WinGD Korea Training Centre

Training Programme Catalogue

WinGD Korea Training Centre

- Content

WinGD Korea Location

Address and Contact Information

- Address: 2 Floor, 8, Bagyeongjun-gil, Ilgwang-myeon, Gijang-gun, Busan, 46040, Korea
- Contact: + 82 51 320 9824 / jiyoung.kim_external@wingd.com (Jiyoung Kim, Training coordinator)

WinGD Korea Location

Connectivity – Major shipyards & Engine builders

WinGD Korea is located at eastern of Busan.

It is within 1 hour distance by car from HHI & Hanwha Engine and 2 hours distance by car from SHI & Hanwha Ocean.

QR code links to view google map for WinGD Korea location.

WinGD Korea Training Centre

- Content

Local Arrangement

Centum Business Hotel

- Address: 1521,U-Dong, Haeundae-Gu, Busan, Korea / 부산시 해운대구 우동 1521
- Contact: +82-51-755-9000

- Hotel is located in downtown where is around 30 minutes away from WinGD Training Centre.
- Room rate: 110,000 KRW (Included breakfast and daily commuting service from/to Training Centre)
- Daily commuting service is provided free of charge if more than 4 trainees book. In case of less 4 trainees, additional cost will be charged to the room rate and the additional cost depends on the number of trainees.

❖ Note: This benefit is provided only under the condition of pre-payment by WinGD.

Local Arrangement

Transportation

- If you request, we can arrange transportation from your location to your destination (ex. Airport, Hotel, Mokpo, Geoje, Ulsan etc..)
- The cost depends on the distance and the number of people.
- The vehicle is always cleaned and disinfected before & after transfer to avoid COVID-19.

❖ Note: This benefit is provided only under the condition of pre-payment by WinGD.

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- Content

Available Courses

Engine Training Courses

	Theoretical Course 3-Day, Classroom Lecture	Advanced Course 5-Day Classroom Lecture, Hands-on & Simulation
WECS-9520 Controlled	Theoretical Course WECS-9520 Controlled Engines	Operation Advanced Course WECS-9520 Controlled Engines
UNIC Diesel Controlled	Theoretical Course UNIC Diesel Controlled Engines	Operation Advanced Course UNIC Diesel Controlled Engines
UNIC DF Controlled	Theoretical Course UNIC-DF Controlled Engines	Operation Advanced Course UNIC-DF Controlled Engines
WiCE X Controlled	Theoretical Course WiCE Diesel Controlled Engines	Operation Advanced Course WiCE Diesel Controlled Engines
WiCE DF Controlled	Theoretical Course WiCE-DF Controlled Engines	Operation Advanced Course WiCE-DF Controlled Engines

WinGD Korea Training Centre

- Content

Training Facilities

Training Classroom “Otto”

Training Facilities

Training Classroom “Diesel”

