

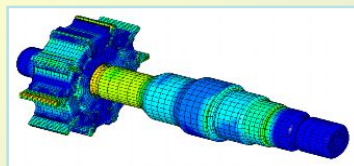
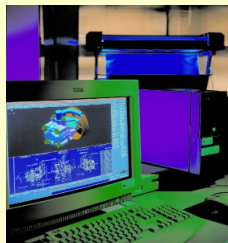
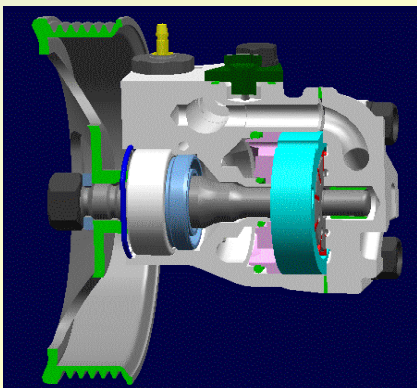


YOUNGSHIN

# YOUNGSHIN PRECISION CO., LTD.

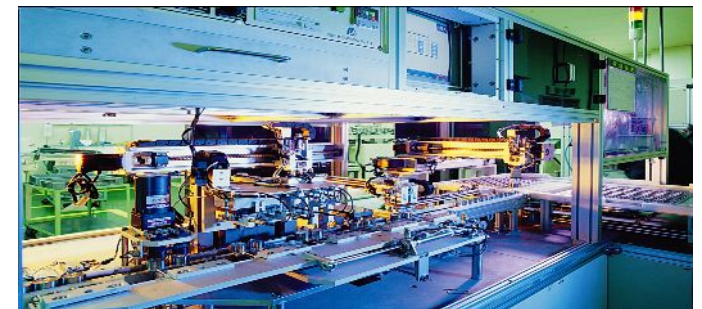
#408, Oya Ri, Cheonbuk Myeon, Gyeongju City, 780-874, Korea

[www.ys-kr.com](http://www.ys-kr.com)



**Leading state-of-the-art Technology  
in Steering & Powertrain Parts**

- **COMPANY PROFILE**
- **QUALITY**
- **R&D**



# COMPANY HISTORY



- **Feb. 28, 1987** Established “Youngshin Precision Co., Ltd.
- **May 1988** Started to produce Power Steering Oil Pumps
- **Apr. 1992** Started to produce HVLA (Hydraulic Valve Lash Adjuster)
- **May 1999** Awarded “The Industrial Peace” by the President of Korea
- **Aug. 1999** Achieved “ISO 9001 & QS 9000”
- **Feb. 2000** Started to produce MLA
- **Dec. 2000** Awarded “The Best Supplier” by Hyundai Motors
- **Feb. 2003** Achieved “ISO/TS 16949:2002”
- **Oct. 9, 2005** Established overseas factory “Beijing Youngshin” in Beijing, China
- **Oct. 2005** Started to produce Pinion Valve
- **Feb. 2006** Started to produce EPS Components and Shimless type of MLA(Mechanical Lash Adjuster)
- **Apr. 2006** Awarded “GM Global Delta & Epsilon Oil Pump Project” by General Motors
- **Mar. 2007** Achieved “ISO14001”
- **Apr. 2008** Awarded “2007 GM Supplier of the Year winner” by General Motors
- **Dec. 2008** Awarded “70 Million US Export Trophy” by Korea Government



# COMPANY LOCATION



## Gyeongju Head Factory



408, Oya Ri, Cheonbuk Myeon, Gyeongju City, Korea

### Area

- Land Area : 25,814m<sup>2</sup>  
(277,862 sq ft)
- Building Area : 16,411m<sup>2</sup>  
(176,648 sq ft)

### Products

- Power Steering Oil Pumps

## Gyeongju Hwasan Factory



1189, Hwasan Ri, Cheonbuk Myeon, Gyeongju City, Korea

### Area

- Land Area : 23,031m<sup>2</sup>  
(247,906 sq ft)
- Building Area : 11,879m<sup>2</sup>  
(127,866 sq ft)

