

SGO

COMPANY PROFILE

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- Press, Plastic Mold
- Hydropower plant
- Construction
- Industrial machinery

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SGO's products strength



01 Instruction



Company outline

Company name	SGO CO., LTD
CEO	TAE SOO CHOI
Established	December 1st, 2000
Address (main)	28-10 Namdongseo-ro 113 beon-gil Namdong-gu, Incheon
Address (2nd factory)	28-13 Namdongseo-ro 113 beon-gil (THEDVELON production)
Seoul branch	
ChangWon branch	15, Gyeongin-ro 53-gil, Guro-gu, Seoul
Employee	21, 39-gil, Wollim-ro, Seongsan-gu, Changwon-si
Capital	59
Main Products	USD 1 Million
Turnover	Oilless Bearings / Extruded Bronze Rods 19,532,346 USD (2022) <small>*1USD =1291.95 KRW</small>





History

2000

- Establishment of SGO CO.,LTD.

2005

- Established R&D Institute

2006

- Developed and installed THEDVELON bush & plates for mold
- Designated as a Promising Export Firm
- Acquired ISO14001
- Approved as venture company

2008

- Started to operate 2,750 Ton of Extruding Machine



History

2009

- Registration of patent rights in Italy and Germany for THEDVELON

2013

- Received a citation from the Small and Medium Business Administration
- Received award for excellent SME business in Venture Contest Incheon in 2013
- Received award certificate of Korea Commission for Corporate Partnership (Industry Innovation Movement 3.0 POSCO)

2016

- Conclusion of agreement with –DAIDO (Japan) & VOLVO Korea

2017

- Received award for reaching USD 5 million export



History

2018

- Designated as small global hidden champion(Ministry of SMEs and Startups)
- Korean Startup Market registered KSM
- Nominated by human resource development company
- Designated as a specialized company for the original technology
- Registration of patent rights in Korea, China and Japan for Oilless bearing plug manufacturing method

2019

- Designated as a Technology innovation company(INO-BIZ)
- Designated as a specialized company for components and materials(MTI)
- Receive award Minister prize from MSS
- Appearing on TV shows [KBS1]
- Youth-friendly small hidden company, Visionary company(MOEL), Excellent job-making company(Incheon city)

2020

- Youth smart job small-medium company (Korea Federation of Small and Medium Business)
- Registered KSM(Korea exchange)
- Established a welfare fund(Korea worker's compensation and welfare service)
- Small hidden champion (MOEL)
- Global IP star company(KIPA)
- Venture company (MSS)

History

2021

- Obtained automotive quality management certification IATF 16949:2016 Certified
- Signed MOU with Incheon Polytech University
- Signed MOU with Inha University Graduate School of Manufacturing Innovation

