



**Hydraulic Leading Company** 

# COMPANY INTRODUCTION & HISTORY

As a company specializing in hydraulic machinery for marine engines, Hanmi Hydraulic Machinery, has been providing customers with the best, high-quality services through continuous research and development since its establishment in July 1985.

Recognized for our advanced technology, we have maintained a long-term partnerships with major engine makers in Korea and other countries. We are making ceaseless efforts to achieve better quality and price competitiveness and to respond to the needs of a diversifying market.



- Developing sealing oil unit of J-Engine's hydrogen/Ammonia engine
- Developing new HIMSEN Engine's Nozzle Tester(H22/32CDF-LM/LA, H54DF)

#### **•** 2024

- Upgrading hydraulic Top Bracing double acting with on/off type
- Developing WIN GD DF-M/A Gas Valve Tester
- Developing ME-LGIA Gas Valve Tester
- Developed ME-LGIM Sealing Oil Unit

#### **•** 2023

• Developed ME-LGIM Gas Valve Test Device

#### • 2022

 Developed ME-GA Gas Valve Test Device(Integrated Type)

#### **2021**

- Developed ME-LGIP Gas Valve Test Device
- Developed Double-Acting with On/Off Control Hydraulic Top Bracing

#### **2019**

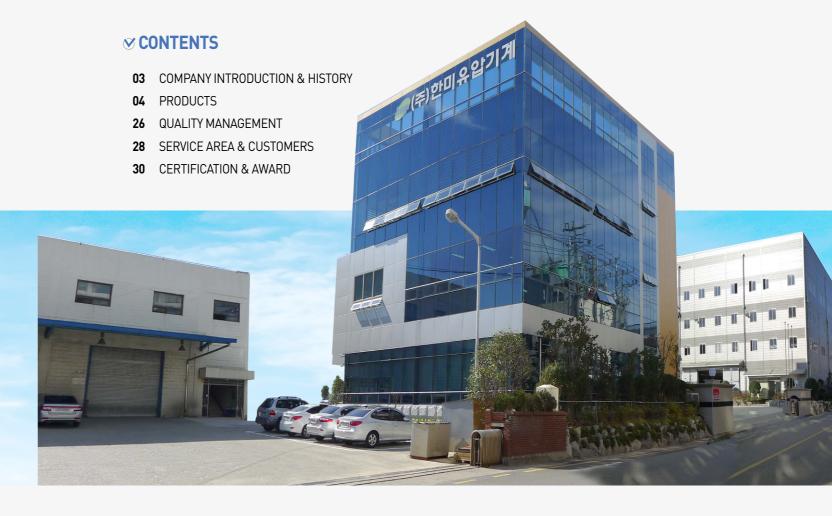
 Acquired WIN GD FTPA Certificate of Cylinder Lubricating Pump(Mk-I & Mk-ε)
 Patented ME-GI Mk-I Gas Valve Test Device

#### **9** 2018

- Developed MAN ES FBIV/PBIV Test Device
- Developed Double-Acting Hydraulic Top Bracing Acquired
- WIN GD Approval Certificate of Cylinder Lubricating Pump(Mk-ε)

#### **9** 2017

- Acquired MAN ES FTPA Certificate of Alpha Lubricator Mk- II
- Developed On/Off Control Hydraulic Top Bracing



#### **9** 2016

- Developed ME-GI Mk-I Gas Valve Test Device
- Developed WIN GD X-DF Engine Injector Test Bench

#### **•** 2015

- Acquired Provisional Certificate of MAN ES Alpha Lubricator Mk- II
- Developed GI Gas Booster Unit

#### 2014

- Acquired Supplier Approval Certificate of WIN GD X-Engine Cylinder Lubricating Pump
- Developed WIN GD X-Engine Injector Test Bench

