



➤ Introduction

➤ Products

➤ Why GGT SRL

➤ Our Customers



## ➤ Introduction

- **Green Gear Trasmissioni Srl** is having state of art manufacturing facility in Asti near Milan spread over 4000 Sq meter.
- **Green Gear Trasmissioni Srl** is having warehouse of area 1000 Sq meter
- **Green Gear Trasmissioni Srl** is maintaining inventory of semi-finished standard products and raw materials to reduce the lead time.





## ➤ Introduction



- Each Member of core team of **Green Gear Trasmissioni Srl** is having over 25 years experience in design & manufacturing of mechanical power transmission products for Steel Industry



- Each member of GGT Sales team is from steel plant + OEM / main technology supplier background
- **Green Gear Trasmissioni Srl** Italy is having partner like RKB International having wide connectivity to customers





## ➤ Introduction

- **Green Gear Trasmissioni Srl** having wide network of European suppliers for raw material
- **Green Gear Trasmissioni Srl** is also having strategic partnership with near by Italian suppliers for treatment and processing which can be used as and when required
- **Green Gear Trasmissioni Srl** is certified with  
ISO-9000-2015 and TUV certification





## ➤ GGT SRL Introduction - Video

[GGT SRL Introduction - Video](#)



## Products



Heavy duty and special Gear Couplings	Elastic Couplings
Gear Spindles	Drawing based special products
Universal Joint Shafts – Light Medium and heavy duty	Gear Box components
Slipper Type Spindles	Hybrid Spindles
Heavy duty Gear Box	Slipper pads and liners
Companion flanges	Roll neck couplings/ Wobblers
Spindle carriers	Coupling box unit
Automatic Oil Lubrication Spindle	Automatic Grease Lubrication Spindle

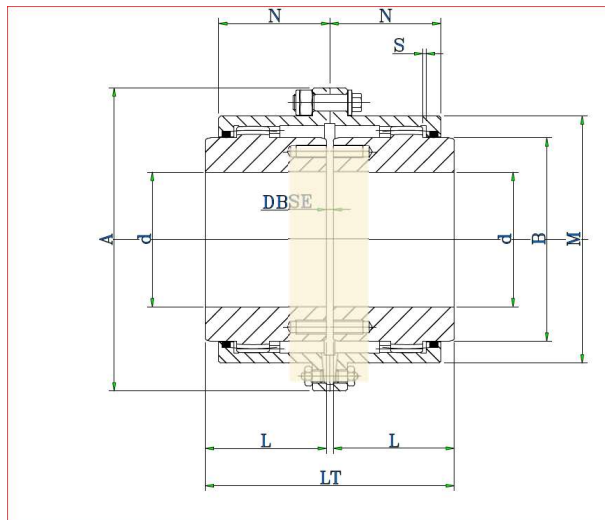


## ➤ Gear Couplings - Standard

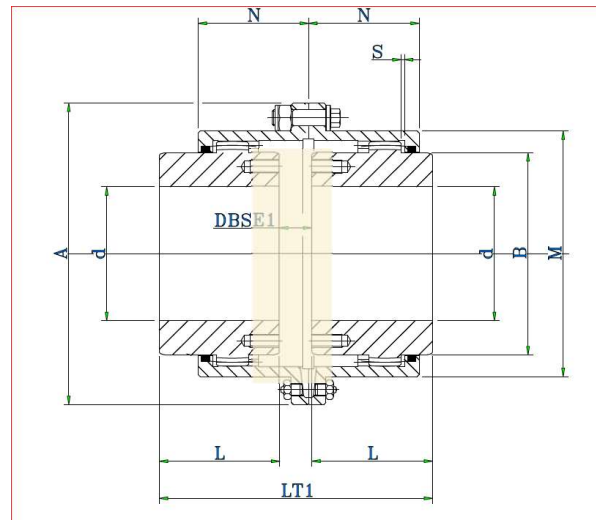
- FGC series Gear Couplings
- FGC-R series Gear Couplings with one hub reverse
- FGC-RR series Gear Couplings with both hub reverse
- FGC-L series Gear Couplings with one Long Hub
- FGC-LL series Gear Couplings with both Long Hubs
- RGC - Series Gear Couplings with one hub rigid



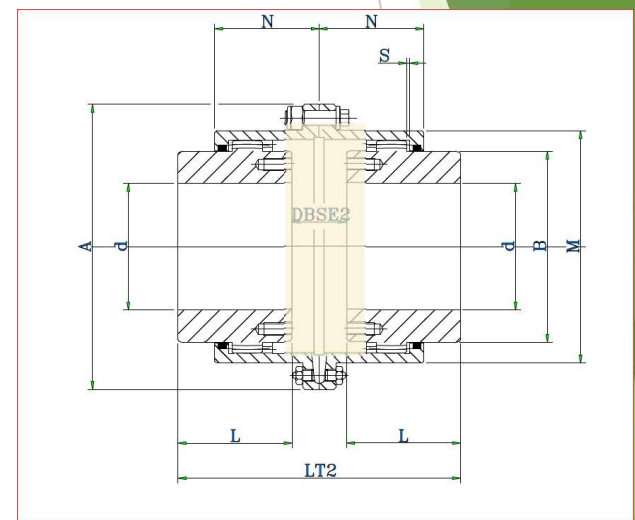
## ➤ Gear Couplings - Standard



**FGC series Gear Couplings**



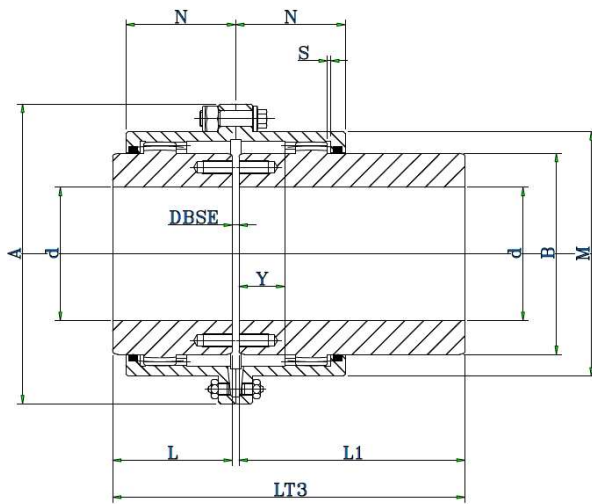
**FGC -R series Gear Couplings**



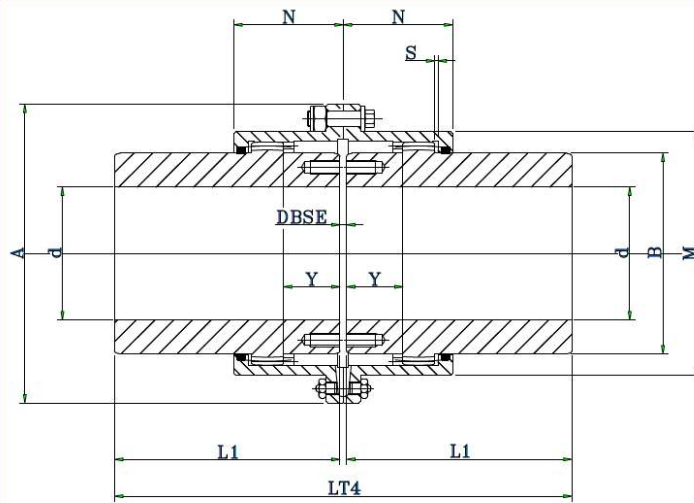
**FGC -RR series Gear Couplings**



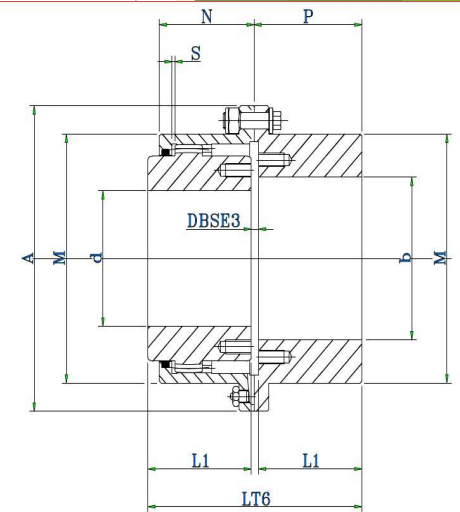
## ➤ Gear Couplings - Standard



**FGC L series Gear Couplings**



**FGC -LL series Gear Couplings**



**RGC series Gear Couplings**



## ➤ Gear Couplings - Heavy Duty

SIZE	MAX BORE d [mm]	Weight [kg]
FGC.531	325	722
FGC.581	370	972
FGC.636	400	1292
FGC.696	430	1695
FGC.762	475	2215
FGC.812	510	2695
FGC.862	530	3150
FGC.937	580	3950
FGC.997	610	4915
FGC.1097	680	6566
FGC.1242	780	9420
FGC.1342	860	12390
FGC.1477	950	15904
FGC.1587	1020	19631
FGC.1687	1090	23543
FGC.1817	1180	29572



## ➤ Gear Couplings - Heavy Duty

- FGC -HD series Gear Couplings

- Material used - 42Cr Mo4





## ➤ Gear Couplings - Heavy Duty

- FGC -HD T series Gear Couplings with Tubular Spacer



- Material used - 42Cr Mo4



## ➤ Gear Couplings - Special

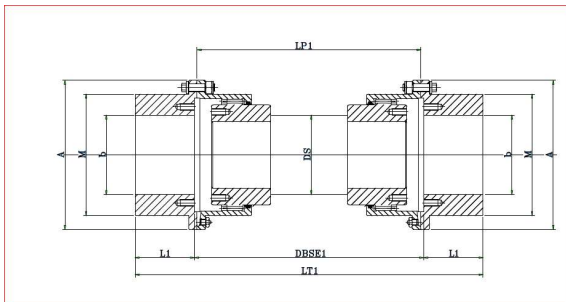
- FGC - FE series Gear Couplings (with Felt seals)
- FGC - EI series Gear Couplings (with Electrical Insulation)
- FGC-SS series Gear Couplings with Stainless Steel
- FGC-TV series Gear Couplings Tubular Spacer for Vertical Application





## ➤ Gear Couplings - Special

- FGC - V series Gear Couplings for vertical Application
- FGC - S series Gear Couplings (with Intermediate floating shaft )
- FGC - SR series Gear Couplings (with Intermediate floating shaft and reverse hub)





