

www.headmfg.co.kr

HEAD

(주)유응연

Hydro- Electronic Application Development

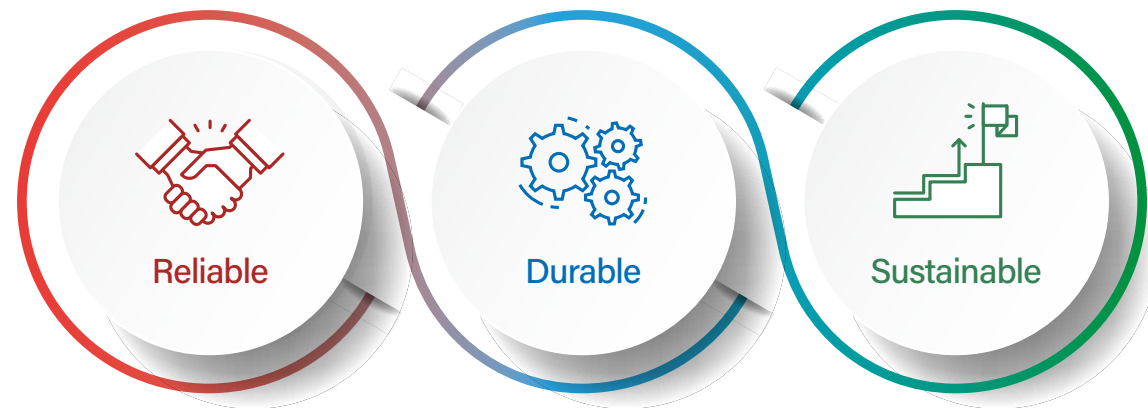


Mission

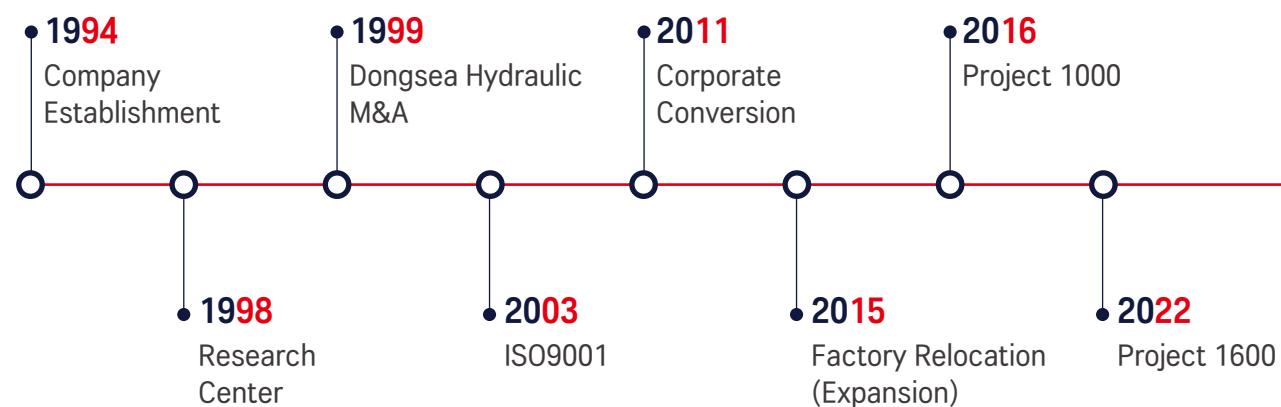
We build your confidence.

HEAD develops, designs, and manufactures hydraulic systems.
30 years of experience , we promise to grow together with our partners.
Pride in technology and quality, make it with HEAD.

Value



History



Business Area

Construction Machinery



Rail Road



Automobile



Agricultural Machinery



Steel Industry



Land Defense



Air Defense



Maritime Defense



Research Area

Extreme Environment Testing



Signal Conditioning



Energy Recycling Module



AI-Driven Data Analysis



High Performance Testing System

- Hydraulic Valve Tester
- Hydraulic Universal
- Dynamometer
- Hydraulic Motor Tester
- Actuator Tester
- Tension, Compression, Torsion
- Pump Tester
- Hydraulic Impulse
- Temperature & Pressure



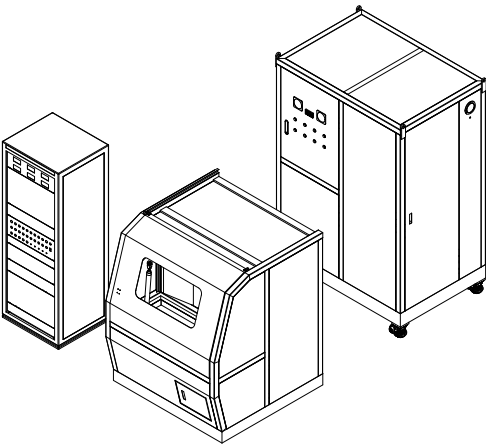
- Basic Model : suited for Repair Business
- Standard Model : suited for Mass Production
- Advanced Model : suited for R&D

SPECIFICATION	BASIC	STANDARD	ADVANCED
Function Test	O	O	O
Performance Test	-	O	O
Development Test	-	-	O
Safety Cover	O	O	O
Hydraulic Power Pack	O	O	O
Filter (in-line)	O	O	O
Filter (off-line)	-	O	O
Temp Control Unit	-	O	O
Manual Control Panel	O	O	O
Analogue Gauge	O	O	O
1st Safe Mode (inter-lock)	O	O	O
2nd Safe Mode (Fire Protection)	-	-	O
Control Rack	-	O	O
Digital Indicator	-	O	O
PC & Printer	-	O	O
Automatic Testing Program	-	O	O
Reporting App	-	O	O
Dual Monitor	-	-	O
Additional Sensor	-	-	O

HYDRAULIC VALVE TESTING

Valve tester evaluates the performance of all types of hydraulic valve.

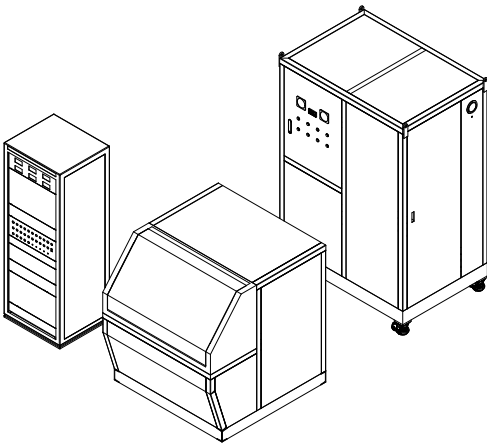
Cartridge Type Valve Tester



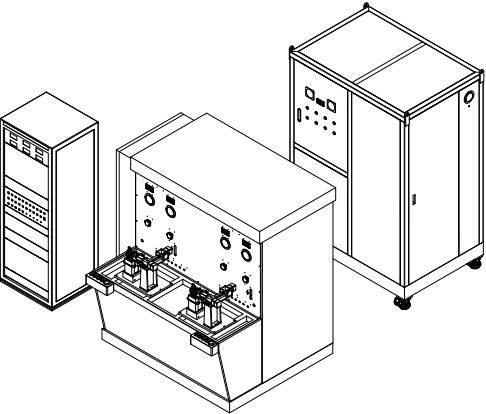
Main Pressure	Max. 420 bar
Pilot Pressure	Max. 300 bar
Main Flow Rate	Max. 160 LPM
Pilot Flow Rate	6 LPM
Temperature	40 ~ 80 °C

Proportional Valve Tester

Pressure	Max. 100 bar
Flow Rate	Max. 30 LPM
Temperature	50±5 °C
Current (12V)	1800 mA
Current (24V)	800 mA



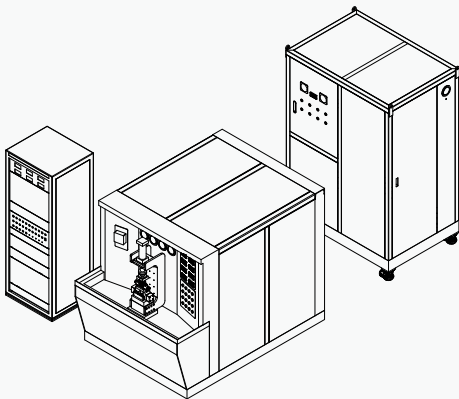
Remote Control Valve Tester



Pressure	Max. 110 bar
Flow Rate	35 LPM
Temperature	50±5 °C



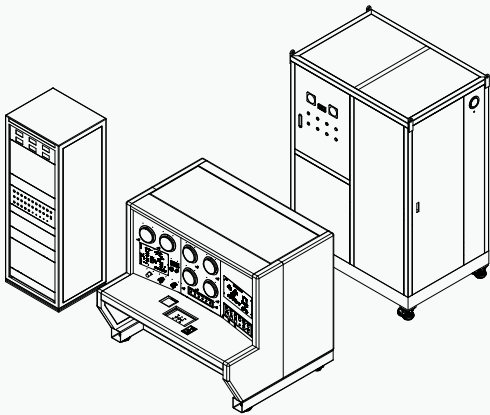
CETOP Type Valve Tester



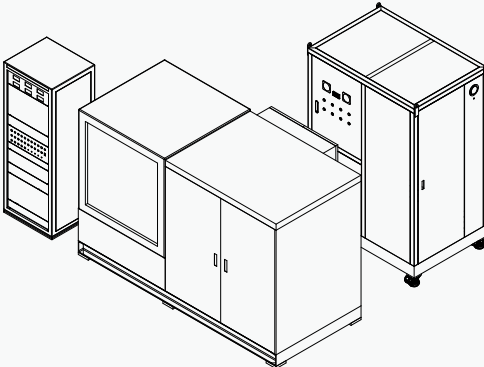
Main Pressure	Max. 320 bar
Main Flow Rate	Max. 120 LPM
Temperature	40 ~ 80 °C