### Products

- Valve Lifters(HVLA, MLA)
- Electrical Power Steering Components

## Beijing Plant



M2-6, Xinggu Industrial Zone, Pinggu, Beijing, 101200, China

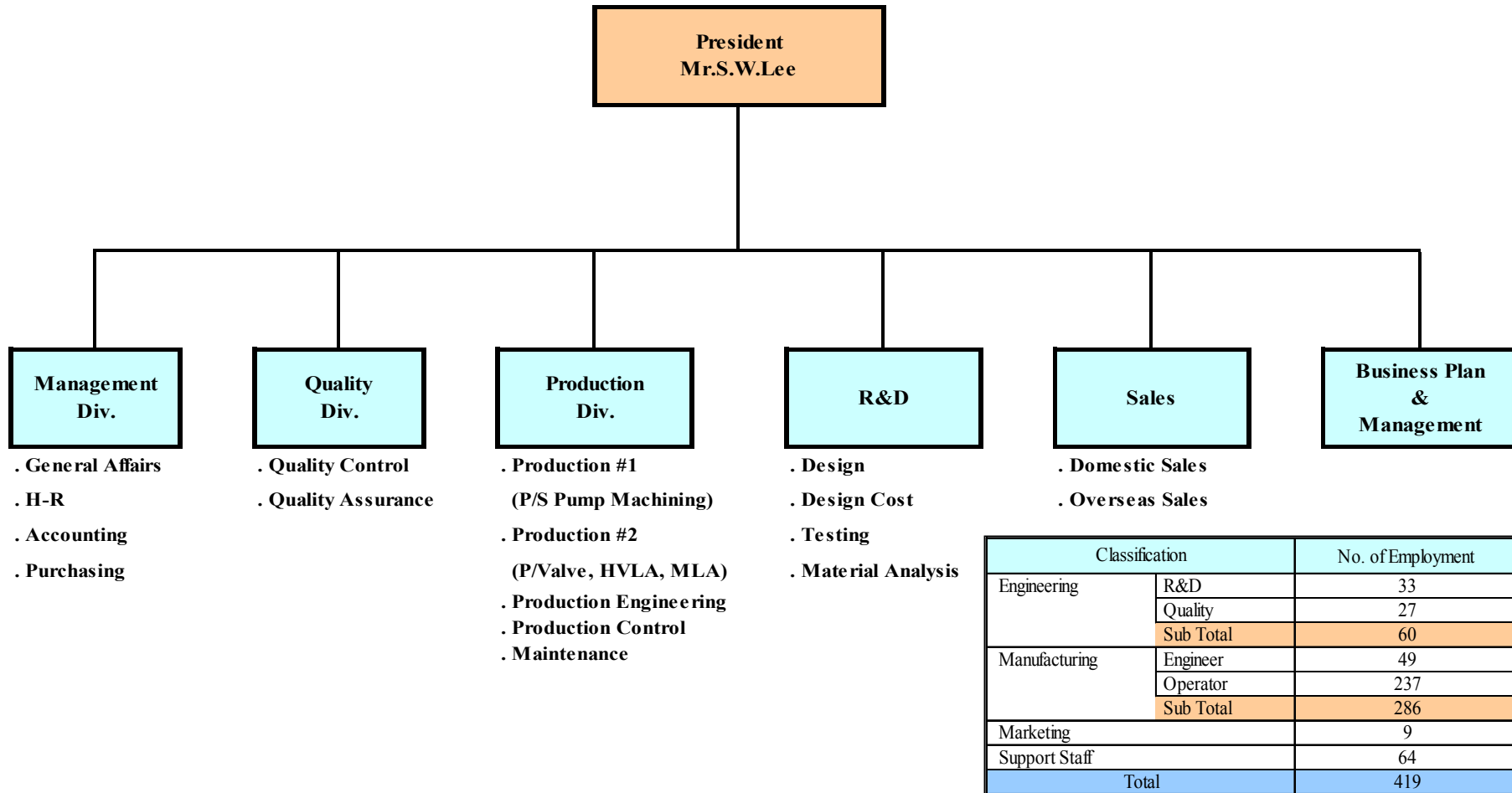
### Area

- Land Area : 16,499m<sup>2</sup>  
(177,595 sq ft)
- Building Area : 5,289m<sup>2</sup>  
(56,931 sq ft)

### Products

- Power Steering Oil Pumps

# ORGANIZATION

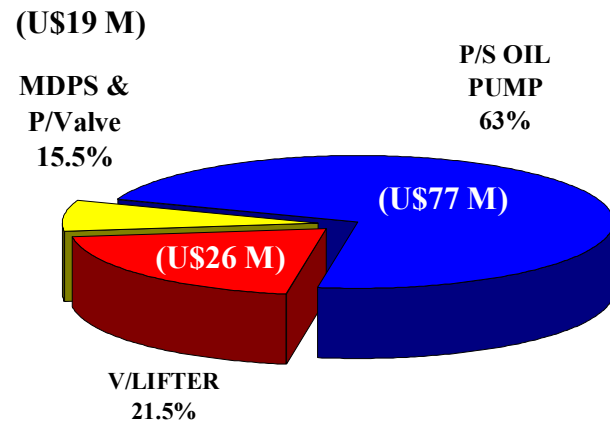


| Classification |                  | No. of Employment |
|----------------|------------------|-------------------|
| Engineering    | R&D              | 33                |
|                | Quality          | 27                |
|                | <b>Sub Total</b> | <b>60</b>         |
| Manufacturing  | Engineer         | 49                |
|                | Operator         | 237               |
|                | <b>Sub Total</b> | <b>286</b>        |
| Marketing      |                  | 9                 |
| Support Staff  |                  | 64                |
| <b>Total</b>   |                  | <b>419</b>        |

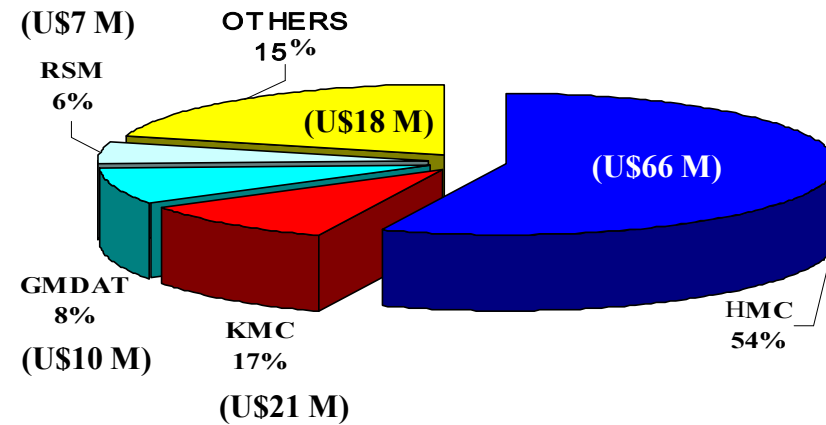
# SALES AMOUNT (YEAR 2007)



## SALES BY ITEM



## SALES BY CUSTOMER










**Total(Y2007) : US\$122 Mil**








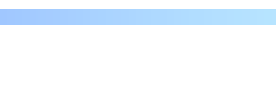

# CUSTOMER



## Domestic Customer

| CUSTOMER  | ITEM                                      |
|---|---|
|    | POWER STEERING OIL PUMP<br>HVLA, MLA      |
|    | POWER STEERING OIL PUMP<br>HVLA, MLA      |
|    | POWER STEERING OIL PUMP<br>MLA            |
|    | POWER STEERING OIL PUMP<br>MLA            |
|  | POWER STEERING OIL PUMP                   |
|  | POWER STEERING OIL PUMP<br>EPS COMPONENTS |
|  | POWER STEERING OIL PUMP<br>EPS COMPONENTS |

