



The wise choice for **U**ltra **R**eliable **B**earings

URB GROUP

Bearings
for
PAPER MILLS
INDUSTRY



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Working Conditions

Paper industry requires high service life, good stability under high temperature and resistance to failure. Bearings have to face tough working conditions, such as: high temperature and moisture.

Applications

DEBARKING

- Rotate on tires which are mounted on shaft supported by bearings
- Debarking principle - Friction/Collision among logs and drum
- Mainly SRB bearing, and also have other type of bearing (eg. TRB)
- Grease lubrication. Middle or low bearing speed
- SAF block including SRB used in the application



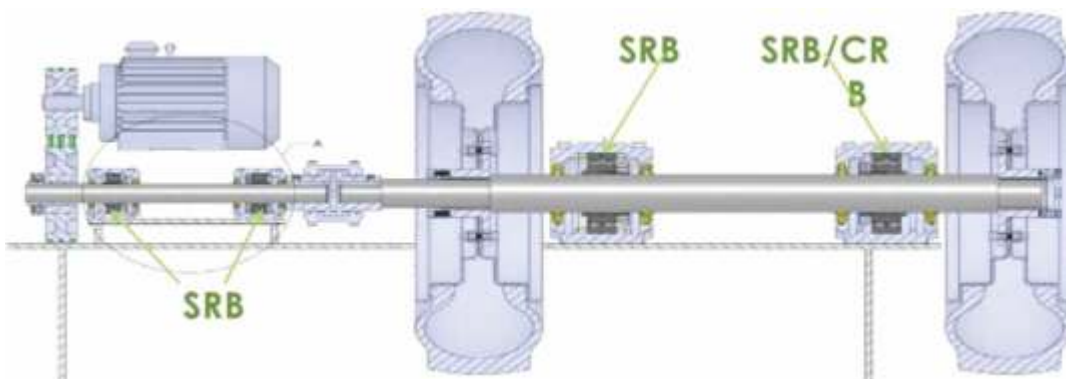
222XX - Series

223XX - Series

232XX - Series

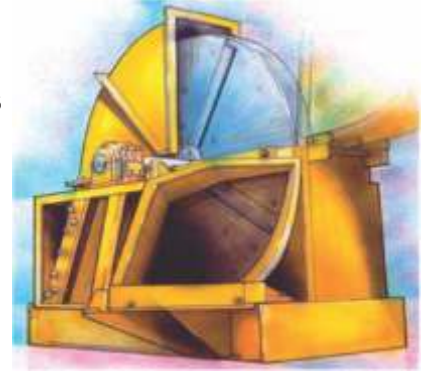
C3 - Clearance

- Tapered Bore

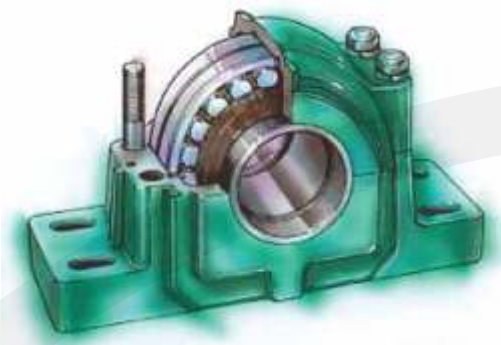


CHIPPER

- The debarked logs pass to machine that chips them into small pieces (length 15-20 mm; width < 20 mm; thickness 3-5 mm)
- Normally 4-6 blades were fixed on the rotating disc.
- Mainly SRB bearing or SRB housing unit, bore range 150-300 mm
- Grease or oil bath lubrication (ISO VG220). Speed range 300-1000 rpm, normally around 600 rpm



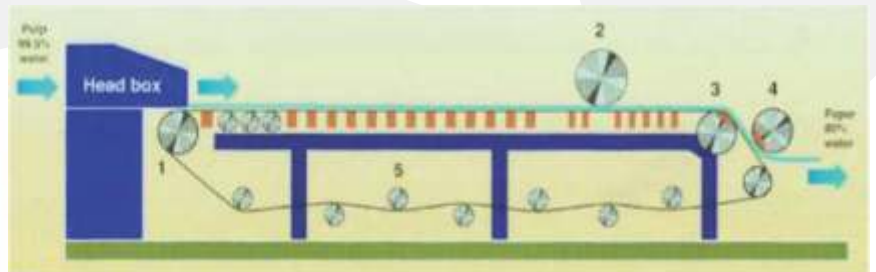
DISC CHIPPER



DRUM CHIPPER

- 22200 - Series
- 22300 - Series
- 23200 - Series
- C3 clearance
- Tapered Bore

FORMING



Forming / Wire Section

The wire mesh receives the water and pulp mixture from the slice produced by the headbox and proceeds to form a sheet of paper