Servo Valve Tester

P1 Pressure	Max. 4000 PSI
P2 Pressure	Max. 7000 PSI
P1 Flow Rate	Max. 110 LPM
P2 Flow Rate	Max. 11 LPM
Temperature	40 ~ 80 °C
Current	Max. ±50 / 250 mA



Valve Body Tester

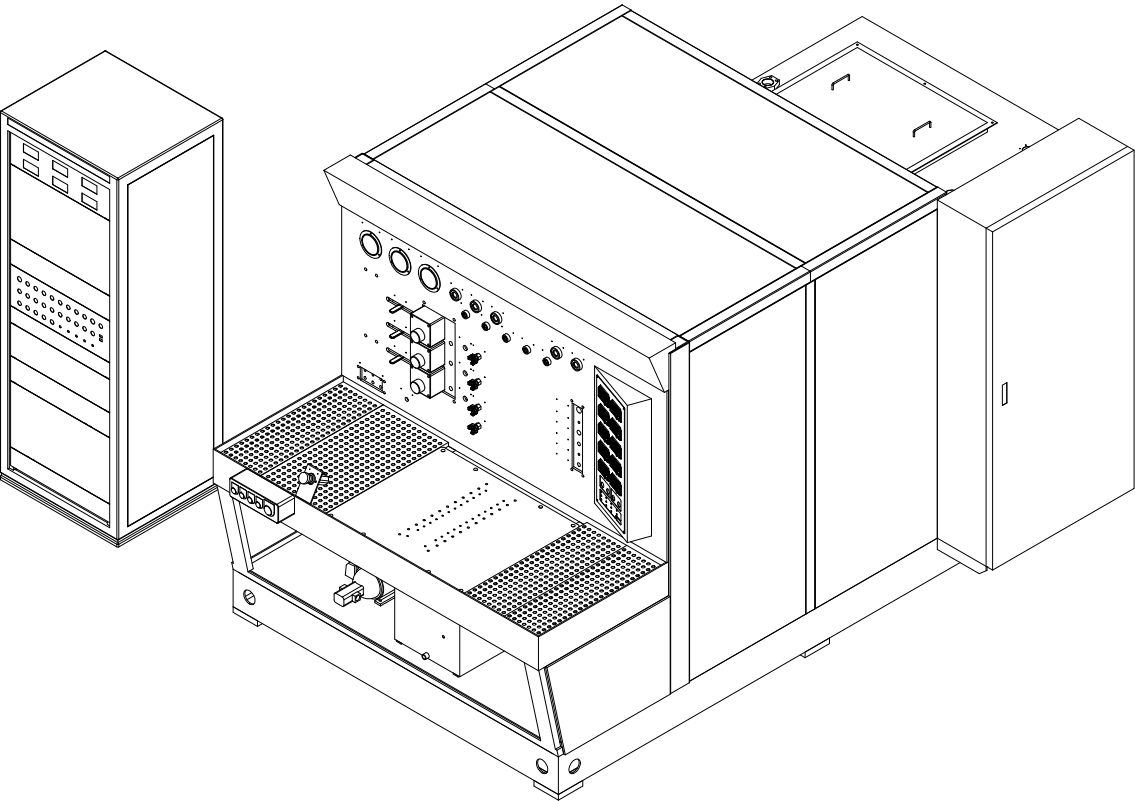


Pressure	Max. 50 bar
Flow Rate	Max. 75 LPM
Temperature	160±5 °C

HYDRAULIC VALVE TESTING

Valve tester evaluates the performance of all types of hydraulic valve.

Main Control Valve Tester (Section Type)

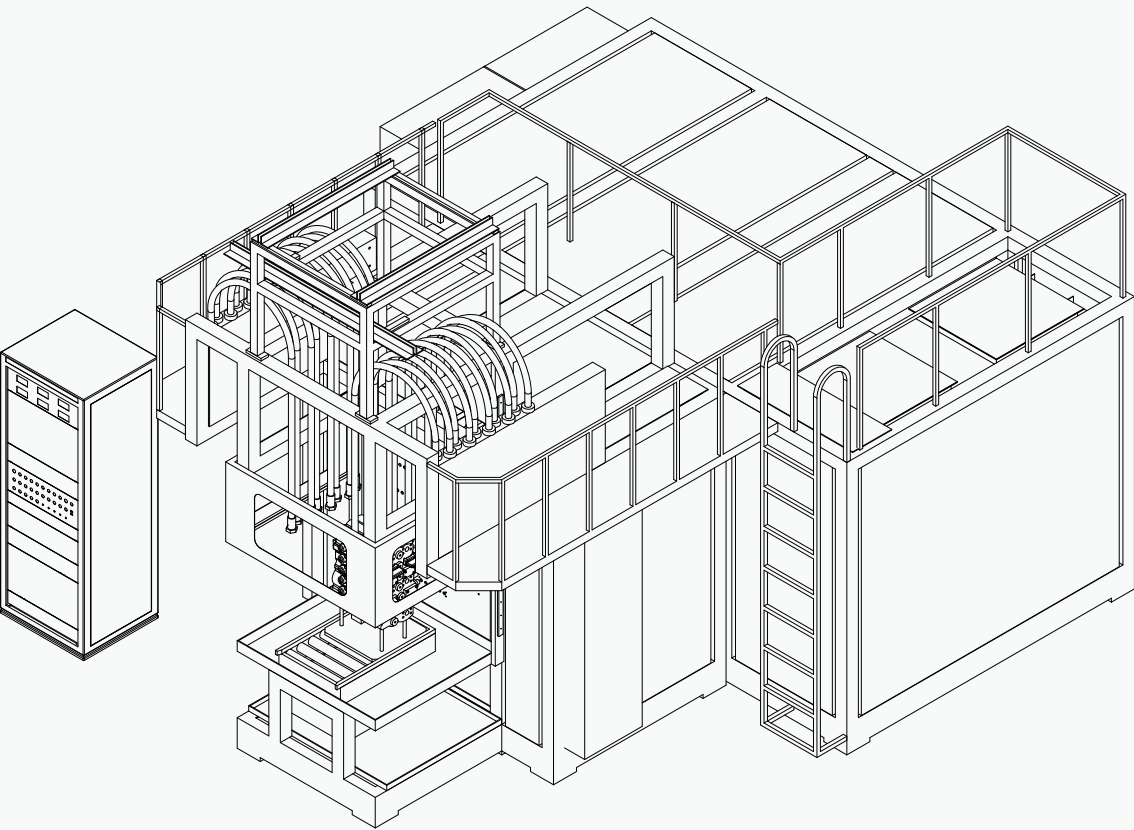


Main Pressure	Max. 350 bar
Pilot Pressure	40 bar
Main Flow Rate	Max. 180 LPM
Pilot Flow Rate	13 LPM
Temperature	50±5 °C



Main Control Valve Tester (Mono Type)

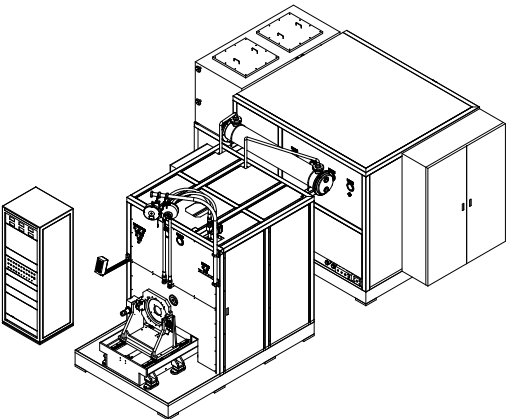
Main Pressure	Max. 420 bar
Pilot Pressure	140 bar
Main Flow Rate	Max. 300 LPM
Pilot Flow Rate	30 LPM
Temperature	50±5 °C



HYDRAULIC MOTOR TESTING

Motor test equipment evaluates the performance of various hydraulic motors such as vane, bent shaft, and swash plate.