Training Facilities

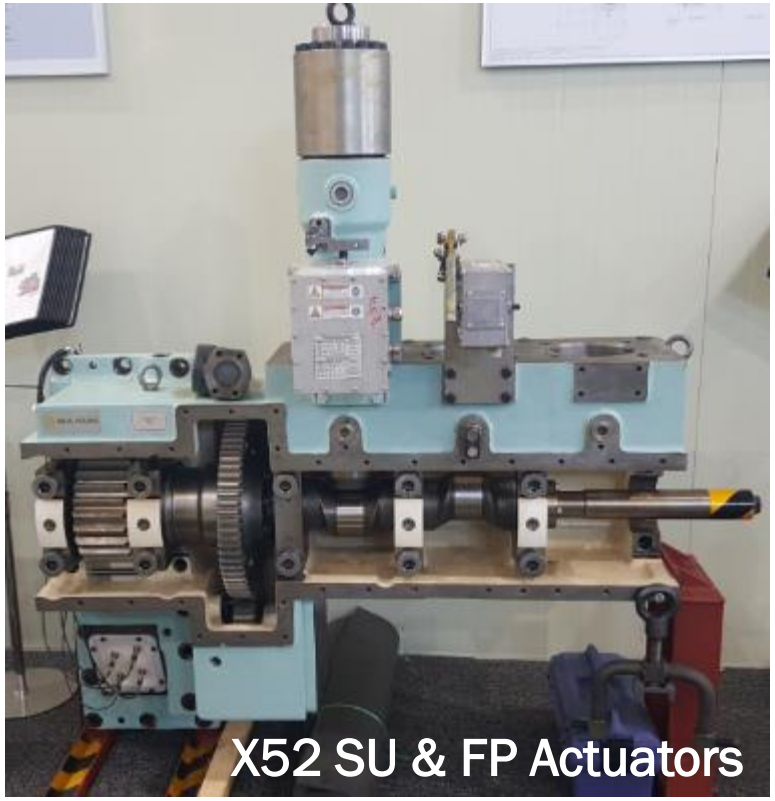
Trainees’ lounge

Training Facilities

Training Workshop Overview

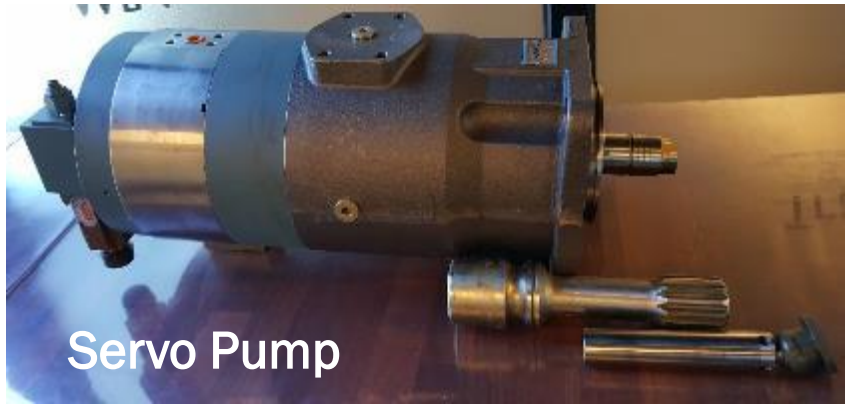
Training Facilities

Flex Components, Supply Unit


X52 SU & FP Actuators

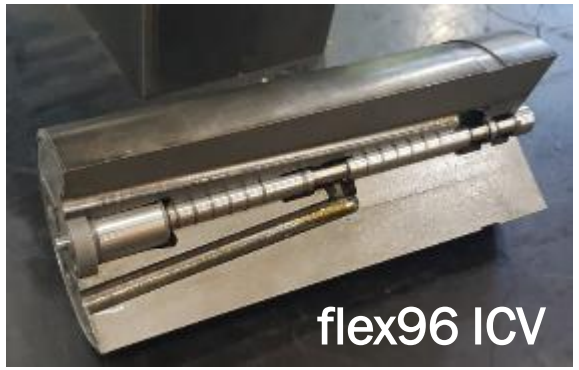

V4 Fuel Pump

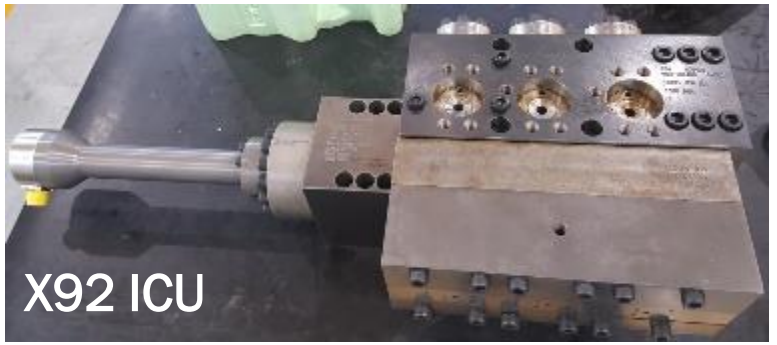

X4 Top Cover


Servo Pump

Training Facilities

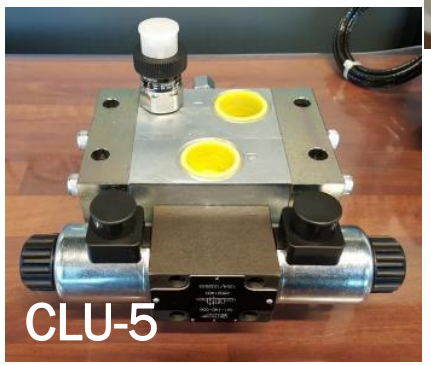
Flex Components, Rail Unit





Training Facilities

Cylinder Lubrication System, flexLube Mk-1 with iCAT, flexLube Mk-ε and CLU-5



Training Facilities

X62/72DF Main Fuel Injector with Tester and Pilot Fuel Injector with Pre-chamber

MFIV & Tester

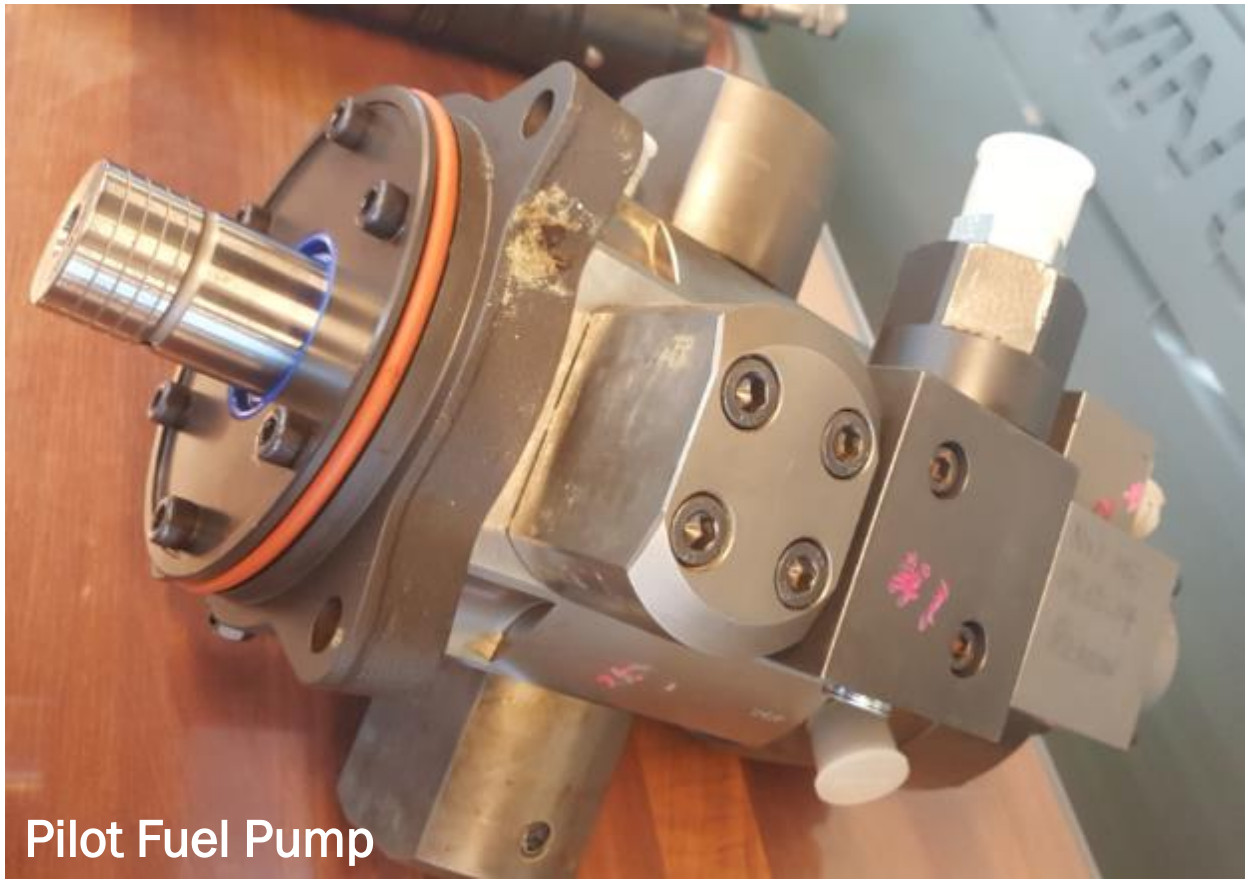

PFIV & Pre-chamber

Training Facilities

X-DF Gas Admission Valves & Pilot Fuel Pump


X62/72DF GAV


flex50DF GAV


Pilot Fuel Pump

Training Facilities

Start Air Valve, Pressure Control Valve & Safety Valve and EXV Upper Housing

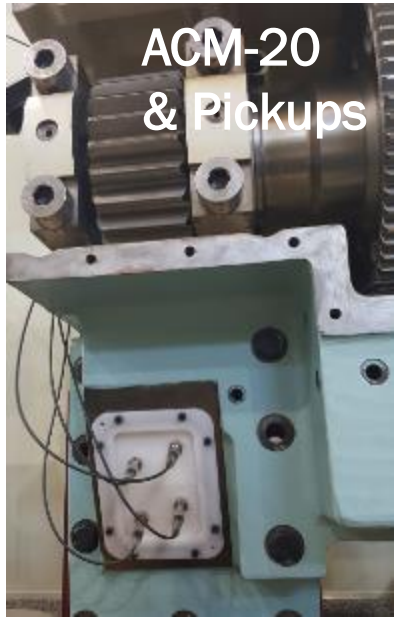
Start Air Valve

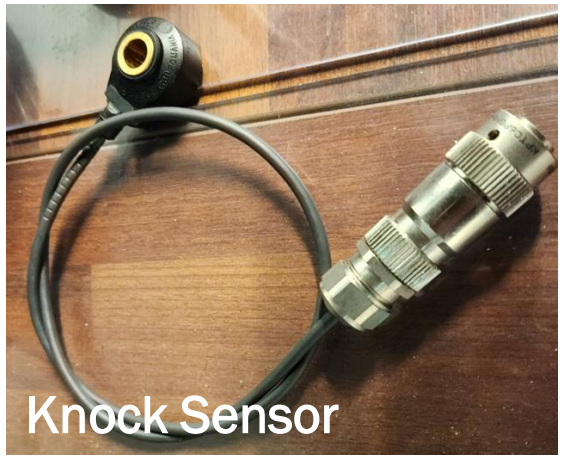
PCV & Safety Valve

EXV Up. Housing

Training Facilities

WECS-9520 ECS Components & Sensors





WinGD Korea Training Centre

UNIC & WiCE Simulator

Simulator Training Objective

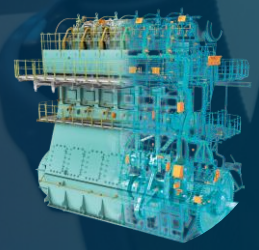
The main purpose of these simulators is operational training for the Crew and technical management of the Ship-owners. Simulator training helps trainees learn engine performance and optimization of troubleshooting items. With a deeper understanding of the product and its applied technologies, engine operators will be able to enhance the performance of the engine by increasing its efficiency and reliability, by reducing maintenance costs, and lowering emission levels.