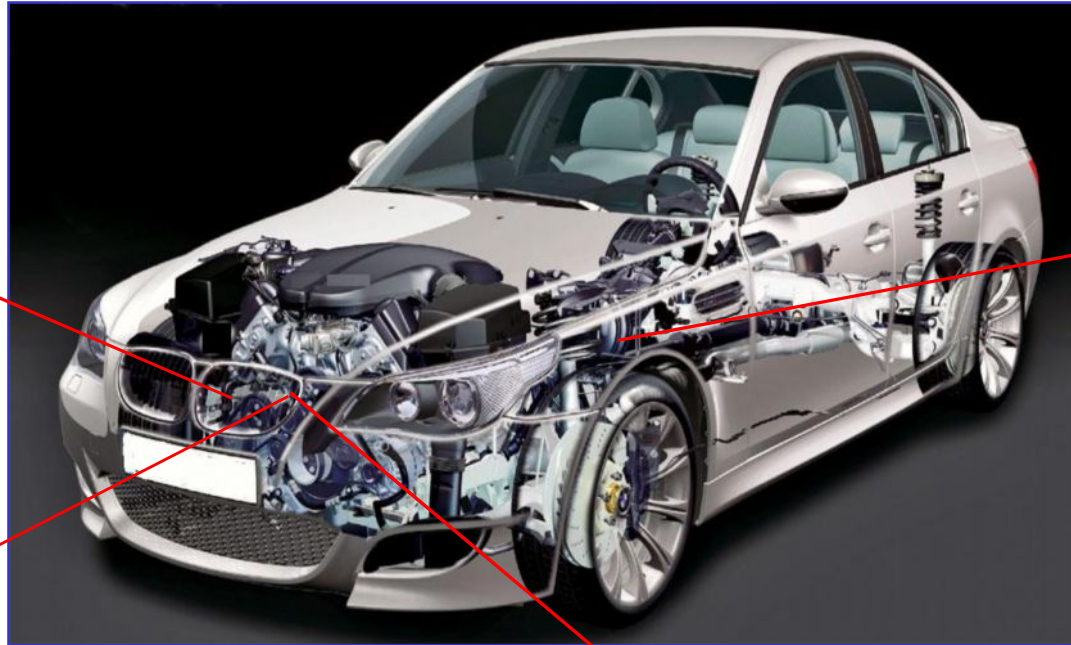
## Overseas Customer

| CUSTOMER  | ITEM  |
|---|---|
|    | POWER STEERING OIL PUMP                                     |
|    | POWER STEERING OIL PUMP<br>(Delta & Epsilon, 258, 308, 813) |
|    | POWER STEERING OIL PUMP<br>(Delta & Epsilon)                |
|    | PUMP & COMPONENTS<br>PINION VALVE COMPONENTS                |
|  | POWER STEERING OIL PUMP                                     |
|  | POWER STEERING OIL PUMP                                     |
|  | POWER STEERING OIL PUMP                                     |
|  | POWER STEERING OIL PUMP                                     |
|  | HVLA  |

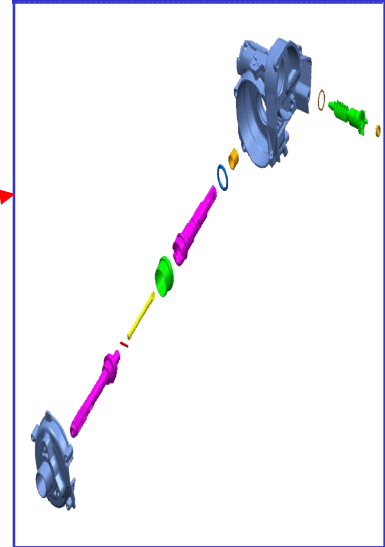
# PRODUCTS OVERVIEW



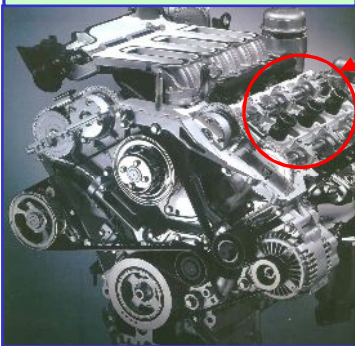
**Power Steering Pump**



**EPS Parts**



**Powertrain**



**Hydraulic Lash Adjuster**



**Mechanical Lash Adjuster**



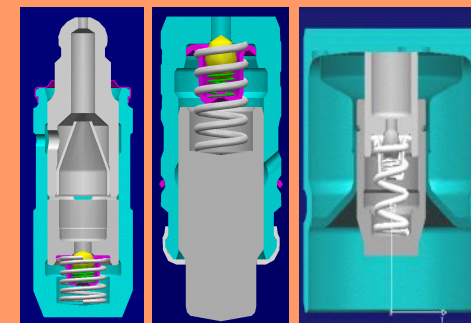
## Power Steering Oil Pump

- Easy steering at low speed
- Driving stability
- Customer : Hyundai , Kia, GMDAT, Renault Samsung, Ssangyong, GM, SGM, GME, GMI, Mahindra, Tata, Geely, Hafei, Great Wall
- Production Q'ty : 2,800,000 sets
- Capacity : 3,900,000 sets



## HVLA(Pivot / Bucket Type)

- Improved fuel efficiency
- Improved engine performance
- Customer : Hyundai, Kia
- Production Q'ty : 8,000,000 sets
- Capacity : 15,500,000 sets



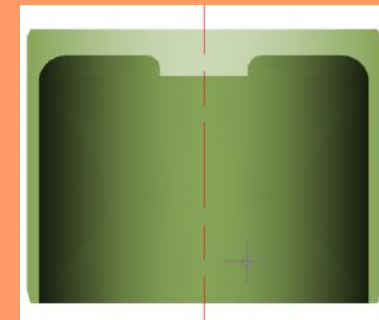
## MLA(Outer Shim Type)