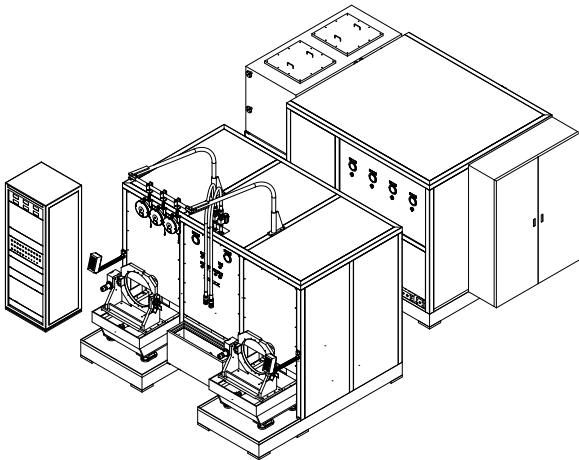
Hydraulic Motor Tester (1 station)



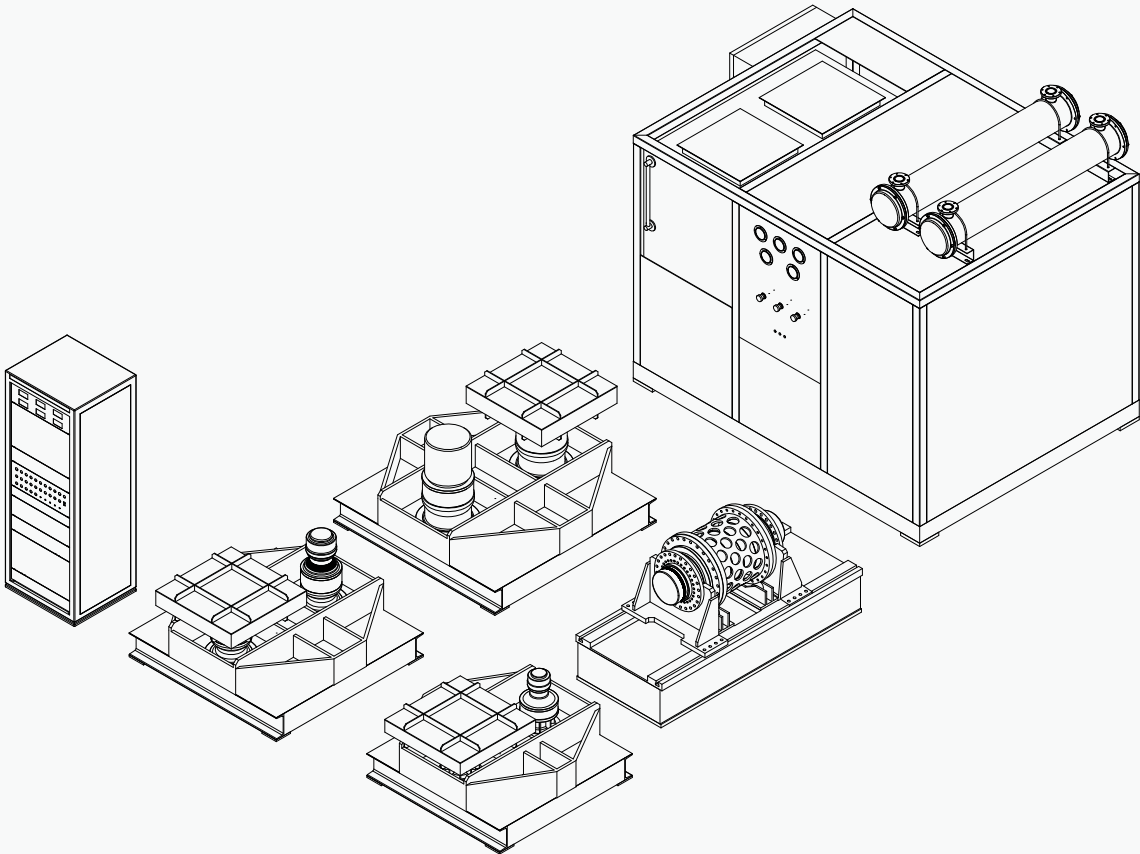
Main Pressure	Max. 420 bar
Pilot Pressure	50 bar
Main Flow Rate	Max. 300 LPM
Pilot Flow Rate	35 LPM
Temperature	50±5 °C

Hydraulic Motor Tester (2 station)

Main Pressure	Max. 420 bar
Pilot Pressure	50 bar
Main Flow Rate	Max. 300 LPM
Pilot Flow Rate	35 LPM
Temperature	50±5 °C



Hydraulic Motor Device Tester



Pressure	Max. 350 bar
Flow Rate	Max. 320 LPM
Temperature	50±5 °C

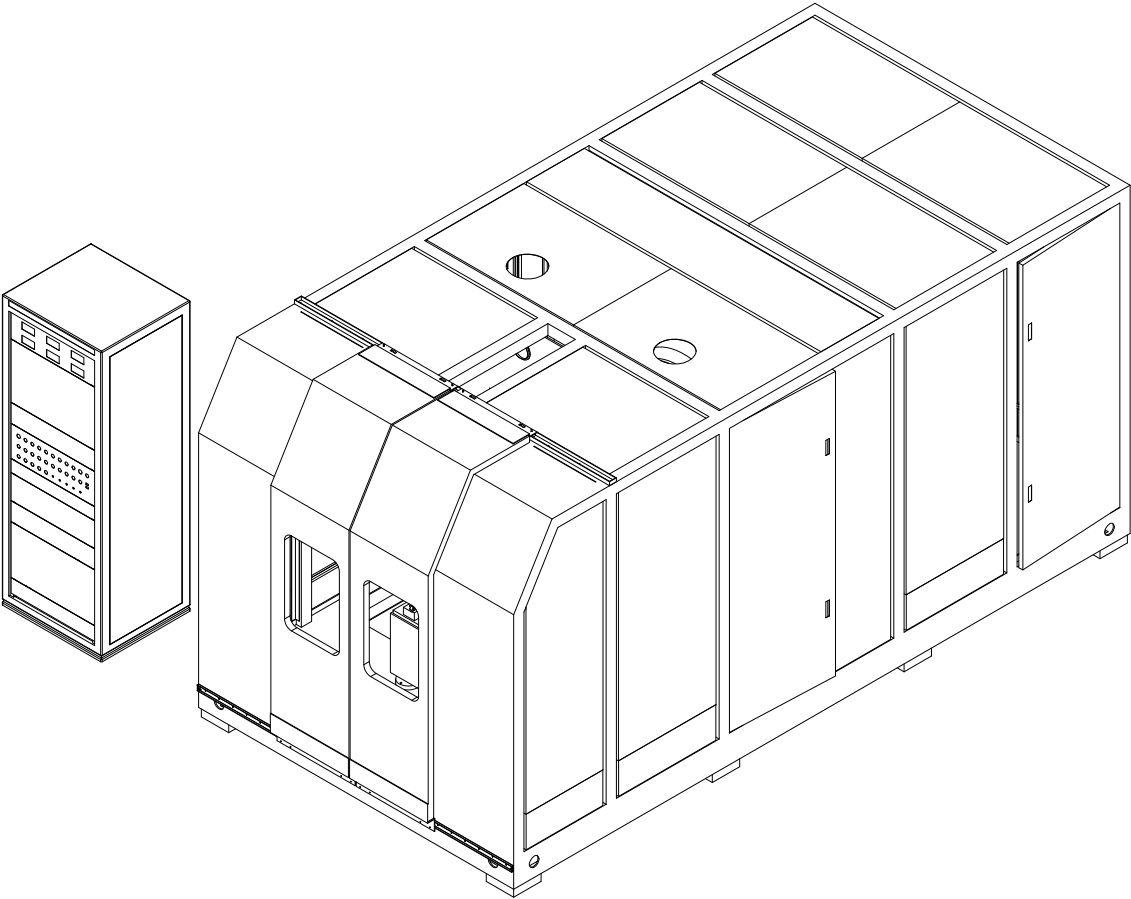


PUMP TESTING

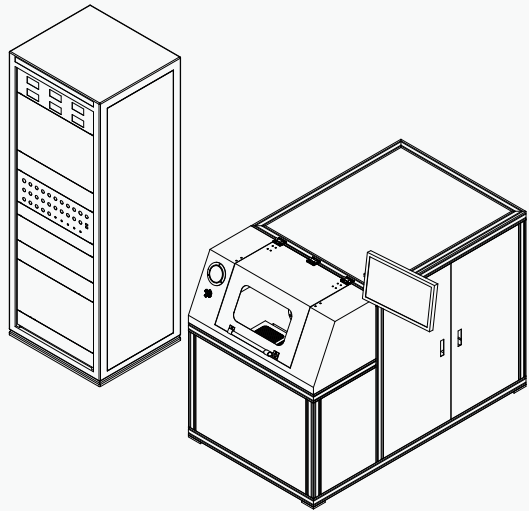
Pump test equipment evaluates the performance of various hydraulic pumps and general pumps.

