

LUBRICANT CONSULT GMBH



Bogs Burgos





LUBRICANT CONSULT GMBH



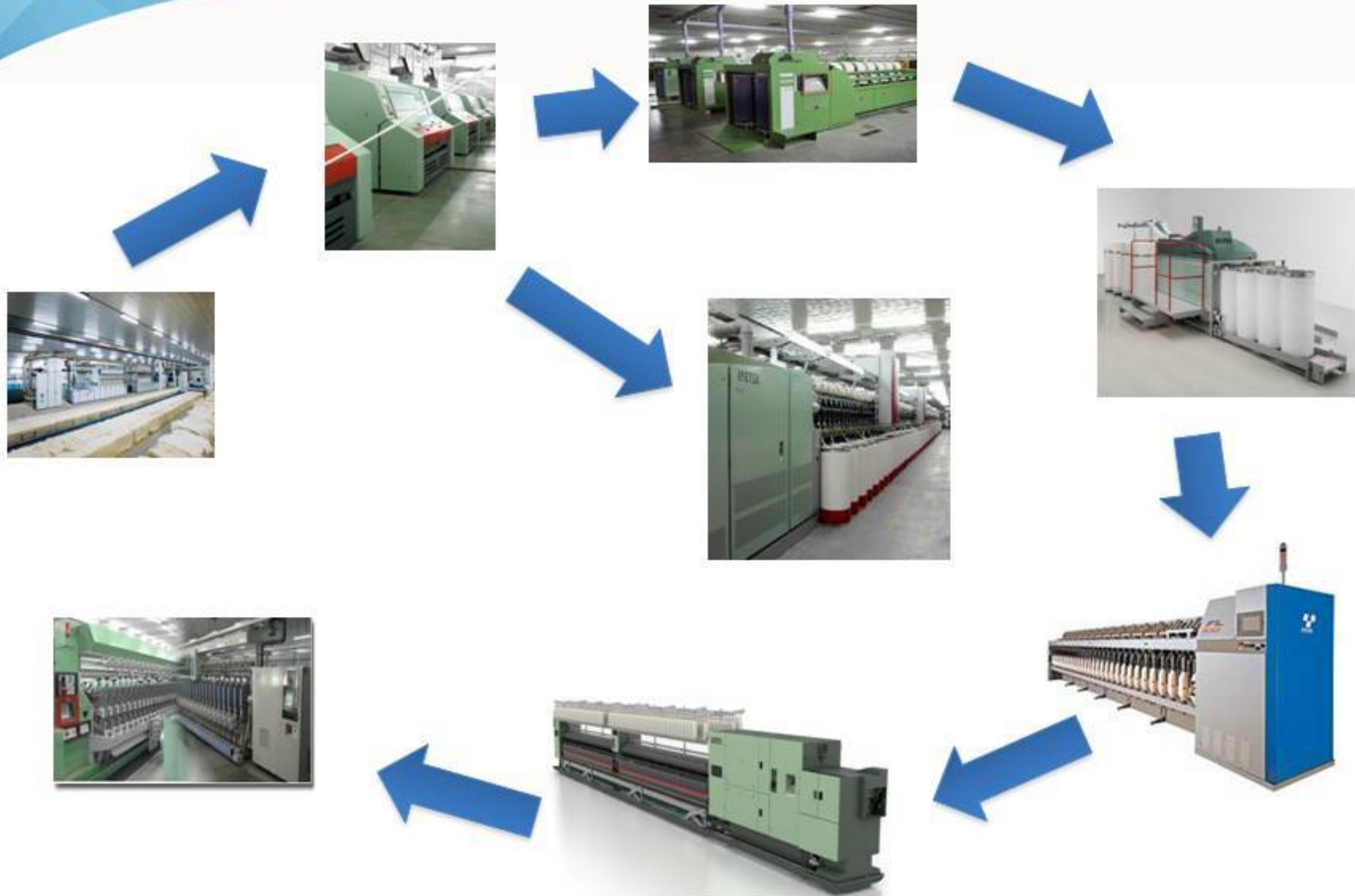
TEXTILE PROCESSES AND MACHINE LUBRICATION

Part 1





Spinning Flow Process



BLOW ROOM MACHINES

Basic Operations in the Blow room:

- 1. Opening**
- 2. Cleaning**
- 3. Mixing or blending**
- 4. Micro dust removal**
- 5. Uniform feed to the carding machine**
- 6. Recycling the usable wastage**
- 7. Foreign Fiber detection & elimination**





Blow room Section

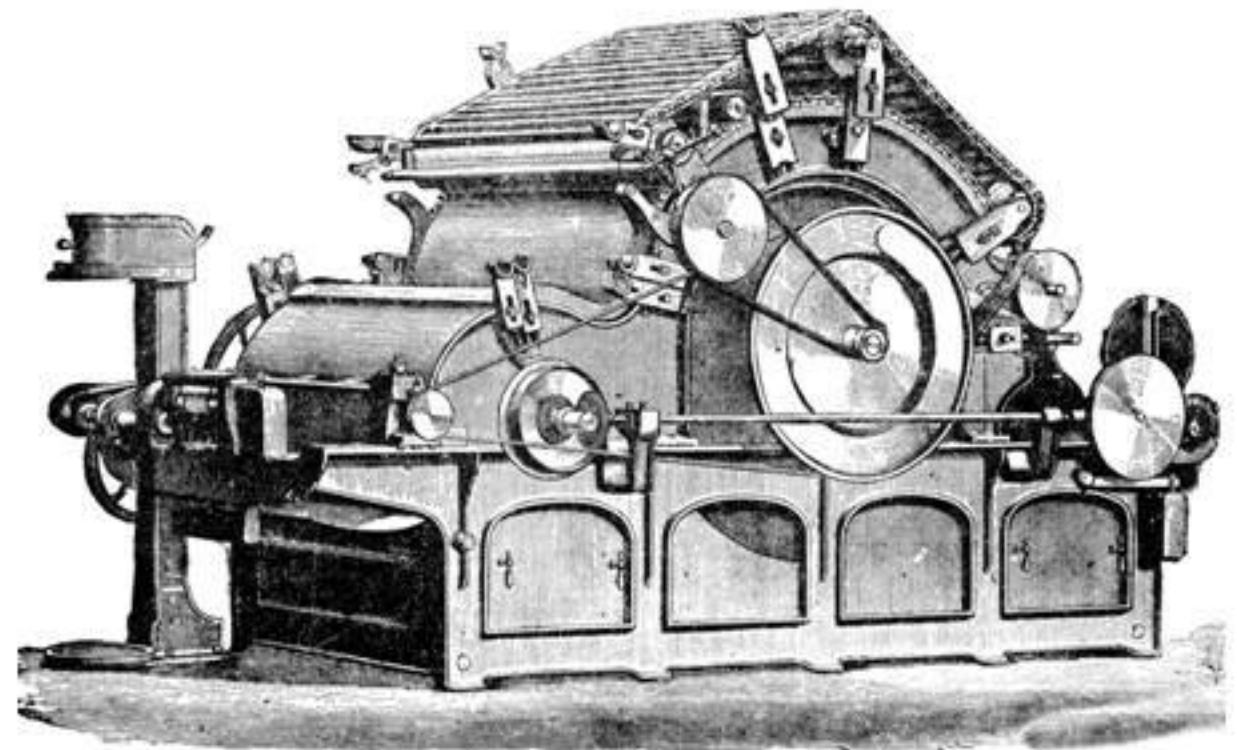


Application	Lubcon Lubricant
Bearings	Turmogrease CAK 2502
Beater bearing	Or
Evener roller	
Stripping roller	Turmopro Li 2502 EP
Belt Roller	
Chain link & wire	Turmofluid 300 OM spray
Electric Motor bearing	Turmogrease N3

