 316 stainless steel with a hip'd (Hot Isostatic Pressing - similar to sintering) Stoody ring atomically bonded in the position where the chuck lip will be machined.

This premium priced component is designed to withstand the harshest environments and has an

exceptionally long working life, however it can only be supplied in the non-interlocking design.

NOTE: As previously described, care should be taken when fitting and removing the chuck to use the correct pin spanner. Care must also be taken to ensure the chuck is dimensionally compatible with the seaming rolls to be fitted.



DESCRIPTION OF COMPONENTS: SEAMING CHUCKS

TECHNICAL SPECIFICATION

- **Material:**
 - AISI 440C High Chrome Steel, hardness 54 - 56 RC
 - Stoody/316 Stainless Steel (Hip'd composite)

- **Chuck lip profile tolerance:**
 - Within 0,025mm (0.001") of master profile

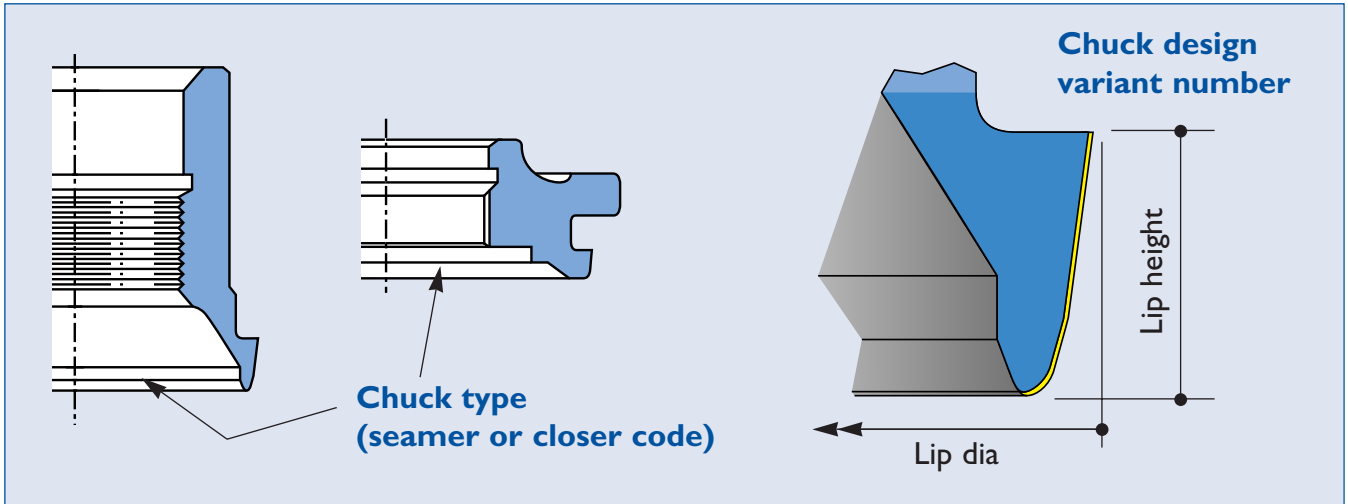
- **Out of roundness:**
 - 0,05mm (0.002") Max Tir (Total Indicated Runout)

- **Coating:**
 - Chemical Vapour Deposition (CVD)
 - Coating Depth 3 - 6 microns

- **Textured finish:**
 - Equivalent of LW5 finish

DESCRIPTION OF COMPONENTS: SEAMING CHUCKS

STRUCTURE AND SIGNIFICANCE OF CHUCK PART NUMBERS



Shipleys seaming chucks are allocated a significant number of eight digits, followed by the alpha character C (Chuck) and two further digits.

Any special treatment is abbreviated at the end of the number, before the manufacturing code. Chuck features are identified as follows:

Typical part number

8 3000 10 1C 64 SAT A99S

- **Units:** _____
8 = Imperial end - Metal
- **End diameter:** _____
3000 = 300 Dia
2060 = 206 Dia
- **Chuck design variant number:** _____
Basic lip shape
- **Material used:** _____
4 = 440C (stainless steel)
I = Stoodly lip
- **Chuck type:** _____
C = Chuck for metal seaming
- **Seamer or Closer code (type):** _____
- **Special treatments:** _____
SAT = Specially Applied Titanium
TTC = Textured Titanium Coating
- **Manufacturing code:** _____
eg. A99S = January 1999 Shipleys

DESCRIPTION OF COMPONENTS: SEAMING ROLLS

SPECIFICATION

■ Material:

AISI 440C (corrosion resistant steel)
'Stoody' centrifugal casting

■ Design:

Specific to each seamer type

■ Bearing:

- Needle roller
- Taper roller
- Opposed SiN ball stainless steel inner and outer race resin cage (ceramic bearing)

■ Coating:

CVD Titanium Nitride
CVD ARC (extended life)
Alternative special application coatings available

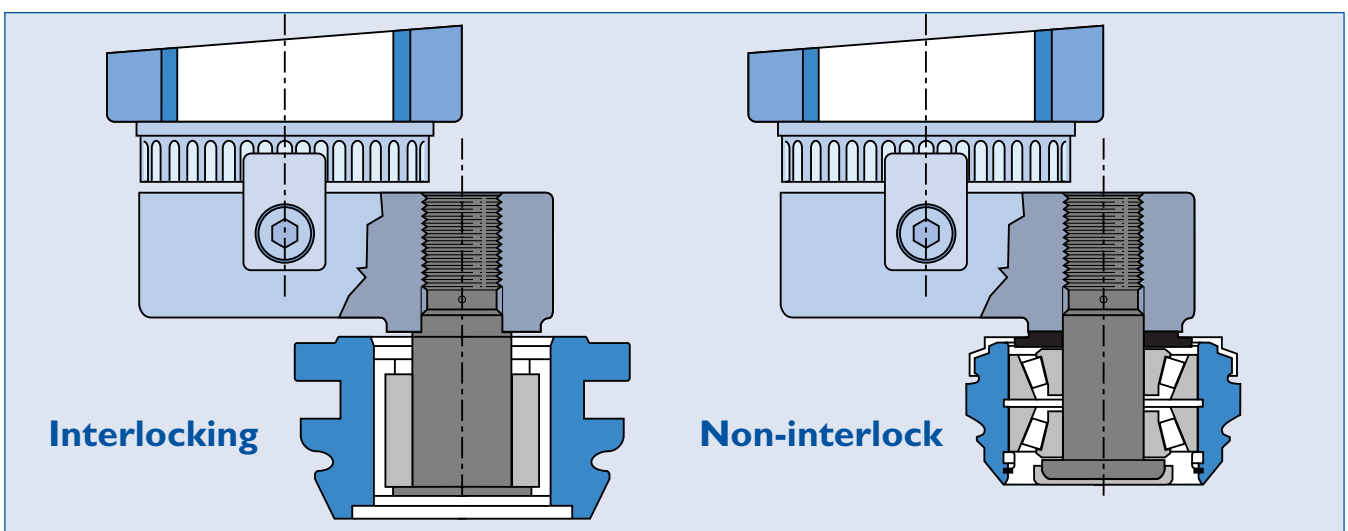
FITTING INSTRUCTIONS

Interlocking rolls are fitted with needle roller bearings. No specific cautions to be aware of other than the roll pin being in good condition and that the thrust washer above the first op roll is correctly shimmed to provide 0,05mm (0.002") max. end float.

Seaming rolls fitted with taper roller bearings are pre-shimmed and 'run-in' by CarnaudMetalbox prior to despatch. The end play is set to 0,025mm (0.001") max. with the bearings lightly lubricated.

The four hour greasing frequency of this assembly will create a degree of grease escape immediately after lubrication.

If the taper roller bearing wears prematurely (usually through corrosion), new bearings can be fitted but care must be exercised to re-shim the assembly correctly remembering the tight tolerance on end float. When assembling the bearing onto the seaming roll pin, tighten the securing screw to **14 ft lbs (19Nm)**, rotating the seaming roll assembly as the screw is tightened, for the countersink screw fastener and **38 ft lbs (51 Nm)** for the headed pin design fitted to CCCo machines. Failure to do this will result in incorrect end float ie. more than 14 ftlbs (19Nm) the roll will be tight to turn, less than 14ftlbs (19Nm) the roll will feature excessive end float.



DESCRIPTION OF COMPONENTS: SEAMING ROLLS

CERAMIC BEARINGS

Most ceramic bearing seaming rolls from CMB feature cartridge bearings which are ground to the correct end float by the bearing manufacturers and therefore are not shimmed. Early ceramic bearings were of the shimmed variety, similar to the arrangement described for taper roller bearings.

The ceramic bearing seaming rolls are tightened to the same torque on the fixing screw as that for the taper roller ie. 14ft lbs (19Nm) countersunk screw type. The tightening torque for the headed pin type is 38ftlbs (51Nm).

