32 Years of Leadership in Providing Unique Solutions for the HVAC Market ...and Counting
Ductless is a small percent of the U.S. HVAC market yet well-positioned to progress into a radical growth stage.
U.S. HVAC Market Overview

Industry Volume Comparison

- Chillers: 0.5%
- Funarnces: 27%
- Portable Acs: 9%
- PTAC: 5%
- VRF / Ductless Systems: 4%
- Rooftops: 2%
- Single Package: 4%
- Split System AC: 6%
- Split System Heat Pump: 32%

Source: AHRI and BRSI, September 2012

*Room Air Conditioners not included in analysis*
Ductless Split-System Advantage

Residential Solutions

- Indoor Unit
- Refrigerant Lines
- Outdoor Unit

Add Line-Hide™ lineset cover system to help protect refrigerant lines and beautify exterior. Reference page 27 for details.
Savings with Ductless

Customers see %15 to 25% savings or more

- Targeted heating or cooling
- Variable speed system to match loads
- Turn-off zones that are not needed
- No ductwork needed
- Highest cooling efficiencies
- 100% Heat Pump Heat to 4 deg F

Not only savings but increased COMFORT!
INVERTER Compressor Advantage

- Over-sizing not an issue!
- Systems match load requirements
- Comfort levels are reached quickly
- Constant circulation of conditioned air
  - improves humidity control
  - reduces hot/cold pockets
- Lower sounds levels from both fan and compressor
- *No cold air delivery at low temperature heat pump start up*
M-Series Systems

- **Cooling Only:** 9,000 – 36,000 BTU/h
- **Heat Pump:** 9,000 – 48,000 BTU/h
- **H2i Hyper-heat:** 9,000 – 18,000 BTU/h

Controller option is system specific

- **MSZ Wall-mounted**
- **MFZ Floor-standing**
- **SEZ Ducted**
- **SLZ Cassette**
What Are Customers Saying?

“"I don’t believe that I have ever seen an installation quite like this one,” Ment said. “He not only maintained the architectural integrity of our house, he introduced us to a technology that is at once quiet, reliable and efficient, providing us years of worry-free operation. This is an amazing product and fits our house like a glove.”

“Most Americans perceive cooling and heating as central systems,” he said, “but that’s a misconception. In Europe and the Middle East, the concept of cooling and heating without ductwork has been in practice for the past 50 years.”

“The finest thing is that we could now enjoy our beautiful sunroom, and the baby’s room was comfortable — all in time for Thanksgiving. I would recommend this system to any homeowner. Certainly ones like us with an historic, legacy house — although I have to admit that this system is so efficient it would probably be perfect for new construction as well.”

“For the diminutive cooling and heating demands of this Passive House, the minimum Btu/h capacities of this system for both cooling and heating are the lowest in the industry: All other systems would have been overkill. Also, we liked the fact that the units are so compact — the outdoor unit’s the size of a suitcase.”
Strategies for Ductless

- Hot Spot
- Cold Spot
- Replace electric resistance strip heaters
- Places where traditional systems cannot go
- Innovative Solutions
Hyper-heating (H2i™) INVERTER

- Provides exceptional heat pump output
- Full heating capacity at 5°F for cold weather locations
- Efficient heat pump heating to -18°F
Hyper-heating INVERTER

Tremendous year-round comfort!

Hyper-heating INVERTER vs. Other Units
% Heating Capacity vs. Outdoor Temperature

100% @ 5°F
87% @ -4°F
80% @ -13°F

Outdoor Temperature - Degrees FWB

- Mitsubishi Electric Hyper-heat INVERTER (H2i™)
- Mitsubishi Electric Standard INVERER Heat Pump system
- Typical Unitary Equipment
Hyper-heating INVERTER

Indoor Unit Discharge Temperature
(wall-mounted indoor unit with fan on high)

Discharge Air Temperature

Outdoor Temperature (°F WB)

-13
-4
5

98° F
102° F
106° F
Extra High Efficiency!
- Up to 26 SEER and 10 HSPF
- All systems qualify for ENERGY STAR

Hyper-heating INVERTER systems

Comfort with i-See Sensor Technology

Triple filtration
Mitsubishi ENERGY STAR Systems

- 21 Mitsubishi Systems Qualify for ENERGY STAR
- 11 Mitsubishi Systems Qualify for ENERGY STAR Most Efficient
Thank You!!