CARDING PROCESS

The purpose of carding:

- 1. To open the flocks into individual fibers**
- 2. Cleaning or elimination of impurities**
- 3. Reduction of neps**
- 4. Elimination of dust**
- 5. Elimination of short fiber**
- 6. Fiber blending**
- 7. Fiber Orientation or alignment**
- 8. Sliver formation**





CARDING MACHINES



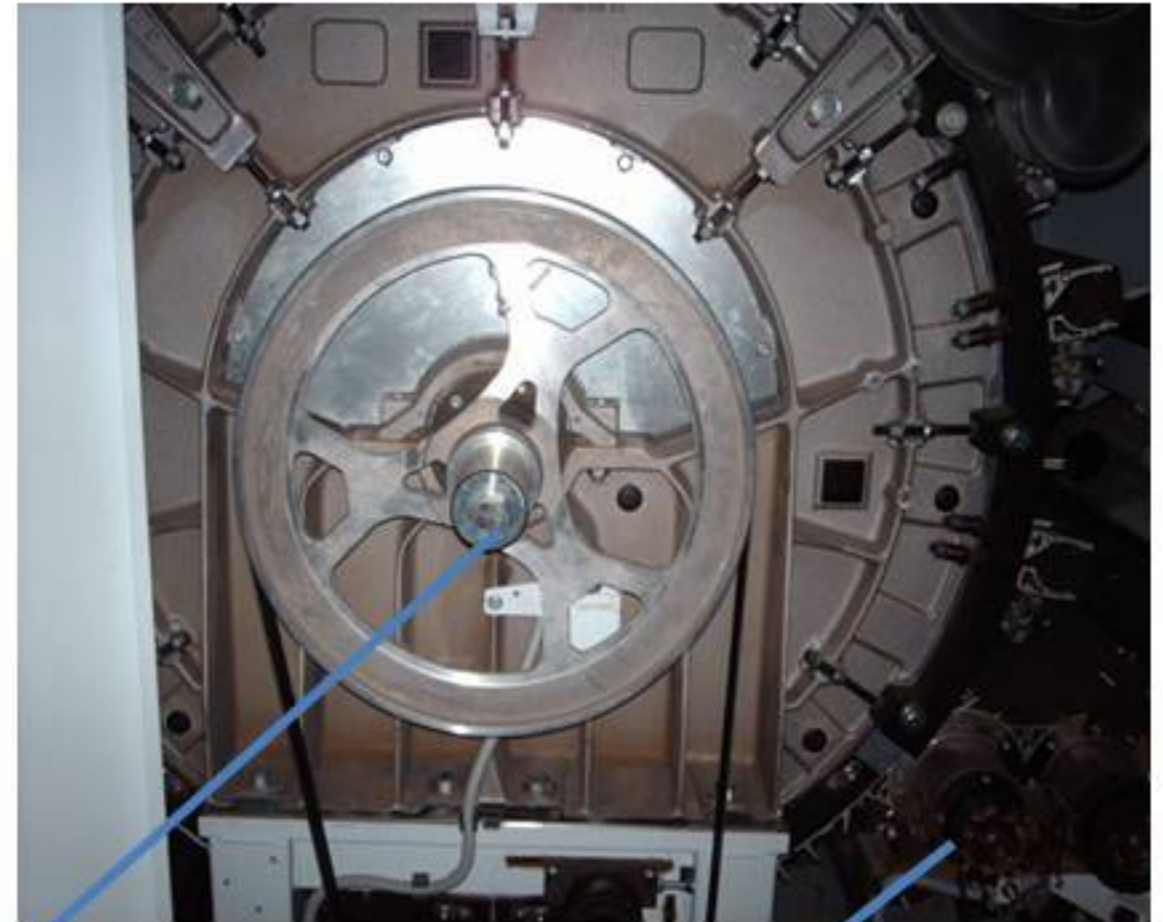
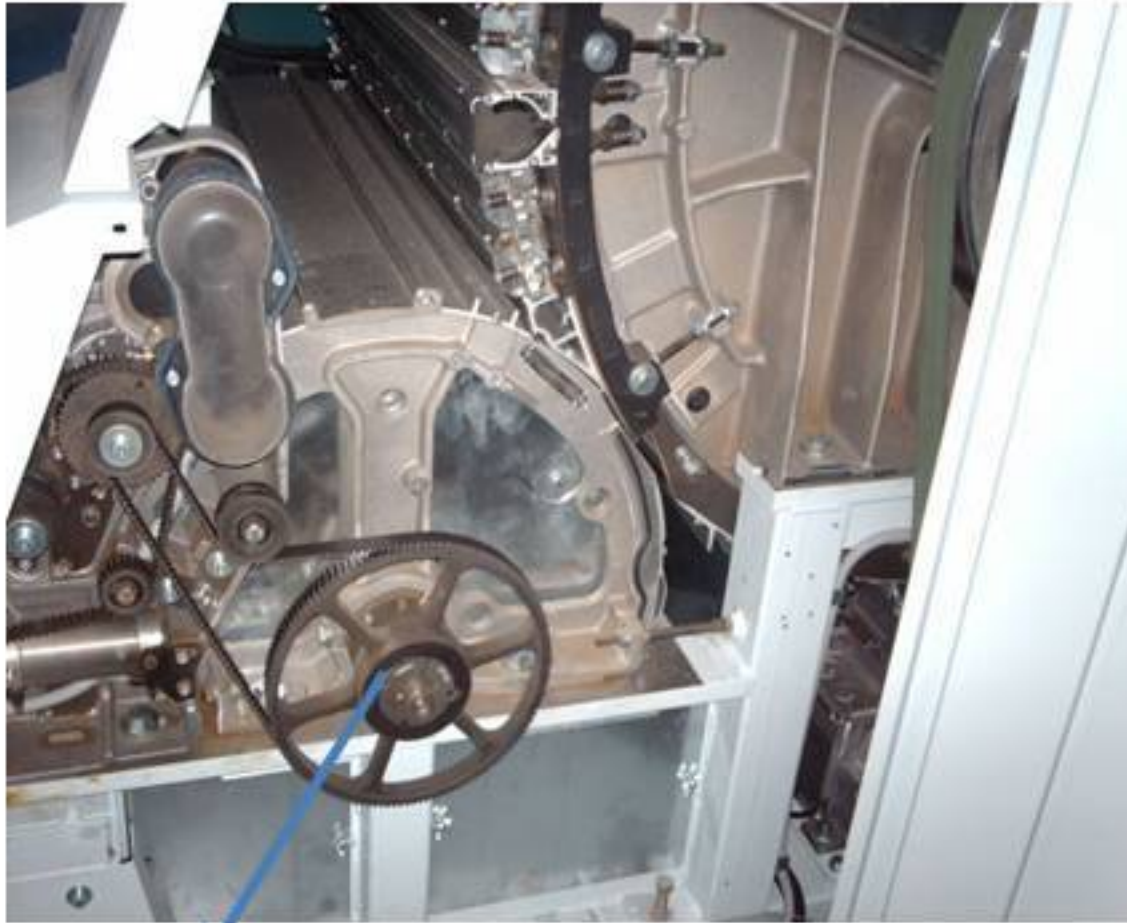