Oil Pump Tester (Large Type)

RPM	600 ~ 2600 rpm
P1, P2 Pressure	Max. 420 bar
P3 Pressure	Max. 100 bar
P1, P2 Flow Rate	Max. 600 LPM
P3 Flow Rate	Max. 200 LPM
Temperature	110±5 °C



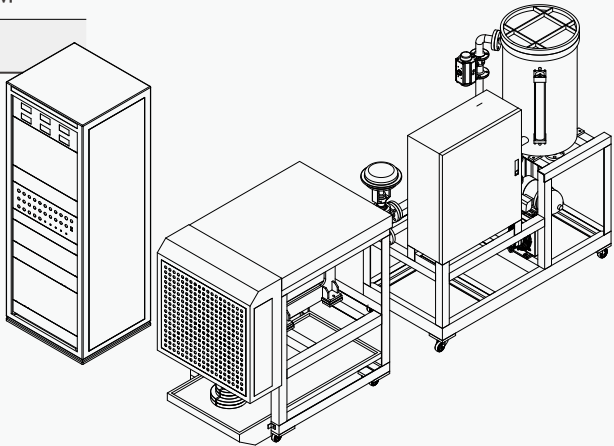
Oil Pump Tester (Small Type)



RPM	~ 4500 rpm
Pressure	Max. 20 bar
Flow Rate	Max. 50 LPM
Temperature	25 ~ 80 °C

Water Pump Tester

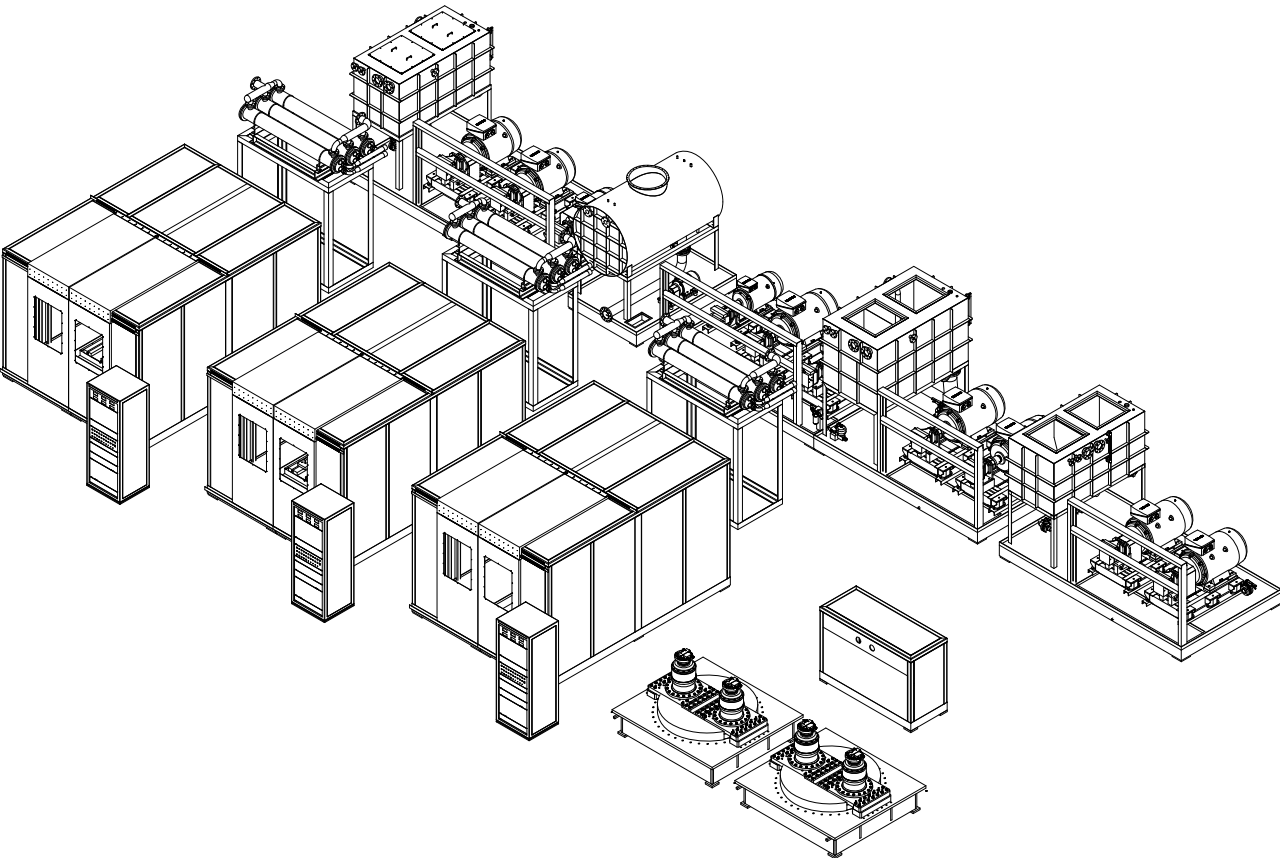
RPM	~ 10000 rpm
Pressure	Max. 10 bar
Flow Rate	Max. 500 LPM
Temperature	25 ~ 50 °C



HYDRAULIC UNIVERSAL

Hydraulic Universal is a comprehensive testing system for hydraulic components including pumps, motors, and valves.

Hydraulic Component Universal



Hydraulic Pump	
RPM	~ 3000 rpm
P1 Pressure	Max. 420 bar
P2 Pressure	Max. 420 bar
P3 Pressure	Max. 250 bar
P4 Pressure	40 bar
P1 Flow Rate	Max. 400 LPM
P2 Flow Rate	Max. 400 LPM
P3 Flow Rate	Max. 100 LPM
P4 Flow Rate	28 LPM
Temperature	35 - 70 °C

Hydraulic Motor	
RPM	3000 rpm
P1 Pressure	Max. 420 bar
RF Pressure	20 bar
PP Pressure	40 bar
HP Flow Rate	Max. 500 LPM
RF Flow Rate	125 LPM
PP Flow Rate	28 LPM
Temperature	35 - 70 °C

Hydraulic Valve	
HP1 Pressure	Max. 420 bar
HP2 Pressure	Max. 420 bar
HP3 Pressure	Max. 250 bar
PP Pressure	40 bar
HP1 Flow Rate	Max. 400 LPM
HP2 Flow Rate	Max. 400 LPM
HP3 Flow Rate	Max. 100 LPM
PP Flow Rate	28 LPM
Temperature	35 - 70 °C

Swing Device	
HP Pressure	Max. 420 bar
RF Pressure	20 bar
PP Pressure	40 bar
HP Flow Rate	Max. 400 LPM
RF Flow Rate	125 LPM
PP Flow Rate	28 LPM
Temperature	35 - 70 °C



HYDRAULIC UNIVERSAL

Hydraulic Universal is a comprehensive testing system for hydraulic components including pumps, motors, and valves.