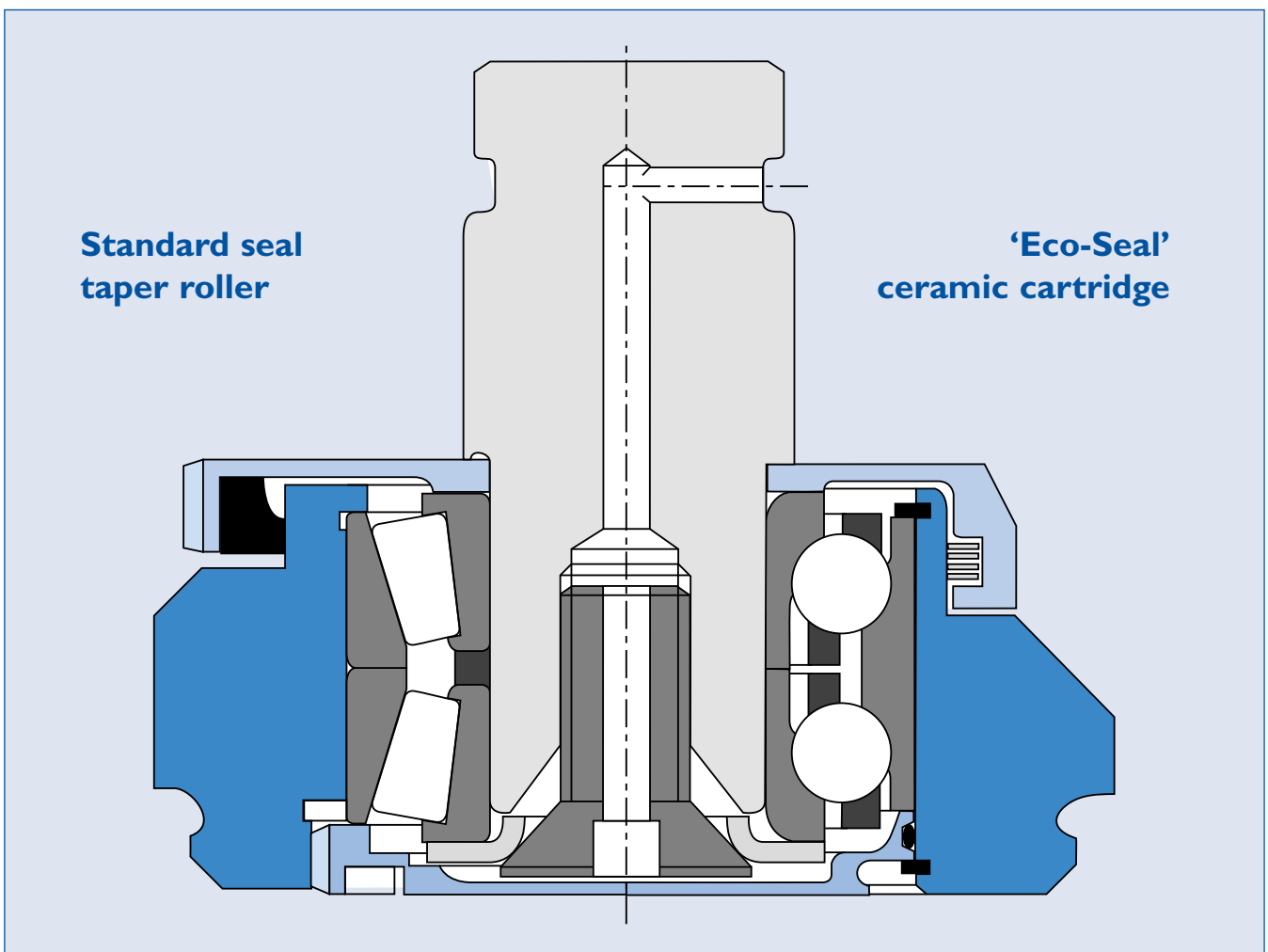
Ceramic bearings are very lightly lubricated and are fitted **without** the white neoprene seal above the bearing, but non Eco-Seal rolls are fitted **with** the neoprene outer seal in the cap. A 0,25mm (0.010") spacer is fitted on Angelus L type seamers above the upper bearing and below the

inner face of the cap to seal the location peg hole against lubrication escape.

The bearing is pre-lubricated prior to dispatch and requires no more than two shots of grease from a manual side arm grease gun (or equivalent) before start up, re-greasing with 2 shots every 72 hours running sanitary food cans or once per week (144 hours) running beer or soft drink cans. Additional greasing will increase the risk of grease escape immediately after lubrication, and will do nothing to improve the performance of the bearing.

ECO-SEALS

'Eco-Seals' provide an advanced sealing arrangement to further improve machine cleanliness and reduce the possibility of product ingress into the seaming roll bearings. 'Eco-Seal' replaces the original cap and neoprene outer seal, plus the 0,25mm (0.010") shim spacer.



