CARNAUDMETALBOX

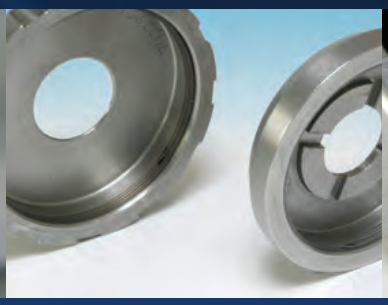
ENGINEERING

WE ENGINEER YOUR SUCCESS

2020

seamer tooling

Seamer Tooling

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High Performance Seamer Tooling

For Increased Profitability

Sustainability
Production volumes must be achieved with less resources and ever more challenging budgets. The enemy is downtime whether caused by machine maintenance activities, breakdowns or adjustments to maintain double seam quality. The trick is how best to optimise often conflicting forces while delivering thequality necessary to avoid product spoilage and recalls. More sustainable seamer tooling becomes a mandatory requirement.

Environmental Impact
Hygiene is of upmost importance with many beverage and food fillers often searching for seamer tooling capable of retaining lubrication and reducing the risk of contamination.

Tooling Solution For Improved Results
Utilising non-corrosive components, CMB Seamer Tooling was developed to combat downtime and environmental impact enabling customers who convert to achieve higher production efficiencies on a more hygienic set of seaming chucks and rolls.

Revolutionary innovations
CMB have been manufacturing high quality seamer tooling at our Headquarters in Shipley, UK since 1990. Working closely with our customers and suppliers, CMB have used progressive innovation to design and manufacture high performance chucks and rolls which are currently sold to the beer/beverage, food, aerosols and can making industries.

Performance
Stoody, CVD applied coatings and ceramic bearings, all bespoke to CMB, were introduced to the seaming process by CMB to improve production issues experienced on our customers fillers.

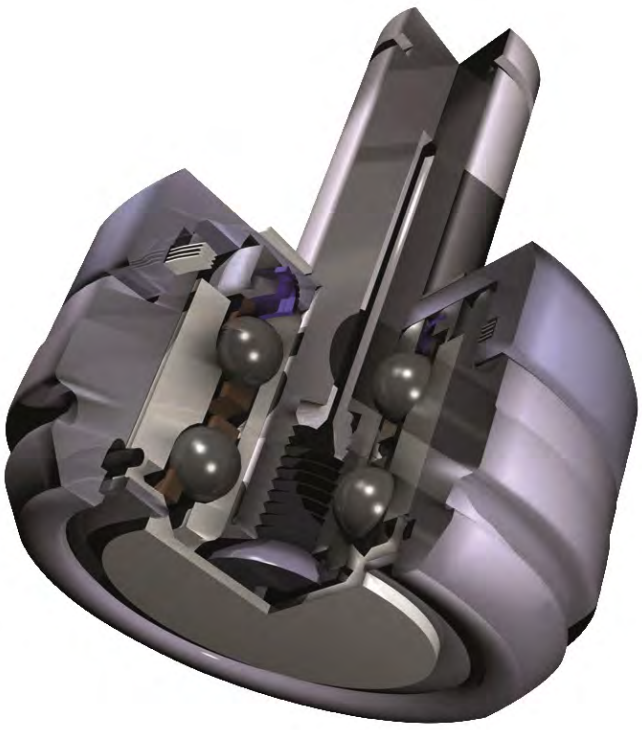
Hygiene
Eco seal, Evo seal and Ultraseal were introduced to the seaming process by CMB to improve seamer cleanliness.

Global Supply
After installing CMB seamer tooling, customers often comment on the improvement to their production process. As a result, CMB now export 10,000 pieces of seamer tooling per year all over the globe out of our key locations in Norwalk, USA, Shipley, UK and Shanghai, China.

‘Our objective is to deliver chucks and rolls that lead the world in quality, innovation and performance life.’

Ultraseal – The Most Hygienic Seaming Rolls On The Market

The most advanced seaming roll in the industry. Fit and forget technology for next generation performance and profitability. Combined with either Eco or Evo seal, this unique seal package creates two lines of defence on oil or grease lubricated seamers reducing the risk of product/ water ingress in the bearing and lubrication contamination in the seamer. A cleaner seamer and longer operational seaming roll life!