Hydraulic Motor Universal

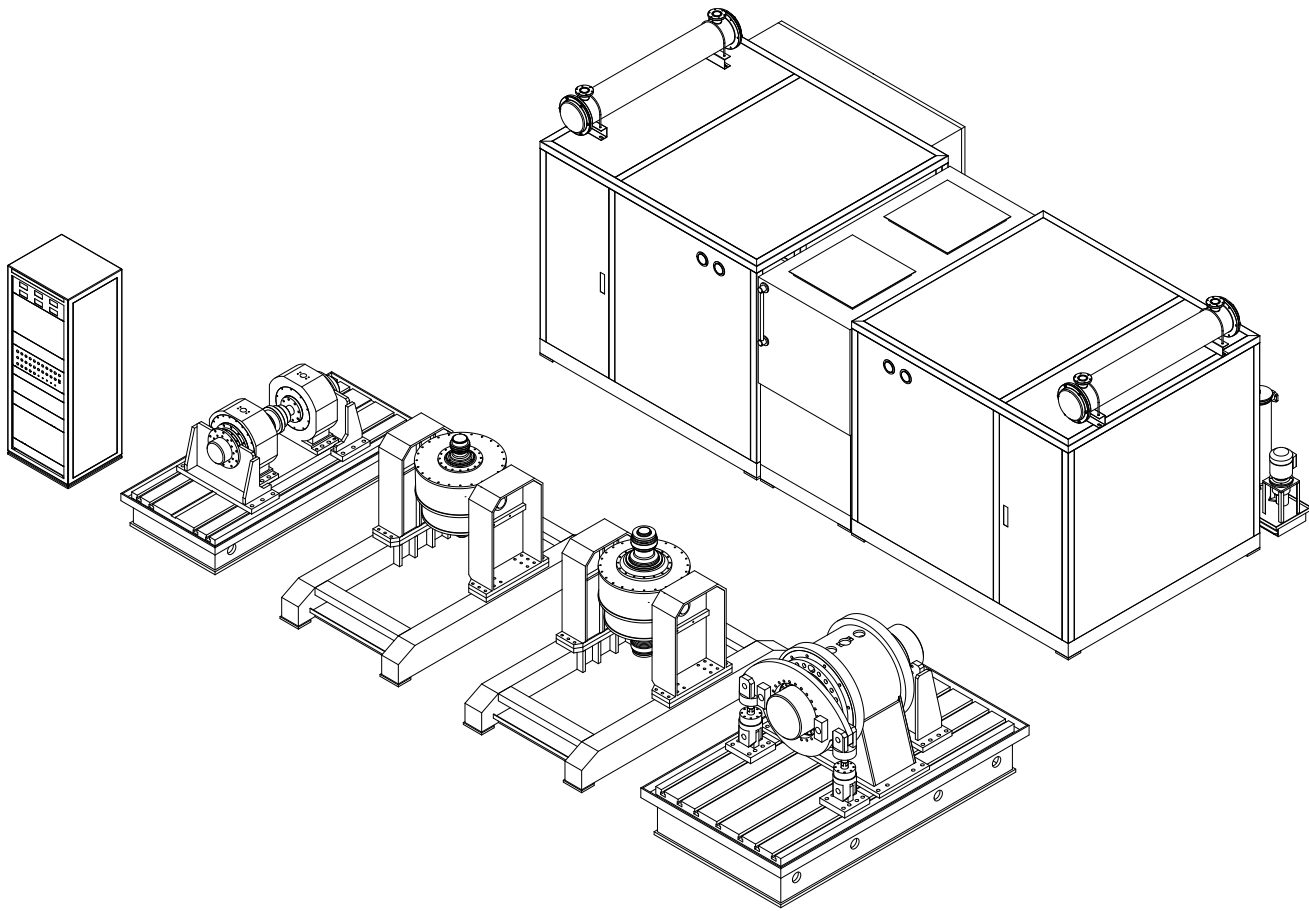
Hydraulic Power		
P1 Pressure		Max. 420 bar
P2 Pressure		Max. 420 bar
P3 Pressure		70 bar
P1 Flow Rate		Max. 300 LPM
P2 Flow Rate		Max. 100 LPM
P3 Flow Rate		27 LPM
Temperature		50±5 °C

Driving Motor Device A		
Torque		Max. 10000 kgf-m
RPM		~ 70 rpm

Driving Motor Device B		
Torque		Max. 1000 kgf-m
RPM		~ 90 rpm

Swing Motor A		
Torque		Max. 200 kgf-m
RPM		~ 1700 rpm

Swing Motor B		
Torque		Max. 100 kgf-m
RPM		~ 2200 rpm



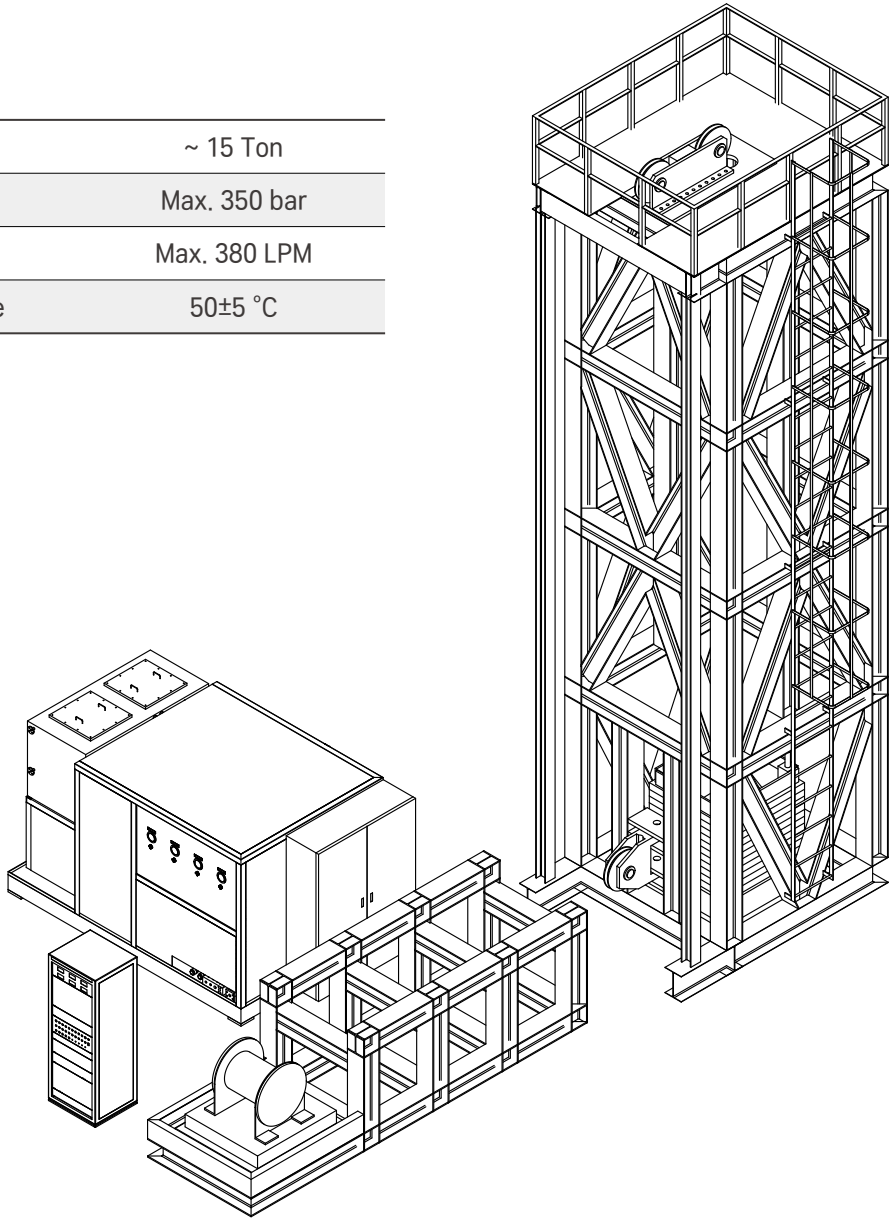


ACTUATOR TESTING

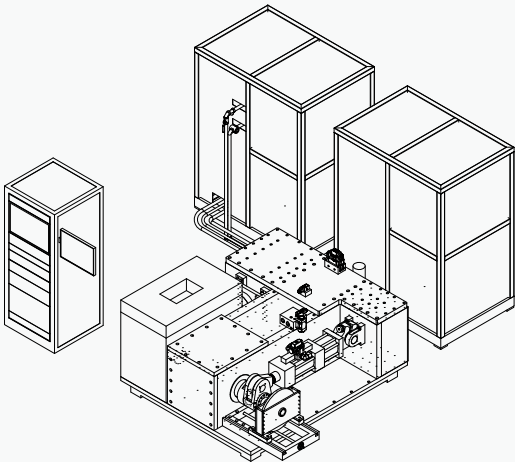
Actuator testing equipment evaluates the static and dynamic performance of various actuators.

Winch Tester

Load	~ 15 Ton
Pressure	Max. 350 bar
Flow Rate	Max. 380 LPM
Temperature	50±5 °C



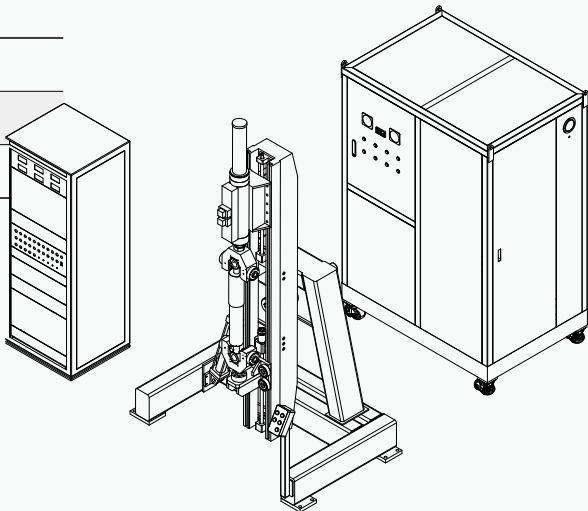
Cylinder Type Actuator Tester



Test Pressure	210 bar
Load Pressure	275 bar
Test Flow Rate	130 LPM
Load Flow Rate	130 LPM
Temperature	35±5 °C

