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LPG Filling System







HANYOUNG GAS TECHNOLOGY CO.,LTD

LPG Import Terminal



▶Storage Tank (Spherical Type)



▶Storage Tank (Cylindrical Type)

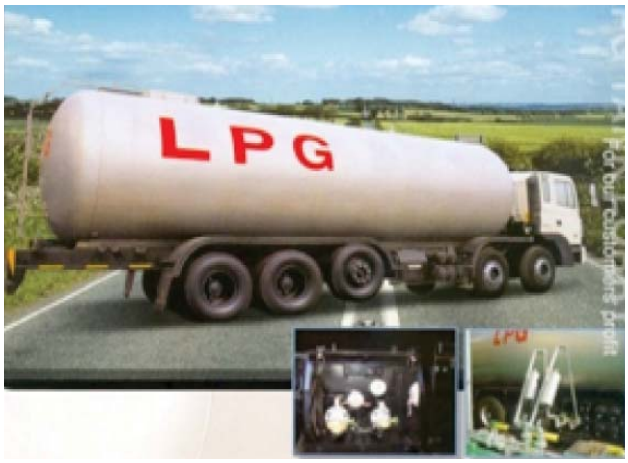
Transportation Equipment(River)



▶Barge(100~300ton)



Transportation Truck(Road)



- Tank Lorry



- Trailer

INT. VOL(ton)	VOLUME(ℓ)	DIAMETER(㎜)	MATERIAL	WEIGHTY(㎏)	LENGTH(㎜)	APPLICATION	REMARK
10	23,500	2,260	SPV490	4,950	5,108	14ton CARGO	
12	28,200	2,260	SPV490	6,200	6,280	16ton CARGO	
15	35,250	2,260	SPV490	6,950	8,034	19ton CARGO	
18	43,475	2,400	SPV490	8,150	8,810	25ton CARGO	





- Bulk Lorry

INT. VOL(ton)	VOLUME(ℓ)	DIAMETER(㎜)	WEIGHTY(㎏)	APPLICATION
3	7,050	2,100	2,460	5ton CARGO
4.5	10,576	3,150	2,230	7ton CARGO
6	14,100	3,450	2,900	8.5ton CARGO
10	23,500	4,750	5,040	16ton CARGO

Satellite LPG Filling Station

:: Bottle Filling Station



:: Automobile Filling Station













Satellite LPG Filling Station

:: LPG Storage System(Ground Type)



:: LPG Storage System(Ground Package Type)



Filling Package

Satellite LPG Filling Station

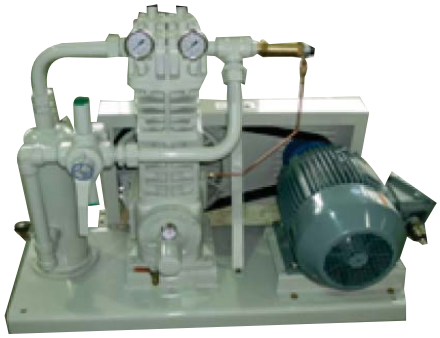
:: LPG Storage System(Under Ground Type)





Satellite LPG Filling Station - Unloading Equipment

:: COMPRESSOR



SPECIFICATION	MODEL	
	HYGC-075	HYGC-150
IN / OUT	20A	32A
RPM-Min / Max	400 ~ 825	
Max. Outlet Temperature	177℃	
Max. Working Pressure(Bar)	24.1	
Max. Flow-Propane(m3/hr)	23	48
Maximum Driver	7.5HP	15HP

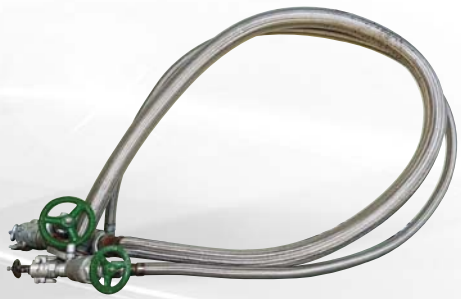
:: LOADING ARM





MODEL	HYLD-2	HYLD-3
DESIGN PRESSURE	2.0 Mpa	2.0 Mpa
FLANGE MATERIAL	JIS 20K RF Flange	JIS 20K RF Flange
SIZE	25A, 50A	50A, 80A