#### **o** 2012

- New factory & Office Awarded 2nd
- Government President Award-Single PPM

#### **2011**

- Acquired ISO14001
- Awarded 1st Government President Award-Single PPM

#### **•** 2003

- Produced MC Alpha Lubricator & ME Alpha Lubricator Mk-I
- Acquired ISO9001

#### 1995

• Produced Hydraulic Top Bracing

#### • 1987

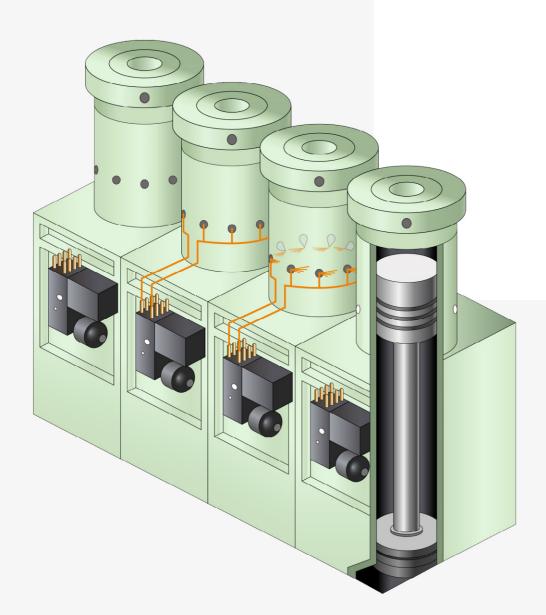
- Produced Fuel Valve Test Device
- Produced Air Driven High Pressure Pump & Hydraulic Jack

#### o 1985

Established

# LUBRICATING PUMP





The lubricator and lubricating pump, a product that supplies lubricant oil directly to the main engine cylinder liner, can control injection timing and consumption using an electronic control method that responds to the movement of the main engine piston.

#### **MAN ES**



ME LUBRICATOR Mk-I



ME LUBRICATOR Mk-I



MC LUBRICATOR

#### **♥ WIN GD**



LUBRICATING PUMP Mk-ε



LUBRICATING PUMP Mk-I

# HEATING TANK UNIT OIL SUPPLY UNIT BOOSTER PUMP STATION





These devices are to heat the lubricant oil. The lubricant oil heated by heating unit is delivered to main engine cylinder through lubricator unit.

#### HEATING TANK UNIT

Heating unit is to heat lubricating oil.

The lubricating oil heated by heating
unit is delivered to main engine cylinder
through M/E lubricator unit.





#### OIL SUPPLY UNIT

J-ENG UEC A-ECL Supply unit is to heat lubricating oil. The lubricating oil heated by heating unit is delivered to main engine cylinder through lubricator unit.

# BOOSTER PUMP STATION

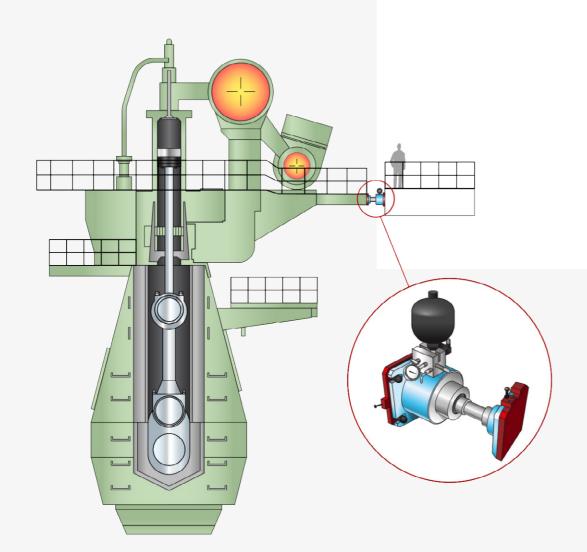
The pump station consists of two individually operating pumps, filters and a suction tank. For safety reasons, the power supply to the pump station starter panels is taken two separate circuits, one supplying each pump.



# HYDRAULIC TOP BRACING

HYDRAULIC LEADING COMPANY





#### Patent registration numbers

10-1708627, 10-1801231, 10-1910633

This hydraulic equipment, installed between the engine and hull, helps prevent resonance by controlling the operation mode of the top bracing according to the main engine's RPM, reducing thermal expansion and vibrations during ship operation. The hydraulic top bracing responds flexibly to compressive stress and varying loading conditions. Depending on the engine size and the number of cylinders, two, four, or six top bracings are typically installed.