Carding Section



Application	Lubcon Lubricant
Comb Bearing	Turmogrease Li 802 EP
Rotary Plate	Turmopast NBI 2 white Turmopast MA2
Motor Bearing	Turmogrease N3

Carding Machine

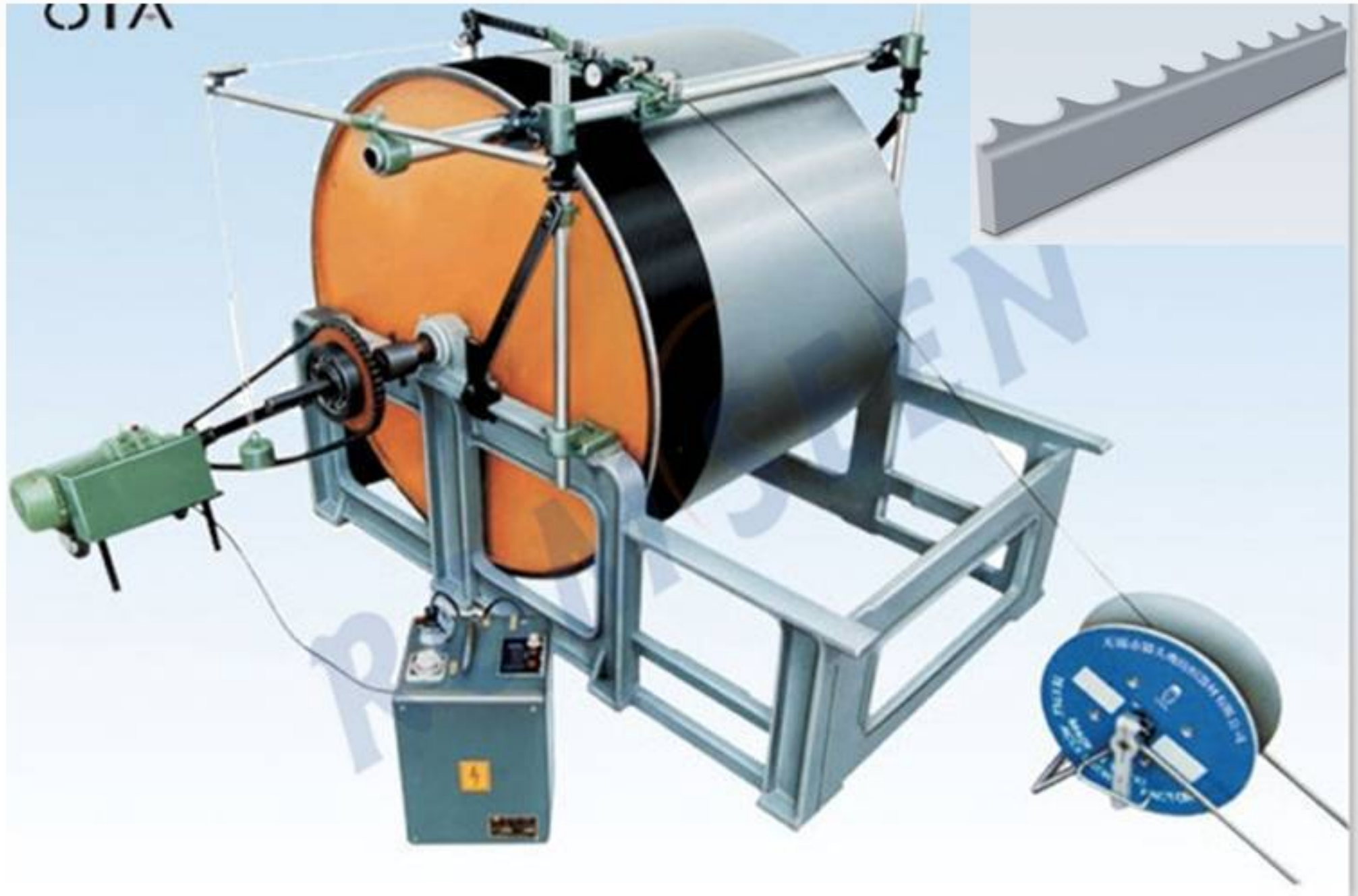


Doffer bearing

Cylinder bearing

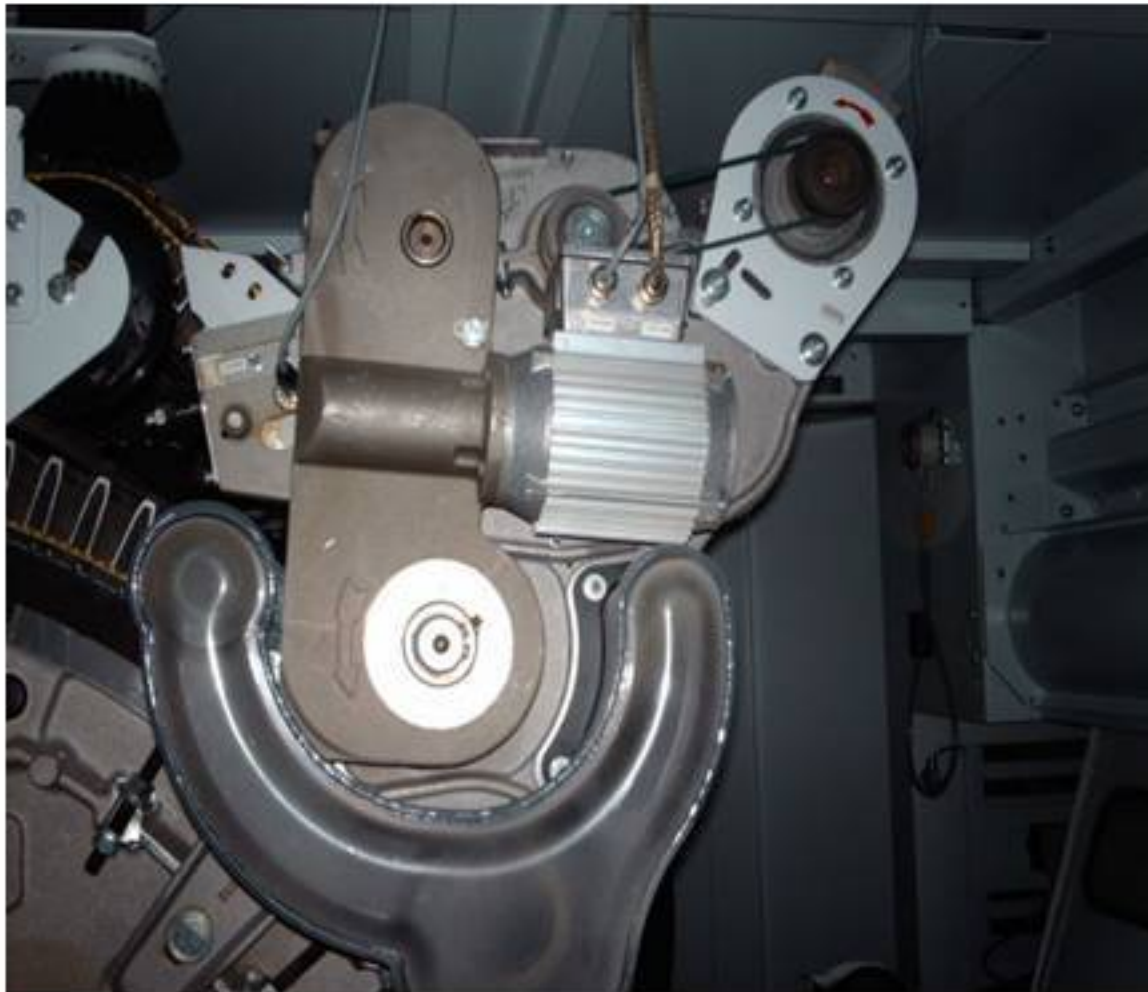
Licker in bearing

LUBCON RECOMENDATION- TURMOGREASE CAK 2502



CARDING FLAT DRIVE GEAR BOX

CARDING CALENDAR ROLLER



TURMOPOL OIL 1000 EP

TURMOGREASE LI 802 EP

COMBING PROCESS

Combing is the process which used to upgrade the raw material. It influence the following yarn quality:

- **Yarn evenness**
- **Strength**
- **Cleanness**
- **Smoothness**
- **Visual appearance**
- **Removing short Fiber**

Lap former machine



Combing machine





COMBING PROCESS

Lap former machine



Combing machine



Application	Lubcon Lubricant
Comber gearbox	Turmogearoil 150 OM
Multipurpose grease	Turmopro Li 1002 EP
Chain drive	Turmofluid 300 OM spray
Protection against tribo corrosion	Turmopast MA 2
Electric motor	Turmogrease N3

DRAW FRAME MACHINE



Task of Draw frame:

- 1. Through doubling the slivers are made even**
- 2. Doubling results in homogenization(Blending)**
- 3. Through draft fibers get parallelized**
- 4. Hooks created in the card are straightened**
- 5. Through the suction, intensive dust removal is achieved**
- 6. Auto leveler maintains absolute sliver fineness**

DRAW FRAME



Thermoplex 2 TML special A



DRAW FRAME



NSB 040

Lubricant Manufacturer

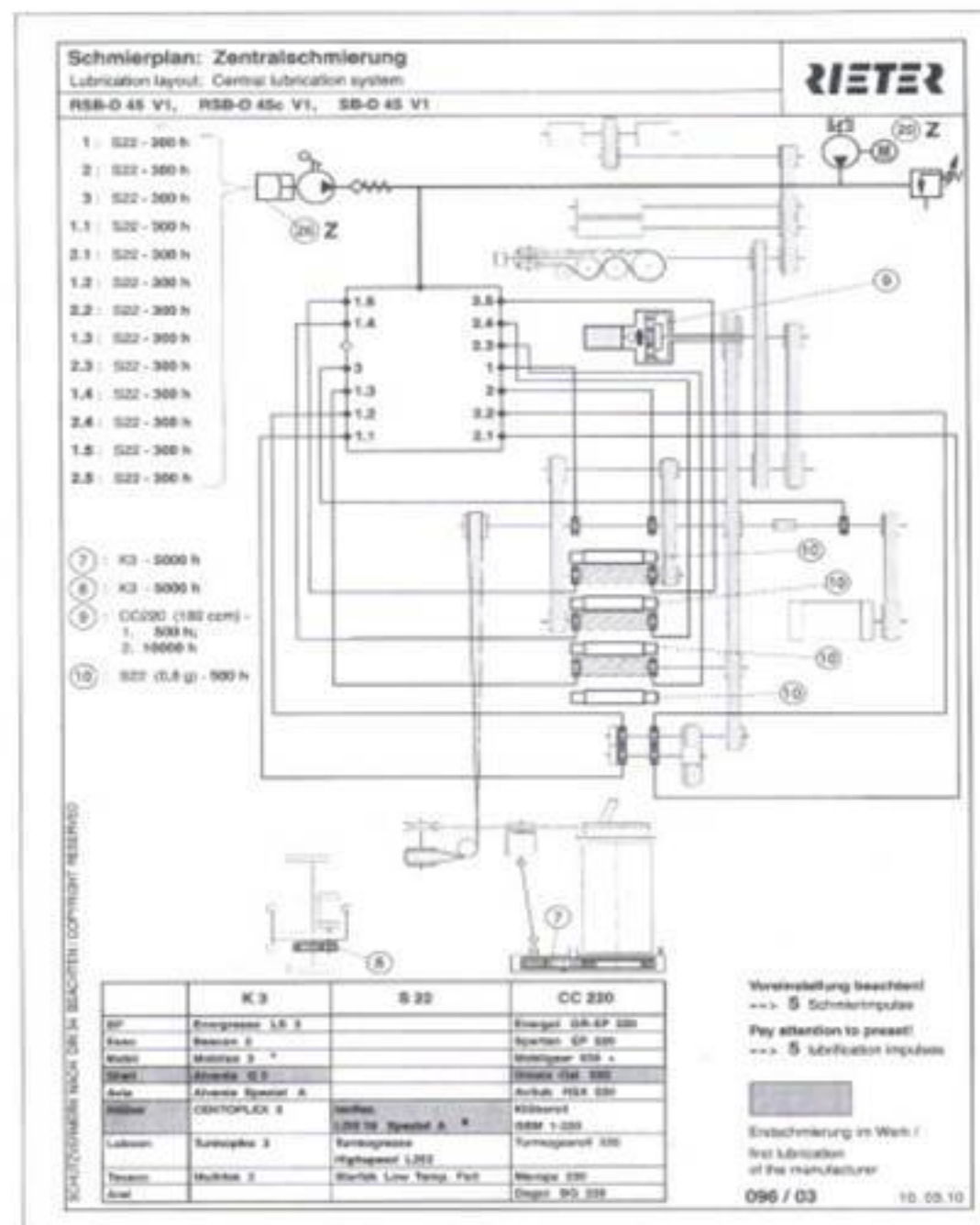
8 Lubricant Manufacturer

Lubricant	Manufacturer	Name
CC220	AGIP	BLASIA 220
	ARAL	DEGOL BG 220
	AVIA	AVIA GEAR RSX 220
	BP	ENERGOL GR - XP 220
	ESSO	SPARTAN EP 220
	KLÜBER	KLÜBER GEM 1-220 N
	MOBIL	MOBILGEAR 630
	OPTIMOL	OPTIGEAR BM 220
	SHELL	OMALA 220
	TEXACO	MEROPA 220
VALVOLINE	EPG 220	
K3	AVIA	AVALITH 3 EP
	BP	ENERGREASE LS-EP 3
	ESSO	BEACON EP 3
	KLÜBER	CENTOPLEX 3
	MOBIL	MOBILUX EP 3
	SHELL / ASEOL	ASEOL LITEA EP 3, 6-076
	TEXACO	MULTIFAK PREMIUM 3
	VALVOLINE	MULTILUBE EP-3
	S22	KLÜBER
TEXACO		STARFAK LOW TEMPGREASE EP
FUCHS		URETHYN LT 60
LUBCON		TURMOGREASE HIGH-SPEED
S24	KLÜBER	MICROLUBE GL 261
	MOBIL	MOBILTH SHC PM oder SHC 460



