



NAVIER

Doug Crogan

About US

**The Leading Manufacturer in Korea
to be a World leading manufacturer**

NAVIENT

Navigating **En**ergy & **En**vironment

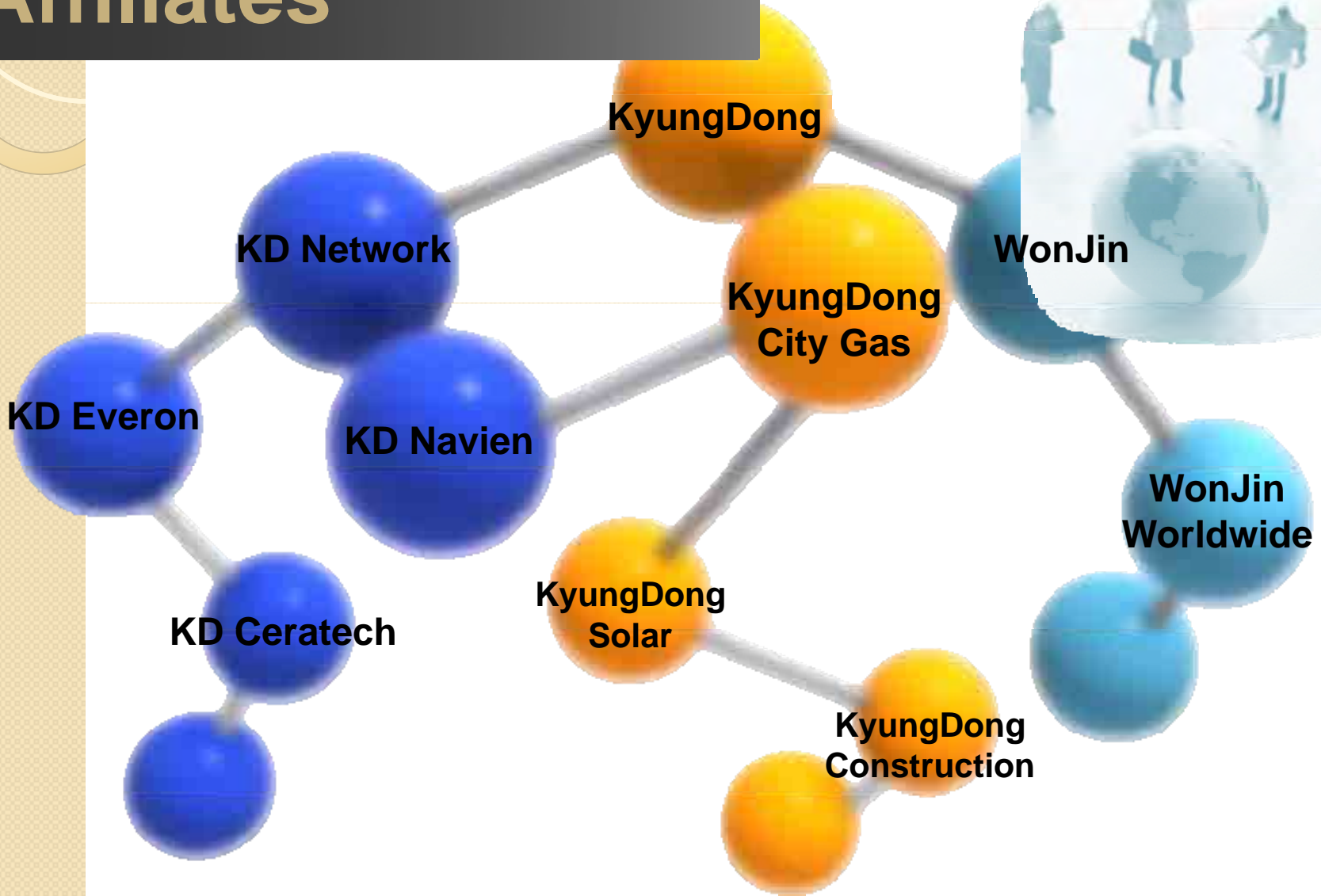
Supplies HVAC equipment
to more than 30 countries worldwide since 1978