09



#### HTBA225-30

Туре	On/Off
Cyl. Dia. (mm)	225
Cyl. Max.Force (kN)	183(H) / 127(L)
Air Supply (bar)	6(H) / 3.5(L)
Weight (kg)	160



HTBS225-30

Туре	High/Low
Cyl. Dia. (mm)	225
Cyl. Max.Force (kN)	183(H) / 127(L)
Air Supply (bar)	N/A
Weight (kg)	160



#### HTBD225-30

Туре	Double Acting & On/Off
Cyl. Dia. (mm)	Push-225 & Pull-180/225
Cyl. Max.Force (kN)	183(H) / 127(L)
Air Supply (bar)	6(H) / 3.5(L)
Weight (kg)	ABT. 180



#### HTBS200-30

Туре	High/Low
Cyl. Dia. (mm)	160/200
Cyl. Max.Force (kN)	127(H) / 82(L)
Air Supply (bar)	N/A
Weight (kg)	160





#### TBD200-30

Туре	Double Acting
Cyl. Dia. (mm)	Push-200 & Pull 160/200
Cyl. Max.Force (kN)	Push : 160, Pull : 160
Air Supply (bar)	N/A
Weight (kg)	200



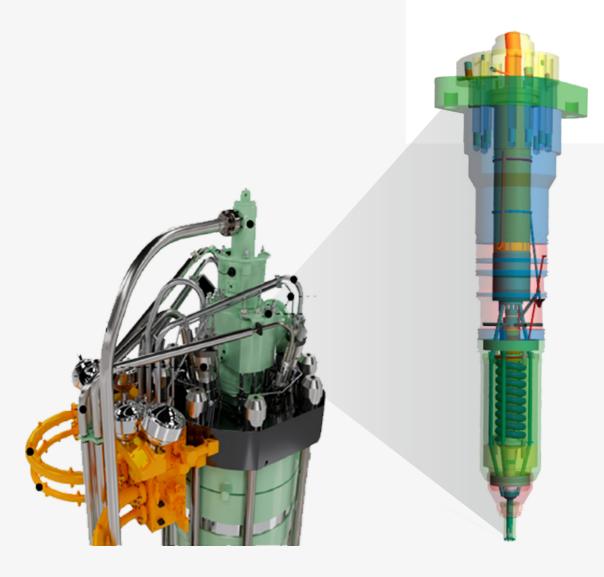
TBS250-30

Туре	Single Acting
Cyl. Dia. (mm)	200
Cyl. Max.Force (kN)	160
Air Supply (bar)	N/A
Weight (kg)	138

HYDRAULIC LEADING COMPANY

# **FUEL VALVE TEST DEVICE**





#### Patent registration numbers

10-1785407, 10-1722966, 10-1924637, 10-2392799, 10-2460186, 10-2539726

This device is for testing injection and leakage of valves mounted on the main engine. There are test devices for both diesel engines and eco-friendly dual-fuel gas engines (GI/E, LGIP/M/A, XDF-M/A) manufactured with a in-house technical expertise from design to production.

#### **▼ MAN ES**



#### VTU-500ME-LGIA

Engine Type	ME-LGIA	
	Sealing Oil : 40	
Marking	Control Oil : 500	
Working	Fuel Oil : 10	
Pressure (bar)	Gas pressure : 300	
	New Developing	



#### VTU-500ME-LGIP

ME-LGIP
Sealing Oil : 80
Control Oil : 330
Fuel Oil : 50
Gas pressure : 330



#### VTU-500ME-LGIM

Engine Type	ME-LGIM
Working Pressure (bar)	Sealing Oil : 40 Control Oil : 500 Fuel Oil : 10 Gas pressure : 300



VTU-500ME-GI/GIE

Engine Type	ME-GI
Working Pressure (bar)	Sealing oil : 340/400 Control Oil : 300 Gas pressure : 300

# **FUEL VALVE TEST DEVICE**

#### **✓ MAN ES**



HDFD-1100

Engine Type	MC/ME
Working Pressure (bar)	900



FBTD-1300

Engine Type	ME
Working Pressure (bar)	900





VTU-2500(DF)

Engine Type	X82/92(DF)	
Working	Electric Motor : 480	
Pressure (bar)	Pneumatic pump: 1,500	



VTUE-2000(DF)