Ceramic bearing

- No shimming
- Perfect contact angle
- Impellers to pump oil in to the bearing
- Easy spin technology
- Further reduction in lubrication frequencies
- Cooler operation during production reducing double seam drift caused by temperature variation
- Longer operational life

Titanium Coatings (CVD applied)

- Reduced wear rates
- Less seam scuffing
- Less frequent setting interventions

Eco seal

- Labryinth seal specifically designed for grease lubrication

Evo seal

- Lip seal specifically designed for oil lubrication

Ultraseal

- Unique lip seal which sits on the inner race of the ceramic bearing

seamer tooling

High Performance Tooling

Enabling Higher Levels Of Sustainable Production

Stoody® Material

- Introduced to the seaming process by CMBE. An alloy made up of 50% Cobalt, 25% Chrome, 12% Tungsten plus a few others.
- Totally corrosion free
- Hardness of approx. 52 Rockwell C

Coatings

- Developed specifically to prevent metal pick up. Previously, lines had to be stopped to polish roll profiles
- CVD applied TiC (Titanium Carbide) or TiN (Titanium Nitride)
- Thickness of coating between 3 and 5 microns.
- Extremely hard at approx. 3500 Vickers for TiC or approx. 2500 Vickers for TiN.
- Refined textured coatings TTA (TiC)/ TTC (TiN) enabling better end drive

Ceramic bearings

- Extremely free rotating bearing reduces eliminates lacquer removal and metal pick up in the roll grooves during seaming process.
- Corrosion free
- Less heat generated
- Life of the Ceramic is more than equal to the roll life,especially if our CVD coating technology is used.

Specialised seals

Eco seal

- ‘Specialised’ low friction labyrinth seal designed for grease lubricated seaming rolls
- Re-lubricate grease every 144 hours in beverage applications

Evo seal

- ‘Specialised’ low friction lip seal designed for oil lubricated seaming rolls

Ultraseal

- Unique lip seal which sits on the inner race of the ceramic bearing


ALL METAL CANS ARE 100% RECYCLABLE
CANS ARE WIDELY RECYCLED

Seaming Roll Lubrication

And Environmental Impact

GREASE – Eco seal and Ultraseal example

Below is evidence of a customer who trialled one station of Ultraseal tooling on their Angelus seamer. The tooling created less grease fly which reduced the risk of contamination and reduced the frequency of re-greasing.

Before Eco seal and Ultraseal installation

After Eco seal and Ultraseal installation

A working example (in beer/beverage) adhering to CMB tooling care issue document:

With Eco seal

Greasing frequencies = 1 to 2 grams every 144 hours of operation.

A filling company runs 1200 cans per minute on an Angelus 121L (12 heads) at a production efficiency of 80%. Including efficiency losses and product/ diameter changes, this machine closes 1200 cpm constantly for 16 hours a day, 5 days a week.

Weekly production = 80 hours
Annual production = 4160 hours for 52 weeks
Annual lubrication = 4160 hours / 144 hours = 28.88 or 29 times per year

Annual lubrication quantity = 29 x 2 grams = 58 grams per year for 299,520,000 cans seamed.

With Eco seal and Ultraseal

Greasing frequencies = 4 to 8 grams every 6 months of operation.

A filling company runs 1200 cans per minute on an Angelus 121L (12 heads) at a production efficiency of 80%. Including efficiency losses and product/ diameter changes, this machine closes 1200 cpm constantly for 16 hours a day, 5 days a week.
Weekly production = 80 hours
Annual production = 4160 hours for 52 weeks
Annual lubrication = 4160 hours / 2 greasing interventions = 2080 hours

Annual lubrication quantity = 2 x 8 grams = 16 grams per year for 299,520,000 cans seamed.

Significant Savings on Grease Plus a Cleaner Seamer!

Recyclable Packaging

Reducing Our Impact on the Environment

CMB understand the impact packaging can have on the environment. We have eliminated any waste which cannot be recycled and introduced 100% recyclable packaging meaning our customers can achieve zero to landfill and recycle every item within the box issued.

Key Contacts

Due to demanding industries we hold more stock than ever before, allowing our customers to decrease their stock holding as we at CMB Engineering increase ours. Offering this kind of flexibility is key to the success of our customers own stock holding.

For all your seamer tooling questions and or queries please do not hesitate to contact our seamer tooling sales team in your specific region.

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Precision Seaming Chucks

Each Chuck Is Manufactured For A Specific End Design

Chucks have been designed and made against specific customer requirements for almost any can/ end combination and for most common seamers including Ferrum, Angelus, FMC and Metalbox.

Each chuck is manufactured for a specific end design and can be specially customised for end type or supplied against a recognised industry standard manufacturing drawing.