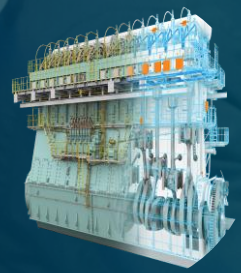
W-Xpert Full Mission Engine Room Simulator(FMS)

Trainees will have a better understanding of the structure and principle of key engine components through 3D graphical specific components display on touch screens. Trainer will guide participants through operational aspects of main engines as well as demonstrate certain troubleshooting outline.

Available engine type

- 5 ~8 cylinder for UNIC X or X-DF engines
- Up to 12 cylinder for WiCE X or X-DF engines

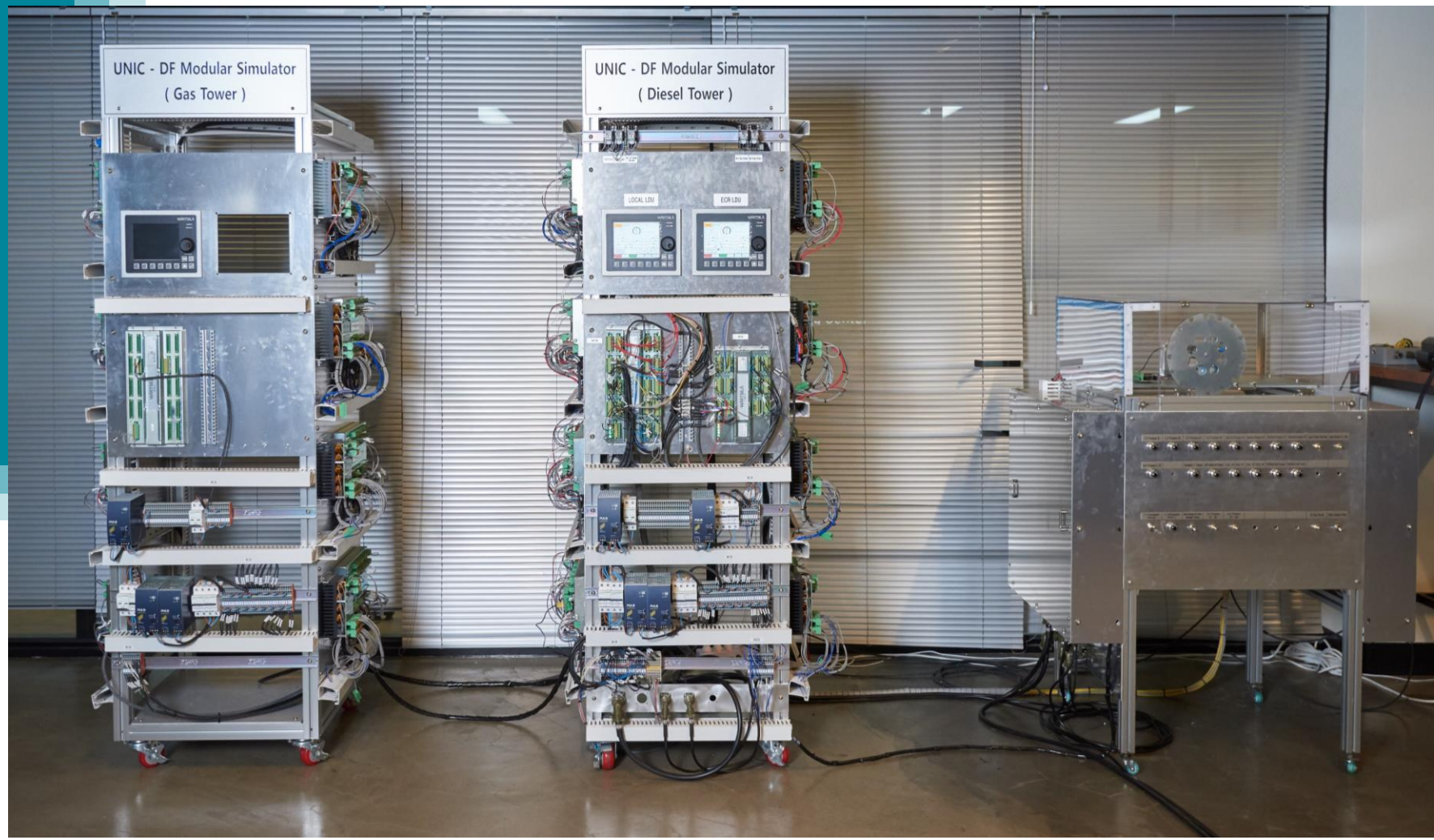




UNIC Modular Simulator

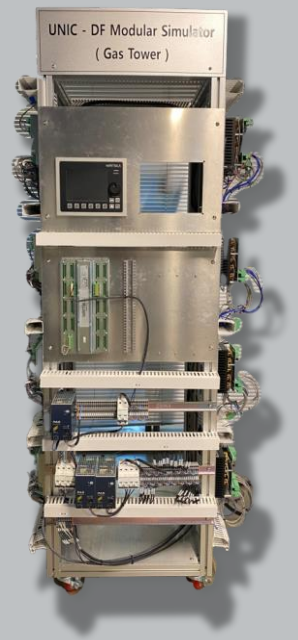
Overview

- Gas Tower (Up to 8 cylinders)
- Diesel Tower (Up to 8 cylinders)
- Shaft Simulator



Interface of UNIC Simulator

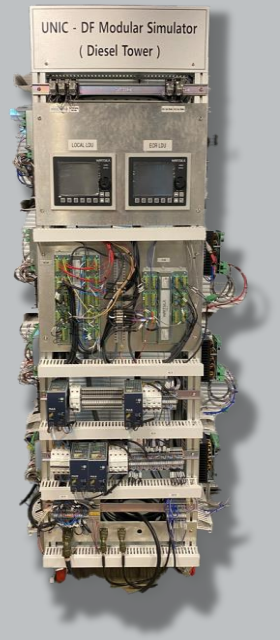
Gas Tower (Up to 8 cylinders)



CA signal
(A, B, C, D TDC and BDC)

CAN S Bus #1 & #2

Diesel Tower (Up to 8 cylinders)



CA signal
(A, B, C, D TDC and BDC)

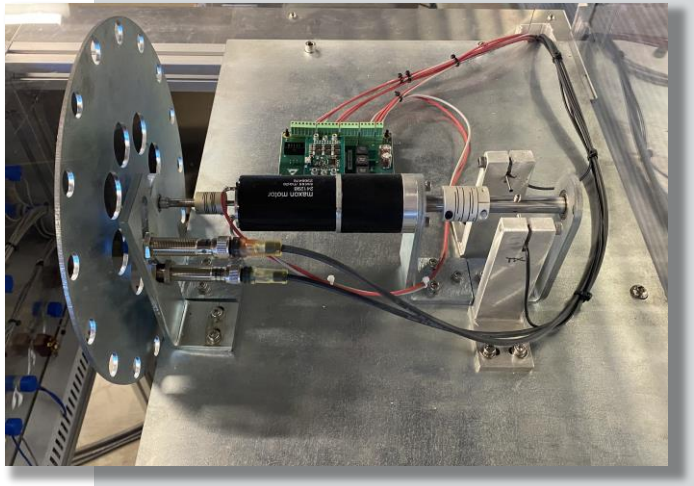
Analogue, TC, Digital signal feedback to UNIC(F.O, S.O, Scav', Pilot, Gas Pressure, Scav, Temp, T.G position, etc.)