## ➤ Gear Couplings - Special

- FGC - BD series Gear Couplings with brake disc
- FGC - BP series Gear Couplings with Brake Pulley
- FGC - SD series Gear Couplings with shear pin safety device





## ➤ Gear Couplings - Special

- FGC - CS series - Continuous Sleeve Gear Couplings

FGC - SG series Sliding - Gear Couplings

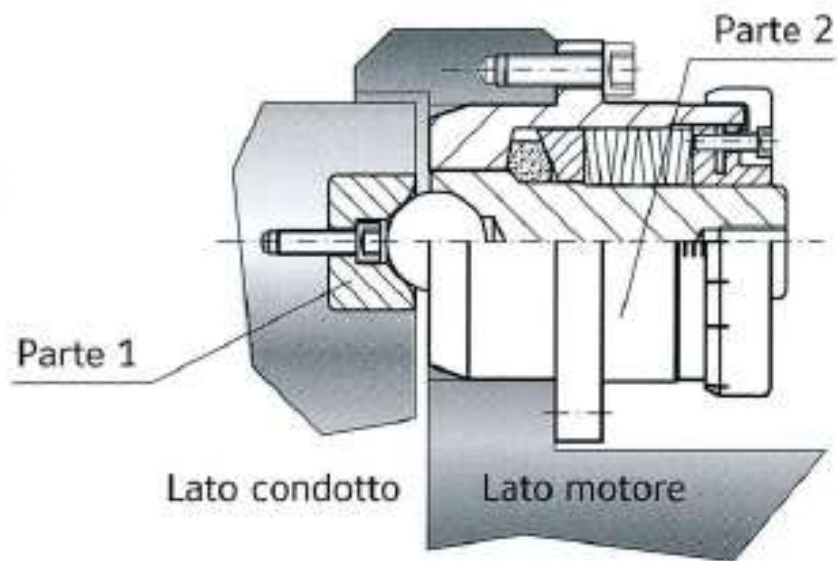
FGC - DI series - Dis engageable Gear Couplings





## ➤ Gear Couplings - Special

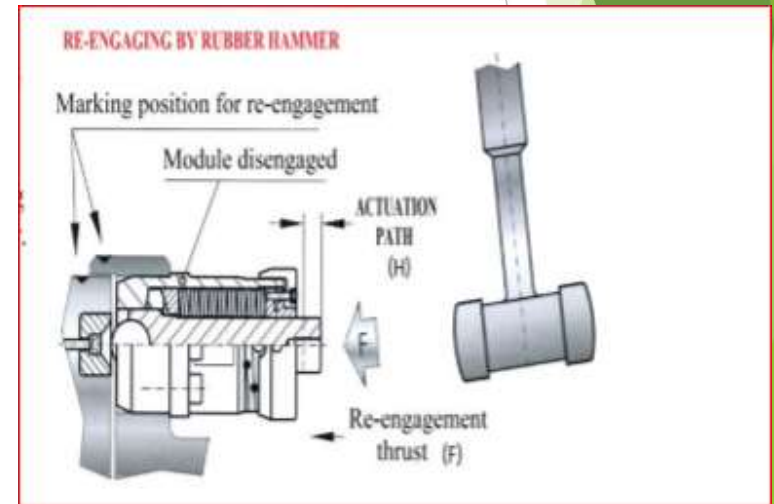
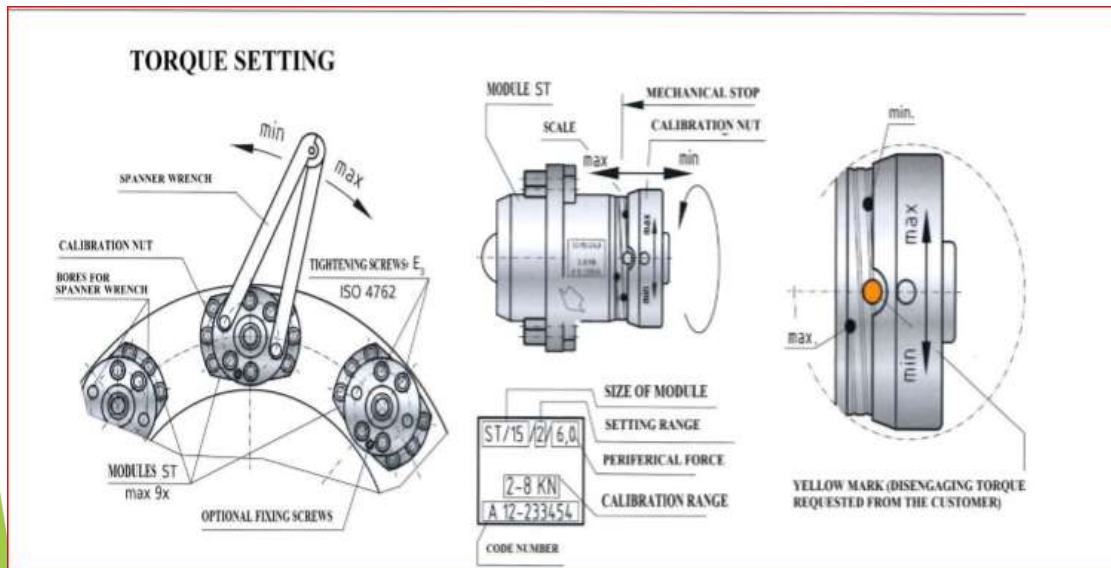
- Couplings assembled with Easy release Module





## ➤ Gear Couplings - Special

- Couplings assembled with Easy release Module





## ➤ Gear Coupling - Video



**Flexible Gear Coupling XXX**

With One Long Hug, Tubular Spacer and Break Disc



## ➤ Gear Spindles

### Basis Types

- Fix intermediate Shaft
- Telescopic intermediate shaft

### Green Gear Trasmissioni Technical Advantages

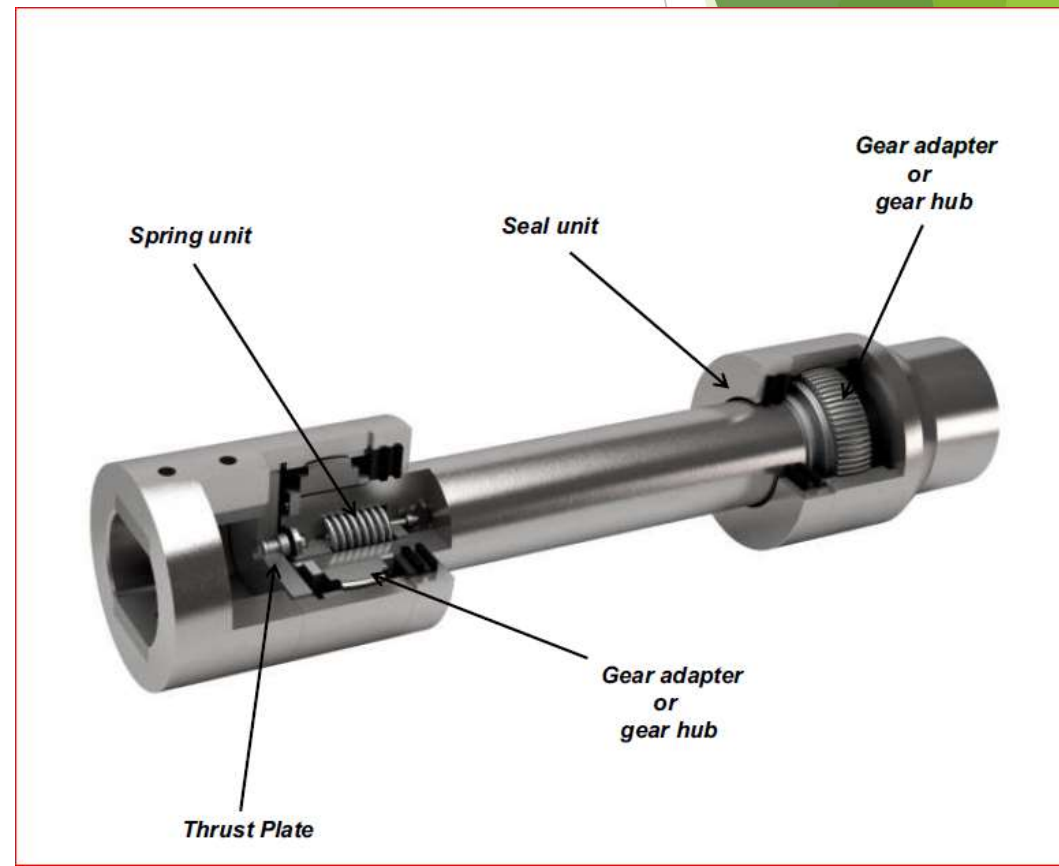
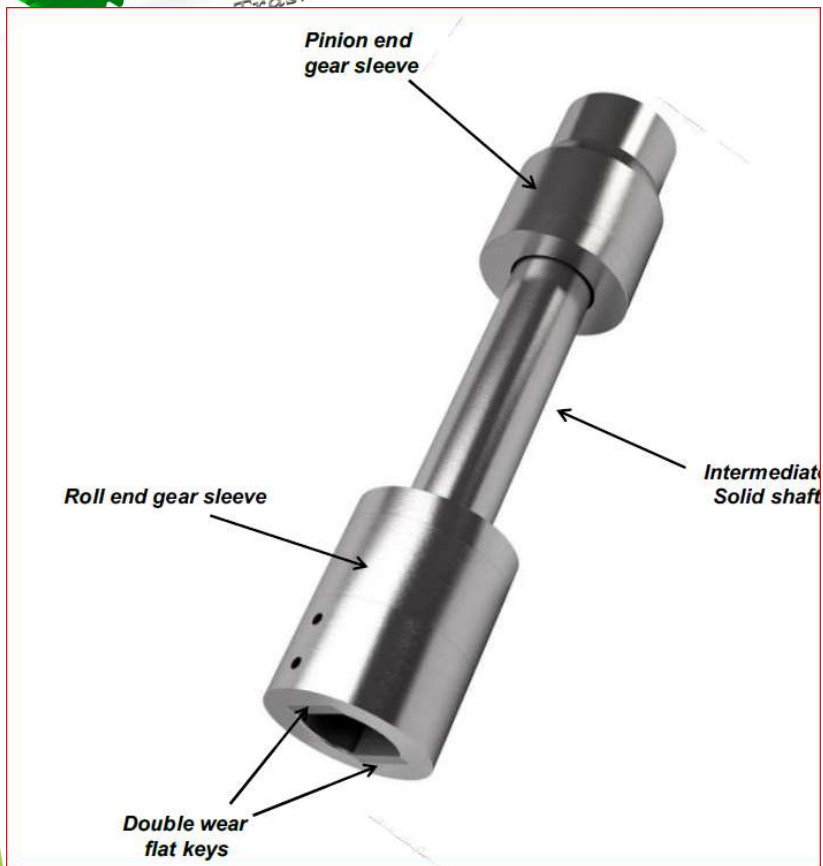
- For transmitting high torque
- Max Static angles allowed 5 Deg
- Max Dynamic angles allowed 3.3 Deg

### Design

Designs are always customized according to technical specifications so that product will be most suitable for the required application.



