

www.woorimpts.com

KOSDAQ¹
LISTED COMPANY

BEST & INNOVATIVE GEAR MAKER

woorimPTS

HISTORY

연혁

Power Train Solution Specialist

With a half-century of accumulating manufacturing technologies, Woorim Power Train Solution has been providing engineering and manufacturing services for power train to the industries leading companies, fulfilling customers wants and needs.

1976



Established in Changwon in 1976
1976 경남 창원에 설립

CI changed to Woorim Power Train Solution (Woorim PTS) in 2021
우림피티에스주식회사로 상호 변경

2006



Established new factory for planetary gearboxes
중장비용 기어박스 양산 전문공장 설립

100,000 set/year 10,574m²

2009



Listed on stock market
코스닥 상장

First in industrial gearbox section
기어박스 제조업 최초 상장

2012



Established new factory for Industrial Gearboxes (14,370m²)
대형기어 및 기어박스 제조 전문공장 설립

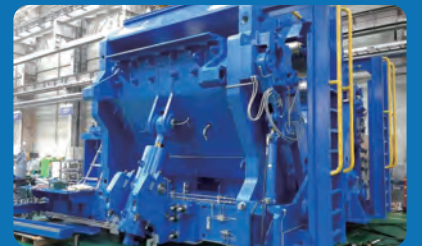
Recorded 20M\$ by direct export
직접수출 20M\$ 달성

2017



Line extension for precision gearboxes
정밀 감속기 라인 증설

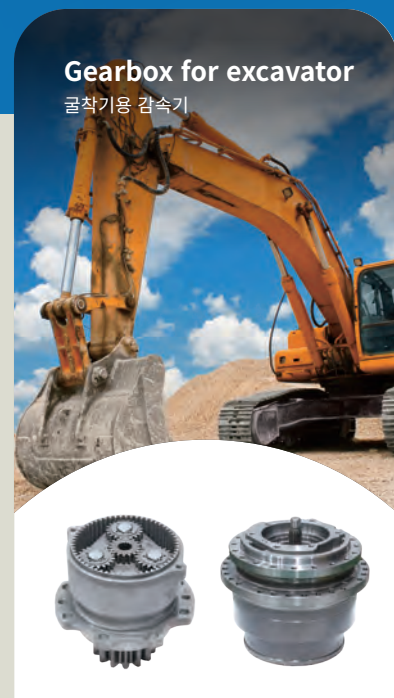
2020



Started engineering business service for steel plant facilities
제철설비 엔지니어링 사업 개시



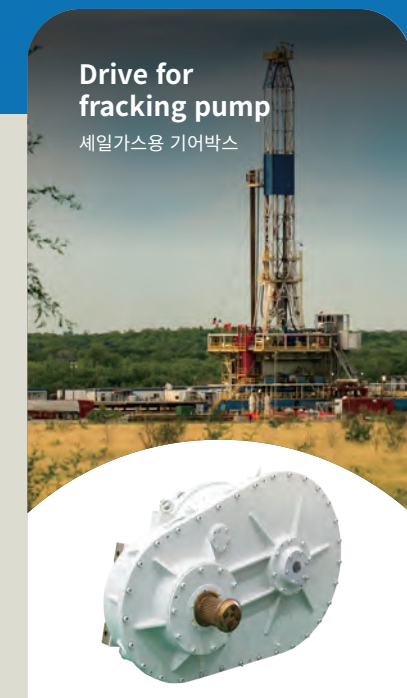
Industrial gearbox
산업용 감속기



Gearbox for excavator
굴착기용 감속기



Main gearbox for wind turbine
풍력발전기용 증속기



Drive for fracking pump
세일가스용 기어박스



Cycloid drive for robotics
로봇 및 자동화 정밀구동 감속기



Gearbox for defense industry
방산용 기어박스

MAJOR CUSTOMERS

주요 고객사

SOUTH KOREA

POSCO

HYUNDAI

MOTTROL

DOOSAN

KAI

HANWHA

VOLVO

USA

JOHN DEERE

AIDA

CATERPILLAR

JAPAN

IHI

KOBELCO

HITACHI

STEEL PLANTECH

NABTESCO

MITSUBISHI

PRIMETALS

AUSTRALIA

REXNORD

GERMANY

SMS



INTERNATIONAL CERTIFICATES

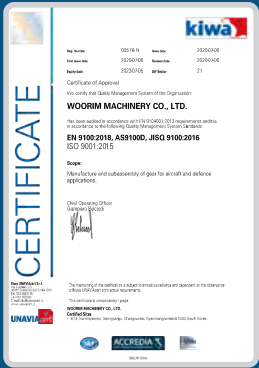
국제인증서



ISO 9001:2015



ISO 14001:2018



AS 9100D

CERTIFICATE OF PATENT

기술특허

- No. of patent : 34
Registration.
21 registration incl. transmission with a device for neutral position
- Application.
13 application incl. cycloid gearbox