:: Lorry Hose

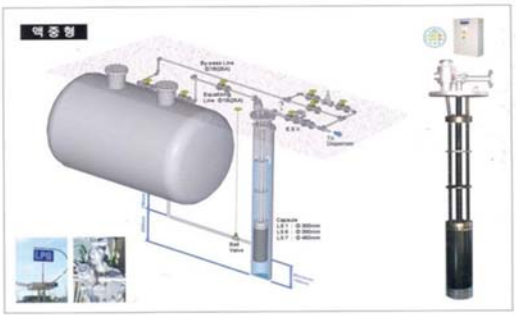


MODEL	HYLS-2
DESIGN PRESSURE	2.0 Mpa
FLANGE MATERIAL	JIS 20K RF Flange
SIZE	25A, 50A

Satellite LPG Filling Station - Filling Pump

:: SUBMERGED PUMP(UNDER GROUND)







Chamber Type



Tank Type

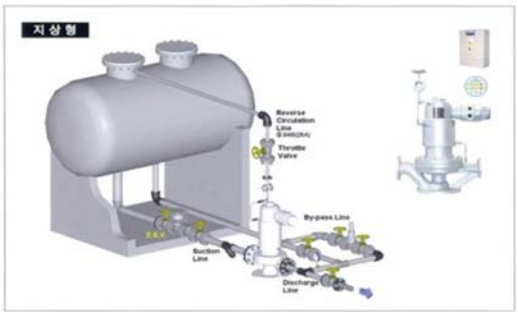
MODEL	50Hz			60Hz			Motor Rated Out Put(kw)
	Flow (ℓ/min)	Head (m)	Diff.Pres (kg/㎠)	Flow (ℓ/min)	Head (m)	Diff.Pres (kg/㎠)	
HYPG1	120	80	4.5	120	80	4.5	3.7
HYPG2	200	80	4.5	200	100	5.5	5.5
HYPG3	400	80	4.5	400	80	4.8	7.5
HYPG4	500	80	4.5	500	100	5.5	11

Difference Pressure = Specific Gravity 0.56
Design Pressure = 20 kg/㎠G
Hydrostatic Test Pressure = 42kg/㎠G

(Low Noize, High Head, No leak)

:: NONSEAL PUMP(GROUND TYPE)







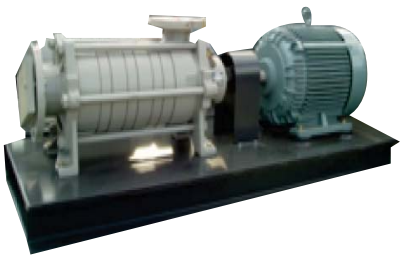


MODEL	50Hz		60Hz		Motor Rated Out Put(kw)
	Flow (ℓ/min)	Head (m)	Flow (ℓ/min)	Head (m)	
HYPG1	120	80	120	80	3.7
HYPG2	200	80	200	80	5.5
HYPG3	200	100	200	100	7.5
HYPG4	300	80	300	100	11

Difference Pressure = Specific Gravity 0.56
Design Pressure = 20 kg/㎠G
Hydrostatic Test Pressure = 42 kg/㎠G

Satellite LPG Filling Station - LPG Filling Equipment(PUMP)

:: MECHANICAL-SEAL TYPE



• REGENERATIVE TURBINE LIQIID PUMP

- Carousel & Bulk Filling PUMP (Multistage side channel design pump)

SPECIFICATION	MODEL					
	MCS-1000	MCS-2000	MCS-3000	MCS-4000	MCS-5000	MCS-6000
IN / OUT (Flange)	40A/20A	65A/32A	65A/32A	80A/40A	100A/50A	100A/65A
RPM - 50Hz / 60Hz	1,450 ~ 1,750					
Temperature	-32℃ ~ 180℃					
Max. Working Pressure(Bar)	40					
Max. Differenrial Pressure(Bar)	10.3	15.9	12.4	12.1	14.5	17.2
Flow Range	0.4 ~ 35m3/h					
Maximum Driver(50Hz)	5HP	15HP	15HP	20HP	40HP	75HP



• REGENERATIVE TURBINE LIQIID PUMP

- Small Cylinder filling PUMP (Regenerative Turbine Liquid Pump)

SPECIFICATION	MODEL			
	T9	T10	T12	T14
IN / OUT	32A/25A	32A/25A	40A/25A	40A/25A
RPM - 50Hz / 60Hz	2880 / 3450			
Temperature	-32℃~ 107℃			
Max. Working Pressure(Bar)	27.6			
Max. Differenrial Pressure(Bar)	4.8	4.8	6.9	8.6
Flow Range(L/min)	5~26	7~45	28~71	53~143
Maximum Driver	5HP	5HP	10HP	20HP