LUBCON : TURMOGREAS HIGH SPEED L252

Lubrication points



ROVING FRAME MACHINE



Task of Roving frame:

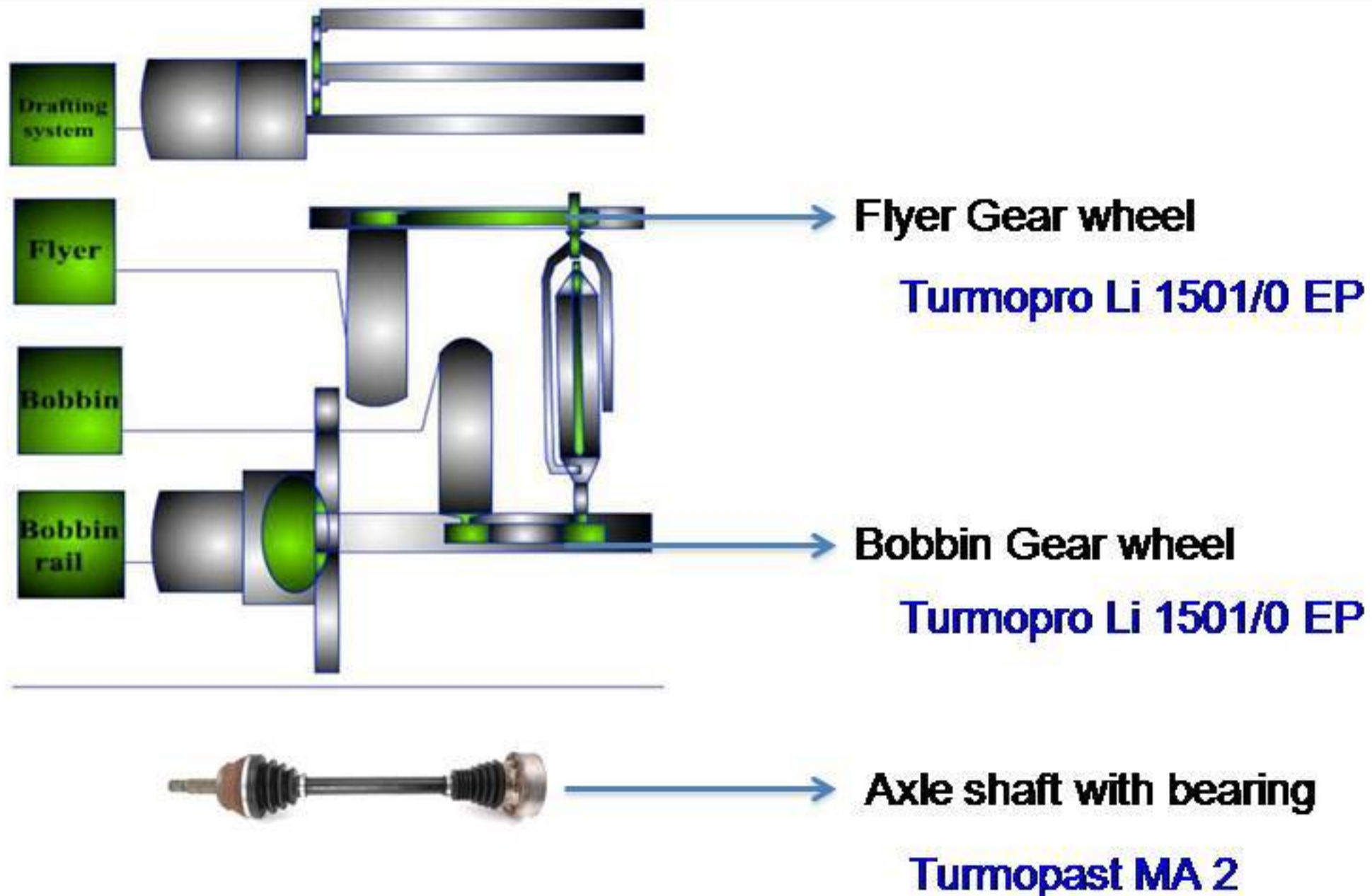
**Attenuation or minimization –
drafting the sliver into roving**

Twisting the drafted fiber

**Winding the twisted roving on a
bobbin**



ROVING FRAME



ROVING FRAME

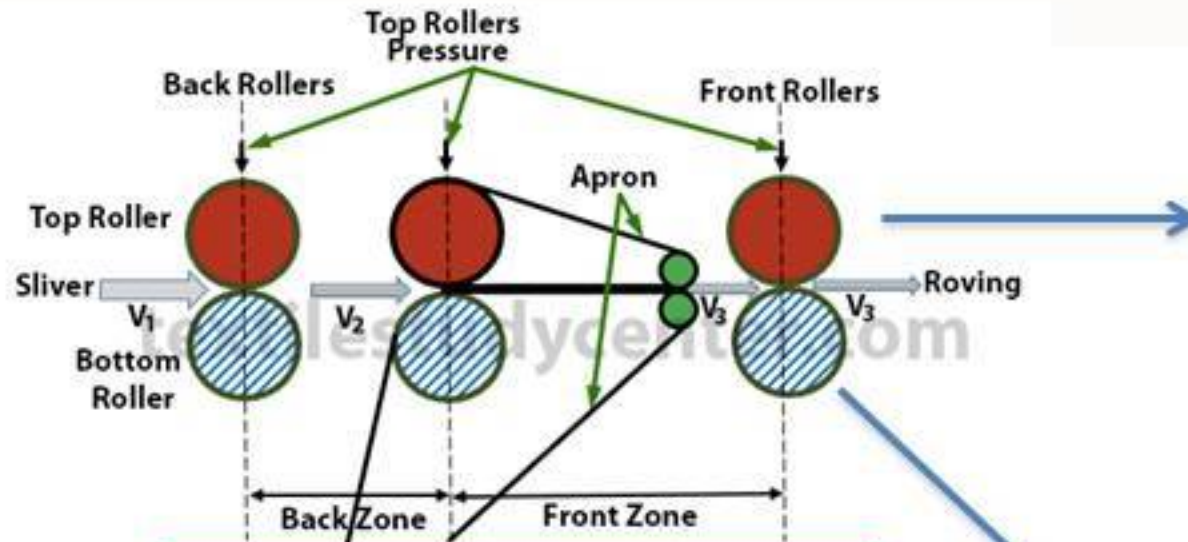


Fig: 3-over-3 double apron drafting system



Tumogrease HDC 5

Tumopro Li 2502 EP



ROVING FRAME

M.1.2 Types of Lubricants and Their Properties
[1] Lubricant types, lubricant symbols, and major lubricating points