- No. of trademarks : 2
Company name & logo



Lifting System of Molten Metal Transferring Container



Device for Handling a Neutral Position of Gear in Transmission



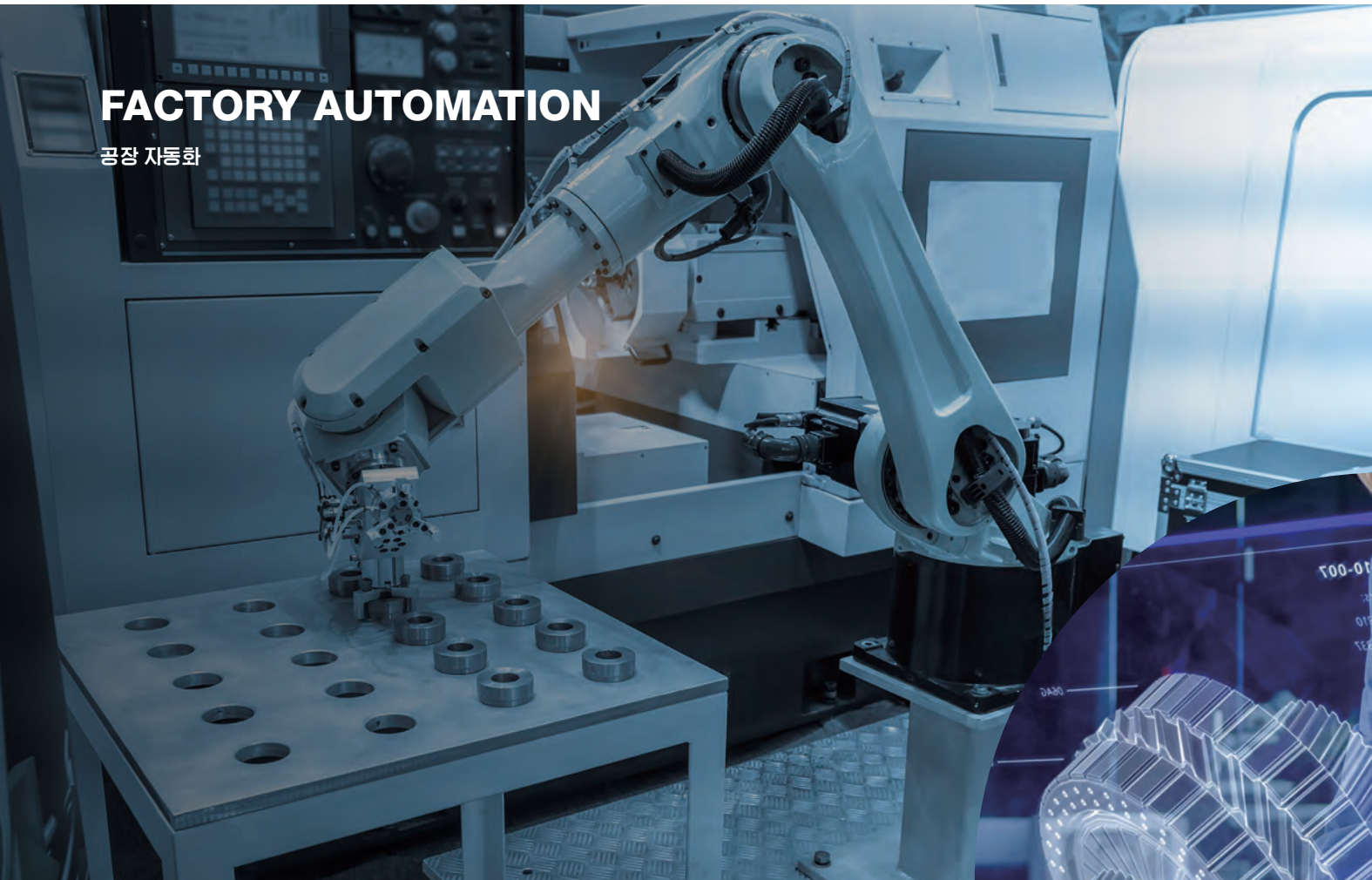
Transmission Having a Device for Handling a Neutral Position of Gear