• REGENERATIVE TURBINE LIQIID PUMP

- Autogas dispensing & Cylinder filling PUMP
  (Regenerative Turbine Liquid Pump)

SPECIFICATION	MODEL		
	RTP-160	RTP-175	RTP-200
IN / OUT	40A / 25A		
RPM-Min / Max	2880 / 3450		
Max. Outlet Temperature	-32℃~ 107℃		
Max. Working Pressure(Bar)	27.6		
Max. Differenrial Pressure(Bar)	10.3	13.8	17.2
Flow Range(L/min)	26~83	40~151	45~220
Maximum Driver	5HP	10HP	20HP



• TRANSFER PUMP

- Sliding Vane Positive Displacement Liquid Pump

SPECIFICATION	MODEL	
	SVP-50	SVP-80
IN / OUT(Flange)	2″ NPT	3″ NPT
RPM - 50Hz/60Hz	420 ~ 800	
Temperature	-32℃~ 107℃	
Max. Working Pressure(Bar)	28.6	
Max. Differenrial Pressure(Bar)	8.6	
Flow Range Gpm	110~320	240~740
Maximum Driver	10HP	20HP

Valves



- GLOBE VALVE

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	GCD-S
SIZE	15A, 20A, 25A, 40A, 50A, 65A, 80A, 100A



- E.S.V (Air)

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	SCPH2
SIZE	50A, 80A, 100A



- By Pass Relief Valve

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	GCD-S
SIZE	40A



- Check Valve

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	GCD-S
SIZE	25A, 40A, 50A, 65A, 80A, 100A



- Strainer

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	GCD-S
SCREEN MIDEL	60mesh
SIZE	15A, 20A, 25A, 40A, 50A



- Line Safety Valve

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	GCD-S
SCREEN MIDEL	C3604BD
SIZE	8A, 15A, 20A, 25A, 40A

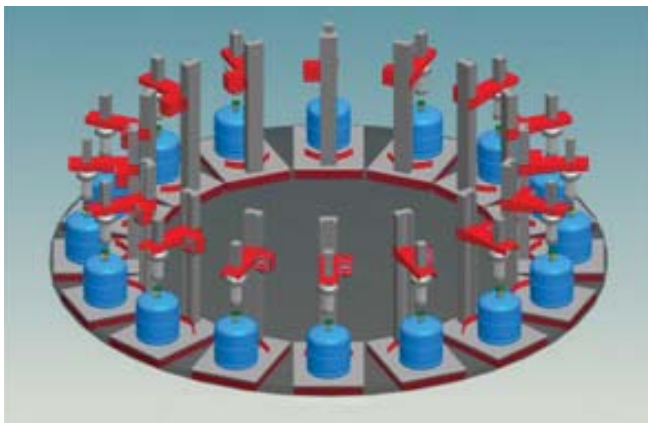


- Tank Safety Valve

MODEL	SPECIFICATION
DESIGN PRESSURE	2.0 Mpa
MATERIAL	GCD-S
SCREEN MIDEL	SCPH2
SIZE	25A, 40A, 50A, 80A, 100A

Satellite LPG Filling Station - Digital Auto Filler For Cylinder Filling

:: Cylinder Digital Auto Filler



Turn Filler Type (Auto)
HYF-TA-15



Stand Type



Turntable Type

ITEMS	SPECIFICATIONS
RANGE	1. (0kg ~ 150kg) 2. (0kg ~ 250kg)
CALIBRATION UNI	1. (50g) 2. (100g)
MEASUREMENT RESOLUTIONT	1/3,000(Max 1/10,000)
DISPLAY TYPE	5digits 3stage VFD number and letter
MEASUREMENT TYPE	LOAD CELL
RATED VOLTAGE	AC 110V/220V 50~60Hz(single phase)
VOLTAGE TOLERANCE	±10%
POWER CONSUMPTION	30W
AMBIENT TEMPERATURE	-25℃~ 50℃
AMBIENT AIR PRESSURE	5kg/㎠~ 7kg/㎠
SPECIAL FUNCTIONS	1. Computer communication function 2. 3 type mode selection function 3. Accumulating function of gas weight to be filled and quantity of cylinders filled withus 4. Auto tracking function to zero point
EXTERNAL DIMENSIONS	500 W × 780 L × 1800 H
WEIGHT	137kg



Can Filler

Satellite LPG Filling Station - Dispensor For Vehicles

:: LPG Dispenser

Multi- Nozzles filling station (HYF-M-4W, HYW-C-2M)

1. 2-4 multi-nozzles are ready to fill simultaneously.
2. Higher flow rate accuracy (deviation less than 0.2 %)
3. Faster filling with lower pressure loss. (45-100L/min)
4. Less contact area with less wearing.
5. Selection of volume flow and weight flow is conveniently applicable both for car filling and for home appliances.