DESCRIPTION OF COMPONENTS: SEAMING ROLLS

TECHNICAL SPECIFICATION (NON INTERLOCKING TYPE)

■ Material:

AISI 440C	High Chrome Steel, hardness 56 - 58 RC
Stoody I	Cobalt Chrome hardness 50 - 53 RC

■ Profile tolerance:

Within 0,025mm (0.001") of master profile

■ Out of roundness:

0,05mm (0.002") Max Tir (Total Indicated Runout)

■ Coating:

Chemical Vapour Deposition (CVD)
Coating Depth 3 - 6 microns

■ Bearing end play when new:

Taper roller	0,025mm (0.001") maximum
Ceramic	0,025mm (0.001") maximum

■ Dynamic Load Capacity:

Taper roller	4220N (950lbs)
Ceramic	8767N (1945lbs)

■ Lubrication:

Preferably Grade 'O' grease, but not greater than Grade '1' (mineral or synthetic)

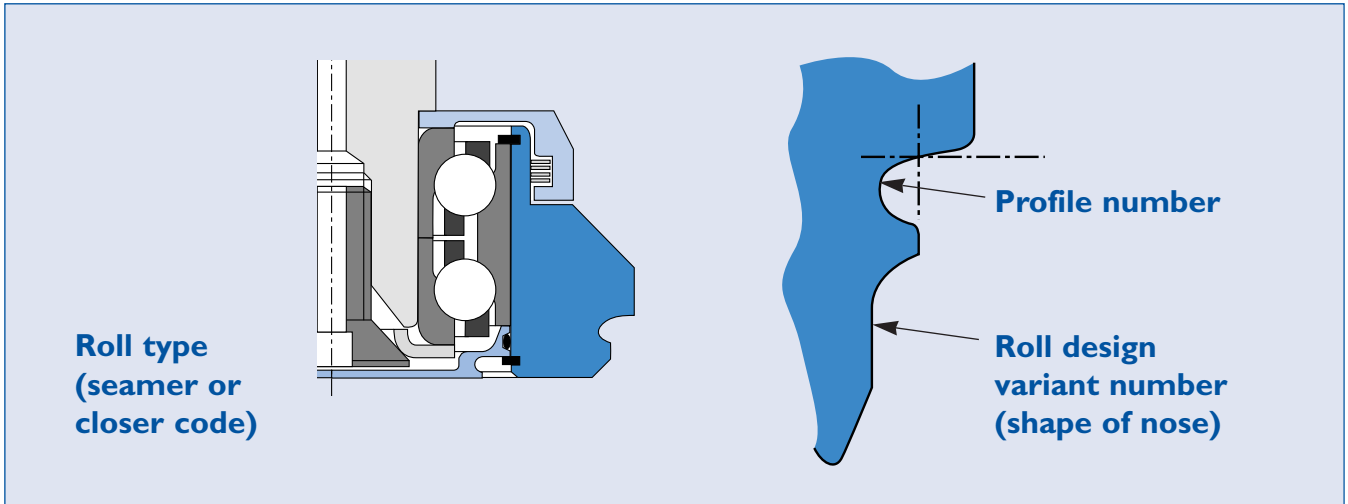
Taper roller	2 shots every 4 hours (all applications)
Ceramic	2 shots every 72 hours (sanitary food) 2 shots every 144 hours (beer & beverage)

NOTE: On autolube grease machines it is recommended that provision is made to convert

the seaming roll to grease nipple, manual lubrication where ceramic bearings are fitted.

DESCRIPTION OF COMPONENTS: SEAMING ROLLS

STRUCTURE AND SIGNIFICANCE OF ROLL PART NUMBERS



Shipleys seaming rolls are allocated a significant number of eight digits, followed by the alpha character R or X and two further digits. An abbreviation for any special treatment follows,

then a code letter for 'Eco-Seal' fitted rolls, with the manufacturing code at the end of the number.

Roll features are identified as follows:

Typical part number

13056 19 1X 64 APC E A99S

■ **Seaming profile number:** _____
12000, 13000, 14000 or 16000 Series

■ **Roll design variant number:** _____
Basic nose shape

■ **Material used:** _____
1 = Stoody (cobalt chrome)
4 = 440C (stainless steel)

■ **Bearing type:** _____
R = Timken taper roller
X = Ceramic ball

■ **Seamer or Closer code (type):** _____

■ **Special treatments:** _____
APC = Anti pick-up coating
ARC = Advanced Roll Coating

■ **'Eco-Seal':** _____

■ **Manufacturing code:** _____
eg. A99S = January 1999 Shipleys