Engine Type	X52~72(DF)
Working Pressure (bar)	900



FMTD-2200

Engine Type	ME-GA
Working Pressure (bar)	Control oil : 500 Fuel Oil : 8



VTU-2500DF-M

X52/82/92DF-M
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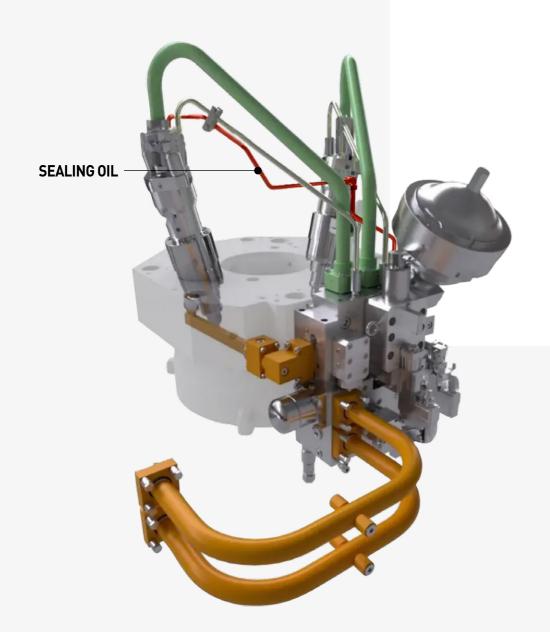


VTU-2500DF-A

Engine Type	X52/72DF-A	
New Developing		
New Developing		

# **SEALING OIL UNIT**





This unit (SOU) supplies sealing oil to prevent the mixing of hydraulic oil and liquefied methanol gas inside the FBIV (Fuel Booster Injection Valve) during the operation of the main engine.

The main components include an oil tank, an electric motor, a hydraulic gear pump, an oil filter, a control block, accumulators, and various sensors, transmitters, and indicators.

The SOU is classified into large bore type (over 60 bore) and small bore type (50 bore and below) based on the number of membrane accumulators.



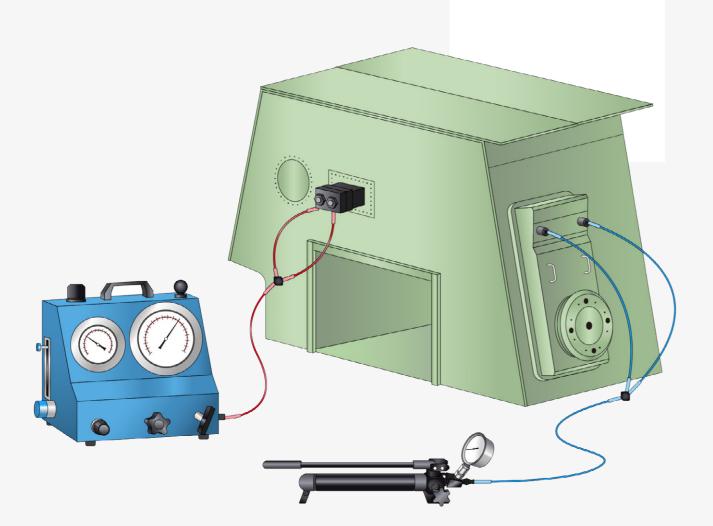


SOU Type	Small Bore	Large Bore
Engine	35ME~50ME	60ME~95ME
Remark	1 accumulator	2 accumulators

# AIR DRIVEN HIGH PRESSURE PUMP



This equipment supplies high-pressure hydraulic oil to the tool of a ship engine with an air-driven method. It is supplied to engine manufacturers as a hydraulic tool package, along with hydraulic jack, hose, coupling and a distributor.



#### **✓ AHP Series**

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AHP-1500

Max. Pressure (bar)	1,500
Auto Stop Pressure (bar)	1,060
Max. Flow Rate (I/min)	0.35



AHP-1500.2

Max. Pressure (bar)	1,500
Auto Stop Pressure (bar)	1,060
Max. Flow Rate (I/min)	0.5



AHP-2000

Max. Pressure (bar)	2,000
Auto Stop Pressure (bar)	1,750
Max. Flow Rate (I/min)	0.18



AHP-2500

Max. Pressure (bar)	2,000
Auto Stop Pressure (bar)	1,750
Max. Flow Rate (l/min)	0.81



#### AHP-2500.1

Max. Pressure (bar)	2,500
Auto Stop Pressure (bar)	2,000
Max. Flow Rate (I/min)	1 45(L) 0 5(H)



#### AHP-3000

Max. Pressure (bar)	2,500
Auto Stop Pressure (bar)	-
Max. Flow Rate (l/min)	0.5



AHP-3000.1

Max. Pressure (bar)	2350
Auto Stop Pressure (bar)	2,000
fax. Flow Rate (l/min)	0.5



AHP-3500

50	Max. Pressure (bar)	3,500
00	Auto Stop Pressure (bar)	2,500
	Max. Flow Rate (l/min)	0.7

# **HAND PUMP**



As an alternative to an air-driven hydraulic pump, this device can be used in an emergency to reach various required pressures using hand force. With a portable hydraulic unit and compact design, it can be easily carried and put into operation.