About US



1978: Navien Korea
2006: Navien America Inc

Affiliates



KD Navien

navien

- Tankless Gas Water Heaters
- Wall Hung Gas Boilers
- Combination Oil Boilers
- Air Conditioners
- Ventilation Systems

network

- Energy Management Systems
- Home Network Systems
- Zone Valve Manifold Control Systems
- Home Security Systems



Since 1979

EVERON

- Gas & Oil Burners
- STS Heat Exchangers
- Plate Heat Exchangers
- Circulation Pumps
- Fans & Motors



- Tankless Gas Water Heaters
- Wall Hung Boiler

ceratech

- Construction Materials
- Environmental Materials
- Industrial Materials
- Ceramic Materials

Products

Gas Boilers



Oil Boilers

Water Heater



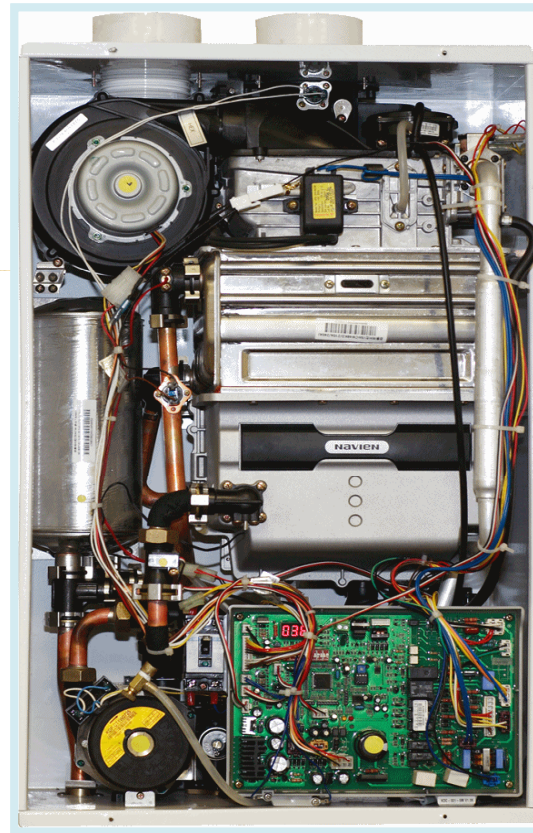
Air Conditioners

Ventilators



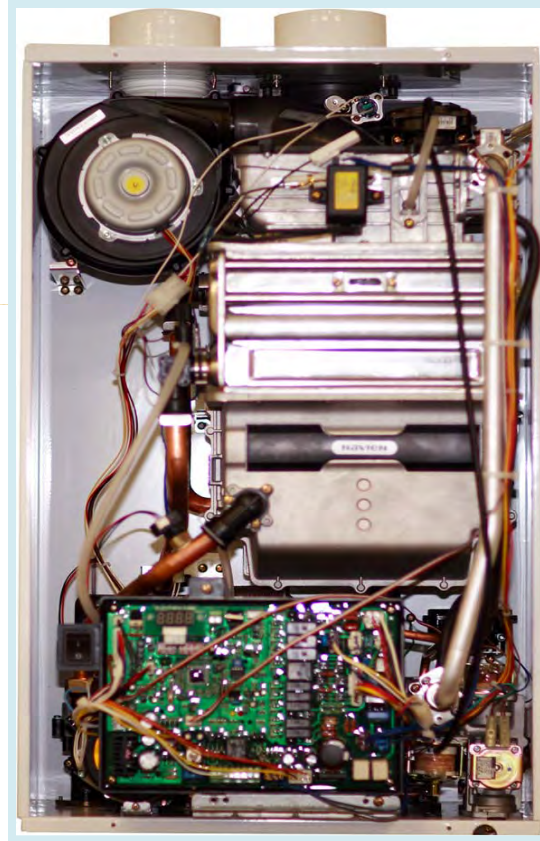
Home Network System

Model NR and NP Water Heater



Tankless Water Heater
Model NR and NP,

Model CH Combination Boiler/Water Heater



Combination Boiler
Model CH

NAVIEN High Efficiency Condensing Technology

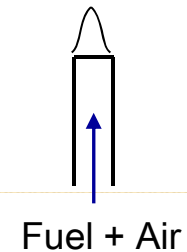
Navien Premixed Burner and Flame

Precisely Premixed Combustible Air and Gas before supply to burner.
Flame length is short and lower flame temperature compare to Lien Rich Burner system.