2022

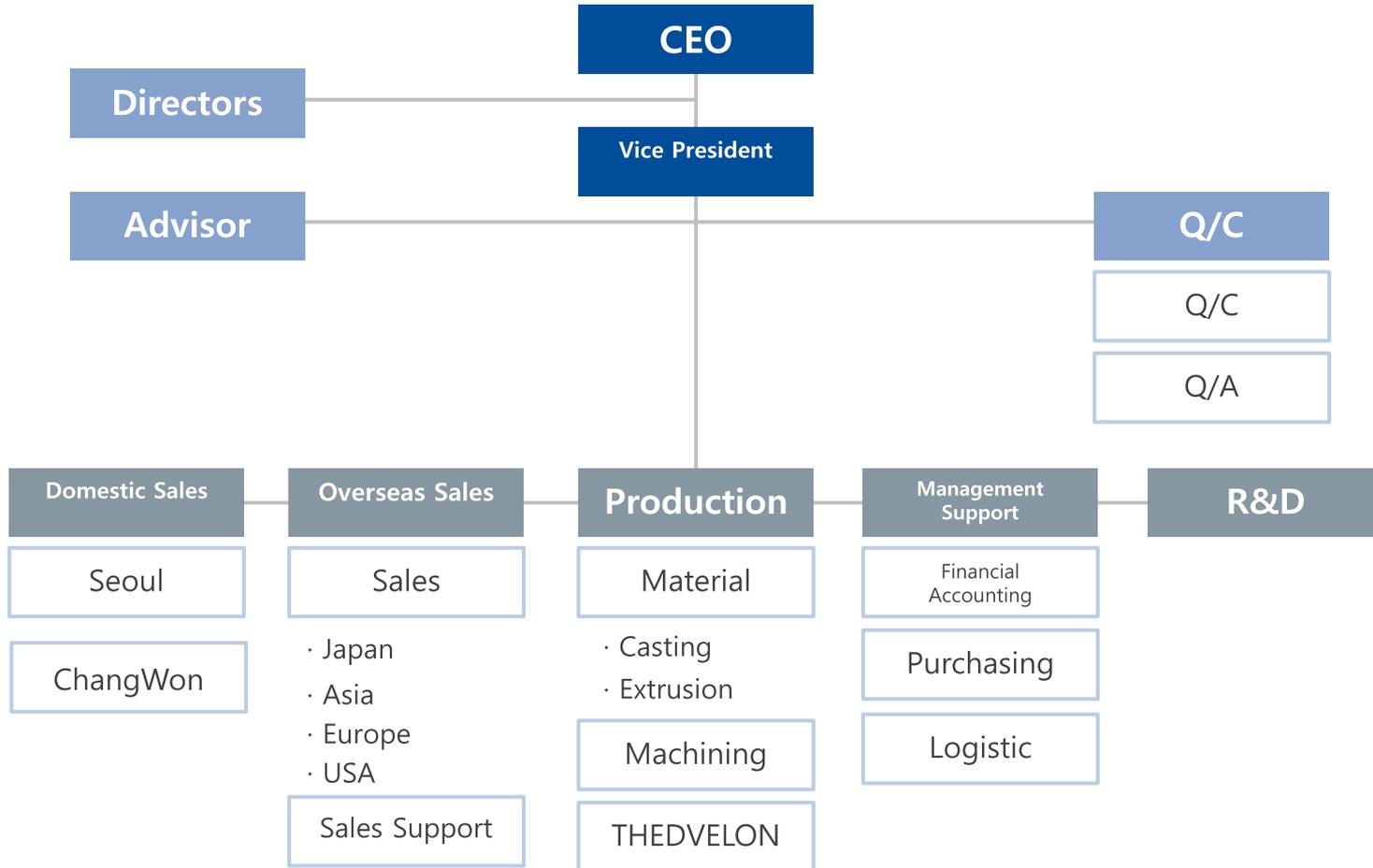
- Innobiz recertification (Ministry of Small and Medium Business)
- Appeared on TV KBS1 documentary broadcast
- Appeared on TV SBS Morning
- Scholarship Donation of KRW 5 million to Polytech University