Damper Tester

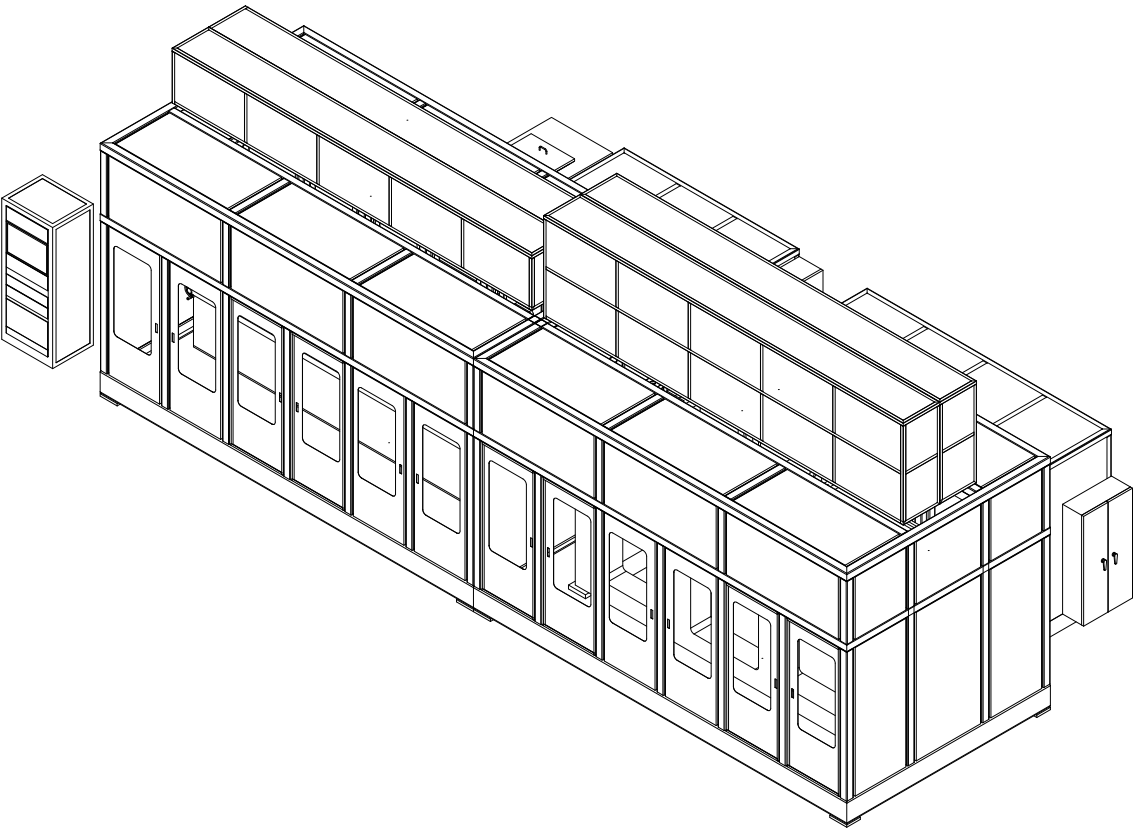
Test Pressure	Max. 200 bar
Test Flow Rate	60 LPM
Temperature	50±5 °C



HYDRAULIC IMPULSE

Impulse test equipment applies instantaneous hydraulic force to evaluate the performance and durability of various parts.

Hydraulic Hose Tester (Static & Dynamic)

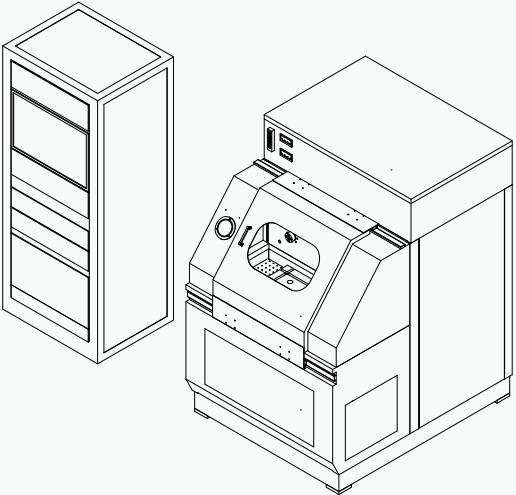


Static	
Test Pressure	50-700 bar
Impulse Frequency	~1 Hz
Temperature	25~150 °C

Dynamic	
Test Pressure	50-700 bar
Impulse Frequency	~1 Hz
Rotating R	250 mm
Temperature	25~150 °C



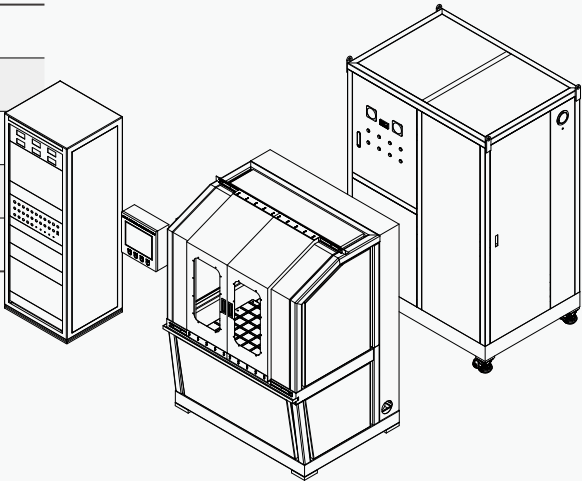
Hydraulic Pipe, Hose, Valve Impulse Tester (Static)



Impulse Pressure	Max. 700 bar
Flow Capacity	Max. 176cc/Stroke
Temperature	50 ~ 150 °C

Valve Housing Impulse Tester (Static)

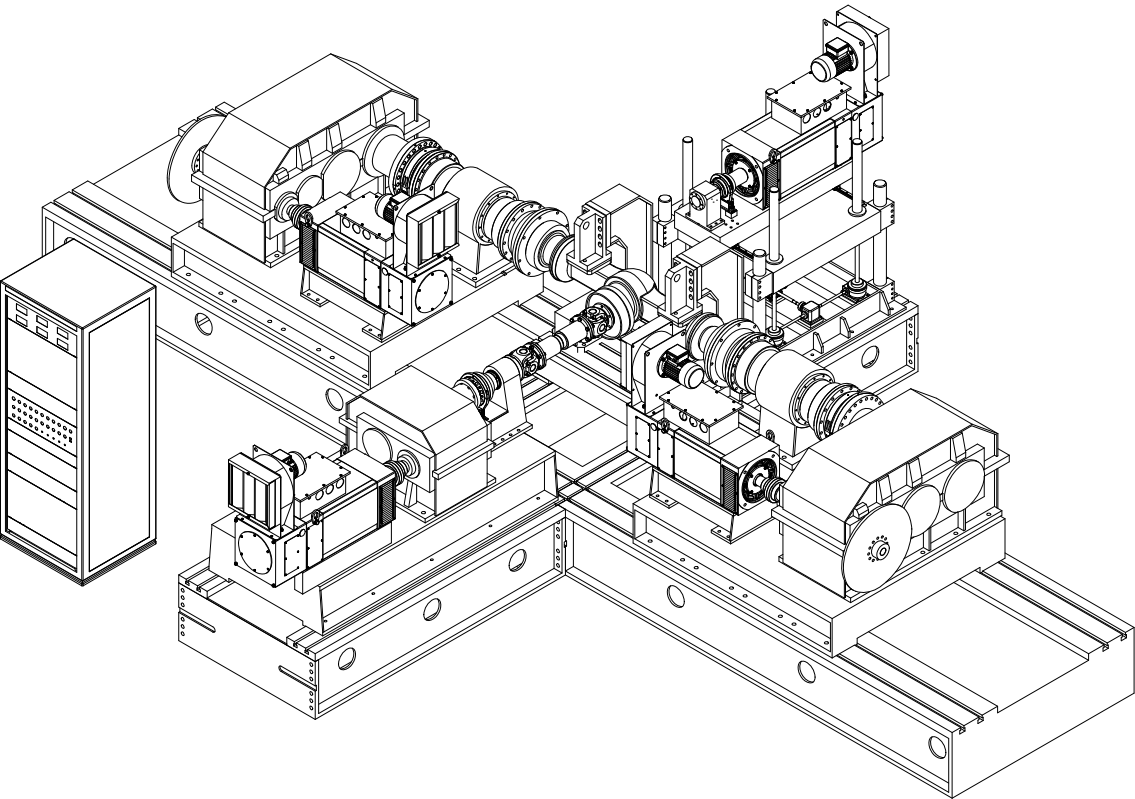
Test Pressure	Max. 450 bar
Pilot Pressure	40 bar
Test Flow Rate	Max. 15 LPM
Pilot Flow Rate	10 LPM
Temperature	50 ~ 150 °C



DYNAMOMETER

Dynamo evaluates the performance and durability of high-speed rotating equipment such as axles, transmissions, and valve trains.