- **Reduced weight and fuel consumption**
- **Reduced engine vibration and noise**
- **Customer : Hyundai, Kia**
- **Production Q'ty : 8,500,000 sets**
- **Capacity : 10,000,000 sets**



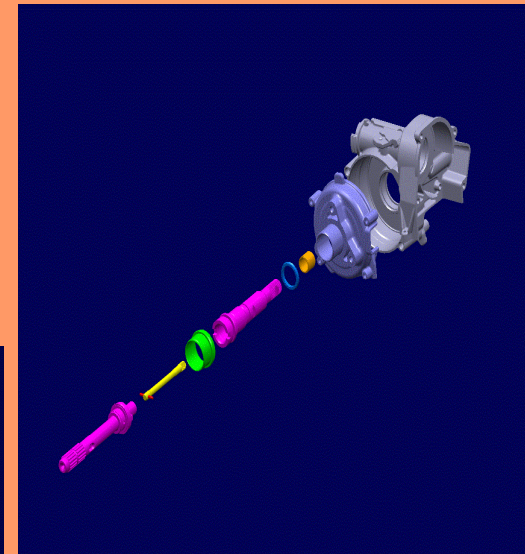
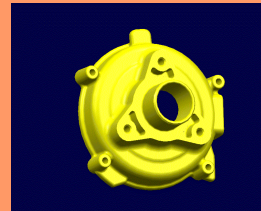
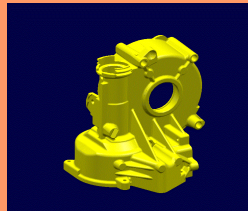
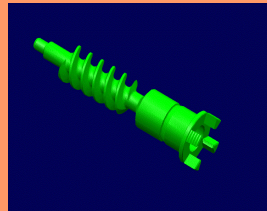
## MLA [ Shimless Type ]

- **Customer : Kia, Renault Samsung, GMDAT**
- **Production Q'ty : 3,000,000 sets**
- **Capacity : 9,000,000 sets**



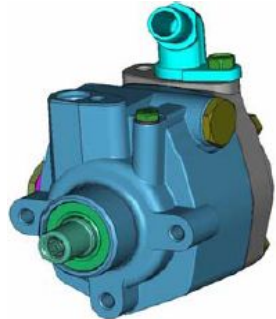
## EPS COMPONENTS

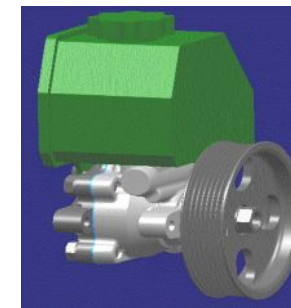
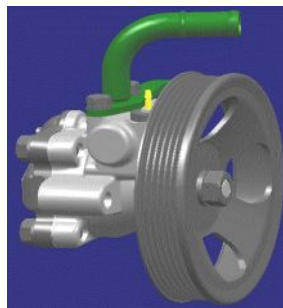
- **Quill Shaft Assembly, Worm Shaft, Housing, Cover**
- **Customer: Mobis, Mando(Hyundai)**
- **Production Q'ty : 650,000 sets**
- **Capacity : 1,300,000 sets**




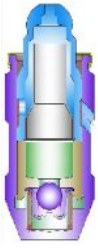
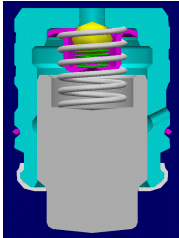
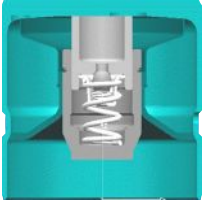
# CURRENT PRODUCTS (POWER STEERING PUMP)





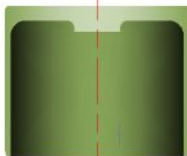

| Classification    |            | Current Available Specification        | New Products   |
|-------------------|------------|--|--|
| Displacement      |            | 5.9, 7.2, 8.5, 9.6, 10.5, 14cc/rev     | <u>Variable Displacement Pump</u><br><br># Proto Sample: by the end of Jul., '08<br># Validation: by the end of Dec., '08 |
| Relief pressure   |            | 50 ~ 135 Kgf/cm <sup>2</sup>           |  |
| Maximum rpm       |            | 9,000 rpm                              |  |
| Oil temp.         |            | -40°C ~ 135°C                          |  |
| Material          | Body       | Al (Gravity/Die-casting), Fe (Gravity) |  |
|                   | Rear cover | Al/Fe (Gravity)                        |  |
| Reservoir         |            | With or Without                        |  |
| Flow control type |            | Sensitive , Non-sensitive              |  |



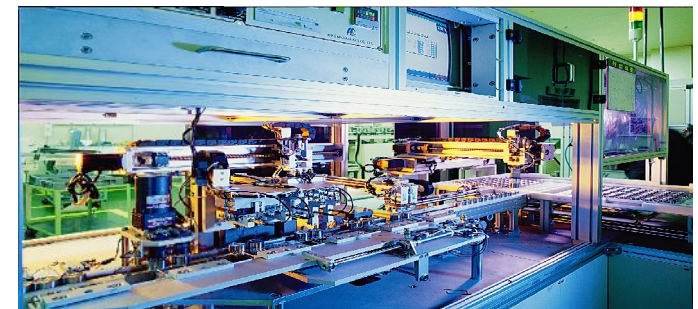
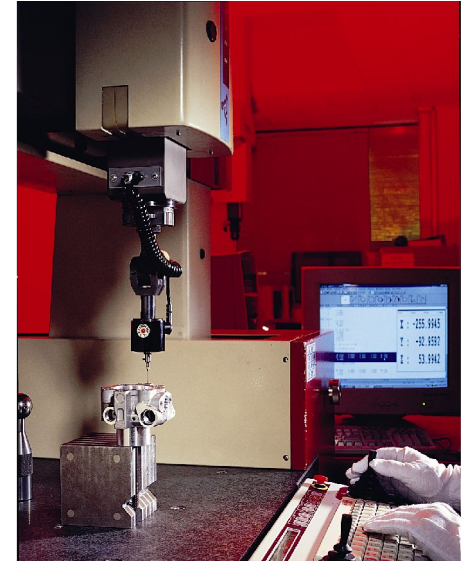
# CURRENT PRODUCTS (HVLA)