## ➤ Gear Spindles





## ➤ Gear Spindles

### Applications

- Flat Products
  - Hot Strip Mill (Ferrous & Non-Ferrous)
  - Cold Rolling mill (Ferrous & Non-Ferrous)
  - Plate mill

### Long Products

- Bar Mill including threaded bars
- Wire rod mill
- Section mill
- Merchant Mill
- Rail mill
- Pipe Plants
  - Multi pipe mill
  - Seamless Tube plants (PQF/ FQM)





## ➤ Gear Spindles



Fig.18



Fig.19

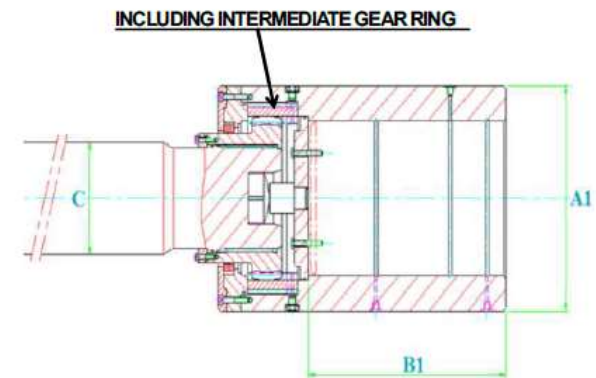


Fig.20



Fig.21

### MILL GEAR SPINDLES FOR HOT & COLD ROLLING MILL



TYPE 3						
SIZE	Tk [kNm]	Tmax [kNm]	MAX SPEED [rpm]	d3 [mm]	A1 [mm]	B1 [mm]
GF.290	177	444	2004	210	290	205
GF.320	223	558	1770	230	320	225
GF.360	316	790	1579	260	360	260
GF.400	400	1000	1310	290	400	295
GF.440	615	1538	1190	320	440	320
GF.490	739	1848	1056	355	490	360
GF.540	1240	3100	932	390	540	400
GF.590	1395	3488	835	425	590	425
GF.650	2121	5302	755	470	650	470
GF.710	2479	6198	670	510	710	520
GF.770	3079	7696	605	560	770	560
GF.840	3755	9388	555	600	840	620
GF.910	4935	12338	495	660	910	630
GF.980	5711	14276	434	710	980	715



## ➤ Gear Spindles

Selection of right material and treatment is having very vital role in the capacity of gear spindle

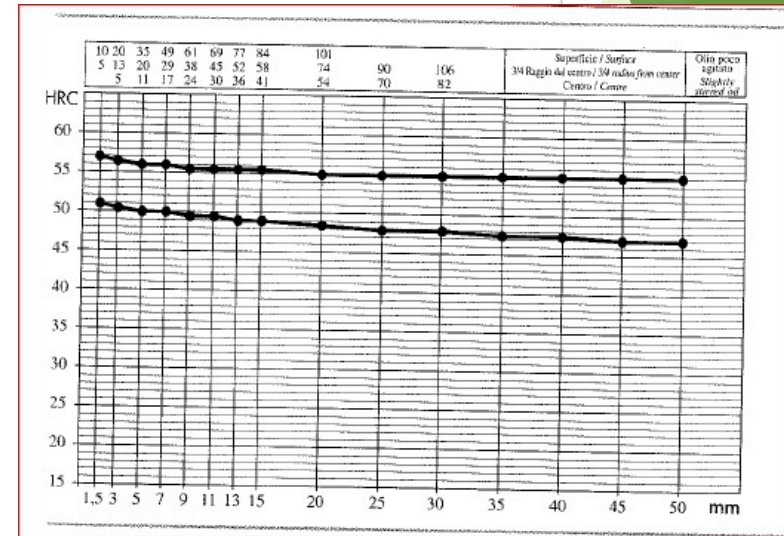
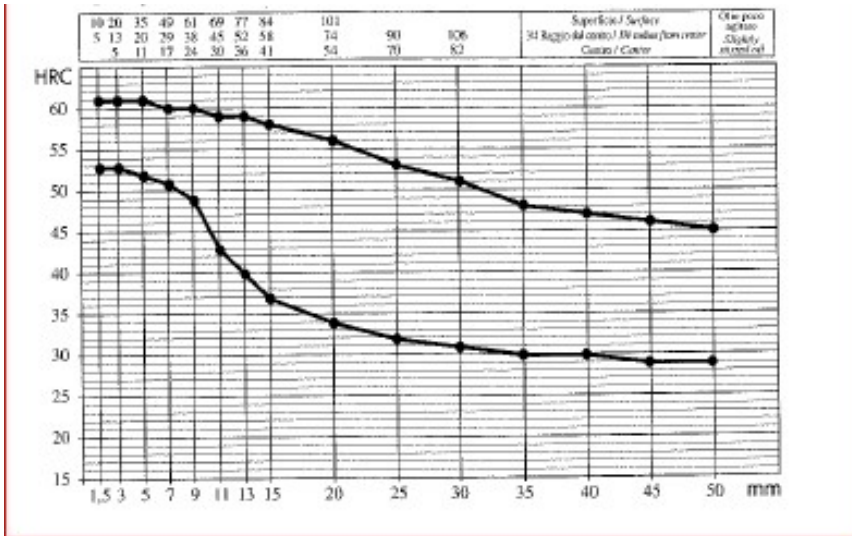
Same size of gear spindle manufactured with type 4 is having almost **4 times higher** capacity than manufactured with type 1

Type	Material	Treatment
Type 1	42 Cr Mo4	Gas Nitriding
Type 2	31 Cr Mo 12	Gas Nitriding
Type 3	41 Cr Al Mo7	Gas Nitriding
Type 4	X38Cr Mo V 51	

	NOMINAL TORQUE Tk [kNm]				MAX TORQUE Tk [kNm]			
SIZE	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 1	TYPE 2	TYPE 3	TYPE 4
GF275	106	151	177	393	264	378	444	982
GF290	124	178	209	463	311	445	523	1157
GF300	133	190	223	494	332	475	558	1235
GF315	147	210	247	546	367	525	617	1365
GF330	188	269	316	699	470	673	790	1749
GF345	211	302	355	785	528	755	887	1963
GF360	227	325	382	845	568	813	955	2113
GF375	244	349	410	907	610	873	1025	2269
GF395	337	482	566	1253	843	1205	1416	3133
GF415	376	538	632	1399	941	1345	1580	3497
GF675	1476	2110	2479	5697	3689	5275	6198	14243
GF710	1832	2620	3079	7074	4580	6550	7696	17685
GF740	1979	2830	3325	7641	4948	7075	8313	19103
GF770	2129	3044	3577	8219	5322	7610	8942	20547
GF800	2280	3260	3831	8802	5699	8150	9576	22005
GF835	2937	4200	4935	11340	7343	10500	12338	28350
GF870	3171	4535	5329	12245	7928	11338	13322	30611
GF905	3399	4860	5711	13122	8497	12150	14276	32805
GF940	3643	5210	6122	14067	9108	13025	15304	35168



## ➤ Gear Spindles



Variation in the hardness across the depth is less in Type 2 compared to Type 1



## ➤ Gear Spindles

**Selection of right material and treatment is having very vital role in the capacity of gear spindle**

For selection of material for gears - Young Modulus and Yield limit are not enough, as gears will fail due to wear and fatigue in critical tension spots. It is required to look for the properties that relate with these factors.

**Fatigue and wear resistance** also needs to be considered wherever there is force, speed and contact, which is the general case with gears.

**Material hardness** - This can be improved with heat induction treatments with carbon rich gases.

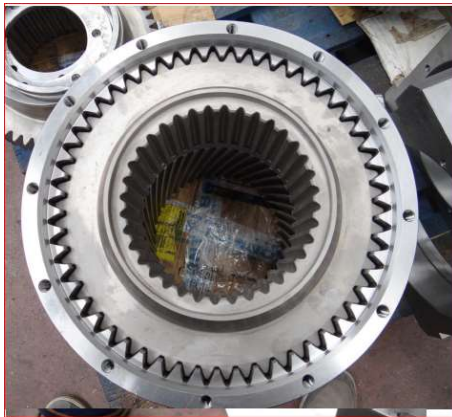
**Fatigue limit** - it is a ratio of the elastic yield limit. This tells after how many cycles the metal will start cracking with a certain applied pressure.