2023

- Türkiye-Syria Earthquake Relief Donation of KRW 5 million



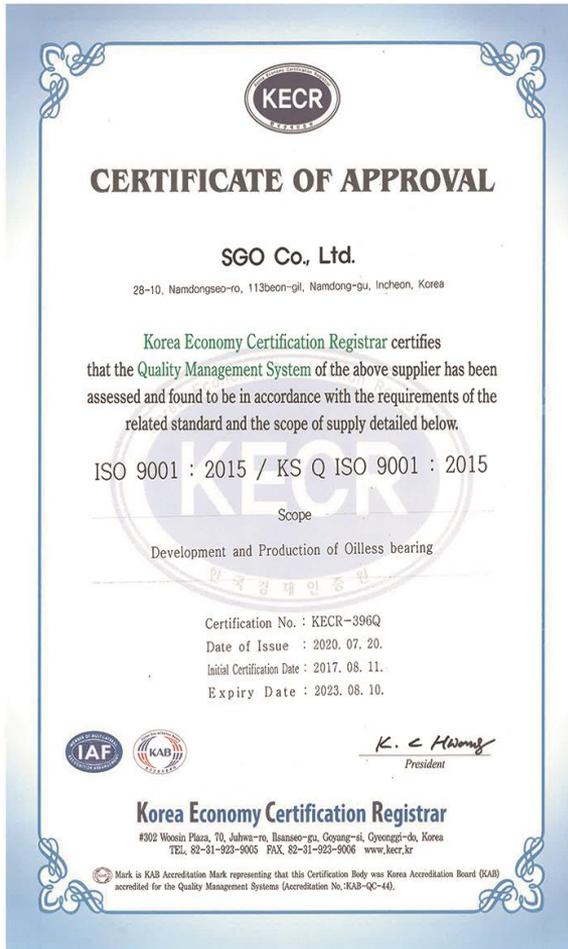
Organization



· Office Employees : 24
 · Production employees : 35

Business figure

Year	2019	2020	2021	2022
Turnover (Million Korean Won)	17,687	13,524	20,328	25,234
Export (Million USD)	6.14	3.79	5.91	5.1
Proportion of export(%)	40%	32%	34%	27%
Employee	75	59	59	59
Employee(R&D)	15	15	15	7
Corporate Credit rating	BBB-	BBB-	BBB-	BBB-



ISO 9001



IATF 16949



ISO 14001

Patents

Division	Domestic	Overseas
Patent Registration	12	5
Trademark	2	
Design Registration	4	3
Total	18	8

02 Manufacturing process



Manufacturing Process – Oilless (SGO#500)

1

Prepare raw materials



Copper



Nickel



Aluminum



Manganese



Steel

2

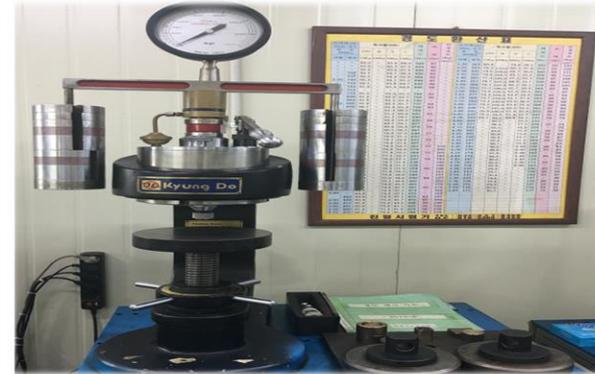
Melting



Manufacturing Process – Oilless (SGO#500)

3

Analysis of ingredient and hardness



4

Continuous casting for Billets



Manufacturing Process – Oilless (SGO#500)

5

Ready Billets
to extrude



6

Extrusion
Storing
material



Manufacturing Process – Oilless(SGO#500)

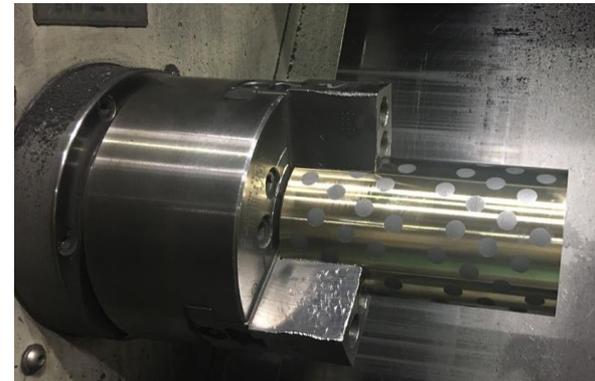
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Cutting
And
Drilling



8

Inserting
graphite plugs
and Machining



9

Impregnation
Inspection



10

Packing
Storage



Manufacturing Process – THEDVELON



1. Raw material



2. Compounding



FINISHED



3. Sintering Press



4. Machining

03 Facilities



Facility - Material



Smelting Furnace



Continuous Casting Caster



Extruding Machine(2,750ton)