| TYPE           |         | HVLA  |   |   |   |
|----------------|---------|---|---|---|---|
|                |         | Pivot   | Insert  | Bucket  |   |
| Photograph     |         |  |  |  |  |
| Engine         |         | -   | -   | -   | -   |
| Outer Diameter |         | Φ16   | Φ17   | Φ12   | Φ30, Φ33  |
| Material       | Body    | SCM420H   | SCM420H   | SCM420H   | SCM420H   |
|                | Plunger | SCM420H   | SCM420H   | SCM420H   | SCM420H   |
|                | Seat    | SCM420H   | SCM420H   | SCM420H   | -   |

# CURRENT PRODUCTS (MLA)

| TYPE              |                     | MLA   |   |   |   |
|-------------------|---------------------|---|---|---|---|
|                   |                     | Outer Shim  | Shimless  |   |   |
| Photograph        |                     |  |  |  |  |
| Engine            |                     | -   | -   | -   | -   |
| Φ, Grade          |                     | Φ33<br>(61Grade)  | Φ32<br>(47Grade)  | Φ26<br>(40Grade)  | Φ34, Φ30<br>(26Grade)   |
| Material          |                     | <b>SHIM: SCM415H</b><br><b>BODY: SCM420H</b>                                      | SCM415H   | SCM415H   | SCM415H   |
| Surface Treatment | Cam Contact Surface | -   | -   | -   | Cr2N  |
|                   | Skirt Surface       | -   | -   | -   | -   |