**Ductile-to-brittle-transition** - applied to cold environments, and for material softening in hot environments.

**Dilatation and thermal fatigue** will also play a part.

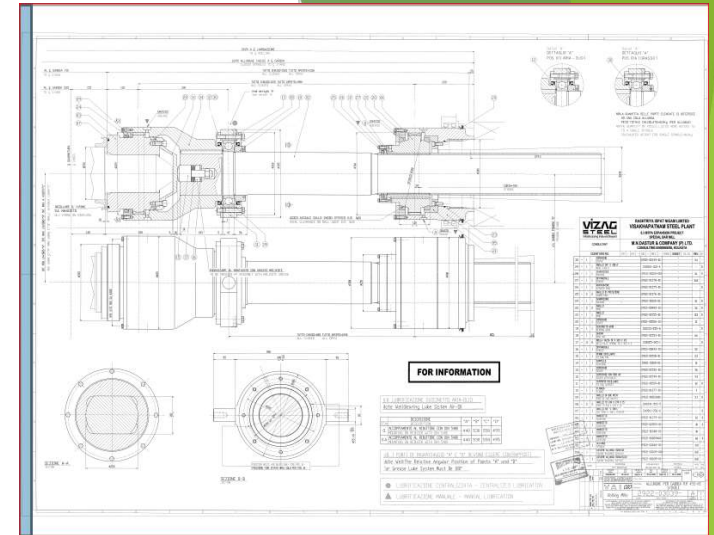


## ➤ Gear Spindles



## Actual Pictures



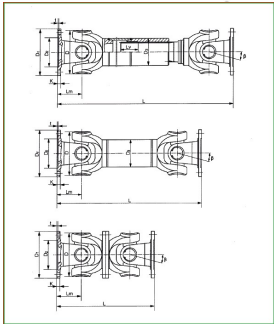




## ➤ Universal Joint Shafts

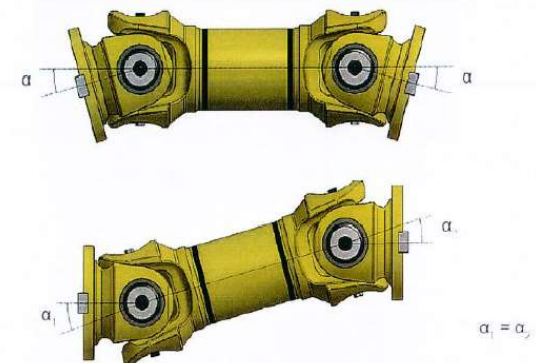
### Basis Types

- Light Duty - US-A
- Medium Duty - US-B
- Heavy Duty - US -C
- Tunnel Type - US-F



### Green Gear Trasmissioni Technical Advantages

- Monolithic design Yokes
- Maximum allowable Misalignment
- Minimum Torsion
- Bearing lifetime, design and make
- Appropriate heat treatment
- Welding quality
- Dynamic Balancing





## ➤ Universal Joint Shafts

### UNIVERSAL SHAFT

WITH TAYLOR-MADE SLIDE, WELDED YOKES AND COMPANION  
FLANGES WITH KEYWAYS



#### HIGH QUALITY COMPONENTS

*Selected suppliers to guarantee  
lifetime protection*



#### MONOLITHIC YOKE

*Demanding applications*



#### SPLINED SHAFT

*Precision made to avoid vibrations.  
Splined shafts treated with gas  
nitriding/induction hardening*





## ➤ Universal Joint Shafts

## Design Calculations

1. The universal shafts are selected according to their load features, calculated torques, bearing lifetime, rotation speed and working angle.
 

$$T_c = K T \dots\dots\dots (1)$$

$$T = 9550 \frac{P_w}{n} \dots\dots\dots (2)$$

$$T = 7020 \frac{P_H}{n} \dots\dots\dots (3)$$

**(1), (2) and (3) where:**  
 **$T_c$**  = Calculated torque [Nm]  
 **$T$**  = Nominal torque [Nm]  
 **$P_w$**  = Motor power [kW]  
 **$P_H$**  = Motor power [kW]  
 **$N$**  = Rotation speed [rpm]  
 **$K$**  = Service factor
2. The calculated torque is given by the following formulas **(1)**, **(2)** or **(1)**, **(3)**:
3. Generally, the universal shafts are selected following the torque to be transmitted and the expected bearing lifetime.
 

**(4) where:**  
 **$T_c$**  = Calculated torque [Nm]  
 **$T_n$**  = Nominal torque [Nm] (theoretically calculated, according to the following conditions, for example: shaft speed  $n = 10$  rpm, angle  $\beta = 3^\circ$  and bearing lifetime  $L_N = 5000$  hours under load).  
 **$T_f$**  = Fatigue torque suitable for alternate loads [Nm]  
 **$T_p$**  = Pulsating torque suitable for pulsating loads [Nm]  
 **$T_p = 1.45 T_f$**
4. Check the torque following the formula **(4)**:  
 **$T_c \leq T_n$  or  $T_c \leq T_f$  or  $T_c \leq T_p$ .....**(4)****
5. Check the bearing lifetime following the formula **(5)**:  $L_N = \frac{K_L}{K_1 n \beta T^{10/3}} \times 10^{10} \geq L_{min}$
6. In case the universal shaft has both horizontal and vertical misalignment, its composite misalignment is calculated by the formula **(6)**:  $\lg \beta = \sqrt{\lg^2 \beta_1 + \lg^2 \beta_2}$   
 where  $\beta$  is the composite angle,  $\beta_1$  is the horizontal angular misalignment and  $\beta_2$  the vertical one.
7. If the flange diameter is 390 mm or smaller, the formulas **(7)** and **(8)** shall be used to check the rotation maximum speed:  
 $n_{max} \leq n\beta$ .....**(7)** maximum permissible speed on working angle – Figure 7.1  
 $n_{max} \leq nL$ .....**(8)** maximum permissible speed on operating length – Figure 7.2



## ➤ Universal Joint Shafts

Service Factors is having very important role in the design of universal joint shafts

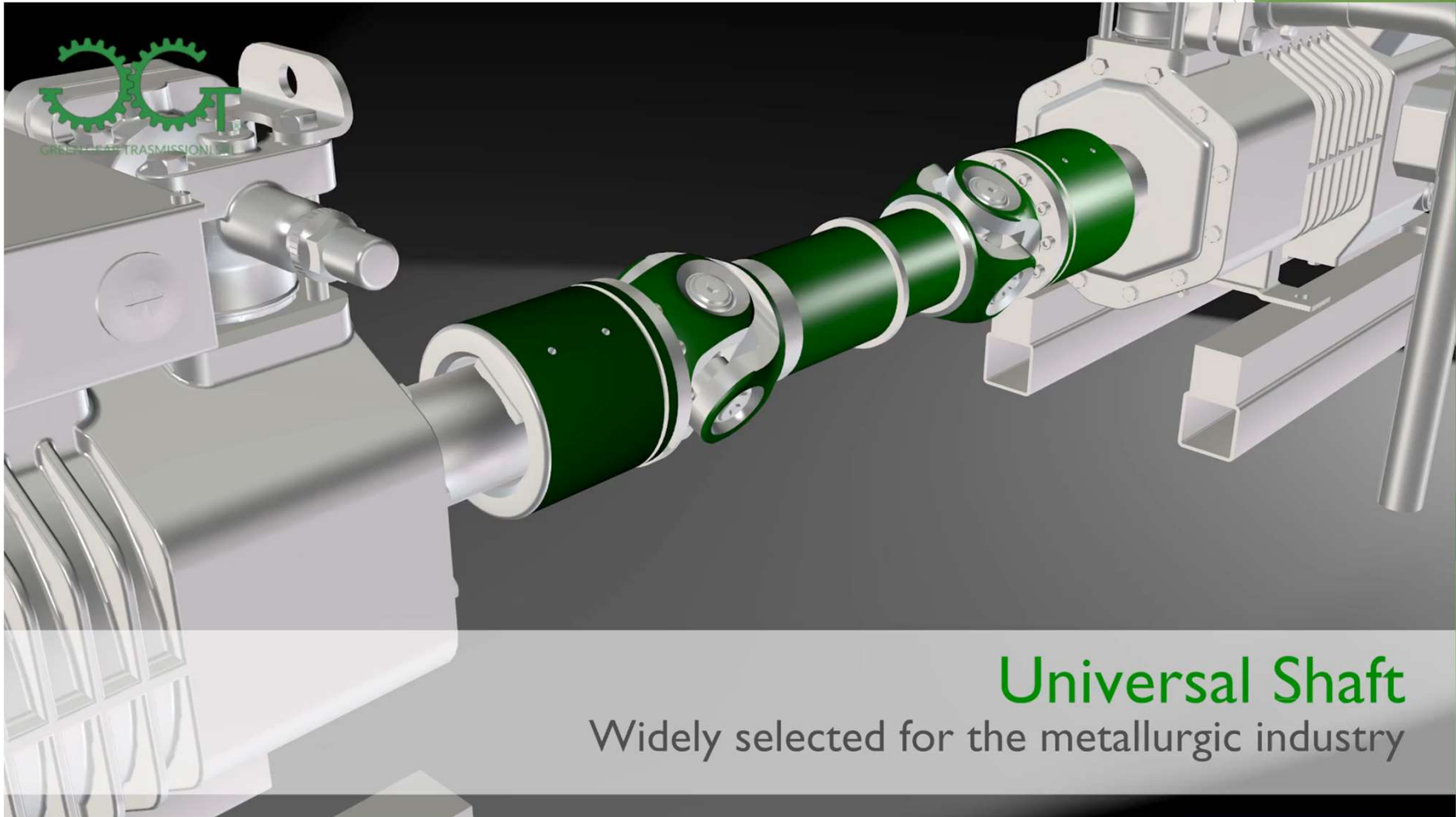
SERVICE FACTORS	DRIVEN EQUIPMENT	K
LIGHT SHOCK LOAD	Generators Centrifugal pumps Ventilators Wood handling machines Belt conveyers	1.1 ~ 1.3
MEDIUM SHOCK LOAD	Compressor (multi cyl.) Pumps (multi cyl.) Small section mills Continuous wire mills Conveyer primary drives	1.3 ~ 1.8
HEAVY SHOCK LOAD	Paper machines Marine transmissions Transport roller tables Continuous tube mills Continuous working roller tables Medium section mills Compressors (single cyl.) Pumps (single cyl.) Mixers Presses Straightening machines Crane driver Ball mills	2 ~ 3
EXTRA HEAVY SHOCK LOAD	Crane accessory driver Crushers Reversing working roller tables Reeling drives Scale breakers Blooming stands	3 ~ 5
EXTREME SHOCK LOAD	Feed roller drives Plate shears	6 ~ 15