BUSINESS AREAS

사업분야

FACTORY AUTOMATION

공장 자동화



DEFENSE & AEROSPACE

방산 및 항공



제철플랜트

STEEL PLANT



에너지 산업 및 중장비

ENERGY INDUSTRY & HEAVY EQUIPMENT



FACTORY AUTOMATION

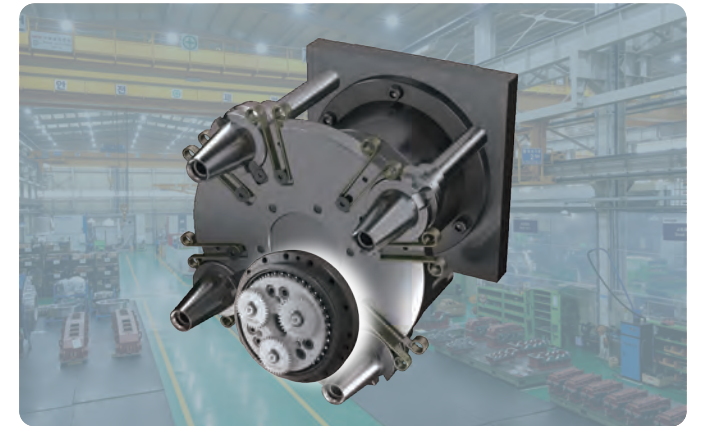
공장 자동화



Industrial Robot 산업용 로봇



Machine Tool 공작기계용



Drive for Tool Changer



Drive for Auto Positioner

Precision Control Device 정밀제어기기



Drive for Medical Instrument



Drive for Radar Antenna



CY-E Series

Standard Type 일반형



CY-U Series

Compact Type 컴팩트형



CY-C Series

Hollow Shaft Type 중공형

DEFENSE & AEROSPACE

방산 및 항공



Aerospace 항공



Gears for Helicopter Transmission

회전익기 트랜스미션용 기어

Quality : AGMA GRADE 13
Operating Condition : 20,000 rpm



Naval Fleet 함정



Precision Gears

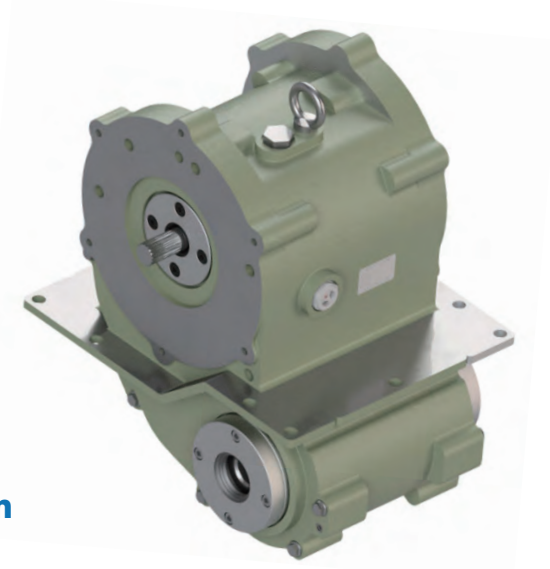
정밀기어

Ring Gear, Zero-Backlash Gear,
Planetary Gear and etc.