BREAST ROLL

- 22300 - Series
- 23200 - Series
- C3 clearance
- Tapered Bore

COUCH ROLL

- 23100 - Series
- 23200 - Series
- 23900 - Series
- C3 & C4 clearance
- Both cylindrical Tapered Bore



70 mm - 150 mm Bearing Bore

DANDY ROLL

- 22300 - Series
- 23200 - Series
- C3 clearance
- Tapered Bore

FELT CARRYING ROLL

- 22200 - Series
- 22300 - Series
- 23200 - Series
- C3 clearance



PRESSING



SUCTION ROLL
23200 - Series
23100 - Series
- C3 clearance
- Both Cylindrical & Tapered Bor

PRESS ROLL
23100 - Series
23200 - Series
- C3 clearance
- Tapered Bore

WET FELT CARRYING ROLLS
22200 - Series
22300 - Series
23200 - Series
- C3 clearance
- Tapered Bore

LOWER OR UPPER PRESS ROLL
223XX- Series
231XX - Series
C3 - Clearanee
Tapered Bore

FRICTION PRESS
223XX - Series; 241XX - Series;
231XX - Series; 232XX - Series;
C3 - Clearanee
Both Cylindrical & Tapered Bore



In the press section the pulp is supported on felts and passes through a series of nips to press the water from the sheet. Suction pressure rolls also draw the water out of the sheet. In this section crown compensating rolls are used to control the sheet caliper (thickness).



DRYING



The Dryer Section removes the remaining water. Rolls include
a) Dryer rolls, or dryer cans
b) Felt rolls



WET FELT CARRYING ROLLS
22200 - Series
22300 - Series
23200 - Series
C3 clearance Tapered Bore

WET FELT CARRYING ROLLS
23200 - Series
23100 - Series
C4 clearance Tapered Bore

CALENDER



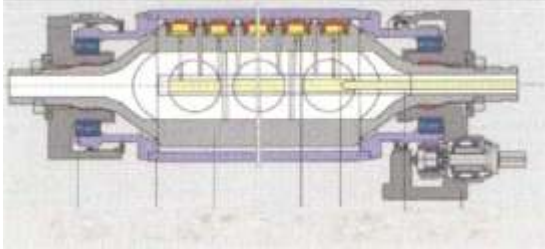
The function of the calender is to impart the final finish and thickness (caliper) to the sheet

There are three common types of calenders:

- a) Machine calenders - stack of two to eight steel rolls
- b) Super calenders - stack of up to 14 steel rolls
- c) Soft calenders - consist of several single-nip calenders

Front side

Drive side



Bearing Roll
Oil element return in box

Support Pressure Loading Oil
Gear housing shell beam

NON HEATED DRIVE ROLLS

23100 - Series

23200 - Series

C3&C4 - Clearance

Tapered Bore

HEATED DRIVE ROLLS

23100 - Series

23200 - Series

24100 - Series

C4 - Clearance

Tapered Bore



NON HEATED LOWER ROLLS

23200 - Series

24100 - Series

C3 & C4 - Clearance

Tapered Bore

HEATED LOWER ROLLS

23200 - Series

24100 - Series

C4 - Clearance

Tapered Bore



REELING



REELING

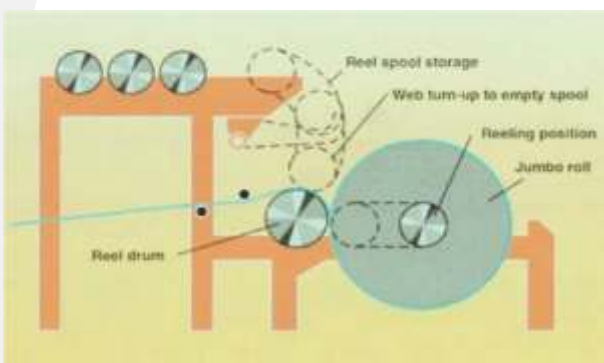
A wind-up turret transforms the continuous strip from the reel winder into rolls, eliminating any defects in the processing.