Shaft Simulator

UNIC Simulator

Shaft Simulator

The simulator's engine shaft driven by DC motor. The shaft speed is controlled by UNIC according to the setting on LDUs by Operator. Two Gear wheel pick-up and TDC pick-up installed on the shaft simulator's wheel can give position and speed feedback to UNIC like actual engines.



Available functions through LDUs

- Engine Start Ahead
- Engine Start Astern
- Engine Stop
- Diesel mode and Gas mode
- Air Run
- Speed control

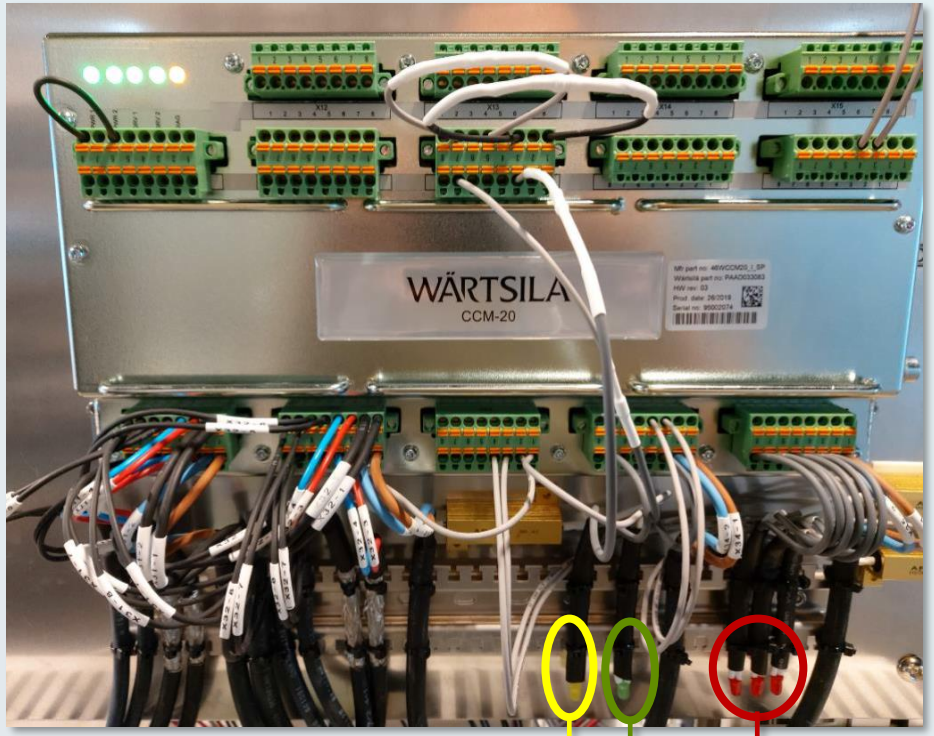
Analogue, Digital feedback to UNIC

Any analogue(4-20 mA) or digital signals' feedback to UNIC designed by means of potentiometers and toggle switches.

UNIC Simulator

Designed by LED connection

Diesel CCMs DRV Output Connection



- One FlexLub pump
- One VCU
- 3 Fuel Injectors

Gas CCMs DRV Output Connection

- 2 GAVs
- 2 Pilot fuel injectors

WiCE Modular Simulator

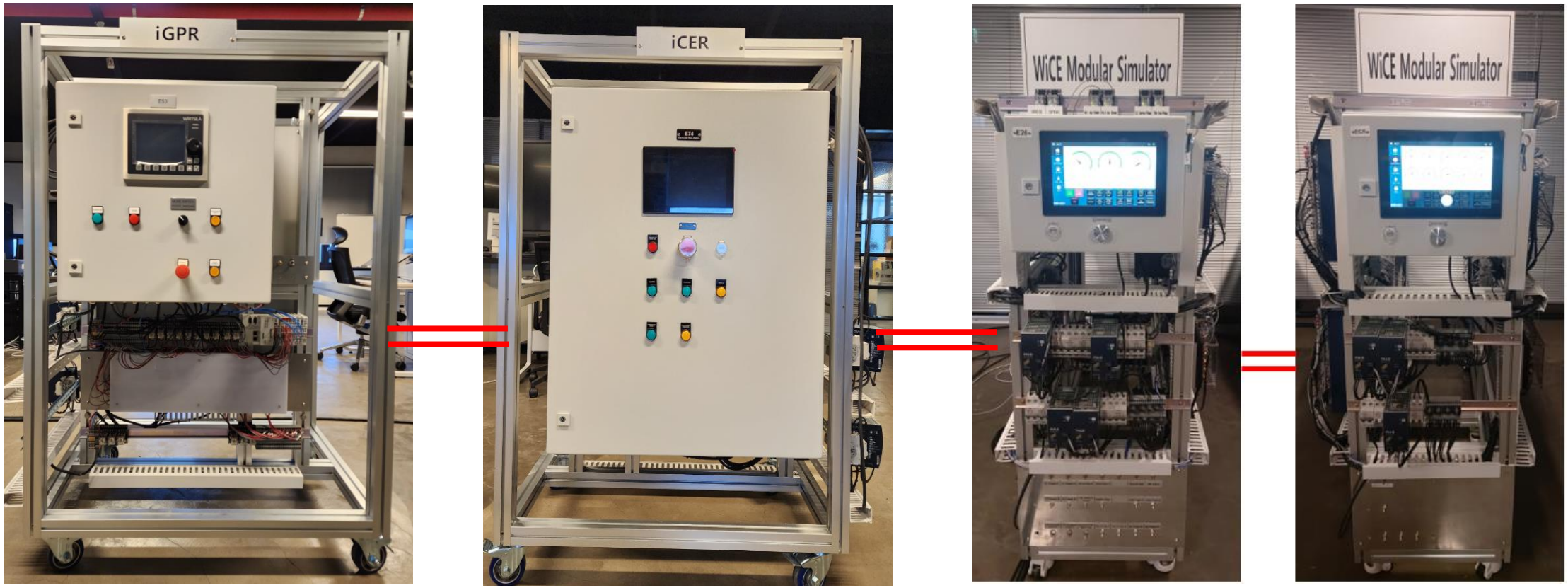
Overview

- ❑ Simulator HMI
- ❑ PLC modules
- ❑ Two WiCE module towers
  (Up to 12 cylinder X or X-DF engines)
- ❑ Flex view 2 Engine Monitoring
- ❑ Shaft Simulator