Mass Flow Meter Type (Cylinder and Car combined)

- Hybrid Type(Vehicle & Cylinder)

MODEL	HYBRID-HYD
POWER	AC 110V or 220V, 50/60Hz
CONNECTION	Liquid line : 25A 20K Flange
	Gas line : 25A 20K Flange
FLOW RATE	2 ~ 60ℓ /min
FLOW METER	Mass Flow Meter
NOZZLE	Quick Coupling Type
HOSE	3/4″ or 1/2″ X 4.5cm
SAFETY BREAK-AWAY COUPLING	3.4″, Reconnectable Type
OPERATING ENVIRONMENT	-25℃ ~ 55℃(Standard)



Wave Flow Meter Type

- Wave Type

MODEL	ECONOMY-HYDS2 2NOZZLE	ECONOMY-HYDS2 4NOZZLE
POWER	AC 110V or 220V, 50 / 60Hz	
CONNECTION	Liquid Line : 25A 20K Flange	
	Gas Line : 15A 20K Flange	
FLOW RATE	5 ~ 55ℓ / min	
FLOW METER	4-Piston Flow Meter	
NOZZLE	Quick Coupling Type	
HOSE	3/4″ or 1/2″ × 4.5m	
SAFETY BREAK-AWAY COUPLING	3.4″, Reconnectable Type	
OPERATING ENVIRONMENT	-25℃ ~ 55℃(Standard)	



- Piston Type

MODEL	ECONOMY-HYDS2 2NOZZLE
POWER	AC 110V or 220V, 50 / 60Hz
CONNECTION	Liquid Line : 25A 20K Flange
	Gas Line : 15A 20K Flange
FLOW RATE	5 ~ 55ℓ / min
FLOW METER	4-Piston Flow Meter
NOZZLE	Quick Coupling Type
HOSE	3/4″ or 1/2″ × 4.5m
SAFETY BREAK-AWAY COUPLING	3.4″, Reconnectable Type
OPERATING ENVIRONMENT	-25℃ ~ 55℃(Standard)

Instrument

Level & Flow Guage





▶ Level Guage(Ground Type)



▶ Sight Glass (With Switch)



▶ Flow Meter

Other Gauge



▶Pressure Gauge



▶Temp. Gauge



▶Gas Detector

Control Panel

:: Gas Control Panel

A program managing effectively filling operation as monitor facility of LPG station by real time.