Lower NO_x emission (8~18 Ng) , CO (0~180 PPM)

Flame temperature is about **900 °C (1650 °F)**

Flue gas temperature: Normal domestic water heating: Max 130 F



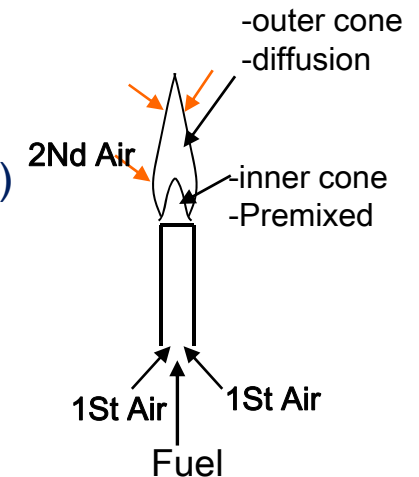
Partial Premixed Flame (Lean/Rich Burner, Bunsen Burner)

Excess Oxygen (Air) supplies, low CO₂ (0~ 150 PPM) , High NO_x. (27~47 Ng)

Blue-Green flam color (inner cone) and Blue-white flame color (outer cone)

Flame Temperature : about **1,200~1,300°C (2200 ~ 2400 °F)**

Flue gas temperature: Max. 480 °F



NAVIEN Condensing Efficiency Benefits.



Primary Heat Exchanger



Secondary Heat Exchanger

Dual Heat Exchangers = 98% Combustion Efficiency



98% Efficiency = Energy Saving



98 % Efficiency Low Emission = The Most Eco-friendly

NAVIEN Condensing Features & Benefits.



Plastic vents

SCH 40 3" PVC

No Vent Kits required

Extended Vent Lengths up to 100'



Durability Extended Life

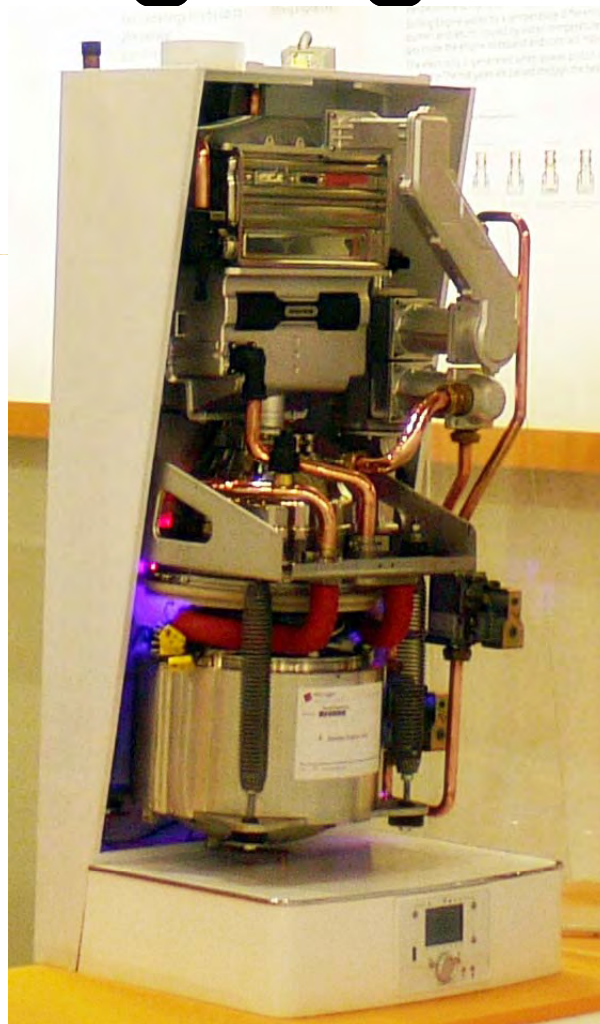
Condensate Resistance = Less Service Calls