## ➤ Universal Joint Shafts

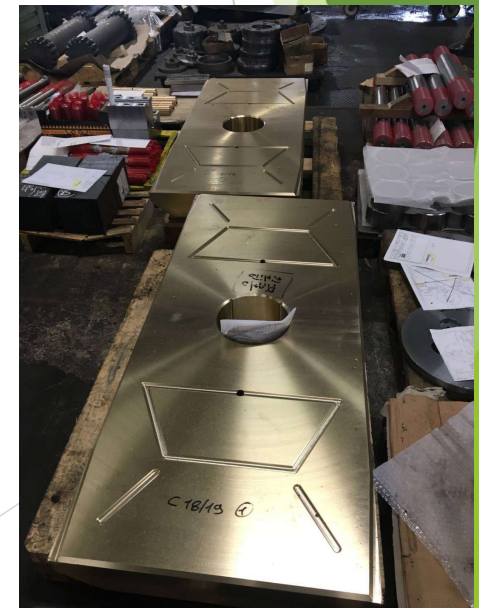


## ➤ Universal Joint Shaft - Video



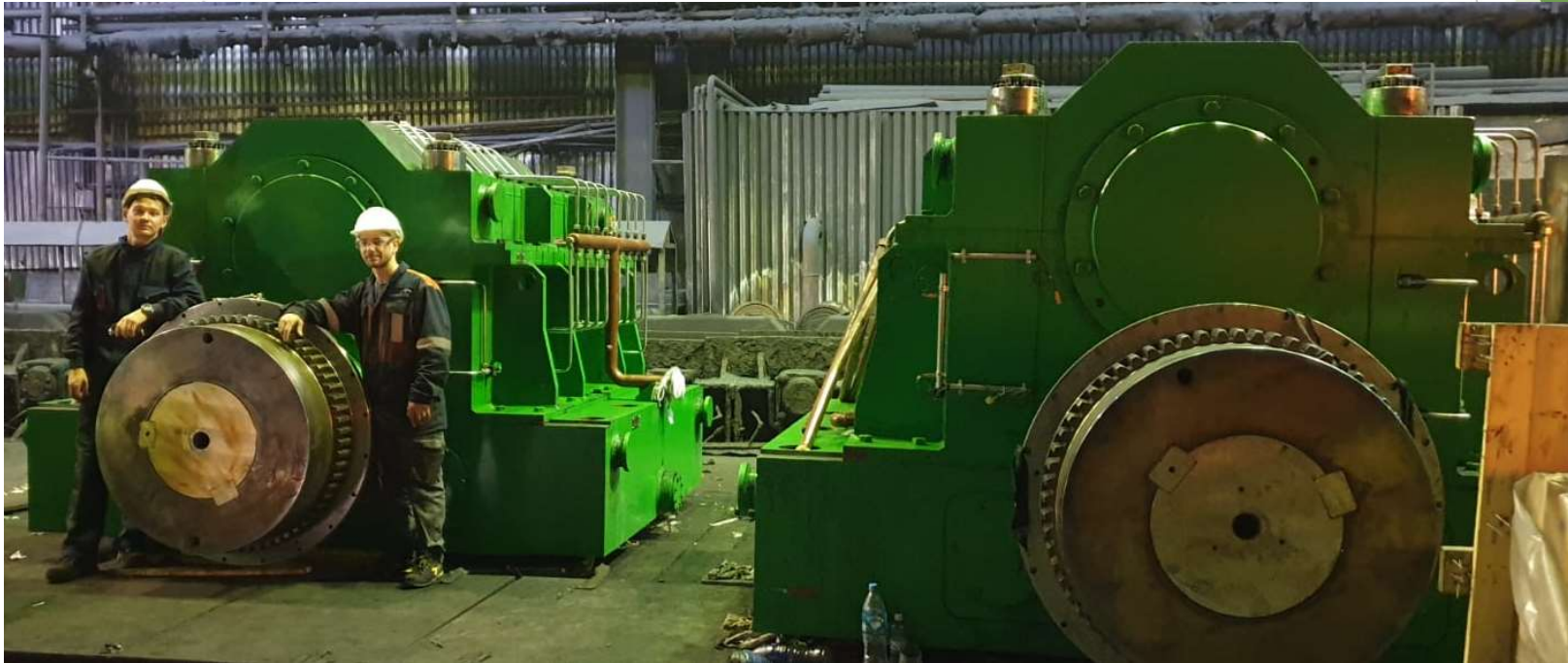


## ➤ Slipper Type of Spindles



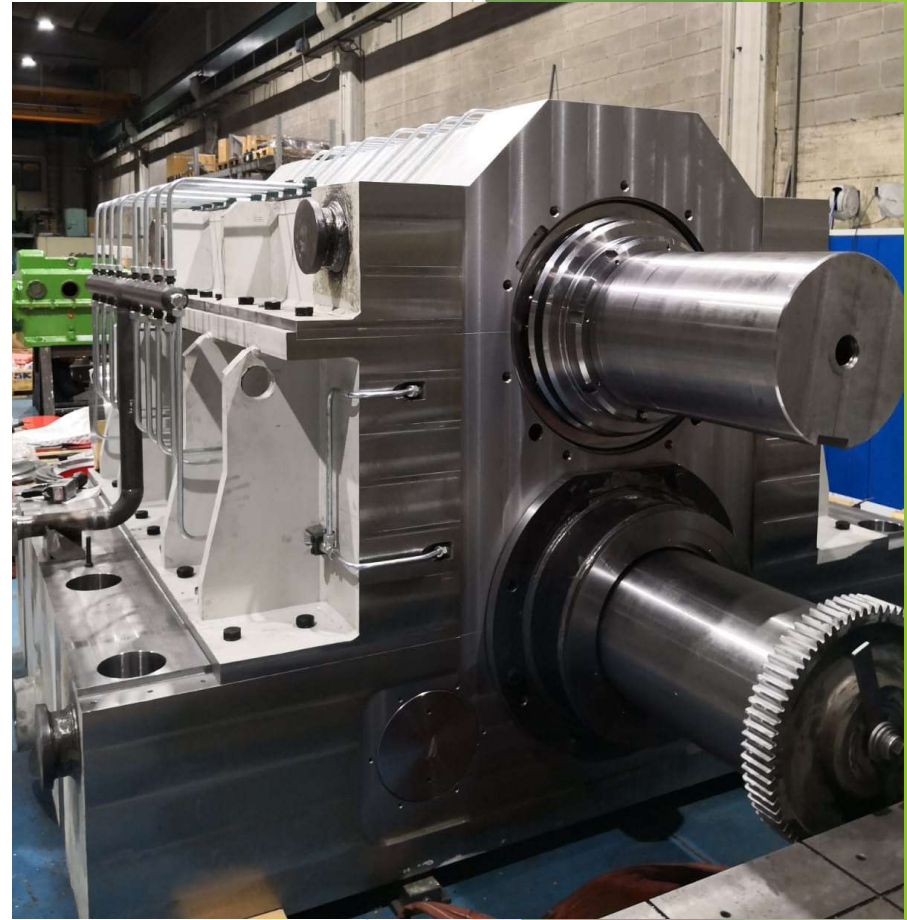


## ➤ Gear Box





## ➤ Gear Box





## ➤ Gear Box Components





## Why Green Gear Transmission?

1. Experienced Team
2. Selection of material & Process
3. Design Specialties
4. Manufacturing facility
5. Service Support
6. Low cost



Experienced Team

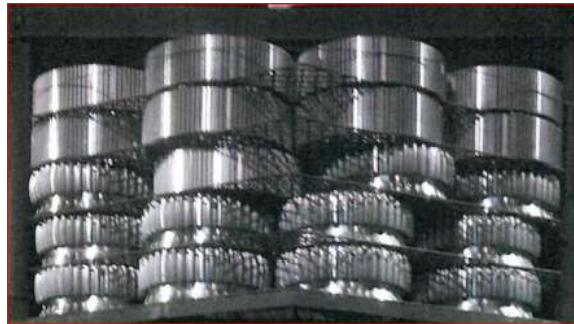
## Why Green Gear Transmission?

- ✓ Mr. Mario Martone - CEO
- ✓ Mr. Fulvio - Design Chief
- ✓ Mr. Caci Romeo - Sales and Service
- ✓ Mr. Allesandro Masscio - Order Execution
- ✓ Ms. Michela - CFO



## ➤ Why Green Gear Trasmissioni?

### Selection of material & Process



Forgings Parameters	Details
Reduction Ratio	Up to 5:1
Grades	31CrMo12, 41CrAlMo7
Hardness	950 HV
Useful Depth	Maximum
Country of Origin	Italy / Europe

Component	Grade	Process	Details
Gear Hubs	41CrAlMo7 QT	Nitriding	1.3 mm useful Depth , 950 HV Hardness
Intermediate Gear Rings	31CrMo12 QT	Nitriding	1.1 mm useful Depth , 850 HV Hardness
Flat Wear Keys	18NiCrMo5 QT	Carburised / Ground	High surface hardness > 58HRC



DUREZZA SU PROVINO	Sample hardness	
DUREZZA CUORE PROVINO	Core hardness sample	HV 320
PROFONDITA' SU PROVINO	Depth on sample	1,32 mm (480 HV)
STRUTTURA	Structure	CB 24 um
DUREZZA SUL PEZZO	Piece hardness	HV1 996/1112





## ➤ Why Green Gear Transmission?

Design Specialties

Parameters	Details
Upgraded and improved gear teeth profile	Increases number of teeth in contact
Reduced male and female gear teeth	Keeping required angle same
Special Drill Shape	Bottom of hole will be in a round shape to avoid stress concentration - eliminates cracking
Socket head threaded keys	Ensure tightness under every situation
Providing step to release the force	It will prevent breakage of screw