Stellite (Stoody) Composite Chucks

This premium priced component is designed to withstand the harshest environments and has an exceptionally long working life. Our Stellite (Stoody) chucks consist of a composite body formed by ‘hipping’ Stellite (Stoody) material onto a stainless steel body as a way of giving exceptional toughness to the chuck lip and profile while retaining a softer core for cutting the mounting thread. The Stellite (Stoody) material is a special formulation of Cobalt Chrome Alloy that forms a perfect substrate for the subsequent application of either Titanium Nitride or Titanium Carbide by Chemical Vapour Deposition (CVD).

- STELLITE (STOODY) NON-INTERLOCKING
- AVAILABLE NON-COATED OR COATED (CVD PROCESS)
- TITANIUM NITRIDE (SAT) COATING
- TITANIUM CARBIDE (ARC) COATING
- TEXTURED TTA/TTC OR NON TEXTURED CHUCK LIP

Advanced Seaming Rolls

Making Seamer Tooling For The Harshest Conditions

CMB Seaming Rolls have been developed to perform in the harshest conditions. Rolls can be supplied for all common seamers in use across the industry.

The grade of Stellite (Stoody) material has been specially developed to ensure the best possible grain structure and properties for the roll profile. Titanium Carbide provides the most cost effective coating and is highly resistant to wear, cracking or flaking. Ceramic bearings combined with the unique ‘Eco seal’ / ‘Evo seal’ and Ultraseal are essential in achieving the very best seaming roll operational performance. CMB has extensive experience across all products and materials including aluminium, steel, plastic & composite can combinations. We work with our customers to provide roll profiles best suited to achieve their specific double seam.

- **STELLITE (STOODY)**
- **DESIGNED TO SUIT EACH SEAMER TYPE**

BEARINGS

- NEEDLE ROLLER (INTERLOCKING)
- TAPER ROLLER (NON-INTERLOCKING)
- STEEL BALL CARTRIDGE (NON-INTERLOCKING)
- CERAMIC BALL CARTRIDGE (NON-INTERLOCKING)

COATINGS

- TITANIUM NITRIDE (GOLD) 70/75RC CVD
- TITANIUM CARBIDE (GREY) 90/95RC CVD
- TEXTURED TITANIUM NITRIDE (GOLD)
- TEXTURED TITANIUM CARBIDE (GREY)

SEALS

- NEOPRENE RUBBER
- EVO SEAL
- ECO SEAL
- ULTRASEAL

Precision Seaming Chucks

Structure & Significance of part numbers

CarnaudMetalbox Engineering seaming chucks are allocated a part 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 date manufacturing code. Chuck features are identified as follows: Typical part number

Material

Stellite (Stoody)
(Hipped Composite)

Chuck Lip Profile Tolerance:

Within 0.025mm (0.001") of master profile

Concentricity:

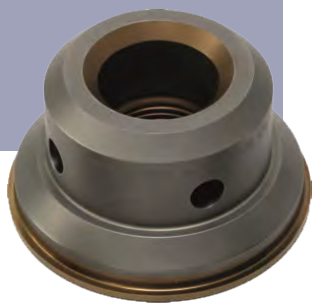
0.05mm (0.002") Max TIR (Total Indicated runout)

Coating:

Chemical Vapour Deposition (CVD)
Coating Depth 5 microns

Textured Finish:

Equivalent of LW5 finish
(Superior to Flame Painting)



Chuck Design Variant Number
Lip shape geometery

Component Code
8 = Pressed metal ends
6 = Thermoformed ends

Material Used:
1 = Stellite (Stoody®Cobalt Chrome)

Special Treatments:
ARC = Advanced Roll Coating (TiC)
SAT = Specially Applied Titanium (TiN)
TTA = Textured Titanium Carbide (TiC)

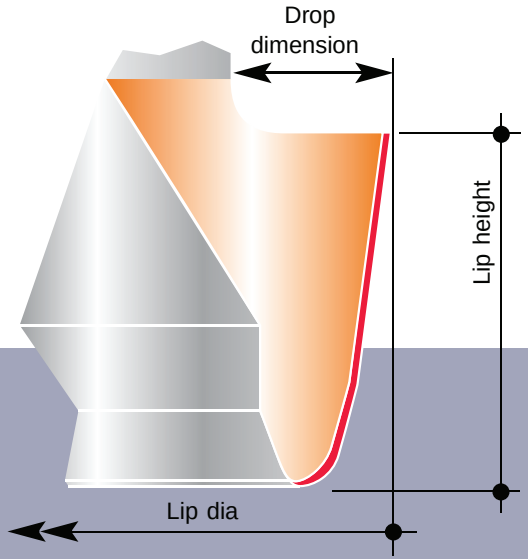
8 2020 30 1C 81 TTA A18S

End Diameter:
2020 = 202 Dia
200 to 707 diameter available

Chuck Type:
C = Chuck for metal seaming

Manufacturing Code:
eg. A18S = January 2018 Shipley

Seamer or Closer Code (type):