Gear Quality : AGMA GRADE 13



Ground Equipment 지상장비



E-Drive System

E-드라이브 시스템

Capacity : 6,800 rpm x 40 Nm



In-wheel Drive System

인휠 드라이브 시스템

Capacity : 100 kW x 5,500 rpm

STEEL PLANT

제철 플랜트

Pulverizer



Material

Rim Gear



Coke

Planetary Units



Sintering

Iron Making 제선

Crop Shear



Main Mill



Pinion Stand



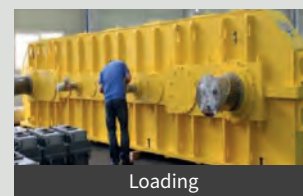
Rolling Mill 압연

Steel Making 제강

PL / CGL 산세 / 용융아연도금라인



Convertor Tilting Device



Ladle Crane Gearbox



Down Coiler



Pay Off Reel / Tension Reel

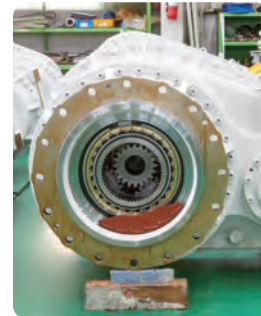


Belt Wrapper



Oil & Gas 오일 & 가스

Drive for Fracking Pump



Capacity
3,000 / 1,000 / 600 HP
Output Speed
679 / 600 / 450 rpm

Bull Gear



D.P - DP 3.1295
No. of Teeth - 108 T
Pressure Angle - 25°

Bull Pinion



D.P - DP 3.1295
No. of Teeth - 17 T
Pressure Angle - 25°



Offshore Plant 해양플랜트

Jack-up Gearbox



Application
Jack Up Barges

Capacity
3,200 ~ 14,000 ton (Leg)

Item	Spec.
3,200	9.52 kW x 120 rpm x 1/100
4,800	13.18 kW x 96 rpm x 1/100
6,000	10.45 kW x 96 rpm x 1/131
14,000	21.77 kW x 114 rpm x 1/390



Wind Turbine 풍력터빈



Pitch System

Pitch Gearbox (2~12MW)
Pitch Bearing (8~12MW)



Yaw System

Yaw Drive (2~12MW)
Yaw Bearing (8~12MW)



Main Gearbox

R&D, Manufacture,
Maintenance (2MW ~ 5MW)

All components for gearbox including planetary gear, ring gear, carrier and pinion



HEAVY EQUIPMENT

중장비

Mining & Cement Equipment

마이닝 & 시멘트 장비

Table Gear for Electric Rope Shovel Swing System



Excavator

굴삭기



Item	Application	Spec.
Traveling Reducer	7~100 ton Excavator	Output Torque : Max 21,000 kg.m
	Over 100 ton Crawler Crane	Output torque : Max 45,400 kgf.m
PTO Gearbox	90~100 ton Excavator	Rated Power : 448 kW Max Input Speed : 1,800 rpm Max Input Torque : 2,750 Nm

HEAVY EQUIPMENT

중장비

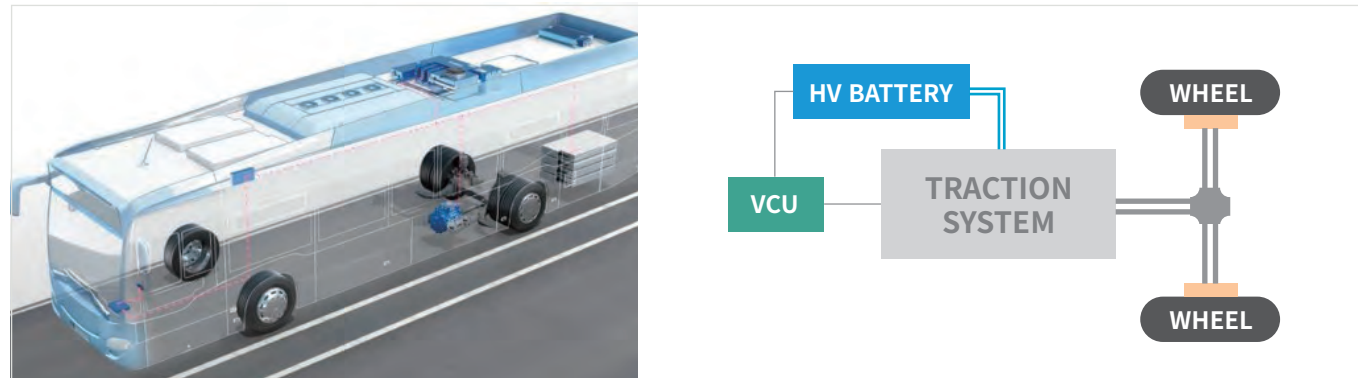
Electric System

전기 시스템



Electric Traction System

Application
Electric Excavator & bus
Capacity
120 kW x 10,000 rpm



Hybrid Traction System

하이브리드 트랙션 시스템

Application
Hybrid Wheel Loader
Capacity
120 kW x 8,000 rpm



Hybrid Wheel loader
In wheel Drive

Motor Power	Max Traction Torque	Max Input Speed	Gear Ratio	Weight (Approx.)
120 kW	112,570 Nm	8,000 rpm	1 / 83	720 kg