WinGD Korea WiCE Modular Simulator

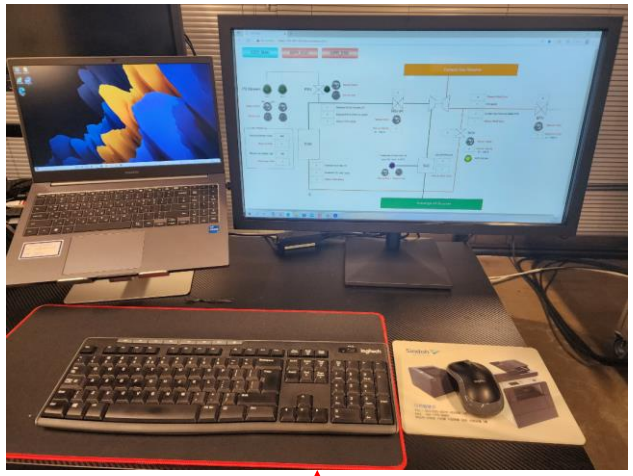
XDF-2.0 with iCER & iGPR

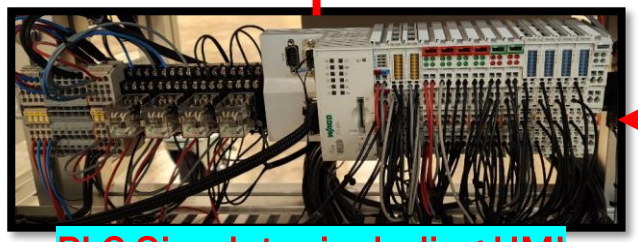
Two WiCE module towers



WinGD Korea WiCE Modular Simulator

XDF-2.0 with iCER & iGPR



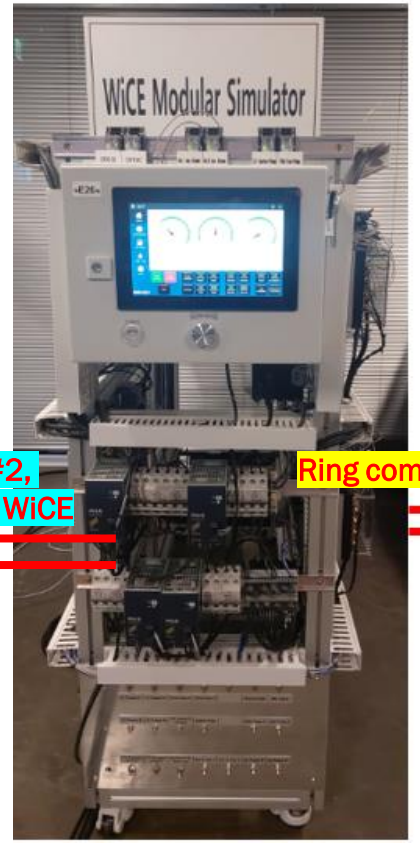


PLC Simulator including HMI

All feedback signals' input & Output controlled
EGC, WTS and Wetting system control and
feedback to i-CER CU (E74 box)

CAN Bus #1 &#2,
communication to WiCE

Two WiCE module towers



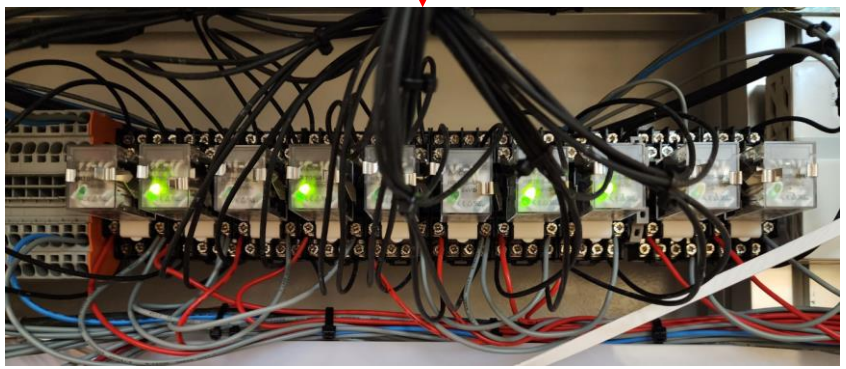
Ring communication

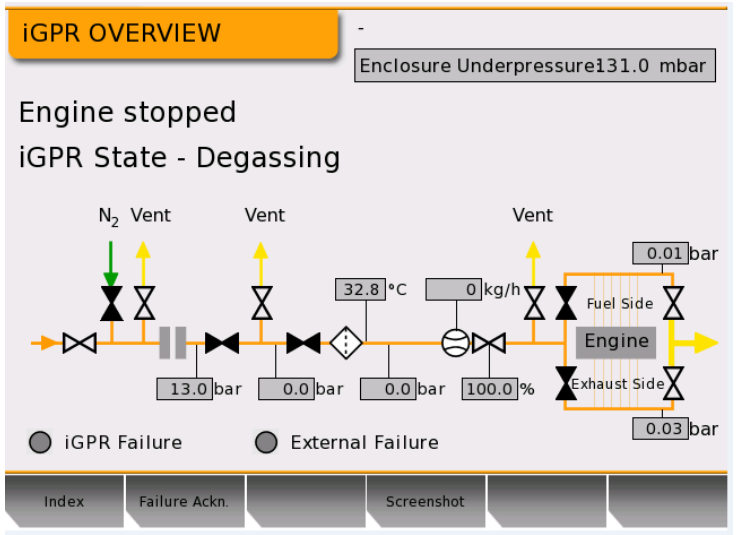
WinGD Korea WiCE Modular Simulator

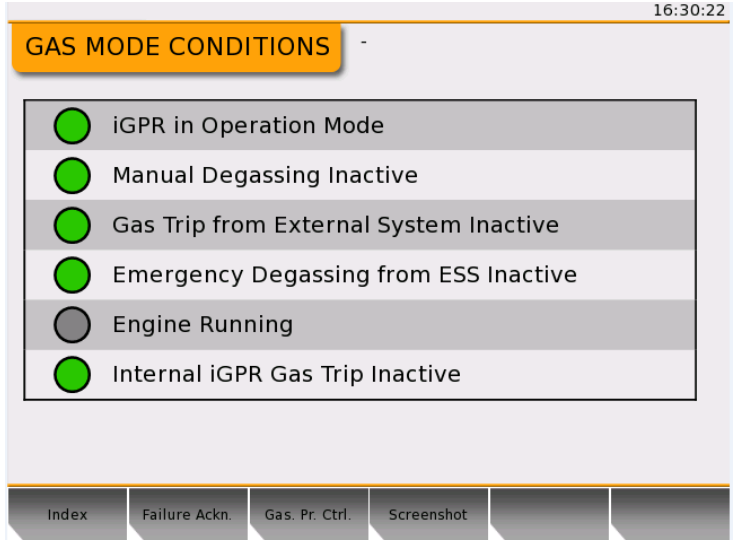
iGPR Simulator lay-out

iGPR Simulator including HMI

- All iGPR Gas Valves' controlled by PLC together with relays.
- iGPR simulator HMI is available for fault simulation