Press machine for Graphite plugs

Facility – Machine List

Process	Management No.	Machines	Specification	Process	Management No.	Machines	Specification
Cutting	SOB-PM-01-01	Circular Cutter	OK3-1100L	THEDELON	SOB-PM-03-17	Universal Lathe	HL460-1000
	SOB-PM-01-02	Band Saw	HFA-500		SOB-PM-01-04	Cutter	DT-500
	SOB-PM-01-03	Cutter	DSS-100		SOB-PM-07-01	4 Sides Processing Machine	DSM-500R
Drilling	SOB-PM-04-01	Drilling Machine	SPT-T30		SOB-PM-07-02	Forming Press	
	SOB-PM-04-05	Drilling Machine	개조1호		SOB-PM-07-03	Straightening Press	
	SOB-PM-04-09	Drilling Machine	개조2호		SOB-PM-07-04	Forming Press	200TON
	SOB-PM-04-10	Drilling Machine	MC-5101		SOB-PM-07-05	Hot Press	100TON
	SOB-PM-04-11	Drilling Machine	MC-5101-3D		SOB-PM-07-06	Hot Press	100TON
	SOB-PM-03-30	Drilling Machine	MAC-V3		SOB-PM-07-08	Hot Press	200TON
	SOB-PM-04-15	Machining Center	AJV-18(MCT)		SOB-PM-07-09	Hot Press	100TON
	SOB-PM-02-01	Vertical Milling Machine	ETHMC-30		SOB-PM-07-10	Forming Press	Graphite plugs
SOB-PM-02-02	Vertical Milling Machine	ETHMC-402	SOB-PM-07-11		Hydraulic Press	Bushing	
Rough-Machining	SOB-PM-03-19	Universal Lathe	HL 460-1000		SOB-PM-07-12	Leveller	
	SOB-PM-03-12	Universal Lathe	HL 580-1500		SOB-PM-07-13	Powder Mixer	
	SOB-PM-03-14	Universal Lathe	HL 460-1000		SOB-PM-07-14	Mixer	
	SOB-PM-03-20	CNC Lathe	SKT15		SOB-PM-07-15	Graphite Grinder	
	SOB-PM-03-21	CNC Lathe	SKT15		SOB-PM-07-16	Cooling Press	
	SOB-PM-03-08	CNC Lathe	PUMA200A	SOB-PM-02-07	5 Axis CNC Machine	MV55-50	
Final-Machining	SOB-PM-03-01	CNC Lathe	PUMA 200A	THEDELON Wear Plates	SOB-PM-02-13	TAPPING M/C	A04B-0057
	SOB-PM-03-02	CNC Lathe	PUMA 200A	SOB-PM-02-15	Grinding Machine	YGS-96A	
	SOB-PM-03-03	CNC Lathe	PUMA CT300	SOB-PM-02-15	Grinding Machine	YGS-116A	
	SOB-PM-03-04	CNC Lathe	LINX 200A	SOB-PM-02-03	TAPPING M/C	TC-360	
	SOB-PM-03-05	CNC Lathe	SKT15	SOB-PM-02-04	TAPPING M/C	TC-360	
	SOB-PM-03-06	CNC Lathe	SKT15	SOB-PM-02-05	TAPPING M/C	TC-380	
	SOB-PM-03-07	CNC Lathe	SKT15	THEDELON Wear Plates Bushings	SOB-PM-02-06	Machining Center	MYNX500
	SOB-PM-03-09	CNC Lathe	CUTEX-160	SOB-PM-02-10	Machining Center	VX650	
	SOB-PM-03-10	CNC Lathe	CUTEX-160	SOB-PM-02-14	TAPPING M/C	A04B-0057	
	SOB-PM-03-24	Vertical Lathe	VT-550	SOB-PM-03-13	CNC Lathe	PUMA-240	
	SOB-PM-03-31	CNC Lathe	PUMA-280	SOB-PM-03-25	Bench Lathe	SD-32	
	SOB-PM-03-27	Turning Machine	PUMA-VTS1620	ETC	SOB-PM-05-02	AIR Compressor (EQ37)	50HP
	SOB-PM-03-37	Universal Lathe	HL460-1000	SOB-PM-05-11	Oil Impregnator		
	SOB-PM-03-38	Universal Lathe	HL460-1000	SOB-PM-05-12	Heating Furnace	Graphite	
				SOB-PM-05-13	Pallet Warring Machine	HK-2415	

Facilities - Machining



Drill Line



CNC Line



Grinding Line



MCT Line



THEDELON Sintering
Line



Twin-spindle milling
machine

Facilities - Inspection



OES Metal Analyzer
& Hardness Machine



Tensile Strength
Machine



Microscope



Concentricity



Flatness Measuring



3 Dimension Coordinate
Measuring Machine



Ultrasonic Detector



Shape Measuring
Machine

Facilities - Test



Bush test machine 1

◆ Scope

Load : 1 ~ 30,000 kgf
 Velocity : 1 ~ 40 RPM
 Angle : 0 ~ 360 °
 Dimension : Ø60 x Ø75 x 60 L

◆ Digital Monitoring

Load
 Inner Temperature
 Coefficient of Friction
 Torque
 Degree of rotation
 Cycle time/ Elapsed time



Plate test machine 1

◆ Scope

Load : 1 ~ 500 kgf
 Velocity : 1 ~ 200 RPM
 Distance: 150mm (1 Cycle)

◆ Digital Monitoring

Load
 Coefficient of Friction
 Push/Full Load
 Speed
 Cycle time/ Elapsed time



Plate test machine 2(For high tem.)