#### **∀** HML Series







HML-1700N / 2000N

Max. Pressure(bar)	1,700 / 2,000
Working Pressure(bar)	1,700 / 2,000
Weight(kg)	9.2



HML-2500

Max. Pressure(bar)	2,350
Working Pressure(bar)	1,800
Weight(kg)	8.5



HML-3500

Max. Pressure(bar)	3,000
Working Pressure(bar)	2,500
Weight(kg)	15

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### **HYDRAULIC JACK**

The product is designed for the assembly and disassembly of main engines on large vessels and hull structures. A hydraulic jack uses oil and an incompressible fluid to easily lift materials, structures, and more. It transmits large power to a force application point with minimal force. Our product is ideal for locations with heavy loads, as it accurately and stably controls high pressure.





#### **MAN ES**

Working Pressure(bar)	900		1,500		2,200	
	S35MC	S80MC	S46MC-C	S80MC-C	S70ME-C	G60ME-C
	S42MC	K80MC-C	S50MC-C	S90MC-C	S80ME-C	G70ME-C
Engine Type	S50MC	K90MC-C	S60MC-C	K98MC-C	S90ME-C	G80ME-C
	S60MC		S70MC-C		K80ME-C	G90ME-C
					K98ME-C	G95ME-C



#### **♥ WIN GD**

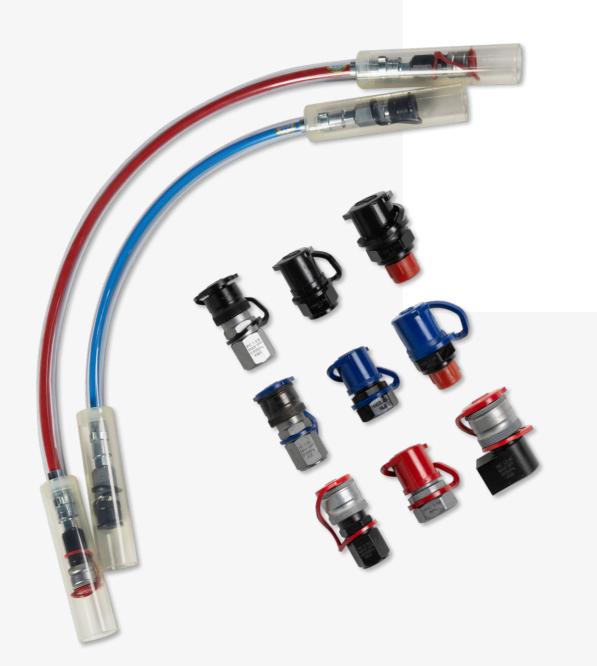
Working Pressure(bar)	900		1,500			
	RTA48T/TB/TD	RTA62/U	RTA84C/CU	RT-flex48TD	RT-flex60C	RT-flex84TD
Engine Type	RTA52/U	RTA72/U	RTA84T/TB/TD	RT-flex50/B	RT-flex68B/D/TB	RT-flex96C
	RTA58T/TB	RTA82C	RTA96C	RT-flex58TB/TD	RT-flex82T	WX-62/72/82/92DF

#### **♥ J-ENG**

Working Pressure(bar)		1,000 – 1,800	
Engine Type	UEC35LSE	UEC45LSE	UEC50LSE
	UEC42LSH	UEC50LSH	UEC60LSE

# **HIGH PRESSURE HOSE AND COUPLING**





A high pressure hydraulic hose and coupling ensure safe repair and maintenance of a marine engine. Domestic development of the coupling has been completed, and the coupling can be easily fastened via a one-handed and one-touch method.