Advanced Type

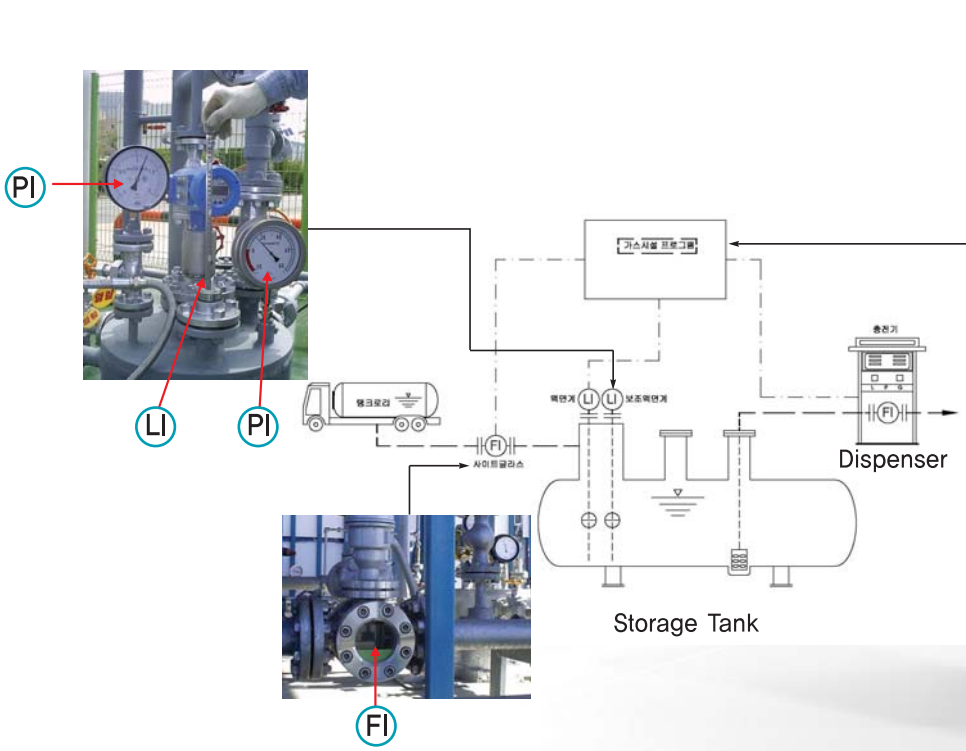


Standard Type



Explosion Proof Type

:: Control Diagram





– Inventory Control



– Warehousing



– Diagnosis

Maintenance - LPG Equipment

Dispenser Calibration



▶ LPG Weight Measurement



▶ LPG Specific Gravity Measurement



▶ Preparatory Work



Maintenance - LPG Equipment



▶ Tank Open Inspection



▶ Valve Test



▶ Inspection Inside Charging tank



▶ Inspection Inside Charging tank

▶ Pump Maintenance





▶ Compressor Maintenance





LPG Bottle Maintenance & Recovery System

:: Bottle Maintenance & Test Plant

Water test



Panel for press.test



Pressure test system



Internal press.test system



Remaining gas recovery



Valve unscrewing/screwing



:: Recovery Equipment





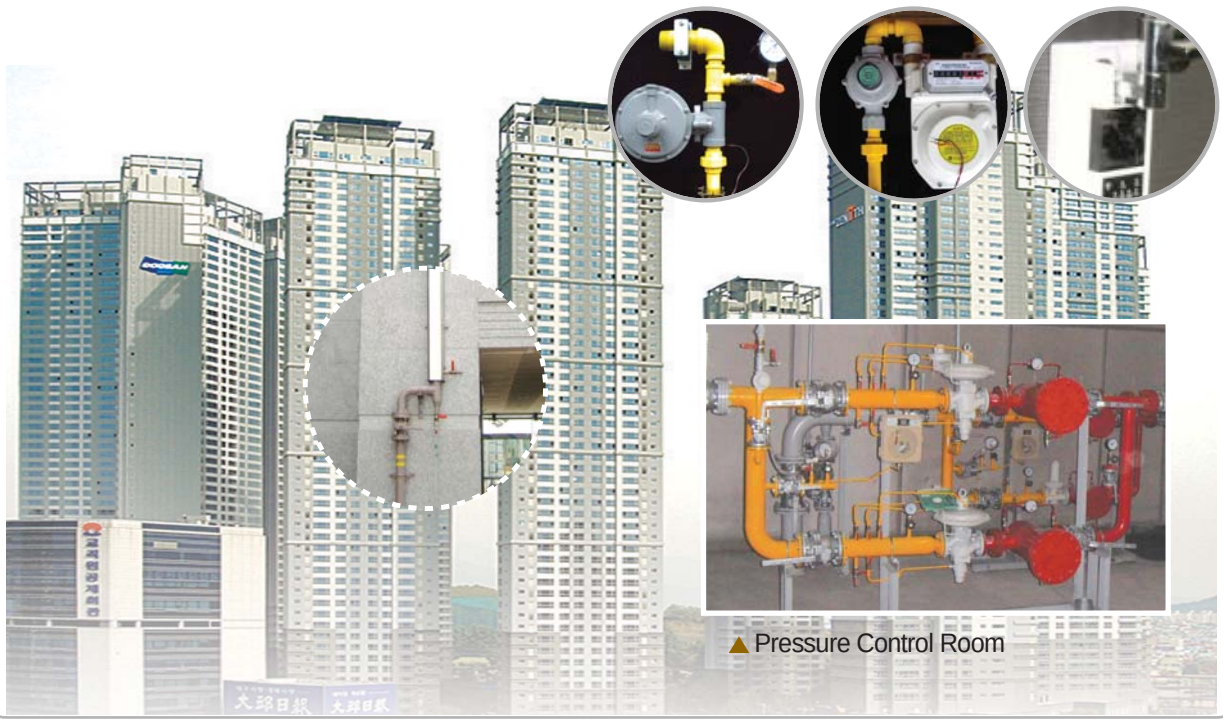






LPG Supply Service System

:: Residential & Industrial



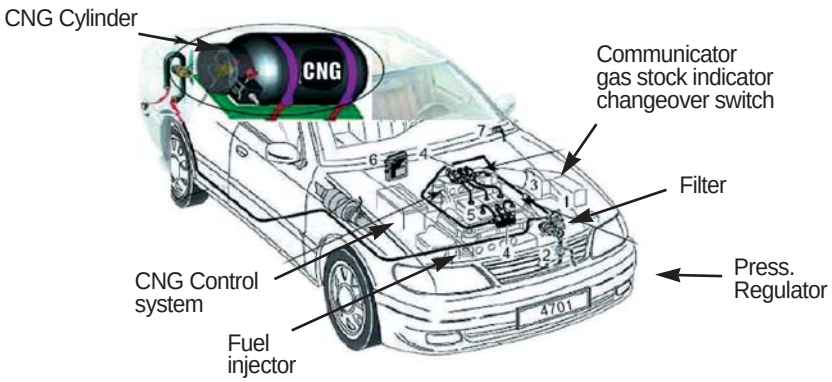
▲ Pressure Control Room

:: LPG Storage Package Unit



Gas Vehicle Reforming

:: Gasoline + Gas(LPG or CNG)



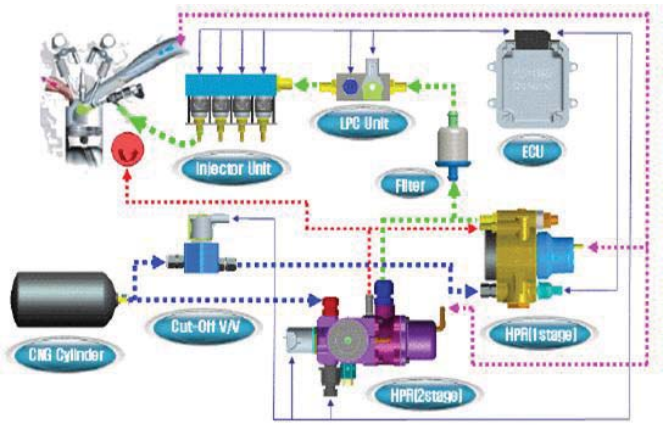


LPG vehicle reforming


CNG vehicle reforming

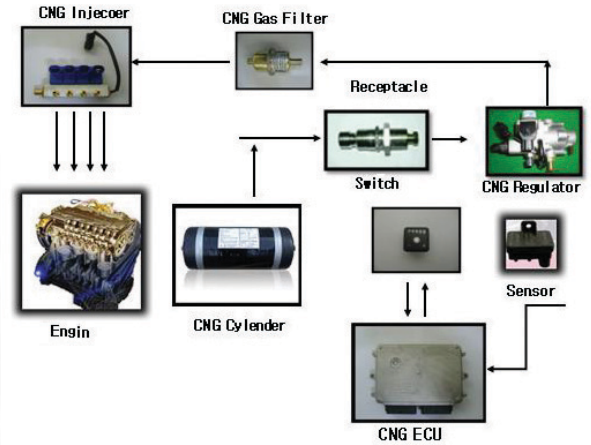
:: Gasoline + LPG System





:: Gasoline + CNG System





Hydrocarbon Refrigerant Gas Station

Environment-friendly, inexpensive refrigerant

Features





1) Economics

Compared to other product 30%–40% cheaper compared to the same capacity

2) Safety

After 10 years of experimentation,
This is a proven product performance and safety

3) Environment

OS–12a is a hydrogen refrigerant mixture and guarantees environmental friendship because its GWP (global warming potential) and ODP (ozone depletion potential) is zero



4) Efficiency

Because HCR–134a is less heavy and more bulky than R–12 or 134a, even though the only 40% of the existing refrigerant is charged the cooling efficiency of HCR–134a is higher, the COP (coefficient of performance) of it is about 3.5% higher and it can reduce electric bill by about 15% more in use of home appliances and it is less noisy in use of vehicles than the existing refrigerant, about 8% more economical in fuel reduction efficiency than the existing refrigerant.

production item	Usage
HCR-134a (Replacement for R12 or R134a)	vehicle air conditioner, Home and commercial air conditioner
HCR-22a (Replacement for R22)	Home and commercial air conditioner, large air conditioning system for hotels, hospitals, ShowCase
HCR-502a (Replacement for R502)	Freezer truck, strong freezer, cold storage, etc.
SC-12d (Replacement for R12)	vehicle air conditioner, Home and commercial air conditioner
HCR-600a (Replacement for R134a)	Compact refrigerator, STANDARD GASES of medicines, cosmetics, perfumes and sprays.





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