◆ Scope

Load : 1 ~ 1,000 kgf
 Velocity : 1 ~ 60 m/min
 Distance: 100mm (1 Cycle)
 Temperature : Room tem. ~ 300°C

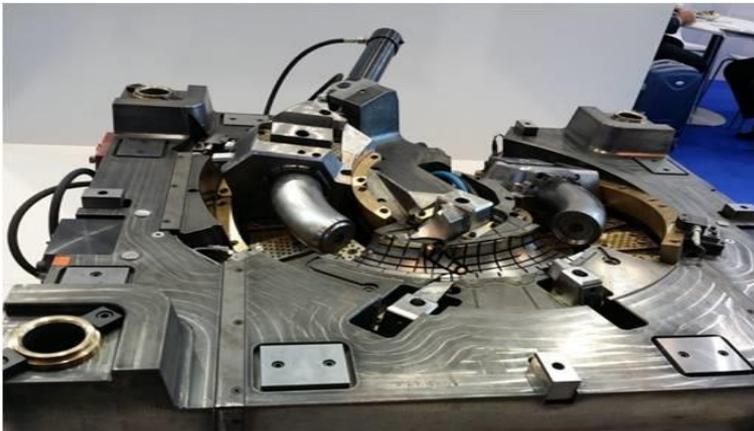
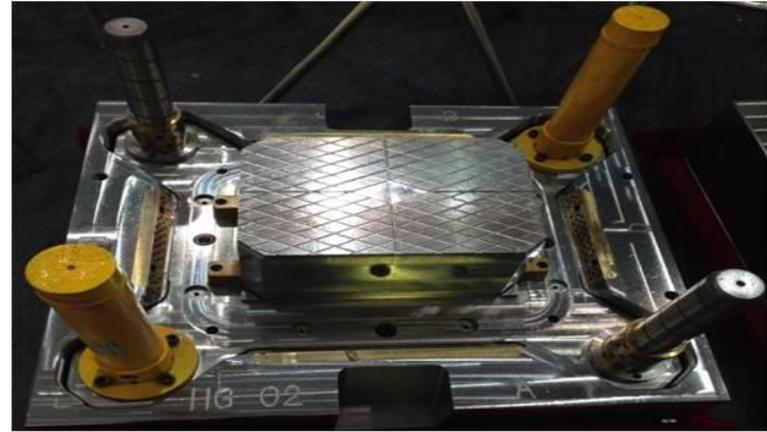
◆ Digital Monitoring