Dynamo For Axle (Load)

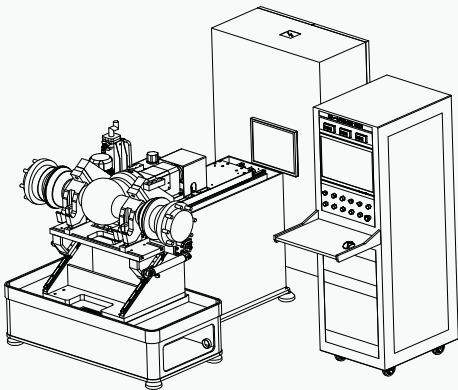


Axle Driving	
Torque	Max. 430 kgf-m
RPM	~ 2400 rpm

Transmission Driving	
Torque	Max. 50 kgf-m
RPM	~ 3000 rpm

Axle Load	
Torque	Max. 5800 kgf-m
RPM	~ 3800 rpm

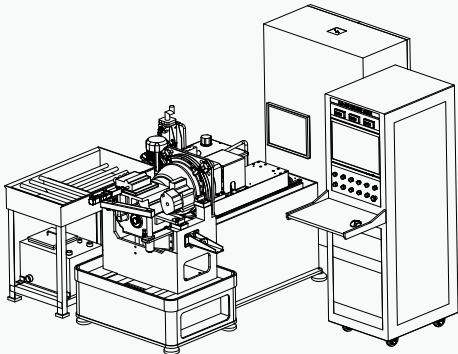
Dynamo For Axle (No Load)



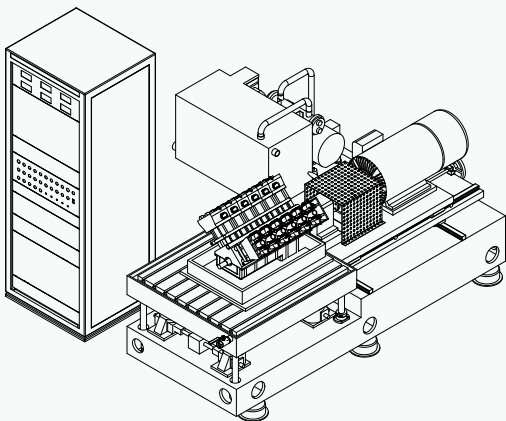
Torque	Max. 9 kgf-m
RPM	~ 3000 rpm
Temperature(Lubrication)	80±5℃

Dynamo For Transmission (No Load)

Torque	Max. 9 kgf-m
RPM	~ 3000 rpm
Temperature(Lubrication)	80±5℃



Dynamo For Engine Valve Train



RPM	~ 2000 rpm
Pressure	Max. 5 bar
Flow Rate	Max. 100 LPM
Temperature	30±5 ℃

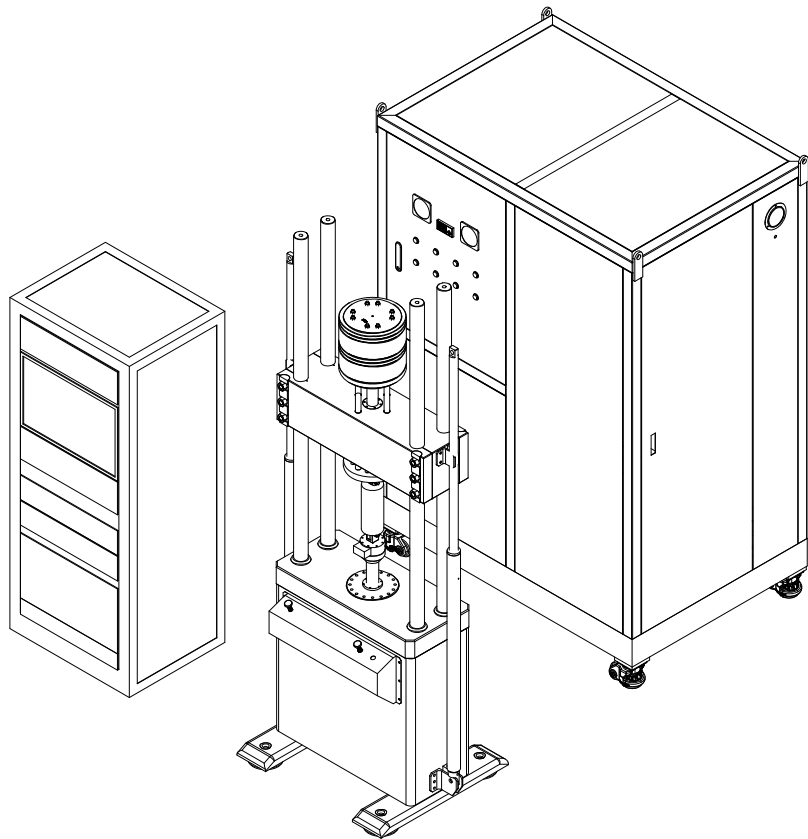




TENSION, COMPRESSION, AND TORSION

Tensile, compression, and torsion testing equipment evaluates various mechanical properties from single materials to complex structures.

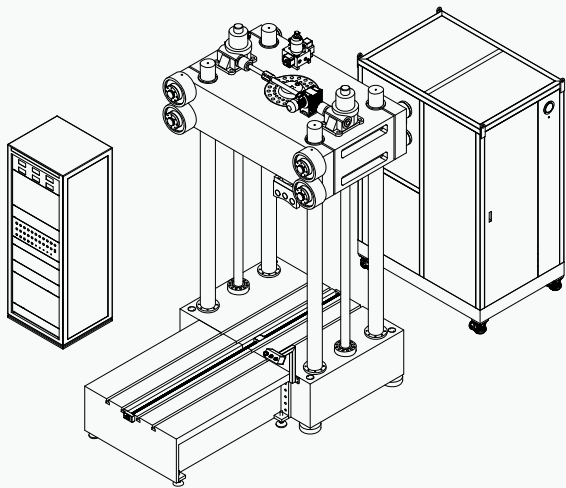
Universal Type



Pressure	Max. 210 bar
Flow Rate	Max. 100 LPM
Static Force	5 TON
Dynamic Displacement	±50 mm
Velocity	~ 800 mm/sec
DOF	1 DOF (Z axis)



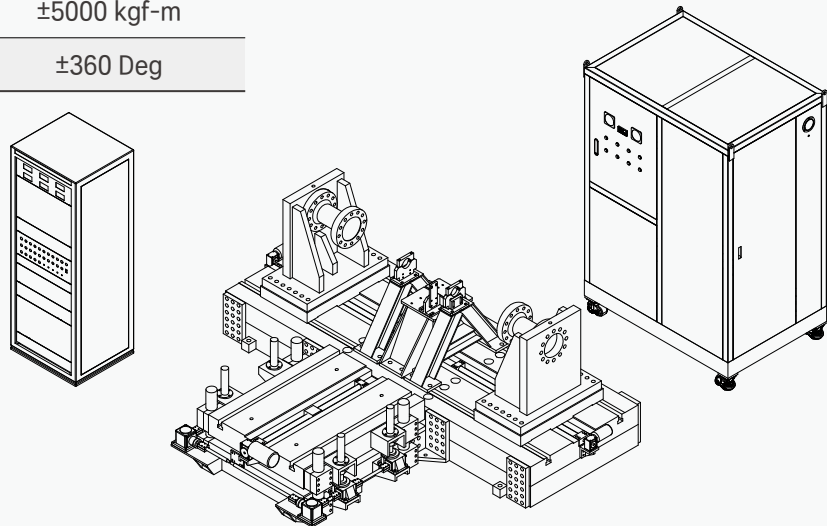
Ultimate Compression



Pressure	Max. 210 bar
Flow Rate	Max. 60 LPM
Force	20 ~ 100 ton
Displacement	±125 mm