Type Symbol	Lubricating points	Japanese products, Standard products	Exxon/Mobil Mobil Brand	Esso/Mobil Esso (Exxon) Brand	Chevron Texaco (CALTEX)	Sell	NOK KLUBER	DOW CORNING	Other manufacturer
Grease	A Bearings (Ball bearings, roller bearings, and needle bearings)	Kyodo Yushi Unisula No.2	Mobilux EP 2 or Mobilgrease XHP 222	Seacon EP 2	Multifak No.2	Avansa grease S2	Centroplex 2EP		
	C Flyer bearings, and driving gears	Kyodo Yushi Unisula DL No.1	Mobilux EP 1	Seacon EP 1					
	D Open gears	Kyodo Yushi Unisula DL No.2 Nippon Oil Eponoc grease APN12 Idemitsu Daphne Eponox EP No.2	Mobilux EP 2	Seacon EP 2	Multifak EP2	Avansa EPgrease 2	Centroplex 2EP		
	J Lifters and slides						Unimoly GL30	Molykote BR2 Plus	
	K Bottom rollers and neck bearings	Kyodo Yushi Powerlite HT	Mobilgrease XHP 222		Multifak AP92		Boburaga NBU12 3000P		
	L Universal joints	Kyodo Yushi Molydex No.2					Unimoly Plus	Molykote EP grease	
	M Couplings for flyer shafts and bobbin shafts	SUMI-KOU Moly Paste 500					Unimoly Plus	Molykote GN paste	
	N Winding motors and gear boxes		Mobilux EP023			Avansa EP grease R500			LUBCON Turmoplex EL000EP
	B Metal plates	JIS No.2 machine oil	Mobil Vactra Oil No.2	Terasitic 88			Cruzeon 88		
	E Oil baths and gears		Mobil DTE Oil Extra Heavy	Terasitic 150			Lancora D150		
Oil	F Lifting gear boxes	Mobilgear 629 "1, Mobil" SHC 629	Spartan EP150			"1 Syntheso HT150			
	G Chains	JIS No.4 motor oil	Mobil DTE Oil Extra Heavy	Milcol K220	Regal R&O	Tellus Oil 68	Structovis FHD		

NOTE: *1 Clean the inside of the gear box before using Mobil SHC 629 or Syntheso HT150 oil.



**Winding motors and Gear boxes
Turmoplex EL 000 EP**

RING FRAME MACHINE



Functions of Ring frame:

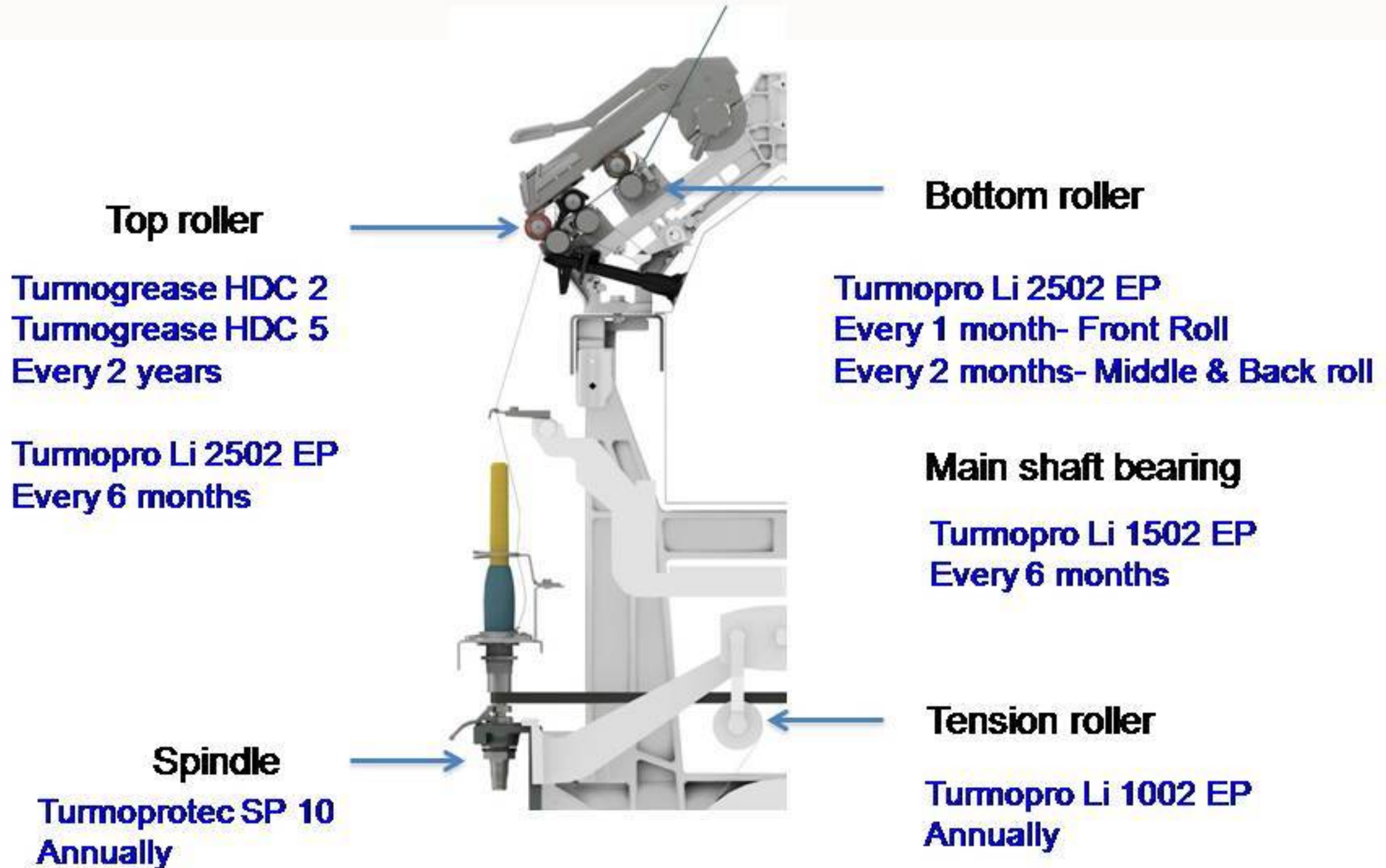
To draft the roving until the required fineness is achieved

To impart strength to the fiber by inserting twist

To wind the twisted yarn on a bobbin for winding process.