Load
 Coefficient of Friction
 Push/Full Load
 Speed
 Cycle time/ Elapsed time

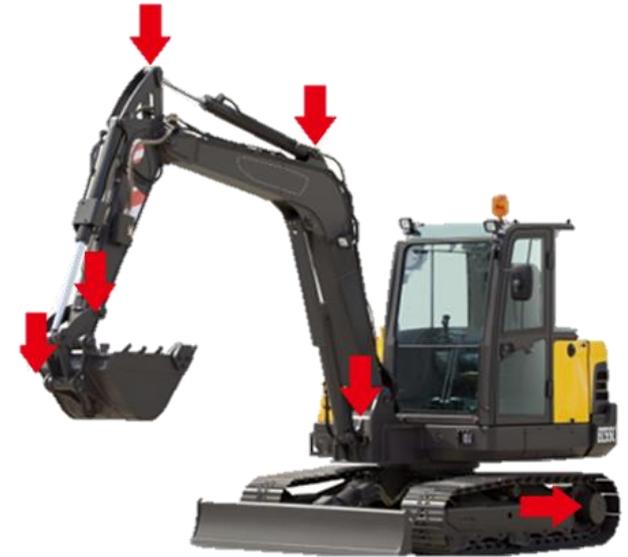
04 Applications



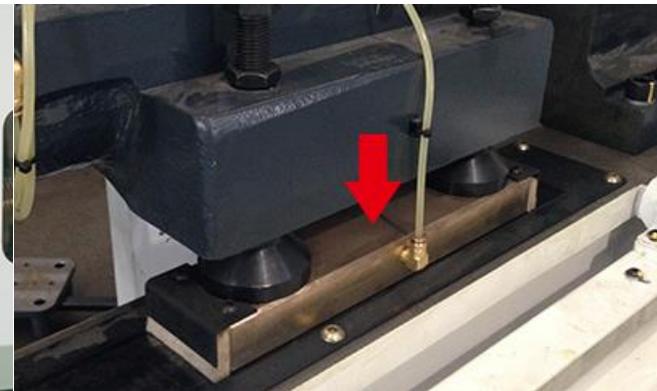
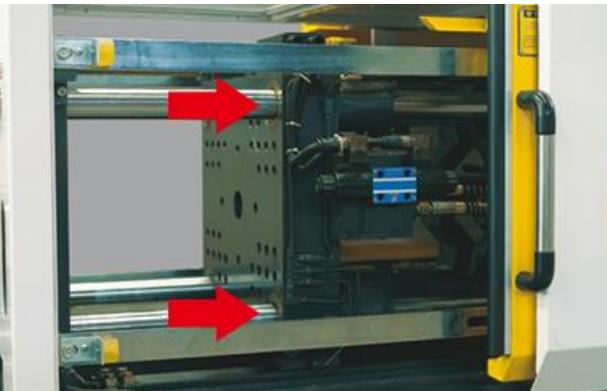
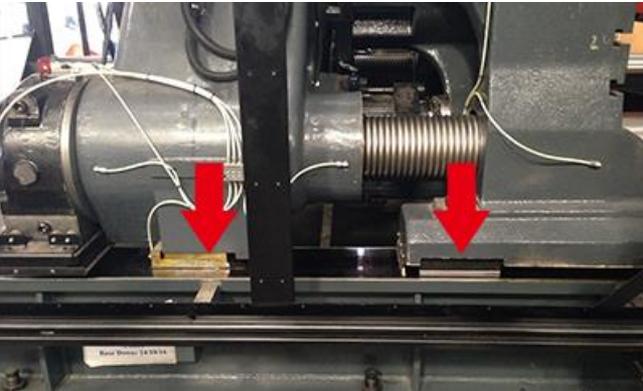
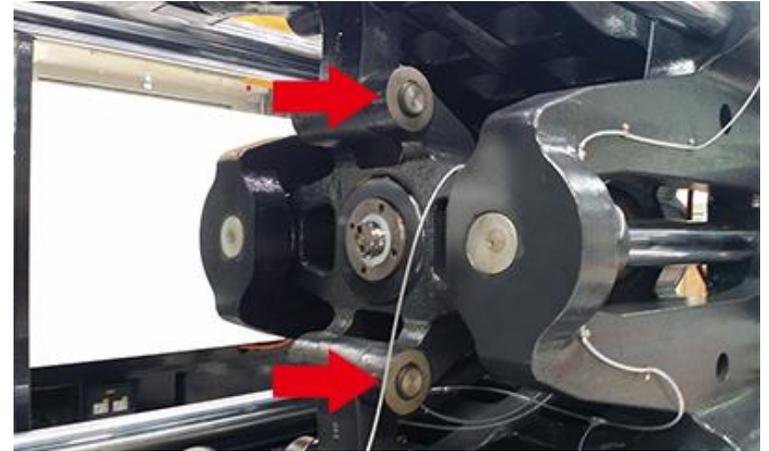
Application - Mold