Torsional Fatigue

Torsion	±5000 kgf-m
Torsion Angle	±360 Deg





TEMPERATURE AND PRESSURE

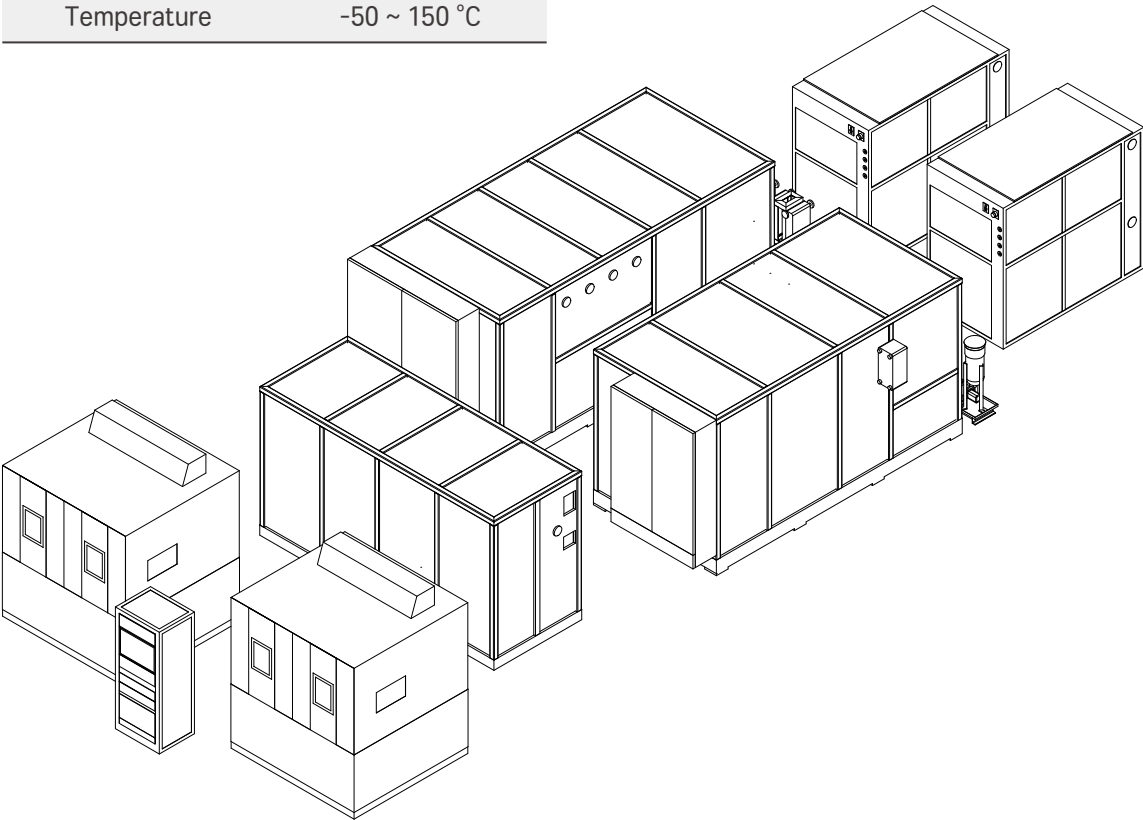
Temperature test equipment provides both high pressure and low / high temperature operating conditions.

Integrated Temperature Tester

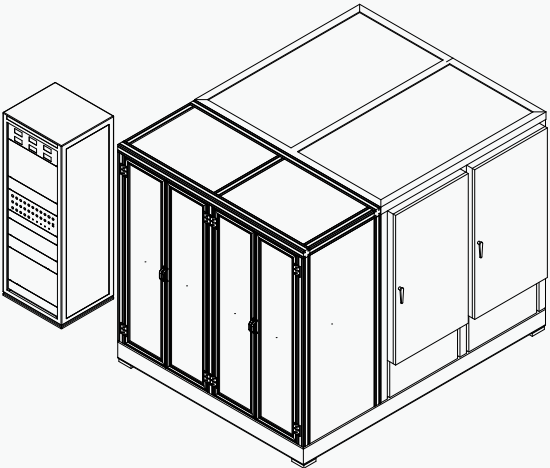
Hot Oil Line	
Pressure	Max. 210 bar
Flow Rate	Max. 540 LPM
Temperature	25 ~ 135 °C

Cold Oil Line	
Pressure	Max. 210 bar
Flow Rate	Max. 350 LPM
Temperature	-40 ~ 25 °C

Atmosphere	
Temperature	-50 ~ 150 °C



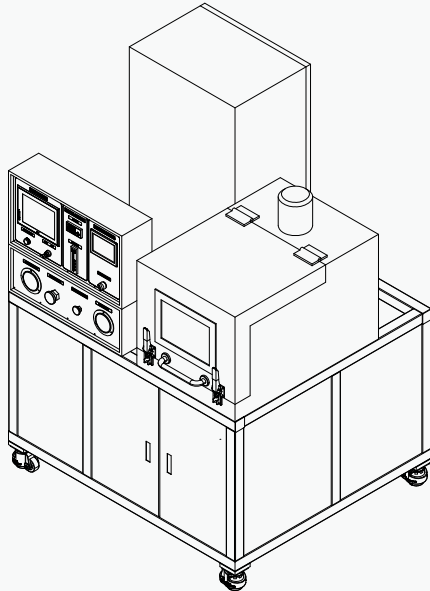
Water Pump Seal Temperature Tester



RPM	~ 12000 rpm
Pressure	Max. 6 bar
Flow Rate	Max. 50 LPM
Temperature (Hot)	25 ~ 120 °C
Temperature (Cold)	-40 ~ 25 °C

Shaft Seal Temperature Tester

Hot Oil Line	
Pressure	Max. 20 bar
Flow Rate	Max. 5 LPM
Temperature	95±5 °C
Atmosphere	
Temperature	-30 ~ 150 °C



HYDRAULIC POWER UNIT



-  High Reliability & Durability
-  Stationary or Mobile
-  Extreme Hot or Cold Oil Supply
-  Independent Safety Mode (Automatic Fire Extinguisher)

SPECIFICATION	HPXS	HPUS	HPUM	HPUL
Oil reservoir(stainless steel)	~100 LT	~ 300 LT	1000 LT	~2000 LT
Oil Type	Mineral Oil	Mineral Oil	Mineral Oil	Mineral Oil
Pump Type	Gear Pump	Piston Pump	Piston Pump	Piston Pump
Operating Pressure	~250 bar	~250 bar	~420 bar	~420 bar
Flow rate	~30 lpm	~ 100 lpm	~300 lpm	~600 lpm
Flow Control	-	-	○	○
Pressure Control	○	○	○	○
Cleanliness Level	10 micron	10 micron	6 micron	6 micron
Cooling Unit	○	○	○	○
Operating Oil Temp	~ 60 °C	~ 60 °C	~ 60 °C	~ 60 °C
Oil Temp Control	○	○	○	○
Power Source	AC380V (or AC440V) - 60Hz - 3 ϕ			
Mobile version	○	○	-	-
Hot Oil version	-	Max. 150 °C	Max. 150 °C	Max. 150 °C
Cold Oil version	-	Min. -40 °C	Min. -40 °C	Min. -40 °C

MAINTENANCE PACKAGE

 HEAD Maintenance Sheet

 Cycle Replacement

 Calibration & Certificate

 User Training

 Emergency Contact



SPECIFICATION	BASIC	STANDARD	ADVANCED
Warranty Period	1 Year	1 Year	1 Year
Check List Inspection	○	○	○
Filter Element	○	○	○
Tank Cleaning	-	○	○
Line Flushing	-	○	○
Calibration	○	○	○
Certificate Issuance	-	○	○
Training	-	1 service	3 service
Emergency Calling (within 24H)	-	3 service	10 service
Program Package	-	UI Modification (10)	UI Modification (10) Add Function (5)
Inspection Report	○	○	○

REPAIR, OVERHAUL, & REMANUFACTURING

-  HEAD Standard Process
-  On-Site or Warehousing Repair
-  HEAD Standard Process
-  HW & SW Remanufacturing

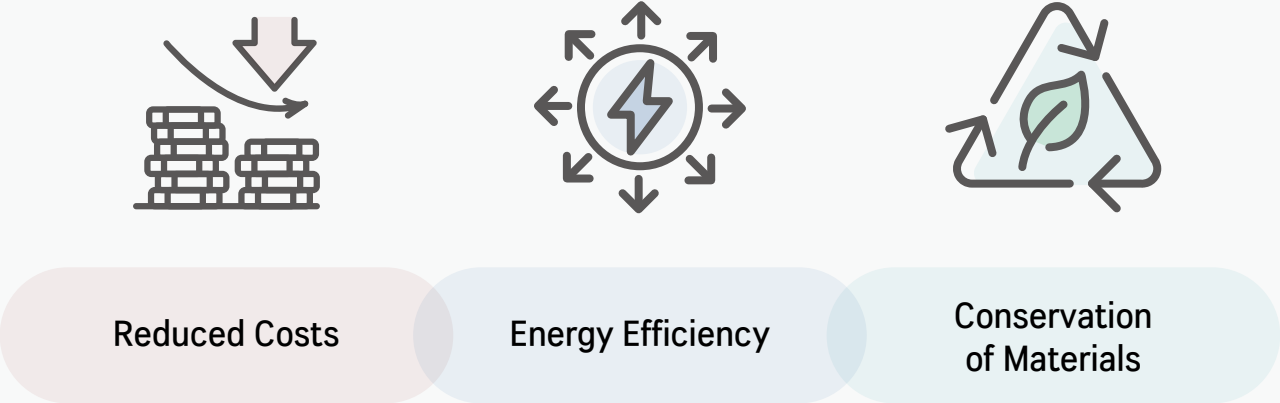


SPECIFICATION	Repair	Overhaul	Remanufacturing
Warranty Period	-	6 Month	1 Year
Pre-Inspection	O	O	O
Pre-Inspection Report	-	O	O
Post-Inspection	O	O	O
Post-Inspection Report	O	O	O
Redesign	-	-	O
Cleaning	O	O	O
Parts Replacement (Proceed As Needed)	O	O	O
Function Testing	O	O	O
Performance Testing	-	O	O
Testing Report	O	O	O

HEAD Standard Process



Expected Effects



www.headmfg.co.kr



Mayu-ro-238 beon-gil 43, Siheung si, Gyeong gi-do, Korea

TEL : +82-31-434-6721

FAX : +82-31-434-2958

E-mail : sales@headmfg.co.kr