Advanced Seaming Rolls

Structure & Significance of part numbers

CarnaudMetalbox Engineering seaming rolls are allocated a part number of eight digits, followed by the alpha character R, X or U and two further digits. An abbreviation for any special treatment follows, then a code letter for ‘Eco seal’ fitted rolls, with the manufacturing date code at the end of the number.

Material

Stellite Stoody Cobalt Chrome 50-53 RC

Profile Tolerance:

Within 0.025mm (0.001”) of master profile

Concentricity:

0.05mm (0.002”) Max TIR (Total Indicated runout)

Coating:

Chemical Vapour Deposition (CVD)
Coating Depth 5 microns

Bearing end play when new:

Taper roller 0,025mm (0.01”) maximum
Ceramic 0,025mm (0.01”) maximum

Dynamic Load Capacity:

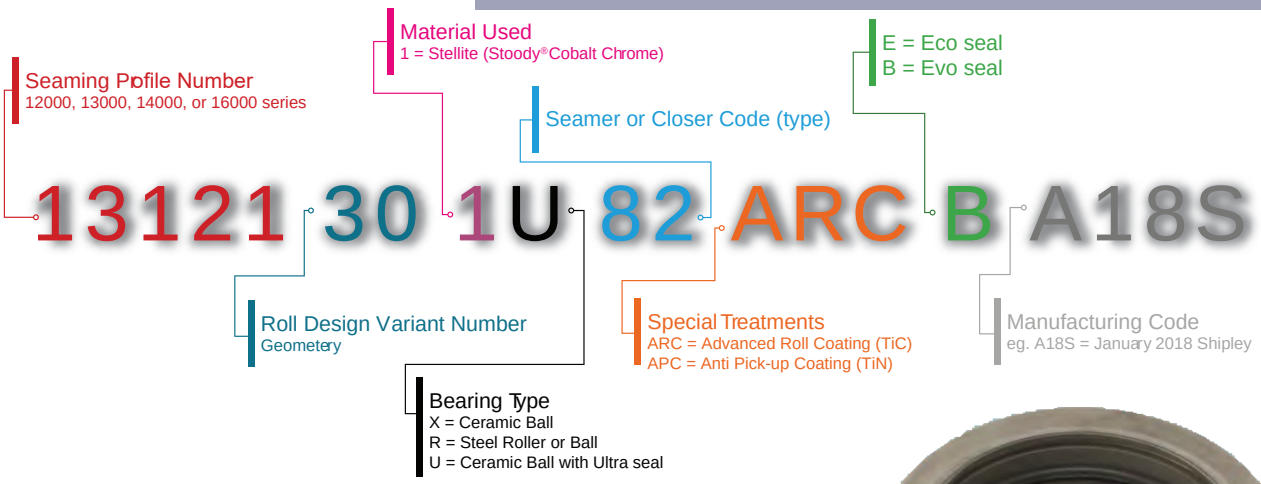
Taper roller 4220N (950lbs)
Ceramic 8767N (1945lbs)

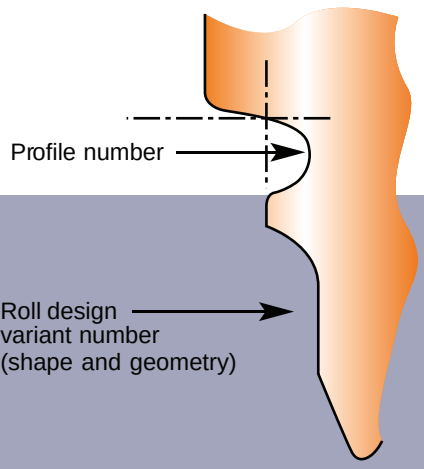
Lubrication:

Preferably Grade ’O’ grease, but not greater than Grade ’1’ (mineral or synthetic)
Taper Roller 2 shots every 4 hours (all aplications)
Ceramic 2 shots every 72 hours (sanitary food)
2 Shots every 144 hours (beverage)

Note:

On autolube grease machines it is recommended that provision is made to convert seaming rolls to grease nipple, manual lubrication where ceramic bearings are fitted.





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