RING FRAME



RING FRAME



Headstock section

Gear wheel – Turmopro Li 1501/0 EP
Gearbox – Turmogearoil OM series



End stock section

Drive motor – Turmogrease N3

WINDING MACHINE

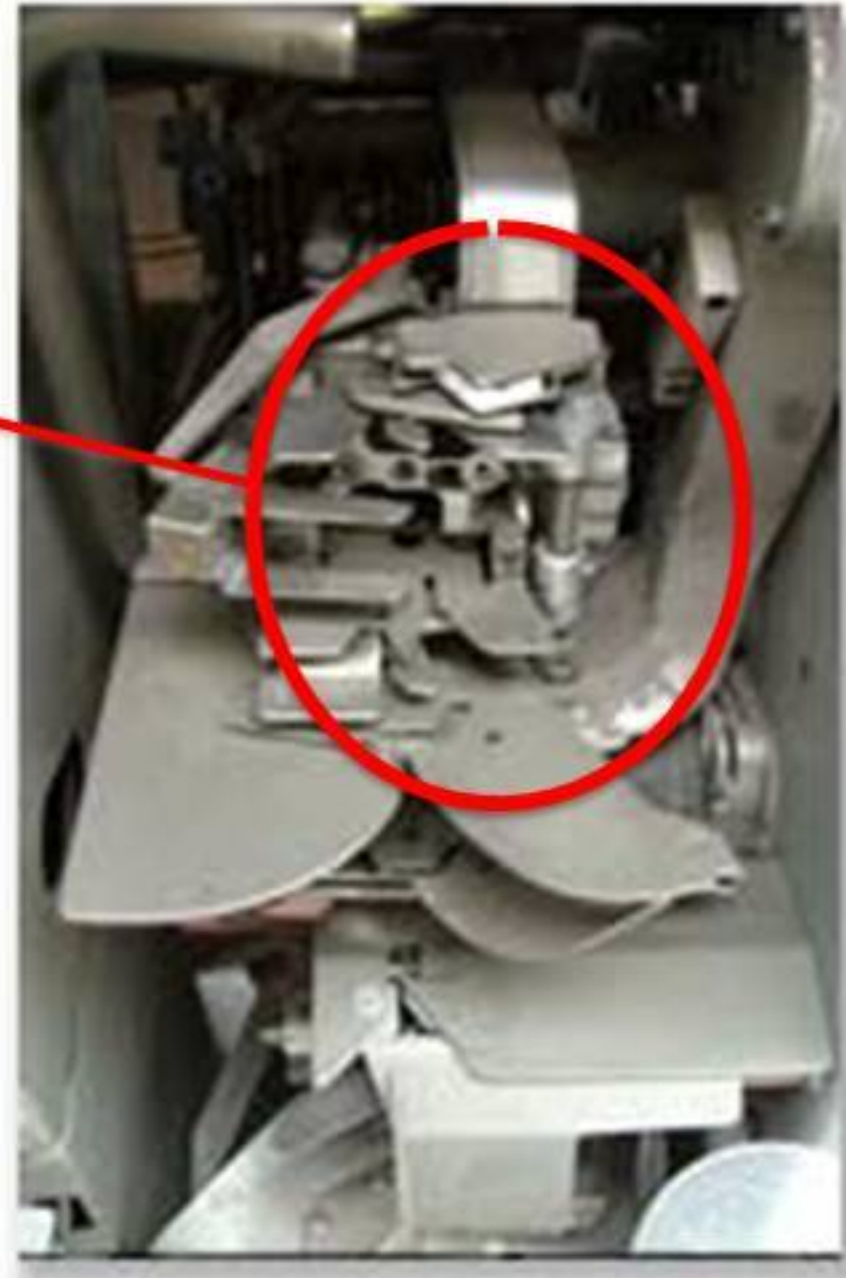




WINDING MACHINE

Splicing unit

TURMOFLUID LS 400 Plus spray





WINDING MACHINE



Bearing center

Tumogrease CAK 2502

Cylinder Sleeve

Tumsilon K 1000 – 21C, 338 etc.

Tumsilon K 6000 – Q-PRO

Drum bearing

Tumogrease PU 702



WINDING MACHINE



WINDING MACHINE

Cams & connecting rod

Turnopast GM 5

Turnolyb PA spray



Multi purpose grease

Turnopro Li 1502 EP

Suction drive and Motors

Turnogrease N2

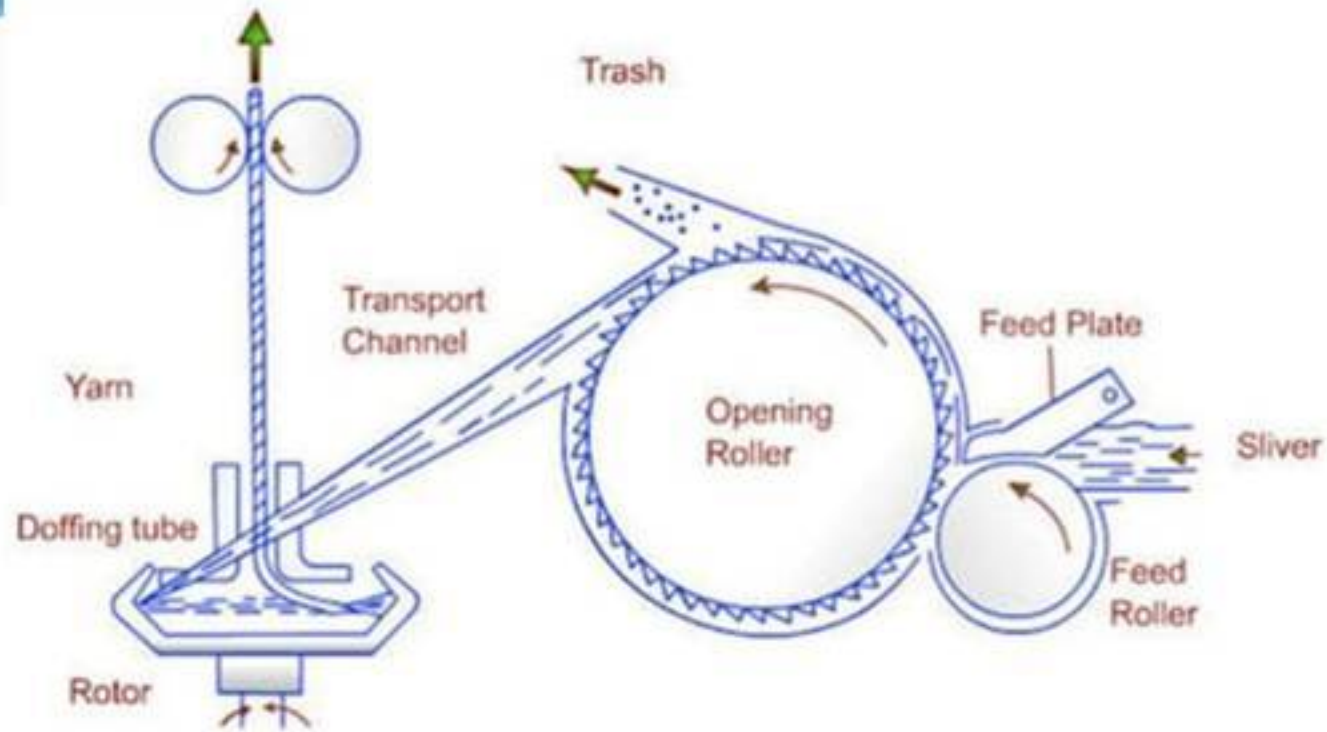


OPEN END MACHINE





Open end



Belt drive pulleys
Roller bearings

Twin disc

Direct rotor drive

Turmogrease High speed L 252

Turmofluid SF 48



OPEN END MACHINE



Gearboxes

Turnogearoil OM series

Piecer - Cams & connecting rod

Turnopast GM 5

Turnolyb PA spray

Multi-purpose grease

Turnopro Li 1502 EP

Drive motors

Turnogrease N3



**Guide Pulley, Reverse Pulley,
Drive Pulley**

**Turmogrease
LC 252**

Multipurpose greases

**Turmogrease CAK
2502**

**Turmogrease Li 802
EP**

YARN CONDITIONING PLANT

In spinning process yarn conditioning machine is **used to adjust the moisture of yarn and to improve efficiency in the next process.**

After processing, when the moisture level of yarn would reach about 8.5 %, strength and elongation can be increased greatly, which help the performance at processing line.