QUALITY ASSURANCE

품질보증

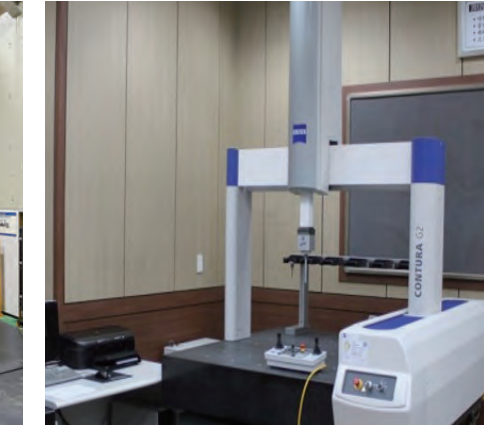
Precision Measuring Equipment

정밀 측정 장비



Gear Tester

Max Ø2,500 mm



3D Measuring Machine

Max 3 m(W) × 4 m(L) × 2 m(H)

Metallurgical Testing Lab

재료 및 금속공학 시험실



Metallurgical Features or Mechanical Properties	Testing Equipment
Hardness	Micro-Vickers Hardness Tester Rockwell Hardness Tester (C-Scale) Brinell Hardness Tester
Microstructure	Optical Microscope (Min x 50, Max x 1,000)
Tensile Strength	Universal Testing Machine
Impact Strength	Charpy Impact Test Machine

R&D CENTER

R&D 센터

New Product Development, Design Analysis & Verification, Performance & Endurance Test
제품개발, 설계분석 및 검증, 성능 및 내구성 시험

1

Design

Customized Design per AGMA, DIN, ISO and etc.

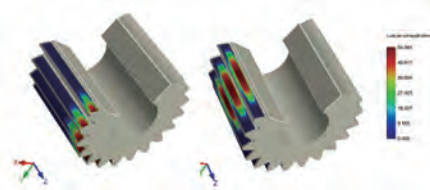


3D DESIGN

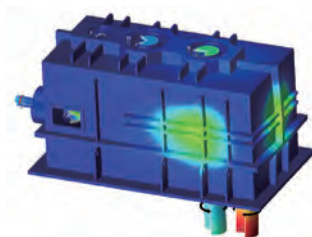


CFD ANALYSIS

MICRO CONTACT SIMULATION



FE ANALYSIS



**TOTAL
SOLUTION**

Gear Contact, Structure Strength, Static, Fluid, Vibration, Dynamic and etc.

2

Prototype

Expediting Manufacturing Process
in R&D Production Lab



Gear Cutting, Gear Grinding, Machining,
Heat Treatment, Assembly

3

Test

Performance and Endurance Test
for R&D Products



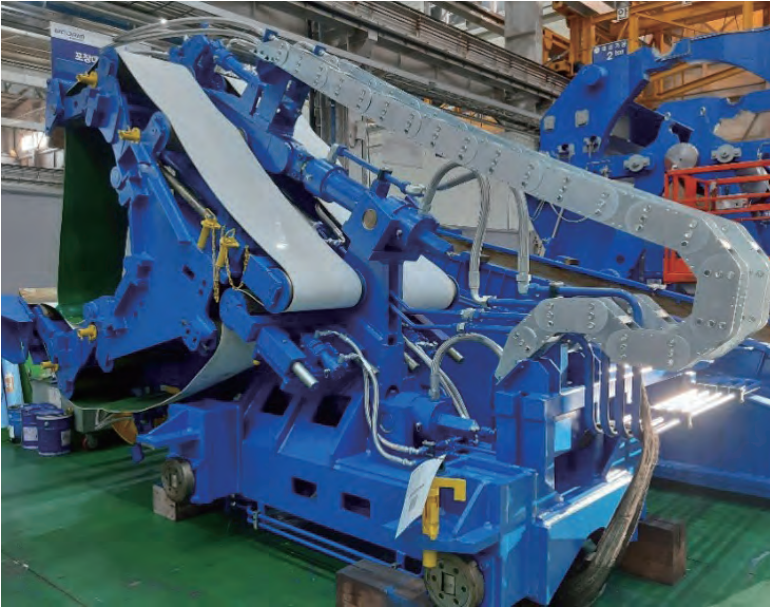
Equipment : Dynamo Tester,
Main and Sub Hydraulic Power Units,
Back to Back Gearbox Test Device