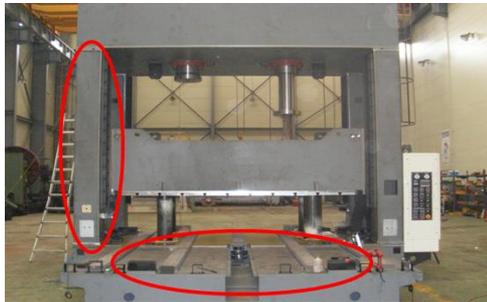
Application - Construction



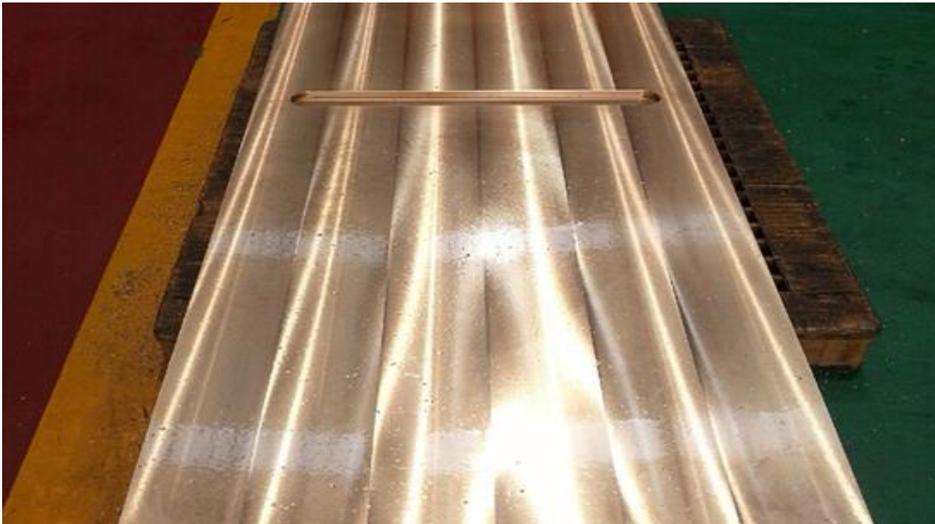
Application – Plastic injection molding machine



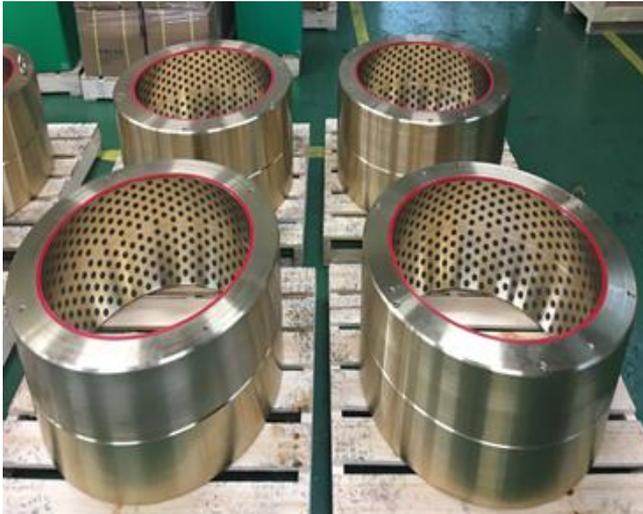
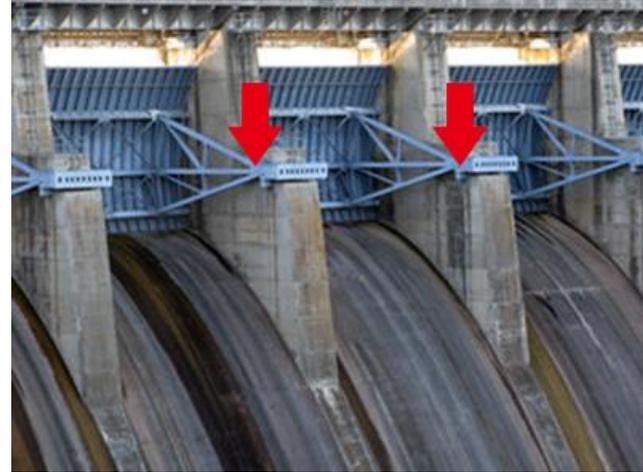
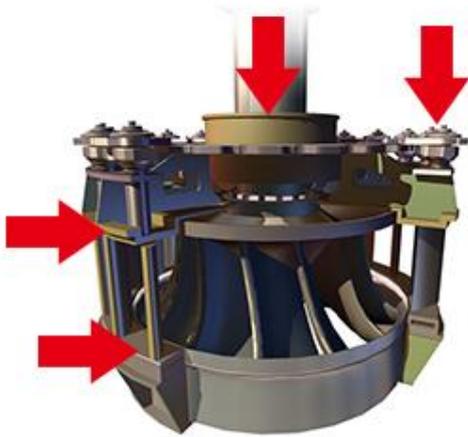
Application – Hydraulic press