## ➤ Why Green Gear Trasmissioni?

State of the Art Manufacturing Facility  
Machining Lathes

### In house manufacturing

#### **TORNIO BIGLIA B1200M** **CNC HORIZONTAL LATHE**

Max lenght: 1200 mm  
Max outer diameter: 300 mm



#### **TORNIO WEBSTER AND BENNET** **CNC VERTICAL LATHE**

Max lenght: 1400 mm  
Max outer diameter: 1500 mm



#### **TORNIO COMEV PICOTRE 500** **CNC HORIZONTAL LATHE**

Max lenght: 3000 mm  
Max outer diameter: 1100 mm



#### **TORNIO COMEV LEONARDO 300** **CNC HORIZONTAL LATHE**

Max lenght : 2000 mm  
Max outer diameter: 600 mm





## ➤ Why Green Gear Trasmissioni?

State of the Art Manufacturing Facility  
Machining Lathes

### **TORNIO RIFA RFCL80 CNC VERTICAL LATHE**

Max lenght: 500 mm  
Max outer diameter: 800 mm



### **TORNIO DOOSAN PUMA V8300 CNC VERTICAL LATHE**

Max lenght: 700 mm  
Max outer diameter: 800 mm



In house manufacturing

### **TORNIO TORGIM 360 MANUAL HORIZONTAL LATHE**

Max lenght: 3200 mm  
Max outer diameter: 720 mm



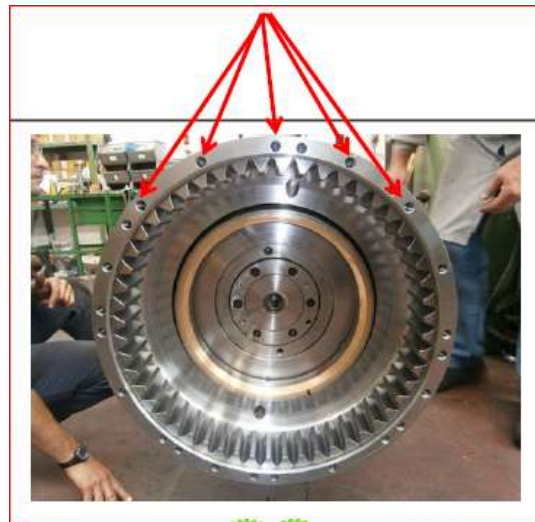


## ➤ Why Green Gear Trasmissioni?

State of the Art Manufacturing Facility  
Milling / Drilling Machines

### **CENTRO DI LAVORO AWEA BM1400 CNC WORK-CENTER (MILLING/DRILLING)**

Max height: 850 mm  
Max lenght: 1400 mm  
Max width: 700 mm



### **CENTRO DI LAVORO AWEA BM1200 CNC WORK-CENTER (MILLING/DRILLING)**

Max height: 850 mm  
Max lenght: 1200 mm  
Max width: 700 mm



## ➤ Why Green Gear Trasmissioni?



State of the Art Manufacturing Facility  
Gear Cutting Machines

In house manufacturing

### **DENTATRICE LIEBHERR LC1002 CNC GEAR CUTTING MACHINE**

Max height: 1500 mm  
Max outer diameter: 1200 mm



### **DENTATRICE MITSUBUSHI SB40 CNC GEAR CUTTING MACHINE – 7 AXIS**

Max height: 600 mm  
Max outer diameter: 500 mm





## ➤ Why Green Gear Trasmissioni?

State of the Art Manufacturing Facility  
Wire Cut Machines , Grinding Machines

In house manufacturing

### ROBOT

#### ROBOT FOR AUTOMATIC LATHE/WORK-CENTER LOADING

Max height: mm  
Max lenght: mm  
Max width: mm



### LAPIDELLO ALPA TANGENTIAL GRINDING MACHINE

Max height: 300 mm  
Max lenght: 1000 mm  
Max width: 300 mm



### EDM WIRECUT KD800CL CNC WIRECUT

Max height: 700 mm  
Max outer diameter: 800 mm





## ➤ Why Green Gear Trasmissioni?

In house manufacturing

State of the Art Manufacturing Facility  
Material Handling and other miscellaneous machines

### OTHER MACHINES AND TOOLS

- ❖ SHARPENER WALTER
- ❖ GRINDING WHEEL FUMAGALLI RTA60
- ❖ BENCH GRINDING WHEEL NUTOOL BT200
- ❖ BAND SAW OPUS 400 BSC-3 for pipe cutting
- ❖ WEIGHTING MACHINE WE-T
- ❖ BRIDGE CRANE X 2(Max load Kg)
- ❖ BIRDGE CRANE SMI (Max load 3000 Kg)
- ❖ FLAG CRANE ELEPHANT (Max load 2000 Kg)
- ❖ FLAG CRANE ELEPHANT (Max load 1000 Kg)
- ❖ FLAG CRANE DAUTEL (Max load 1000 Kg)
- ❖ BRIDGE CRANE PARACCHI (Max load 6300 kg) x 2
- ❖ GAS FORKLIFT HYSTER (Max load 3000 kg)
- ❖ ELECTRICAL FORKLIFT NISSAN (Max load 1500 kg)
- ❖ MANUAL FORKLIFT CROWN (Max load 1000 kg)
- ❖ ELECTRICAL FORKLIFT JUGHEINRICH(Max load 2000 kg)
- ❖ DIESEL FORKLIFT HYSTER( Max load 5000 kg)
- ❖ MARKING MACHINE BERNA
- ❖ HARDNESS TEST MACHINE ERNST
- ❖ MICROMETERS AND CALIBERS

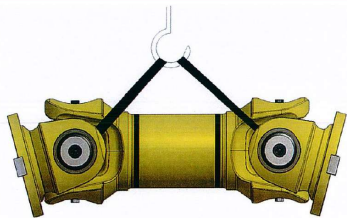




## ➤ Why Green Gear Trasmissioni?



1. Repair facility in Italy
2. Experienced team can be deployed anywhere in the world in case of AMC



***USE & MAINTENANCE MANUAL***

DANGER Transport and store in horizontal position.  
DANGER Select the lifting equipment according to the weights shown in our drawings or in our catalogue.

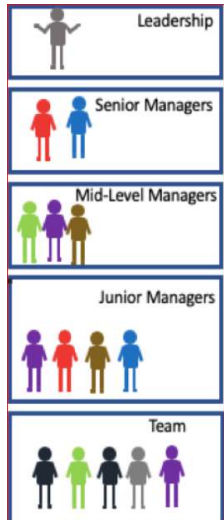


## ➤ Why Green Gear Trasmissioni?



Reconditioning of GWB Cardon Shafts  
done by GGT

# Why Green Gear Transmission?



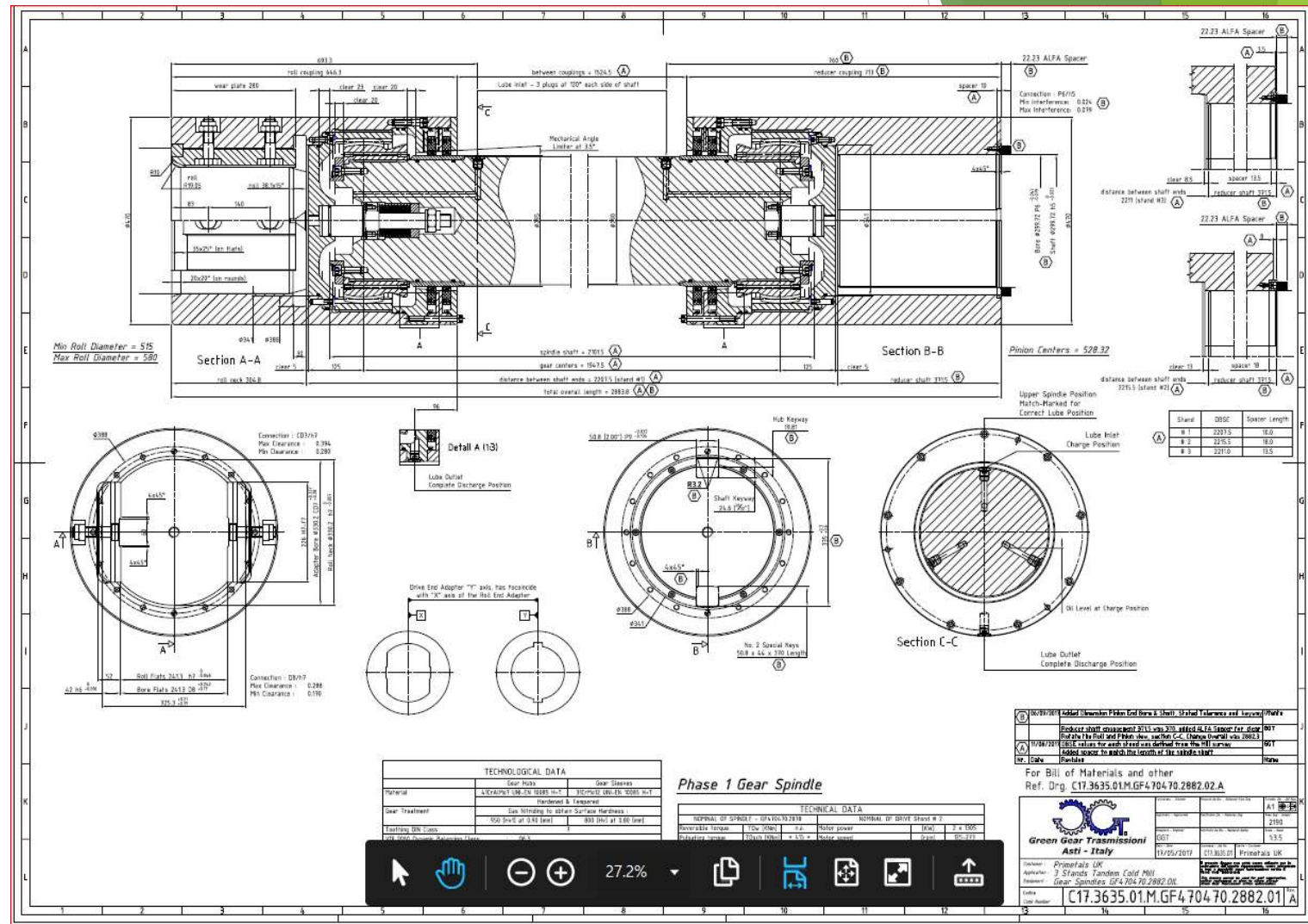
- Small Organization
- Lean and Inhouse manufacturing
- Savings through Design

Low Cost





# ➤ Special Product - Oil Lub Spindle





## ➤ Special Product - Oil Lub Spindle

### Design Parameters

NOMINAL OF SPINDLE - GF470470.2878			NOMINAL OF DRIVE Stand # 2		
Reversible torque	TDw [KNm]	n.a.	Motor power	[KW]	2 x 1305
Pulsating torque	TDsch [KNm]	* 415 *	Motor speed	[rpm]	125-273
Max peak torque	Tf [KNm]	1200	Reducer ratio		---
Max speed	nmax [rpm]	1500	Max Rolling Torque (60/40)	[KNm]	* 125.6 *
Max dynamic angle	Dyn°	* 1.30° *	Max Peak Torque	[KNm]	251.2
Max design angle	Des°	3.50°	Spindle Speed range	[rpm]	125-273
Service factor	SF	* 3.30 *	Load angle ( $\Delta$ parallel 43.8 mm)	[°]	* 1.29° *
			No load angle ( $\Delta$ para. 93.1 mm)	[°]	* 2.75° *



## ➤ Special Product - Oil Lub Spindle

TECHNOLOGICAL DATA			
	Gear Hubs		Gear Sleeves
Material	41CrAlMo7 UNI-EN 10085 H+T		31CrMo12 UNI-EN 10085 H+T
	Hardened & Tempered		
Gear Treatment	Gas Nitriding to obtain Surface Hardness :		
	950 [Hv1] at 0.90 [mm]		800 [Hv] at 0.80 [mm]
Toothing DIN Class	7		
VDI 2060 Dynamic Balancing Class	:	Q6.3	
Dynamic Balancing Speed	:	450 [RPM]	
Mass	[M]	2190	[Kg]
Mass Moment of Inertia	[J]	53.8	[Kgm2]
Lubrication Type	:	OIL FILLING	
Lubricant Quantity	:	2.2 [liter] each coupling	
Lubricant Type	:	Gear Oil 1500 (Molub-Alloy) or equivalent	



## ➤ Special Product - Oil Lub Spindle

### Special Oil Lubrication Gear Spindle

GGT new style of gear spindles with special oil lubrication has been tested successfully at an important Cold Rolling Mill located in TATA Steel South Wales since 2017 .