- **Quality**



**“In Youngshin Precision Co.,Ltd, we are committed to satisfy and exceed our Customer Requirements and Expectations”**

**“Every Youngshin people has the responsibility to focus job activities on customer demands.”**

- **Minimize Nonconforming Parts in Process**

- Strong monitoring and Control in Production Process

- **Zero Defects**

- Through Root Cause Analysis And Improvement

- Corrective and Preventive Action

- **Cost Competitiveness**

- Process Improvement and New Technology & Parts Development

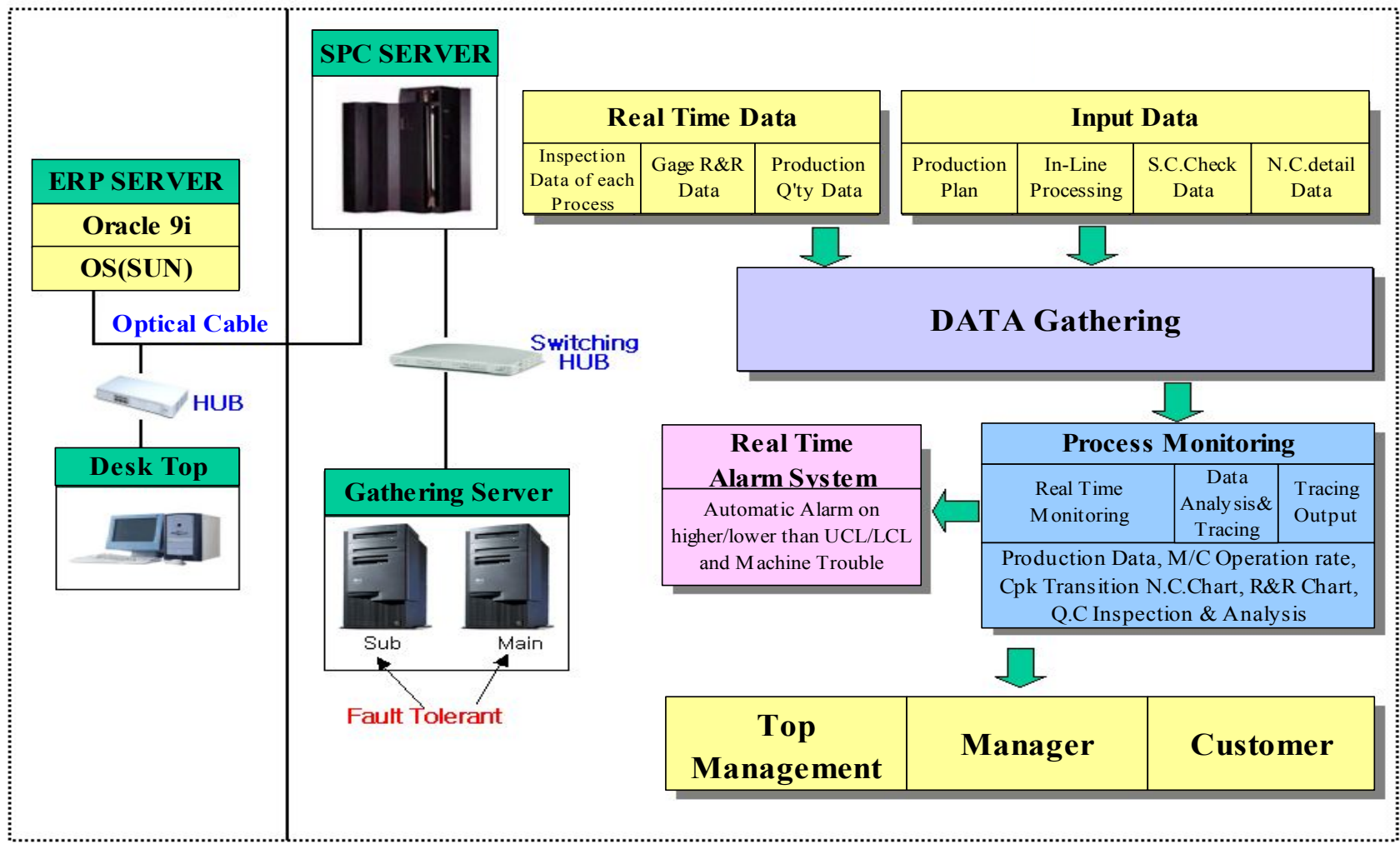
- **Customer Satisfaction**

- Thorough Inspection and Test

- Quick and Precise After Sales Service

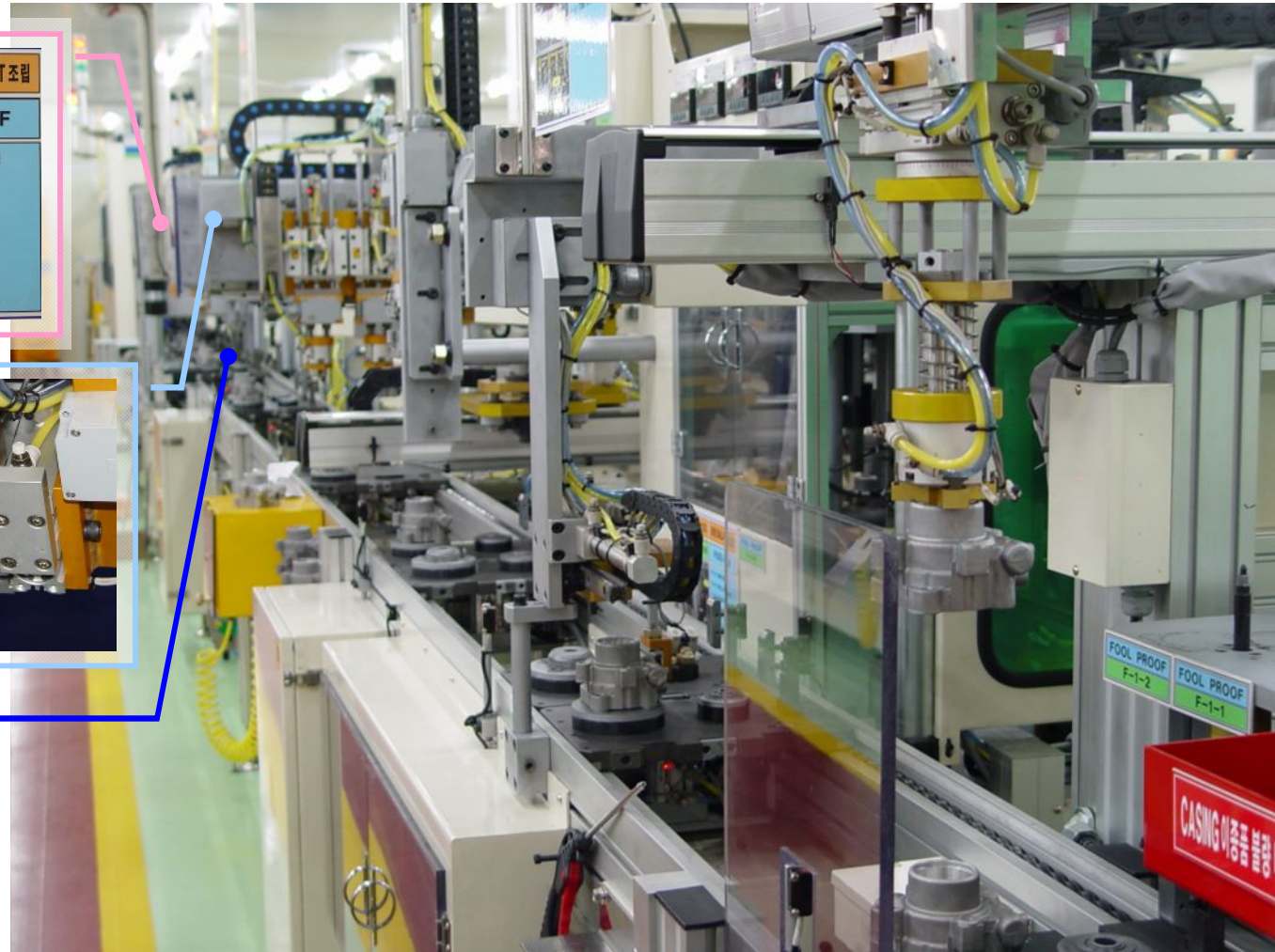


# SPC SYSTEM

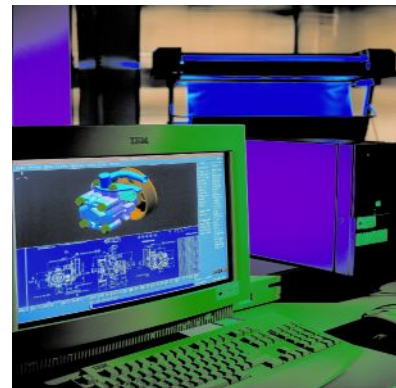
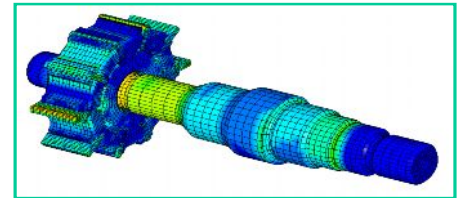
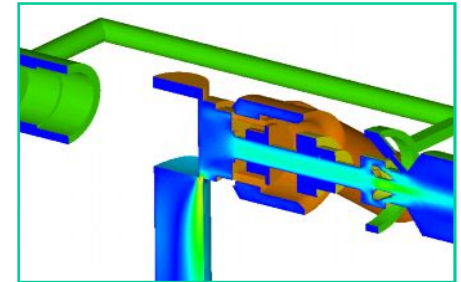