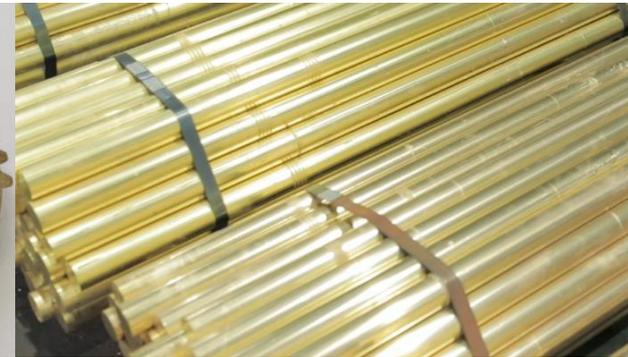
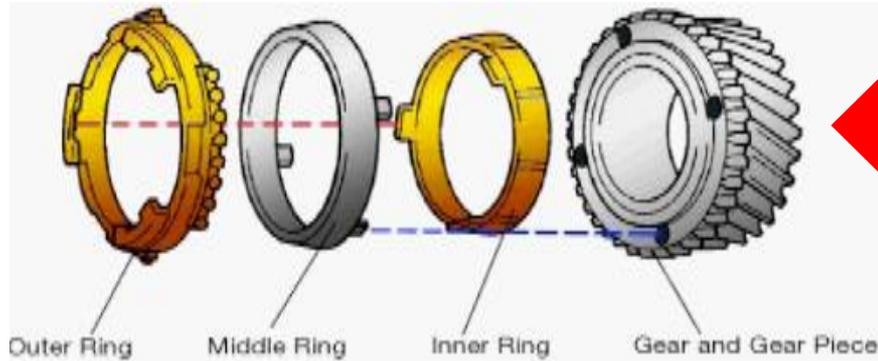
Application – Steel



Application – Construction



Application – Automotive



05 Supply List



Main Customer

<p>Mold</p>	<ul style="list-style-type: none"> • GM (Sungameng) • Misumi Korea • VW (STRACK Norma GmbH) • FIAT (SYNDAL) • HASCO Normalien 	<p>Construction</p>	<ul style="list-style-type: none"> • Volvo Korea • BRADKEN ® (Hitachi) • DY Power • SUMITOMO • SH PAC
<p>Steel</p>	<ul style="list-style-type: none"> • POSCT • Hyundai Steel • Hyundai Rotem 	<p>Plastic injection molding machine</p>	<ul style="list-style-type: none"> • Woojin Plaimm • LS mtron, Dongshin Hydraulic • Engel Korea • The Japan Steel Works(JSW) • UBE MACHINERY CO.,LTD • Ferromatik Milacron Pvt Ltd
<p>Dam & Power plant</p>	<ul style="list-style-type: none"> • K-water • Korea Hydro & Nuclear Power Co.,Ltd • Mitsubishi Heavy Industries Ltd Shipyard 	<p>Hydraulic press</p>	<ul style="list-style-type: none"> • SIMPAC • Hwail PRESS • Hwall Plus

06

Characteristics of SGO products



Characteristic and strength of SGO products

Material	Characteristic and strength of SGO products	Note
#500	One-stop process (Alloy -> Continuous casting -> Extrusion)	
	Solid Lubricant Plugs Production - British Graphite Powder (JAMES DURRANS & SONS)	
	Improvement of Plug Shape Conical-shaped plugs for Wear Plates.	Design application(10-2018-0055859) (#8)
	Strengthen adhesion of lubrication plugs for BUSH. (Heat treatment → press into metal and heat treatment) - Improvement of strengthen adhesion : 85.7kgf/cm ² → 184.1kgf/cm ²	patent application(10-2018-0068884) (#9)
#200	Improvement of velocity comparing to SGO #500	
	Price Competitiveness comparing to SGO #500	
	Excellent Sliding and improved life time for #500 PLATE	Test report of Volkswagen (#3)

Thank you!