The result is unique: during these first 2 years of operation at the maximum capability of production of the 5-stands tandem mill, GGT gear spindles didn't get any wear in the teeth surfaces and most of all got only 4 times maintenance interventions. Once every 6 months.

Usual oil lubrication gear spindles have to be installed together with all the heavy structure around the spindles, composed of oil containers and oil pumping system. While, GGT special oil lubrication gear spindles don't need any kind of structure

This new type of oil lubrication gear spindles can be installed at both for new installation and for any revamping. This revolutionary gear spindles can also replace even grease lubrication gear spindles currently in operation

The evolution is in the geometry and design of the internal components and in the type of oil.



## ➤ Special Product - Oil Lub Spindle



Pump used to replace oil in  
Special Oil lubrication Spindle



➤ **Special Product - Grease Lub Spindle**

Increasing References

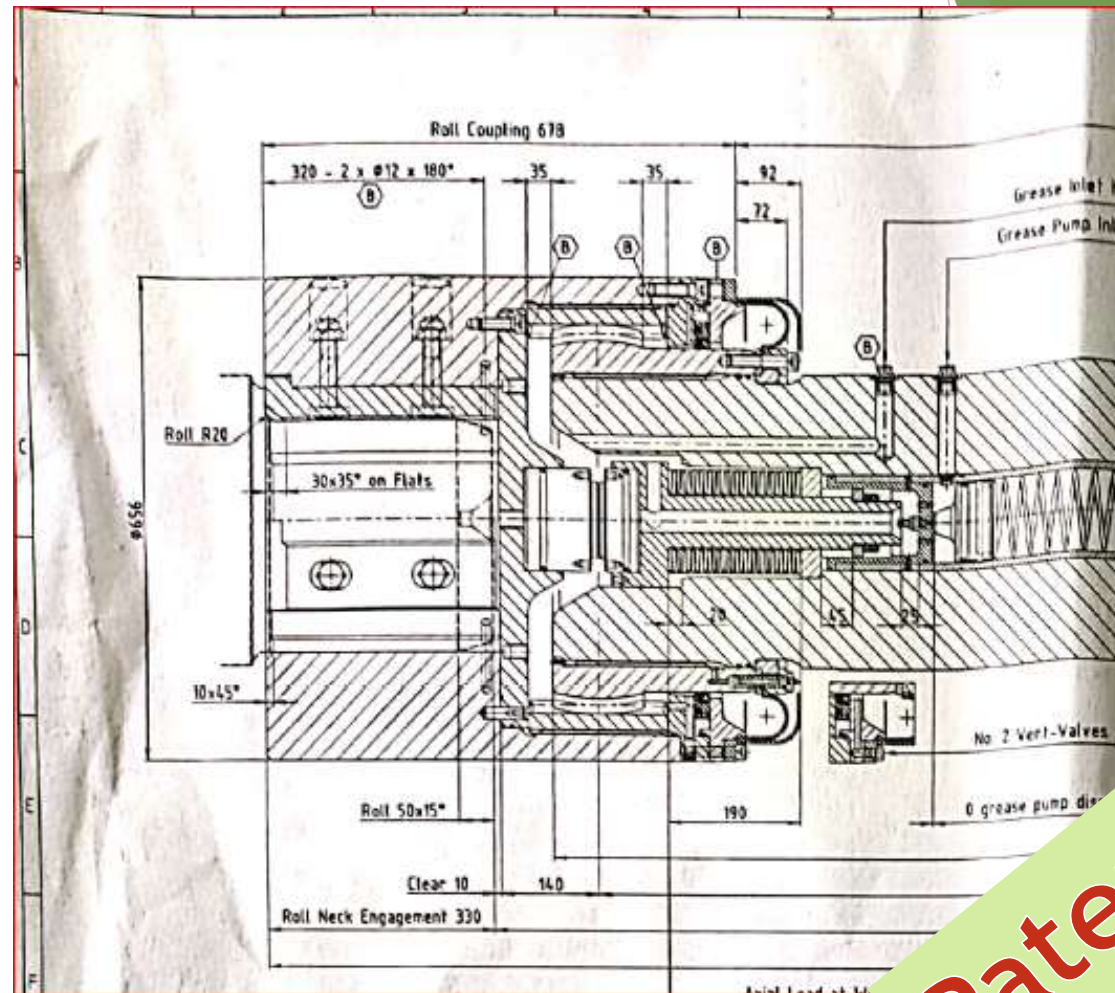
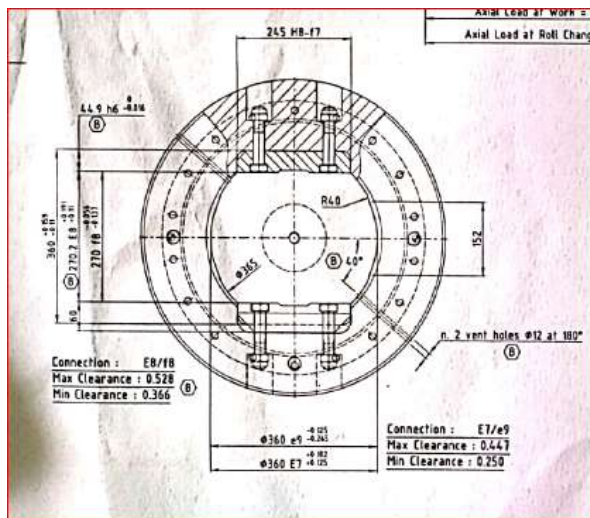


**Automatic Grease Lubrication Spindle Arcelor Mittal**





Increasing References



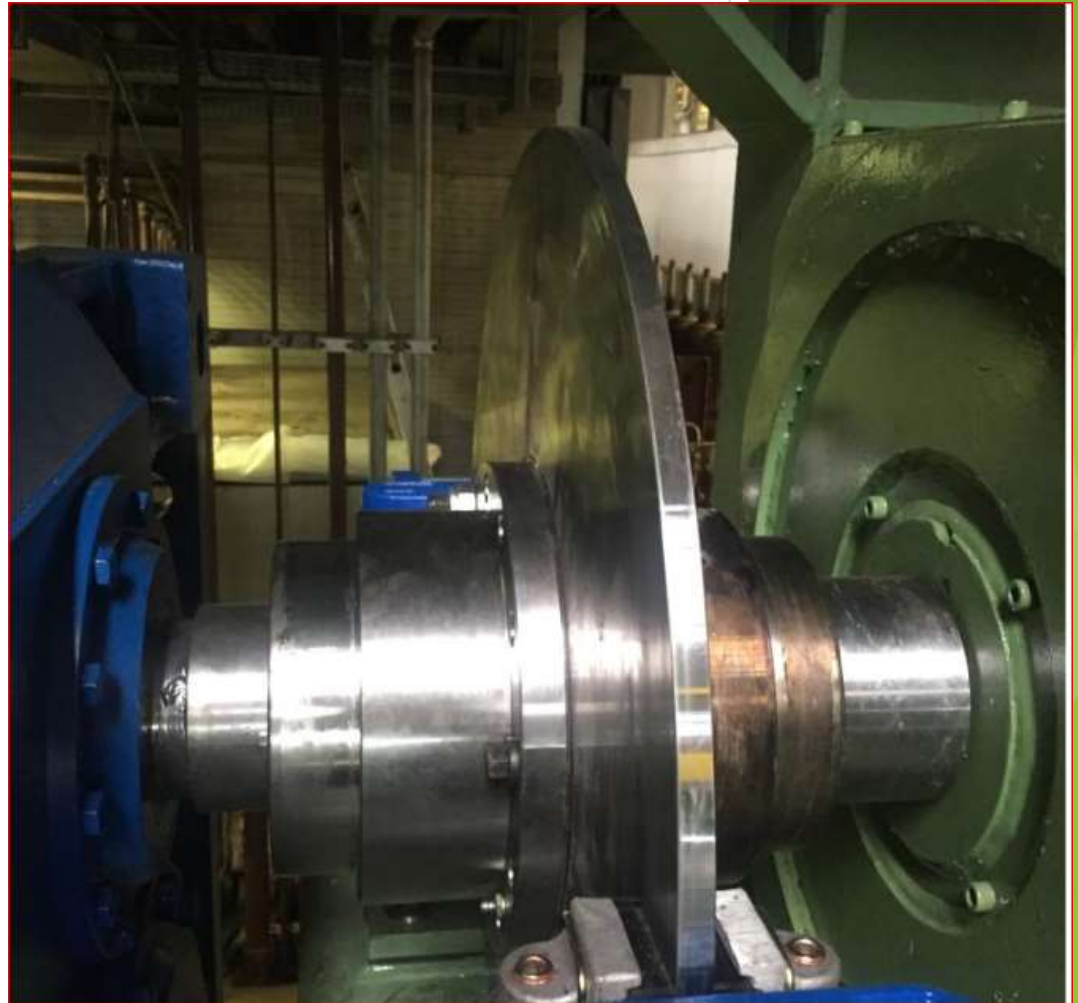
Automatic Grease Lubrication Spindle Arcelor Mittal

Patented



**FGC 236 LL BD**  
**Supplied to Mercegaglia Steel Italy**  
**Supplied through SMS Group**

Increasing References





Increasing References



**13 No of Gear /Carbon Hybrid Spindles  
Supplied to Rizhao Steel China in leveller  
through Voith - China**



Increasing References



**One of Biggest Universal Cardon Shaft size 800  
For edger application - Customer ArcelorMittal Brazil  
Supplied through Primetals**