DOOR SEAL GREASE : TURMOGREASE CAK 4002

DTFE 4002 226

XORELLA

XORELLA AG
Hindstrasse 41
CH-5430 Wetztingen/Schweiz

Phone +41 56 437 20 20
Fax +41 56 429 02 96
info@xorella.com
www.xorella.com

XORELLA

DOOR SEAL HANDLING

Version: 1.1
Last update: 25.09.2007 / rk

Contents

1 General	1
2 Maintenance	1
2.1 Removing the seal	2
2.2 Cleaning	2
2.2.1 Clean the seal	2
2.2.2 Clean the flanges and groove	2
2.3 Lubricating	2
2.3.1 Grease	2
2.4 Replacing the seal	3
2.4.1 Round machines	3
2.4.2 Cubical machines	4

1 General

Xorella is striving for faultless seals and grease. Do not purchase seals for Xorella machines on the local market. We cannot give you a guarantee or support for unknown seals.

2 Maintenance

Please clean and lubricate the door seal, door- and vessel flanges on a weekly basis. There is no need of dismantling. Check and replace the seal if you find some damages.

Dismantle the door seal on a monthly basis. Clean and lubricate all these parts. Check the seal accurately. Replace the seal if you find any damage to the seal. Especially if these cause the message "seal pressure not reached" or anything similar! Replace the seal if it is permanently deformed (e.g. square instead of round) or when the seal is extremely softened. Also clean and lubricate the door seal groove, the door- and the vessel flange.

2.1 Removing the seal

Before cleaning you have to remove the seal out of the groove. Be very careful and never use sharp or spiky objects when removing the seal. The silicone seal is very sensitive and can easily be damaged!

2.2 Cleaning

2.2.1 Clean the seal

Clean the seal with a wet micro fibre cleaning tissue (lint-free tissue). After cleaning the seal you should not find any dirt by visual inspection. It is not necessary to completely degrease the seal. Only dirt and excessive "used" grease should be removed. Never clean the seal with conventional household cleaning agents or solvent for grease and/or silicone.

2.2.2 Clean the flanges and groove

Clean the flanges and the groove with conventional household cleaning agents or solvent for grease and silicone. After cleaning there should be no residues at all such as dirt or firmly bonded deposit of silicone.



IMPORTANT

After cleaning the flanges and the groove with solvent the parts have to be well washed with neutral clear water. Please wait at least 20 minutes before lubricating because the surfaces have to be completely dry.

2.3 Lubricating

After cleaning lubricate the seal, flanges and groove with a thin layer of the recommended above mentioned grease. Please take extra care that the freshly lubricated seal does not touch the floor and catches dirt.

2.3.1 Grease

To support a long lifetime of the seals XORELLA recommends to use only these two types of grease:



Actual XORELLA door grease (on stock): **LUBCON Turmogrease CAK 4002**
DTFE.4002.226, packing unit of 0.5 kg

XORELLA door grease (not on stock): **KLÜBER SYNTHESO PROBA 270**
DTFE.1000.039, packing unit of 1 kg or DTFE.0050.038, packing unit of 50 g

XORELLA

XORELLA

2.4 Replacing the seal

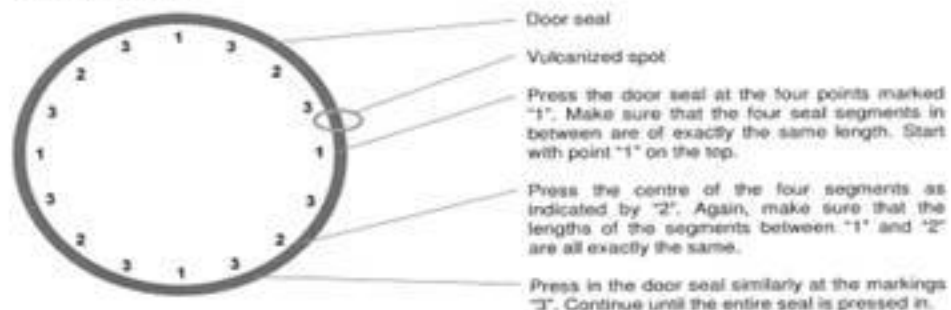
2.4.2 Cubical machines

2.4.1 Round machines

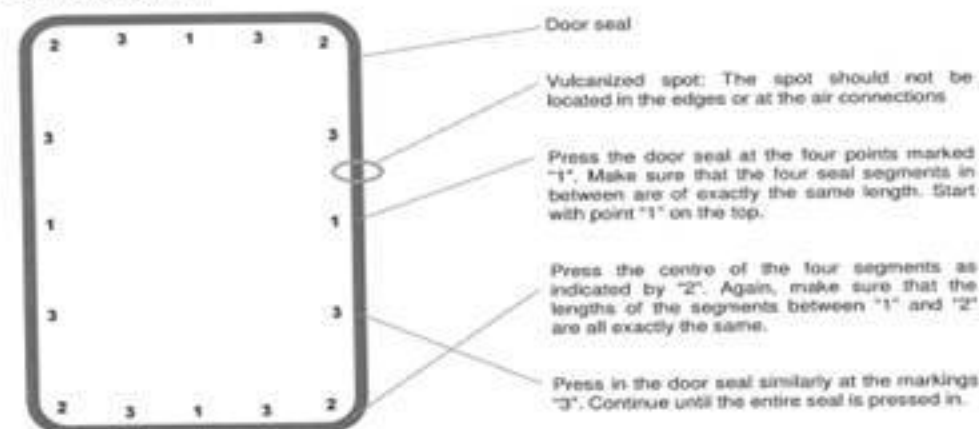
The cover seal is held against the cover flange by compressed air. To ensure that the seal can advance and retract easily, clean and lubricate the seal. Clean and lubricate the groove, door and vessel flanges regularly to prevent abrasion between them.

The cover seal is held against the cover flange by compressed air and will be sucked back before the door opens. To ensure that the seal can advance and retract easily, clean and lubricate the seal. Clean and lubricate the groove, door and vessel flanges regularly to prevent abrasion between them.

Seal replacement



Seal replacement



© 2007 XORELLA AG. All rights reserved.



**Thank you very much
for your
Attention**