PRODUCTION FACILITIES

생산설비

Large Size Gear & Gearbox for Steel Plant & Mining Industry

제철, 마이닝용 대형 기어 및 감속기



Gear Machining	Module	Workpiece Dia.	Face Width	Gear Grade
CNC Grinding M/C	Max 60	~ Ø300" (7,400 mm)	Max 63" (1,600 mm)	DIN 1 class
CNC Hobbing M/C	Max 60	~ Ø330" (8,000 mm)	Max 79" (2,000 mm)	DIN 6 class

Other Process	Turning and Milling	Boring	5-phase Milling
Capacity	Ø217" (5,500 mm)	10 m x 4.5 m (45 ton)	4.2 m x 3.2 m (20 ton)

Heat Treatment Facility	Carburizing, Quenching, Tempering & Shot Blast	Carburizing Max Ø2,000 x 5,000 (mm) – Pit Type
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PRODUCTION FACILITIES

생산설비

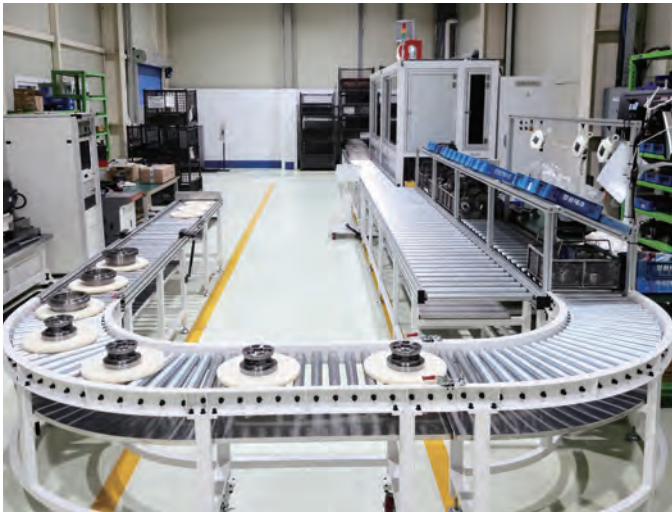
Precision Gear Production

정밀기어라인

Machining Line



Assembly Line



Equipment	Capacity	Description	Gear Grade
Gear Grinding M/C	Module 0.5 ~ 20	Gear accuracy improvement and profile modification	DIN Class 1
Cylindrical & Eccentric Grinding M/C	Max 300 mm	Precision cylindrical grindin and eccentric grinding	
Boring & Honing M/C	Max 800 mm	Precision hole machining (5 micron)	

Serial Production

양산라인

Machining Line



Assembly Line



General Machining	CNC Lathe	Vertical	8" ~ 21"
		Horizontal	8" ~ 21"
	Machining Center	Vertical	600 ~ 2,000 × 500 ~ 900 × 500 ~ 700
		Horizontal	600 ~ 2,000 × 500 ~ 900 × 500 ~ 700
Gear Machining		Gear Shaper	M6 ~ M22 × Ø400 ~ Ø1,000
		Gear Hobbing	M8 ~ M14 × Ø350 ~ Ø1,260
		Gear Shaving/ Honing	M6 ~ M8 × Ø320 × 150T
Heat Treatment		Induction Hardening	1,000 kW × Ø500, 1~3 kHz
		Tempering Furnace	250°C
		Shot Peening	Ø500
Assembly		Tunnel Type Cleaning Machine	Planetary Gearbox 100,000 Set / Year