Increasing References

**Cardon Shaft size 490 to Outokumpu Steel  
Sweden for special cold rolling stand**



Increasing References

**GGT Heavy Duty Gear Coupling**  
**Outer Dia 1500 mm**  
**ArcelorMittal Ukrane**  
**HSM Stand 1 (between Motor & GB)**

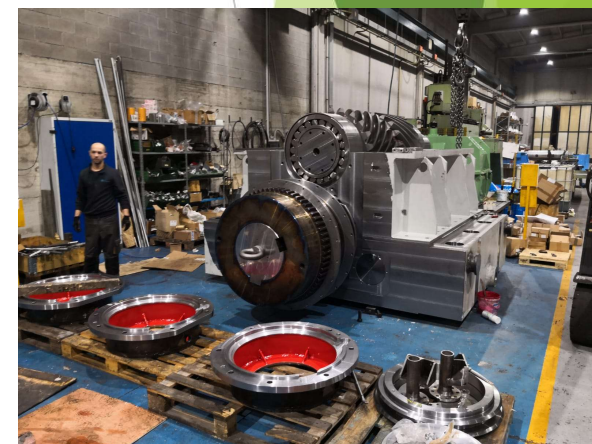
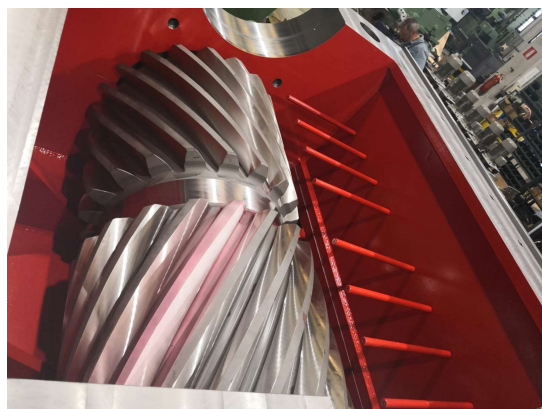


## ➤ Why Green Gear Transmission?



Increasing References

Gas nitrided  
Components  
& Gear Spindle for  
Iranian Steel Mill

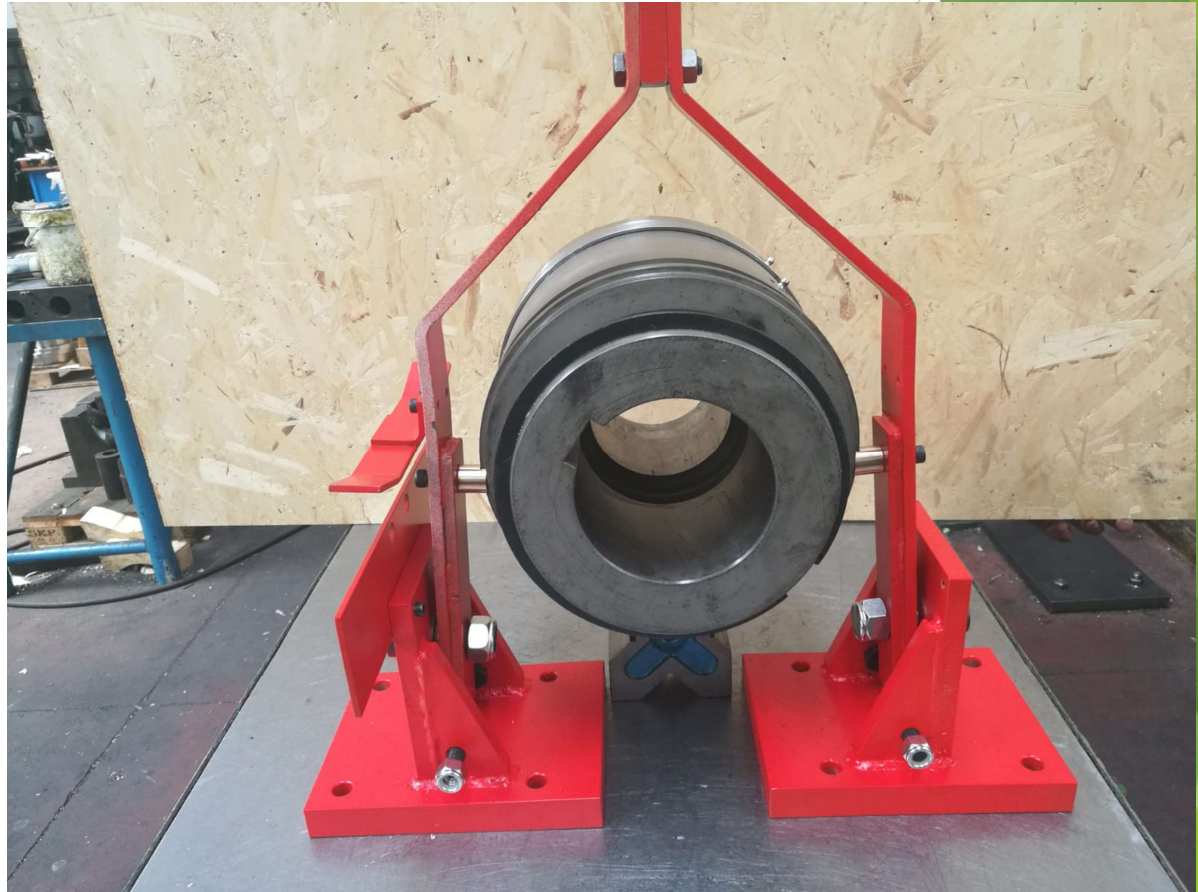


Increasing References

Equipment supplied to ArcelorMittal  
Kazakhstan HSM



Increasing References



**Dis-engagable Gear Coupling with leveller**



**Gear Spindle for  
Aluminium Mill Through Primetals UK**

Increasing References





## ➤ Why Green Gear Transmission?

Worldwide Presence



Green Gear Booth - EXPO USIPA -2019 Brazil

## ➤ Why Green Gear Transmission?

Worldwide Presence



Green Gear Booth - EXPO USIPA - 2019 Brazil

## ➤ Why Green Gear Trasmissioni?

Worldwide Presence

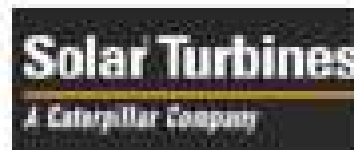
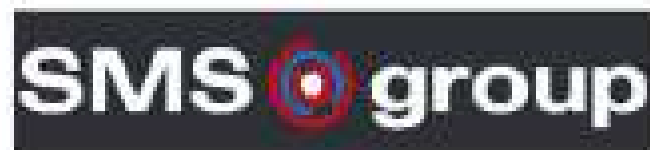


Green Gear Booth - EXPO USIPA -2019 Brazil





## Our Customers





## Our Customers



**SSAB**



Severstal  
Cherepovets Steel Mill



**Bhushan**  
POWER & STEEL



## Our Customers



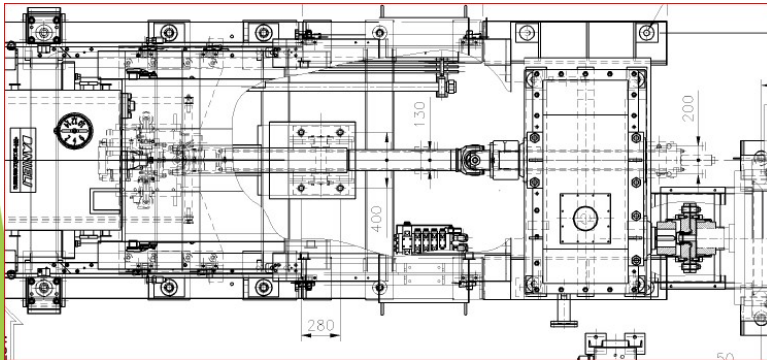
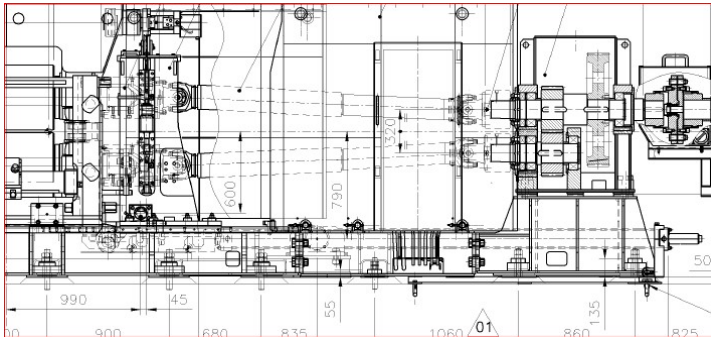
**KALYANI**



सेल SAIL



**We will keep on adding ...**



## #Key words

#Coupling #Gear Coupling

#Gear Box #Pinion #Spindle

#Gear Spindle #Articulated Spindle

#Universal Joint Shaft #Cardon Shaft

#Gear Internals #Slipper pads

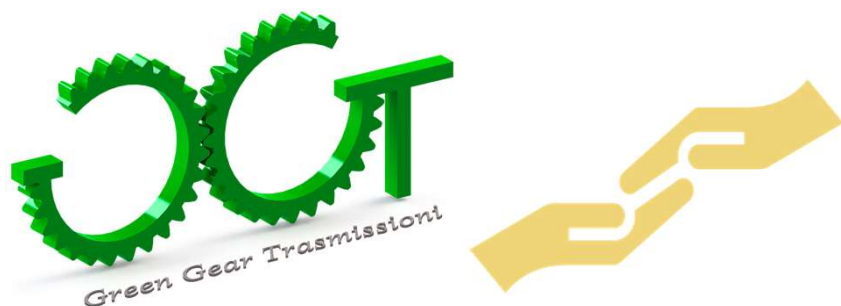
#Slipper type spindle # Liners

# roll neck couplings #Wobblers

#Coupling Box #Spindle Support

#Companion Flanges # Spindle Carrier

#Elastic Couplings #Flexible couplings



*Green Gear Trasmissioni S.r.l.*

**Factory ,Warehouse & Offices:**  
Via NAZIONALE n.83  
BALDICHIERI D'ASTI (AT) – ITALIA

Tel. +39 0141 203522  
Tel. +39 0141 203010

[info@greengeartrasmissioni.com](mailto:info@greengeartrasmissioni.com)

[www.ggtsrl.biz](http://www.ggtsrl.biz)