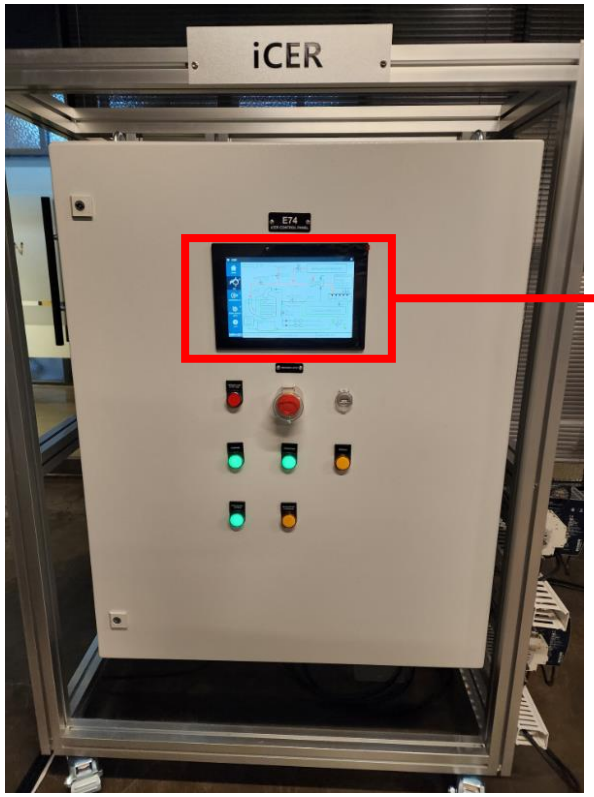


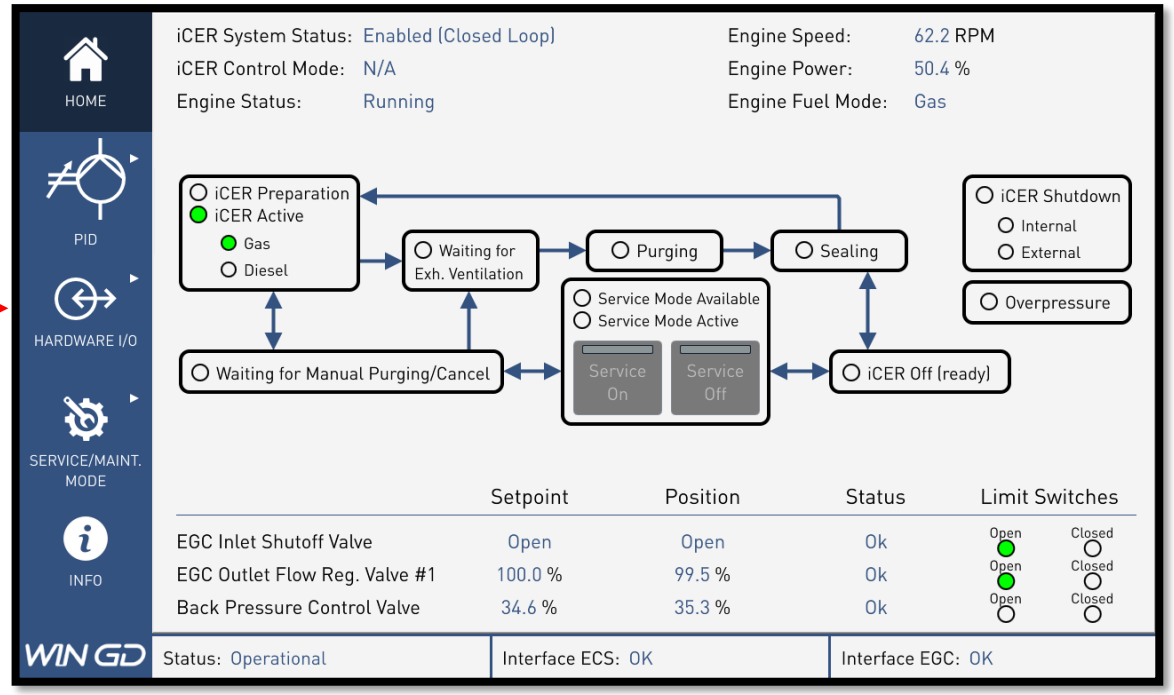




WinGD Korea WiCE Modular Simulator

iCER MCP Display

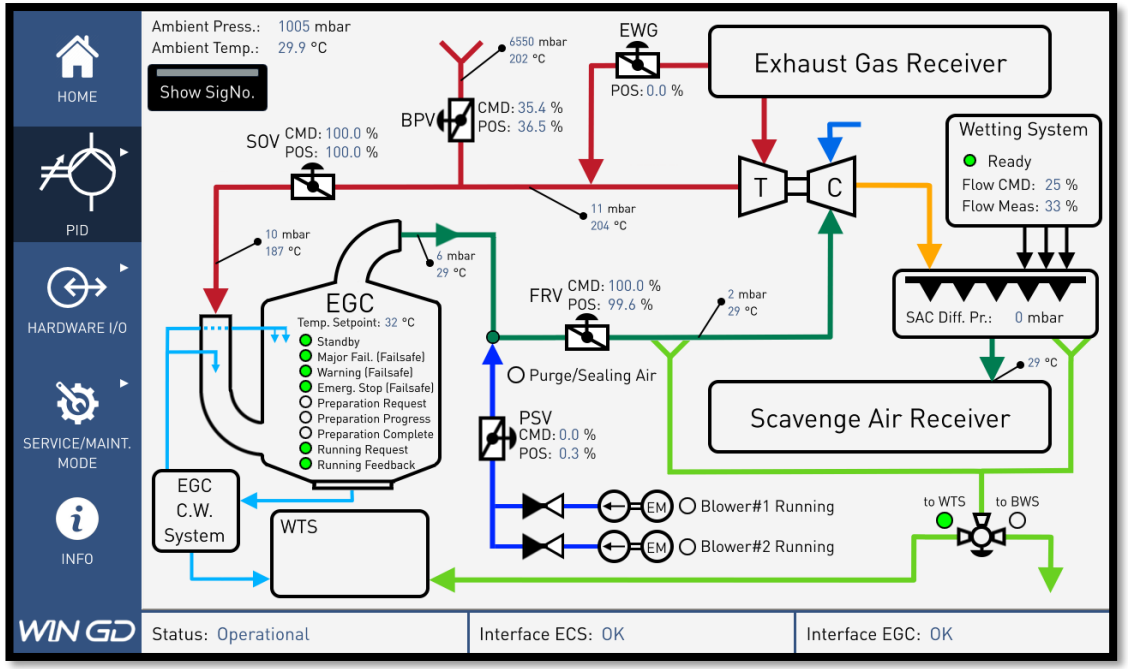


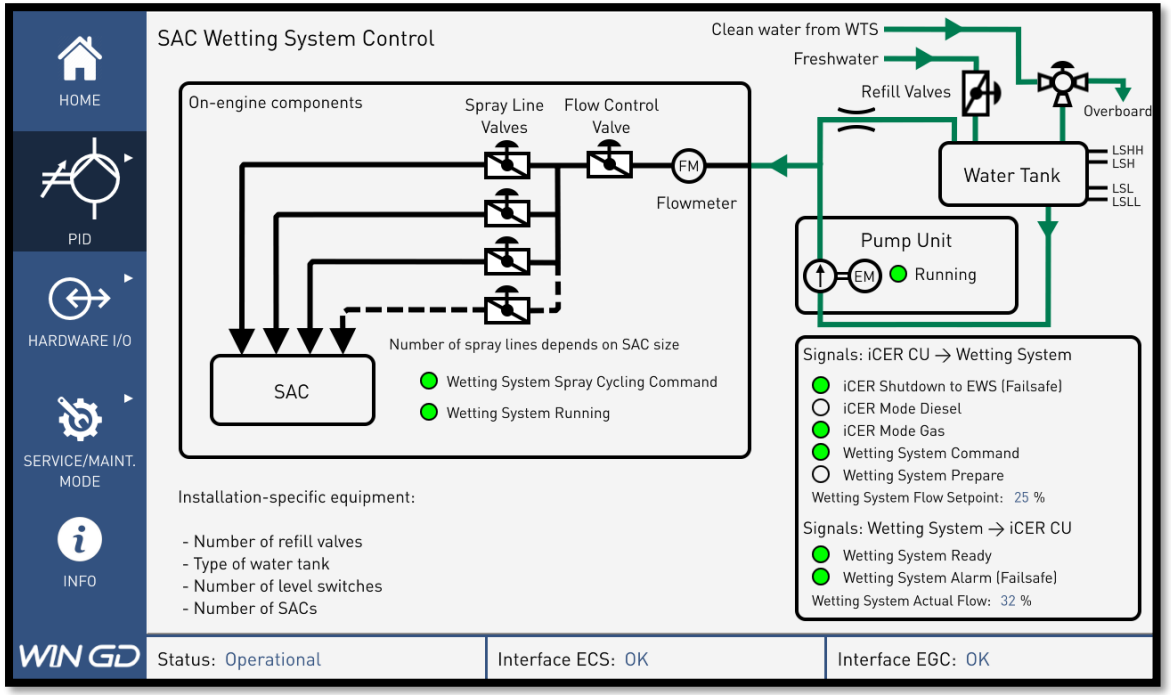


By means of iCER modular simulator, operator or user can exercise or demonstrate the iCER operation on MCP.
Furthermore, iCER running parameter or indication on MCP can help operator for the trouble shooting.