# ERROR PROOFING STATION

|   |                          |
|---|--------------------------|
| 작업 NO : OP#110  | 작업명: RR-COVER BOLT 조립    |
| 작업명: FOOL PROOF 위치  | FOOL PROOF               |
|  | F-11-34 · BOLT 체결 T/Q 확인 |



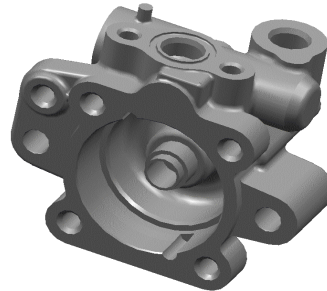
- R & D



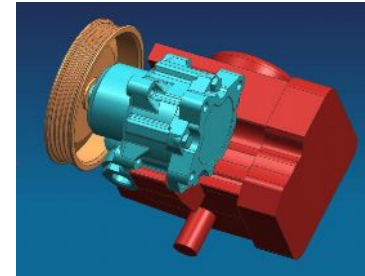
# DESIGN & CAE CAPABILITY

## 1. CAD SYSTEMS

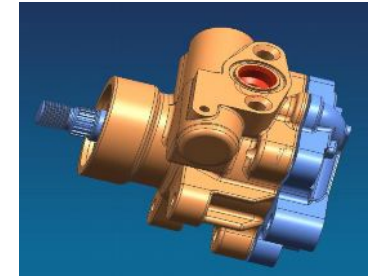
SOFTWARE : CATIA V4 & V5  
Pro-Engineer  
Unigraphics NX 3  
HARDWARE : Workstation RS6000  
DATA EXCHANGE : IGES



CATIA



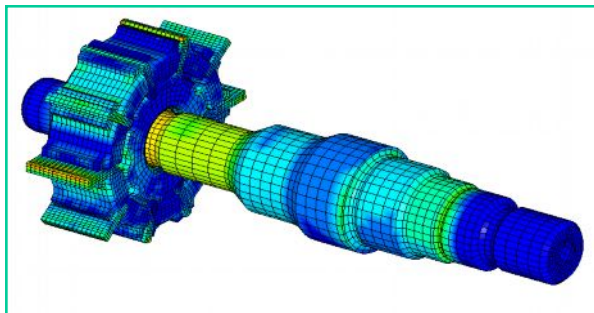
Unigraphics



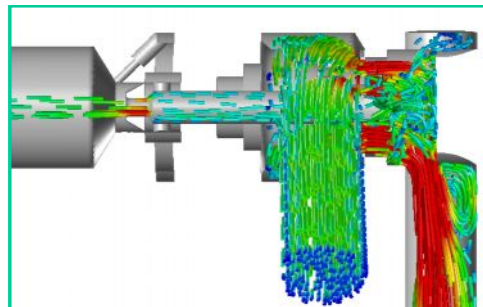
Pro-Engineer

## 2. CAE SYSTEMS

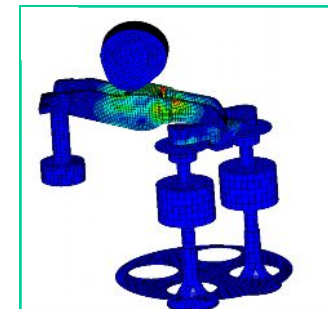
SOFTWARE : NASTRAN/PATRAN  
MODEL : HP W/S X4000  
Application : Stress, Vibration Analysis



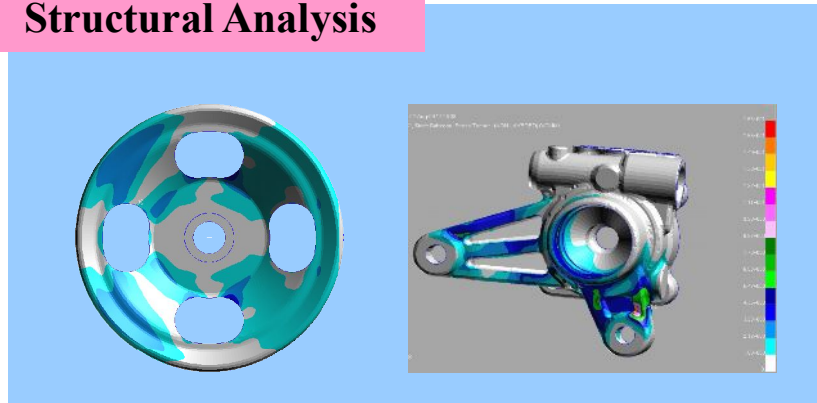
SOFTWARE : FLUENT/GAMBIT  
MODEL : HP W/S XW8000  
Application : Fluid Analysis



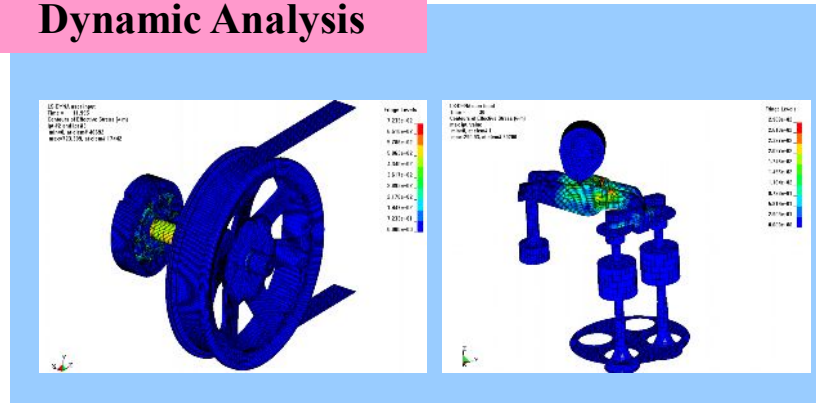
SOFTWARE : LS-DYNA/VPG  
MODEL: HP W/S XW8200  
Application : Dynamic, Crash Analysis