REEL WINDER CYLINDERS & DRUMS

232XX - Series

241XX - Series

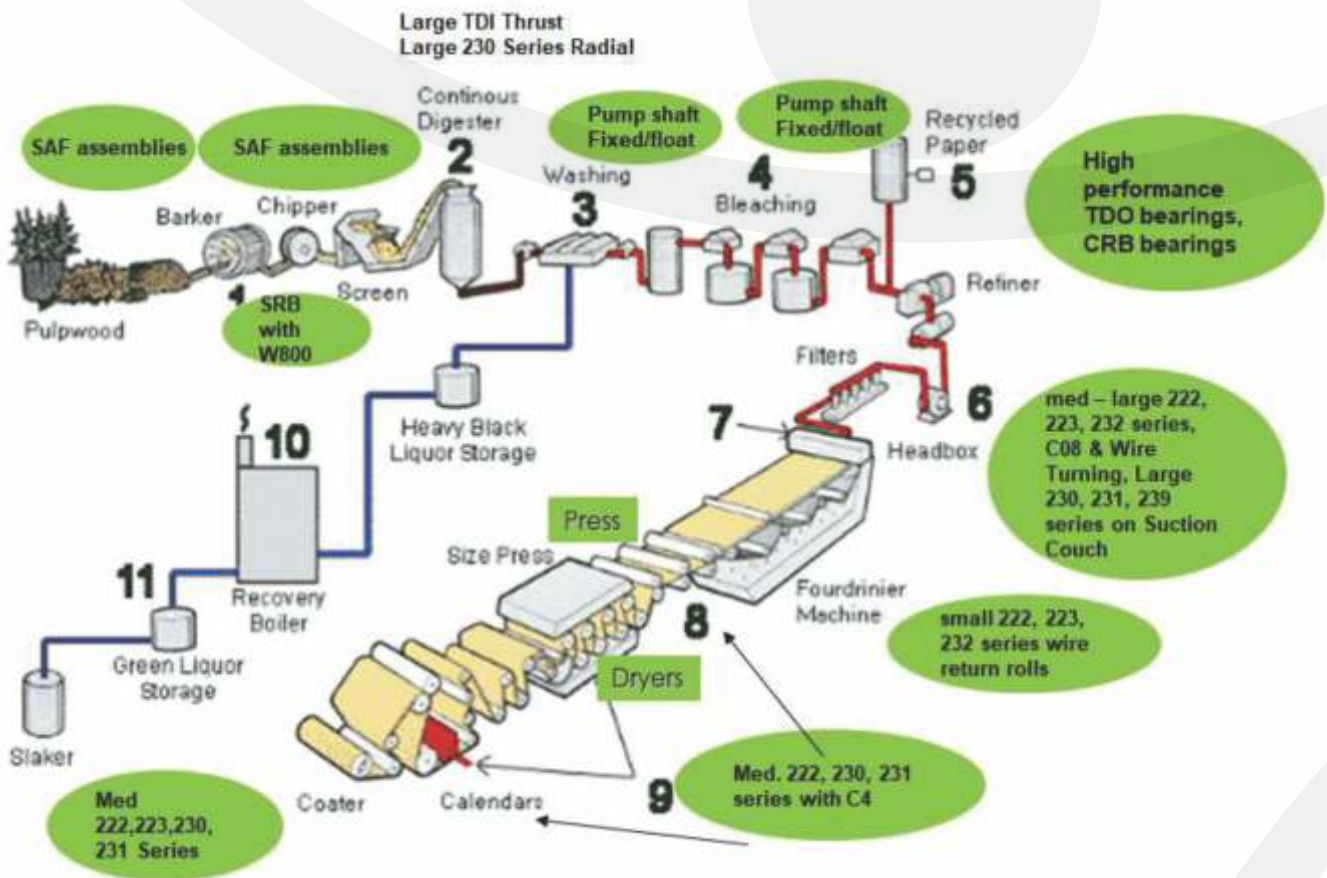
C3 - Clearance Tapered Bore



PULP & PAPER OPERATION

Bearing Applications Map

Large TDI Thrust
Large 230 Series Radial



INDUSTRIAL EQUIPMENT



Bexpert advice and software designed for different applications

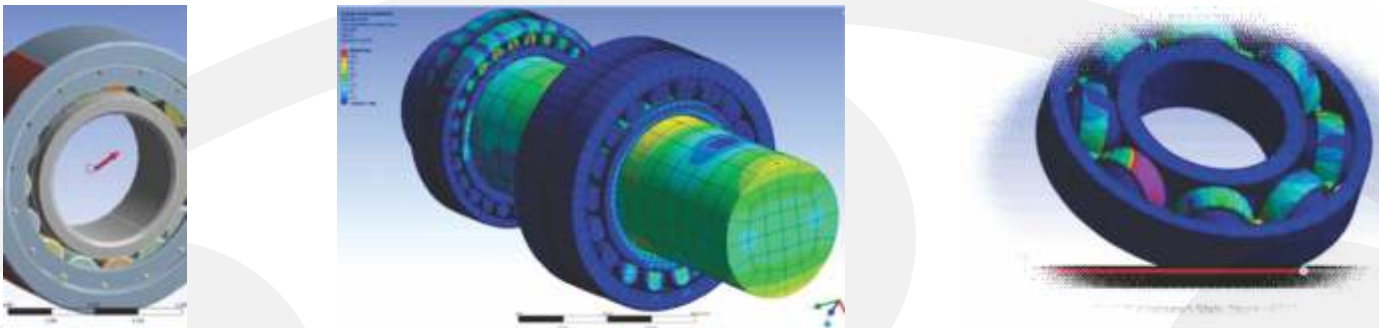
3D Modeling

Workgroup based, interactive designing in 3D visualization



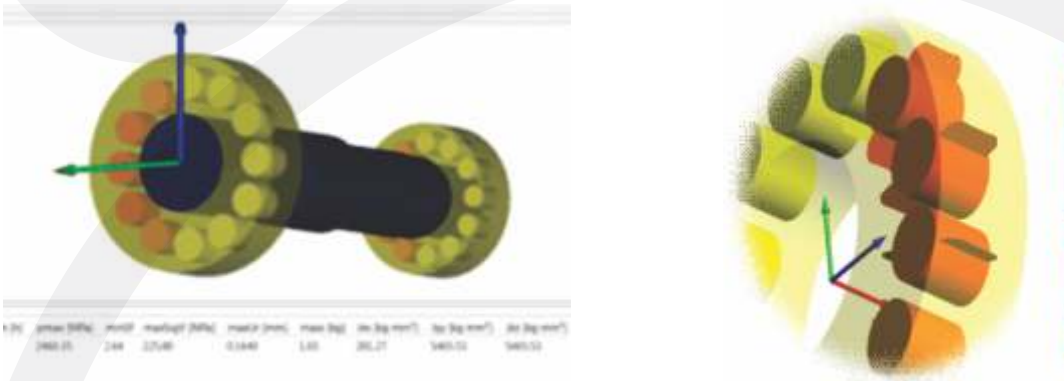
FEA - Analysis

Finite element tool for structural analysis, including linear, nonlinear and dynamic studies



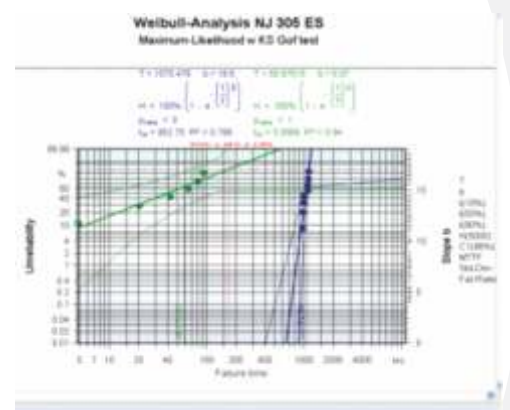
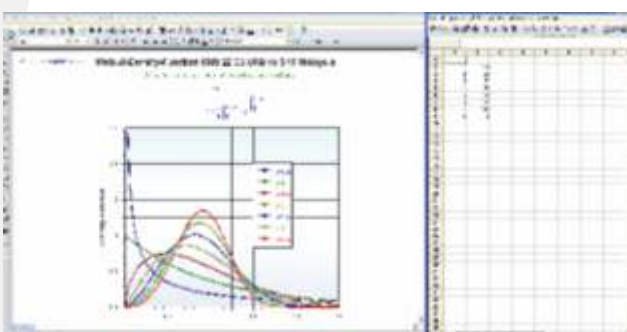
Rolling Calculation and Shaft Calculation

URB company uses computer programs with finite element simulation taking into account internal bearing geometry and operating conditions.



Visual Xsel v.12.0

Implementing the accurate Weibull analysis for laboratory tests



The company was set-up on May 1953 and it has a long tradition in bearings manufacturing of over 60 years, being one of the important bearing manufacturers in the Central and South-East Europe.

The key to success has been a consistent emphasis on maintaining the highest quality of our products and services and investment in research and development.

We include the respect for clients and the satisfaction of their needs among our fundamental principles. Therefore we respond to the market requirements by offering, besides the bearings with standardized shapes and sizes, a large range of non-standardized bearings, specific to various utilizations.