WinGD Korea WiCE Modular Simulator

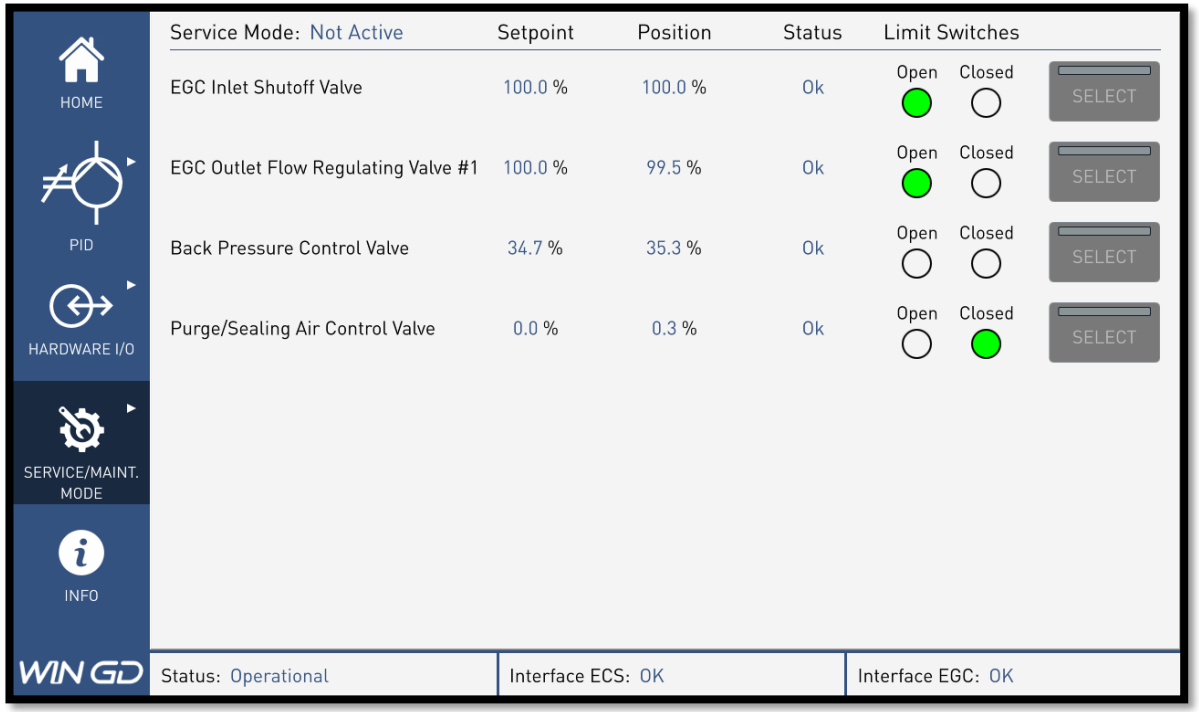
iCER MCP Display

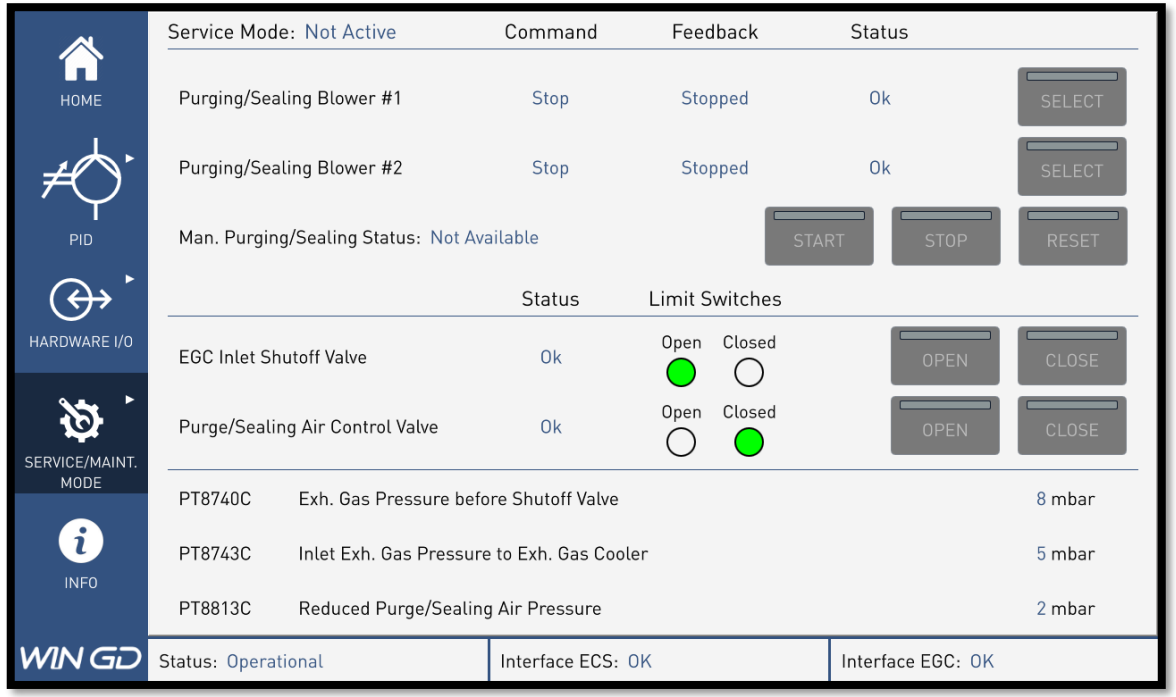




WinGD Korea WiCE Modular Simulator

iCER MCP Display





WiCE Simulator

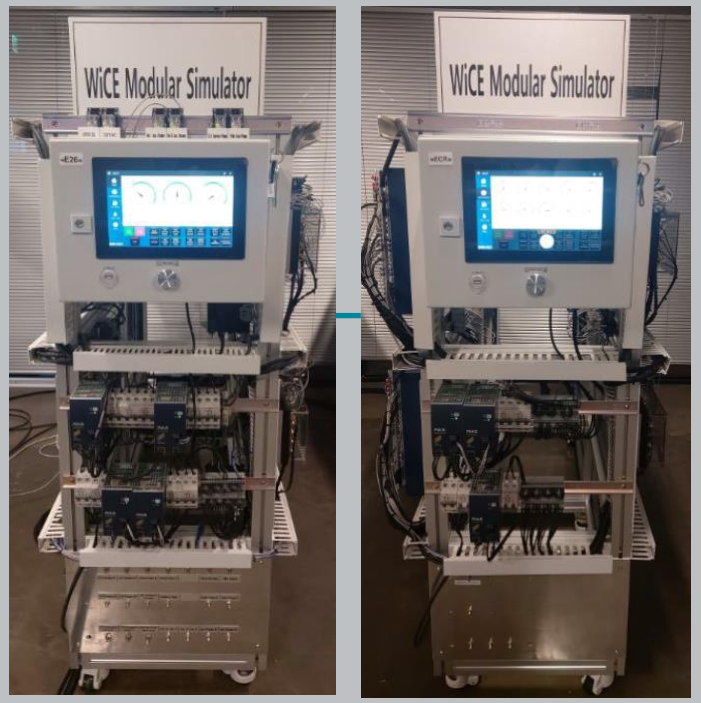
Interface

Ethernet

Flex view 2
Engine Monitoring

Simulator HMI

Two WiCE module towers



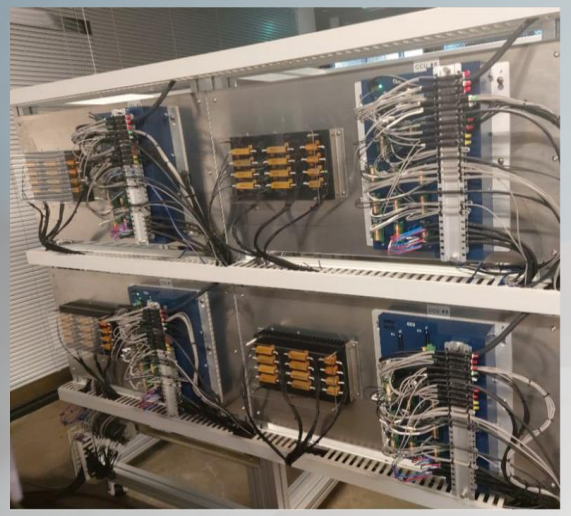
PLC modules

Shaft Simulator

WiCE Simulator

Hardware

2-GTU/3-MCU and 2-ACM



CCU modules
(Available up to 12 units)