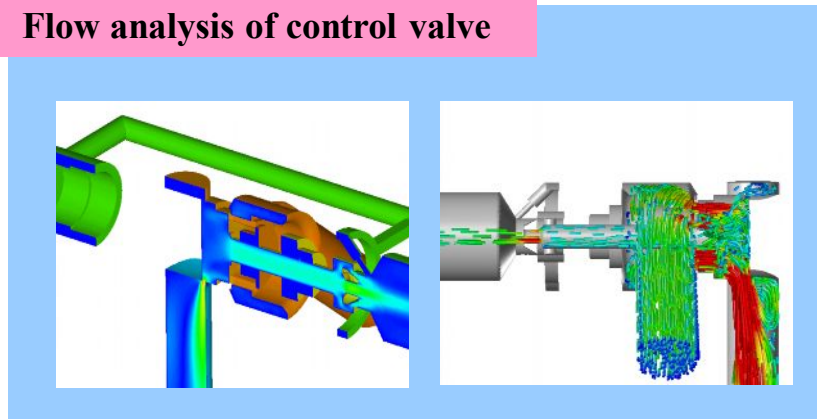
## Structural Analysis



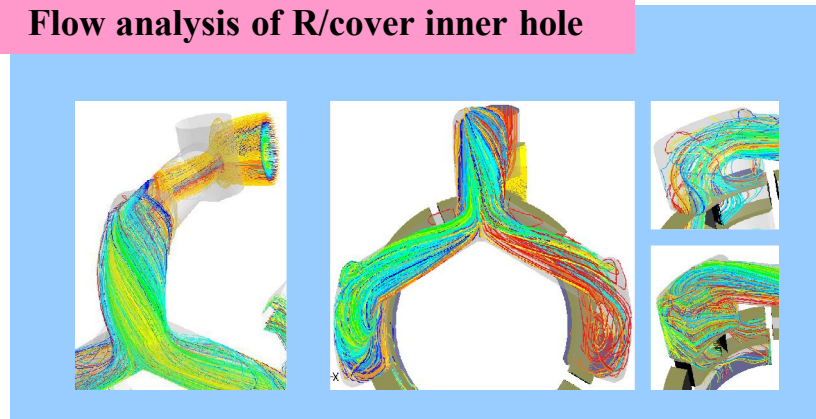
## Dynamic Analysis



## Flow analysis of control valve



## Flow analysis of R/cover inner hole



# TEST FACILITIES

| AREA                         | EQUIPMENT                      | NO                          | APPLICATION                            | REMARKS |
|------------------------------|--------------------------------|-----------------------------|--|---------|
| MATERIAL                     | OPTICAL MICROSCOPE             | 2                           | METAL MICROSTRUCTURE                   |         |
|                              | UTM                            | 1                           | TENSILE STRENGTH                       |         |
| TESTER                       | PSP PERFORMANCE TESTER         | 2                           | P/S PUMP PERFORMACE TEST               |         |
|                              | PSP NOISE TESING ROOM          | 2                           | P/S PUMP NOISE TEST                    |         |
|                              | COMPLEX RIG TESTER             | 1                           | G/BOX,PS SYSTEM TEST                   |         |
|                              | HIGH SPEED DURABILITY TESTER   | 2                           | P/S PUMP DURABILITY TEST               |         |
|                              | COMPLEX DURABILITY TESTER      | 6                           | P/S PUMP DURABILITY TEST               |         |
|                              | PULSE ENDE DURABILITY TESTER   | 2                           | P/S PUMP DURABILITY TEST               |         |
|                              | COLD CHAMBER                   | 1                           | COLD START TEST                        |         |
|                              | MOTOR'G ENG. DURABILITY TESTER | 1                           | HVLA,MLA DURABILITY & PERFORMANCE TEST |         |
|                              | CYL. HEAD TORQUE TESTER        | 1                           | CYLINDER HEAD                          |         |
|                              | QUILL SHAFT DURABILITY TESTER  | 1                           |  |         |
| FULL VEHICLE NOISE TEST ROOM | 1                              | FULL VEHICLE NOISE ANALYSIS |  |         |



**COMPLEX RIG TESTER**



**PSP PERFORMANCE TESTER**



**VIBRATIONAL DURABILITY TESTER**



**COLD CHAMBER**



**MDPS QUILL SHAFT DURABILITY TESTER**



**ENGINE MOTORING DURABILITY TESTER**

# PRODUCTION & TEST FACILITIES



PS Oil Pump Line



PS Oil Pump Line



Full Vehicle NVH Test



Steering System Test



**Production  
Facilities**

Pinion Valve Line



Durability Test



**Test  
Facilities**

MLA(Solid Tappet) Line



EPS Parts Line



PS Pump Noise Test



Performance Test



- 1. Long experiences in automotive industry for more than 20 years, having huge market share reaching 55% of Korean market**
- 2. Lots of experiences for new products development with domestic and overseas car maker**
- 2. Growing business status by taking programs from Global OEM(General Motors)**
- 3. Well organized and fully automated manufacturing line equipped with Error proofing system and SPC system**
- 4. Global manufacturing and supply base using China plant**
- 5. Steady and good relationship between the management and the labor union**
- 6. High level engineering: Self design and testing ability in house with prototype shop meeting customer's demand**
- 7. Good communication skill with customer**

# CONTACT



## Address :

### **Gyeongju Head Factory**

408, Oya-Ri, Cheonbuk-Myeon, Gyeongju City, Gyeongsangbuk Do, 780-874, Korea

### **Gyeongju Whasan Factory**

1189, Hwasan-Ri, Cheonbuk-Myeon, Gyeongju City, Gyeongsangbuk Do, 780-871, Korea

### **China Factory**

M2-6 Xinggu Industrial Zone, Pinggu, Beijing, 101200, China.

### **Seoul Sales & Marketing Office**

5F, Woori B/D, #142, Samseong Dong, Gangnam Gu, Seoul City, 135-876, Korea

## Contact :