APS (Air Pressure sensor) & GPS (Gas Pressure sensor) = GARC (Gas, Air Ratio control) = Ideal Combustion, Flame Stability and steady performance

Next Generation Product for North America

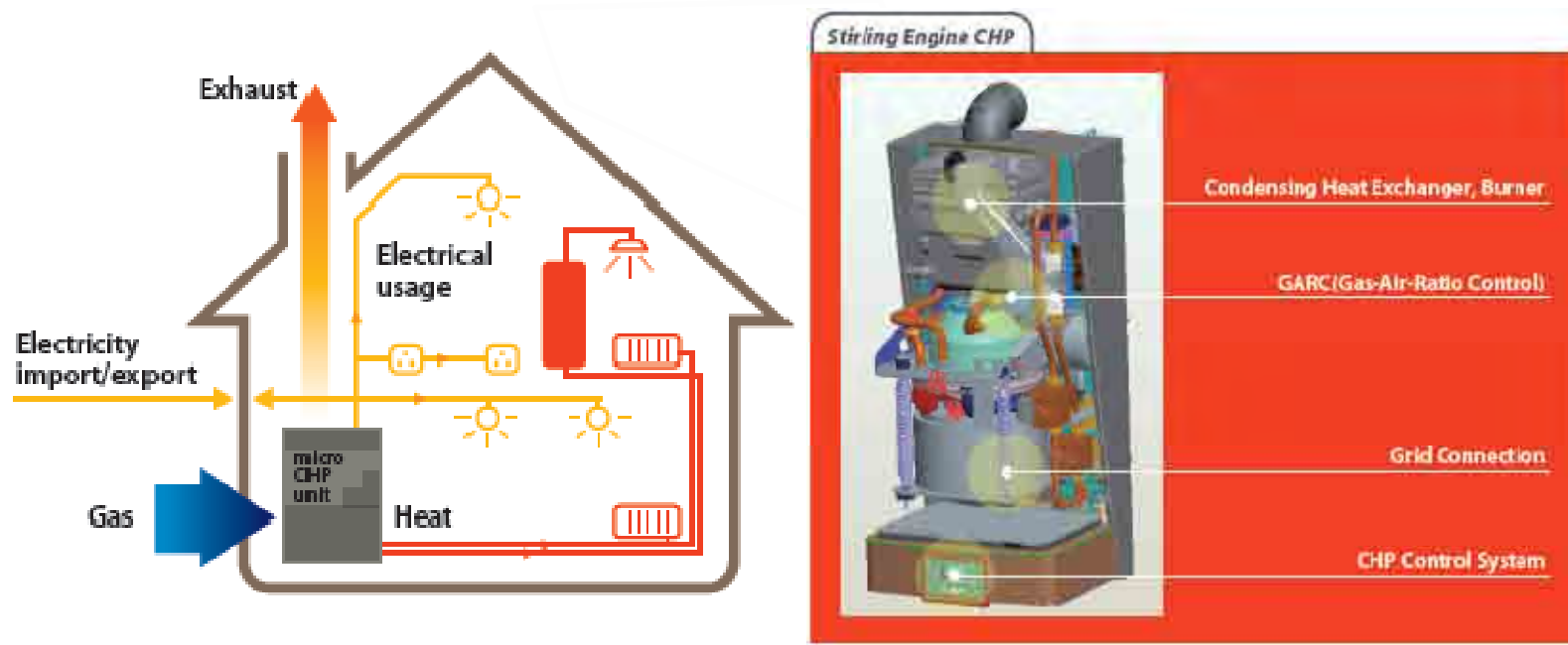
Stirling Engine CHP



Stirling Engine CHP (Combined heat and power) produces heat and electrical power simultaneously using a natural gas as an energy source for individual homes and small commercial properties.

This micro-CHP can be used as electricity supply back-up system or/and for light electricity demand facilities.

The heat and power produced by the appliance is used directly in the home for space heating and for lighting and running domestic appliances.



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Thank you!