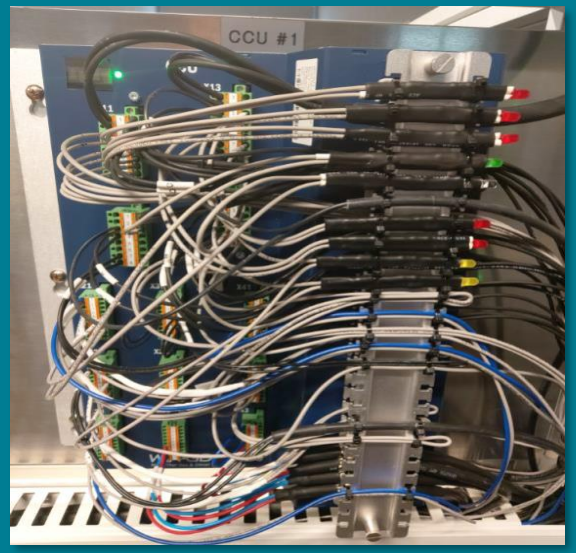
ECR MCP

Local MCP

WiCE Simulator

MCP
User's manual functions on MCP

- Aux. Blower Start/Stop by Relays
- S.O Service Pump, Pilot fuel pump Start/Stop by relay
- Main Starting Air Valve control valve by relays
- ICU venting
- Exhaust Valve manual testing
- Manual Cylinder Lubrication
- EWG manual testing
- GAV manual Testing(DF)
- Exhaust Venting (DF)



CCU
Cylinder Function by LED design

- 3 ICU rail valves(or L-orange injectors) by three Red LEDs
- One VCU rail valve by Green LEDs
- One flexLube pump CV by Blue LED
- 2 Pilot injector by Red LEDs
- 2 GAV rail valves by Yellow LEDs
- Some of cylinders with relay together in order to create some injection sound

WiCE Simulator

Shaft Simulator

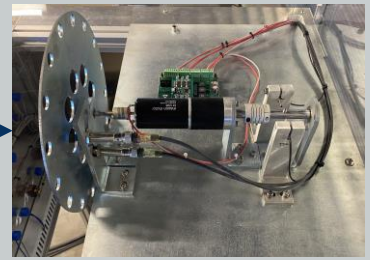
Available functions on MCP via PLC

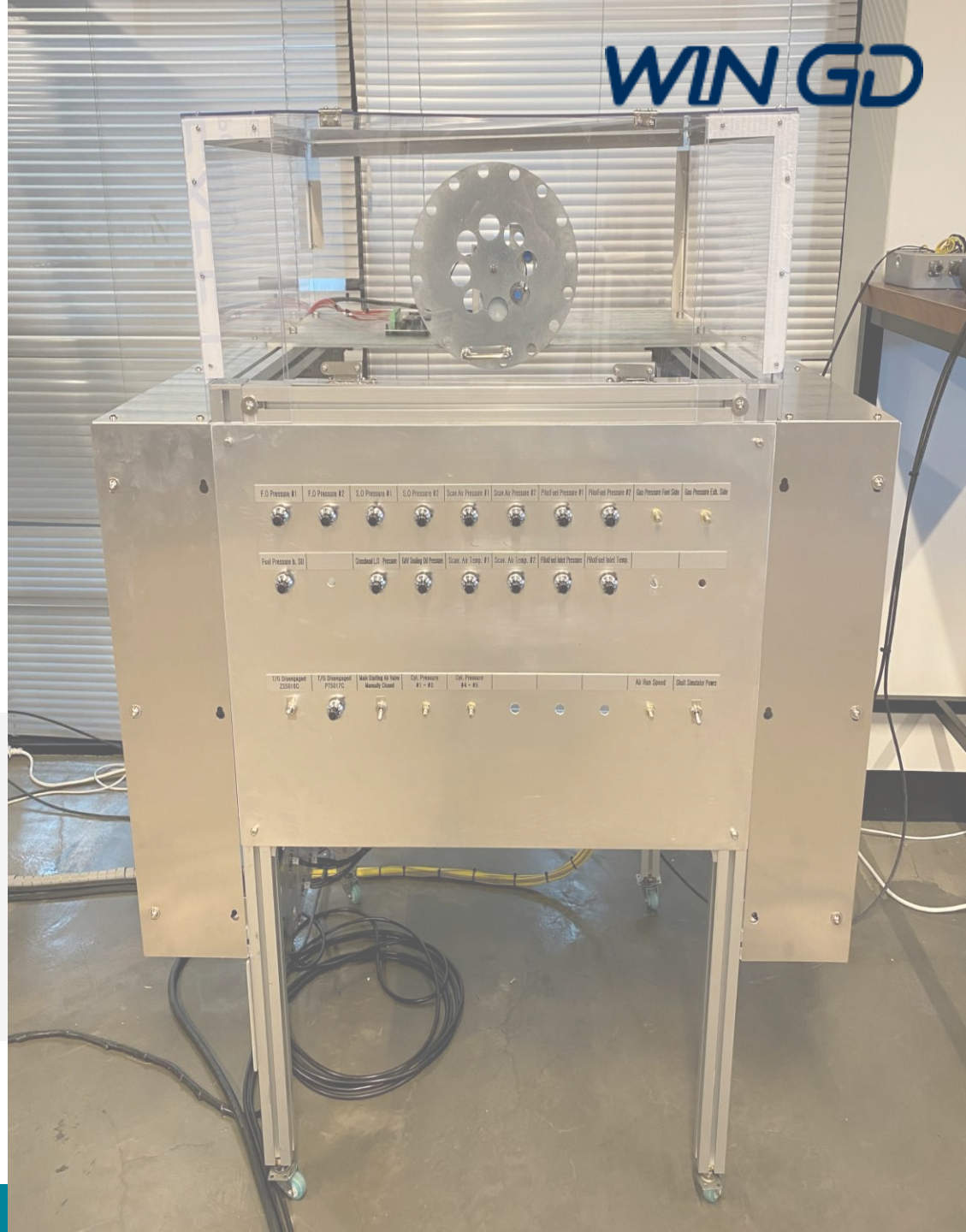
- Engine Start and Stop
- Speed Control
- Air Run
- Slow Turning
- Fuel Mode (Diesel mode and Gas mode)

MCP

PLC

Shaft Simulator





Thank You

WinGD Korea Training Centre
8, Bagyeongjun-gil, Ilgwangmyeon,
Gijang-gun, Busan, 46040, Korea

+82 51 320 9824
jiyoung.kim_external@wingd.com