Computerized Process Control

공정 전산화 관리

SMART FACTORY



01

Design

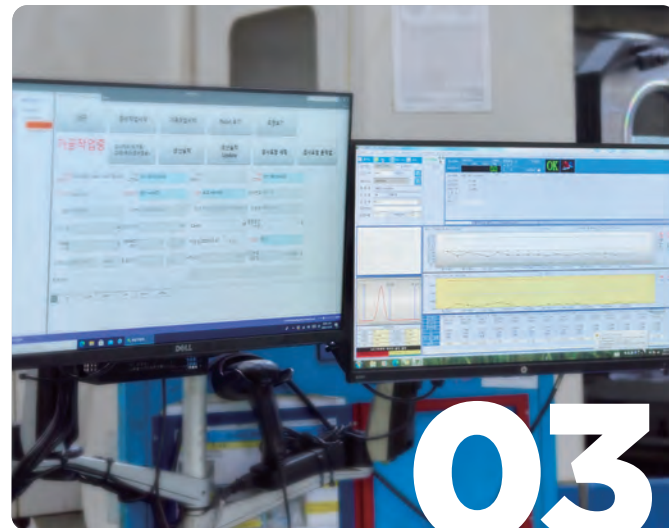
Drawing Revision Level Control



02

Manufacture

Production Data Control



03

Quality

Statistical Process Control (SPC)



04

Shipping&Inventory

Traceability Control for Shipped and Finished Parts

Quality Management

품질 개선 관리

GROUPWARE

Traceability Control



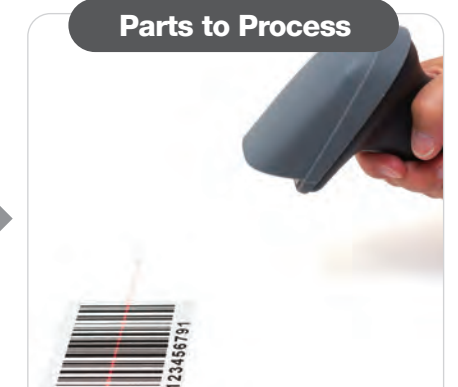
Field to Assembly

Serial Number on Assembly



Assembly to Part

Lot Numbers on Parts



Parts to Process

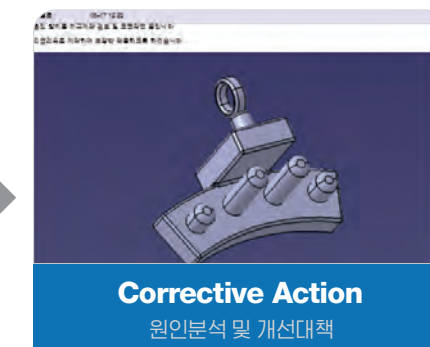
Process Charge Numbers on Parts

Continuous Quality Improvement



Issue Monitoring

문제발생 시 현상 시스템 업로드



Corrective Action

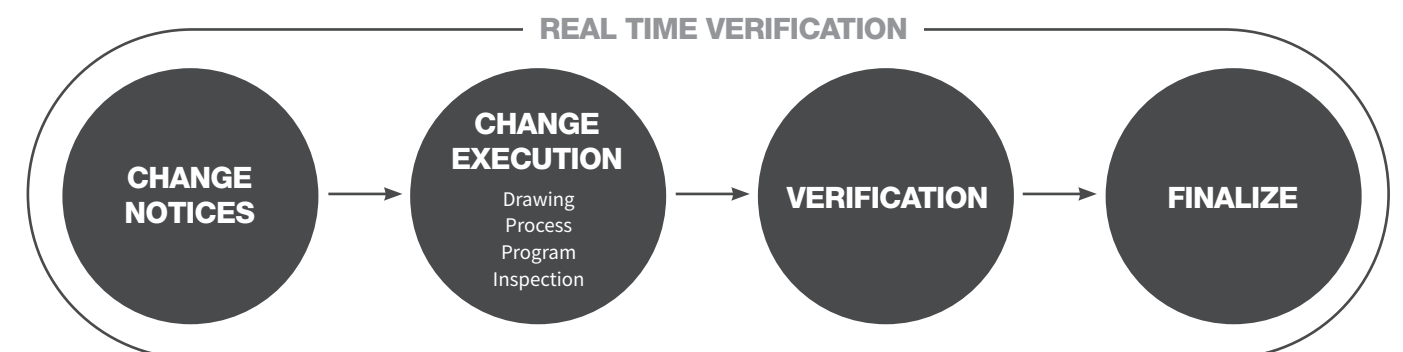
원인분석 및 개선대책



Feedback

FMEA를 통해 설계 및 공정 반영

Engineering Change Verification



wcorimPTS

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