#### ✓ 1.5K Series









HC-1.5K

Max.	1,500bar/
Pressure	150MPa
O	G1/4" Femal

HNC-1.5K

1,500bar/ Max. 150MPa Pressure G1/4" Male Connection Thread

HN-1.5K

Max.	1,500bar/	
Pressure	150MPa	
	G1/4" Male	
Connection	Threadwithout	
	valve	

Hose

Max.	1,800bar/
Pressure	180MPa
Connection	-

#### **⊘** 2.0K Series



HC-2.0K

2,000bar/

G1/4" Female

200MPa

Thread

Max.

Pressure

Connection



HNC-2.0K

2,000bar/

G1/4" Male

200MPa

Thread

Max.

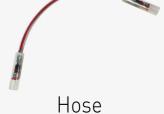
Pressure

Connection



HN-2.0K

<b>Max.</b> 2,000bar/	
Pressure	200MPa
	G1/4" Male
Connection	Thread
	without valve



Max.	2,500bar/
Pressure	250MPa
Connection	-

#### **⊘** 2.5K Series









HC-2.5K

Max.	2,500bar/
Pressure	250MPa
Connection	G1/4" Female Thread

HNC-2.5K

ar/ a	Max. Pressure	2,500bar/ 250MPa
emale	Connection	G1/4" Male Thread

HC-L2.5K

Max.	2,500bar/
Pressure	250MPa
Connection	G1/4" Female Thread

Hose

Max.	2,500bar/
Pressure	250MPa
Connection	-

# CHARGING AND PRESSURE MEASUREMENT TOOL





#### CHARGING TOOL

Charging tool is a charging and testing unit used to charge accumulators with nitrogen or to check and change the existing precharged pressure in accumulators.





#### DIGITAL GAUGE

The HANMI PRESSURE GAUGE is a portable digital pressure gauge with 0.25% FS(Full scale) accuracy, multiple measurement units, Min./Max. readings, auto zero and automatic power off to conserve battery.

- BACKLIGHT
- ALUMINUM DIECASTING HOUSING
- IP65 PROTECTION RATE

# PRESSURE MEASUREMENT TOOL

Test pumps serve as pressure generators for the testing, adjustment and calibration of mechanical and electronic pressure measuring instruments through comparative measurements.





# QUALITY MANAGEMENT

We achieve customer satisfaction with sincerity, proactive thinking, and development of creativity, ensuring continuous quality improvement and product reliability.

We prioritize customer value and achieve customer satisfaction through perfect quality that exceeds customer expectations.

### **SERVICE AREA**

HYDRAULIC LEADING COMPANY

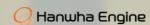


# **CUSTOMERS**























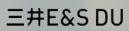




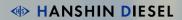


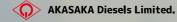


















### **CERTIFICATION & AWARD**





HHI 품질혁신경진대회 최우수상



HSD엔진 동방성장 우수상



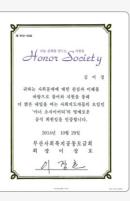
부산광역시 교육감 감사장



HHI엔진기계사업본부 품질분임조경진대회 최우수상 표창장



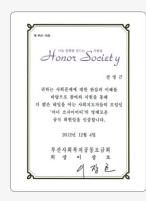
모범납세자 기획재정부 장관상



김이경 아너소사이어티



행복나눔인 보건복지부 장관상



전영근 아너소사이어티



싱글PPM 품질혁신단체부문 대통령상



모범납세자 기획재정부 장관상



싱글PPM 품질혁신단체부 문대통령상



우수자본재개발유공기업 지식경제부장관상

### **CERTIFICATION & AWARD**



ESG우수중소기업 확인서



2024부산청끌 기업선정서



성과공유기업 확인서



청년친화강소기업



메인비즈확인서



ISO45001



ISO9001



ISO14001



EQ인증서



WIN G&D FTPA



LUBRICATOR Mk.II CERTIFICATE



LUBRICATOR Mk.I CERTIFICATE



특허증 (제10-2539726호)



특허증 (제10-2460186호)



특허증 (제10-2392799호)



디자인등록증 (제30-0999550호)



특허증 (제10-1924637호)



특허증 (제10-1910633호)



특허증 (제10-1878815호)



특허증 (제10-1801231호)



특허증 (제10-1785407호)



특허증 (제10-1722966호)



특허증 (제10-1708627호)



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