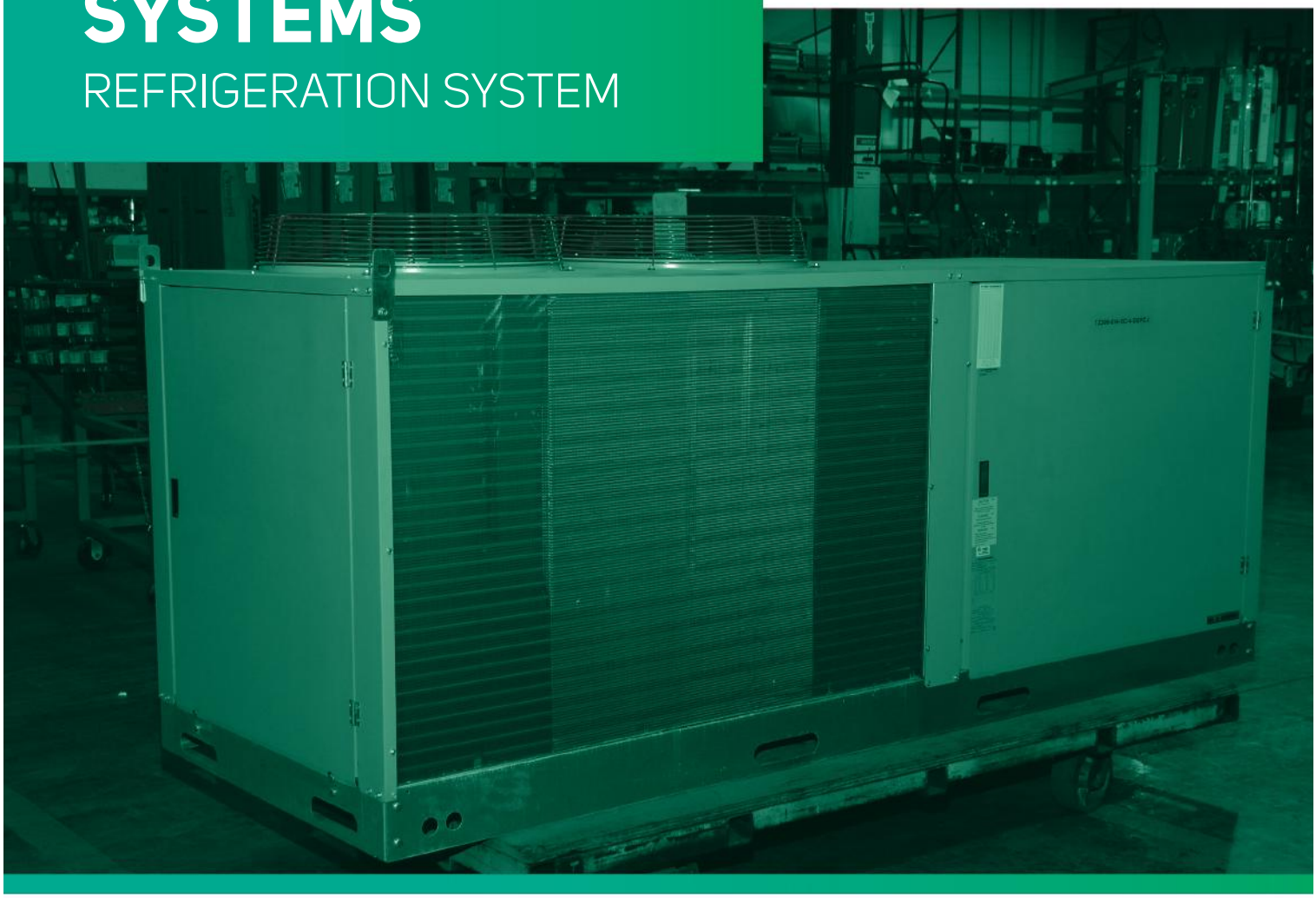
Systems Sales Brochure

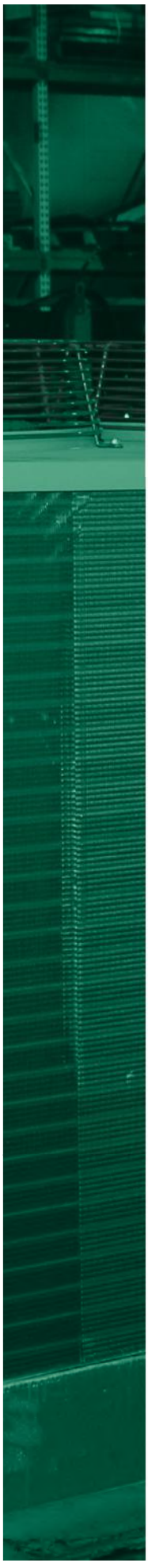
# DISTRIBUTED SYSTEMS

## REFRIGERATION SYSTEM



Epta
GOOD NEVER STOPS

KW KYSOR WARREN



# DISTRIBUTED SYSTEMS REFRIGERATION SYSTEM

Kysor Warren Distributed Systems are designed to be located close to refrigerant loads (cases), reducing refrigerant line runs and substantially reducing refrigerant charge.

Kysor Warren Distributed Systems provide significant benefits to food retail customers:

- Up to 80% refrigerant charge reduction
- Energy efficiency
- Ease of installation
- Ease of serviceability and maintenance

Our Distributed System portfolio contains four market leading platforms:

- Distributed Scroll System (DSS)
- Compact Scroll System (CSS)
- Distributed Scroll Pack (DSP)



*Distributed Scroll System*



*Compact Scroll System*

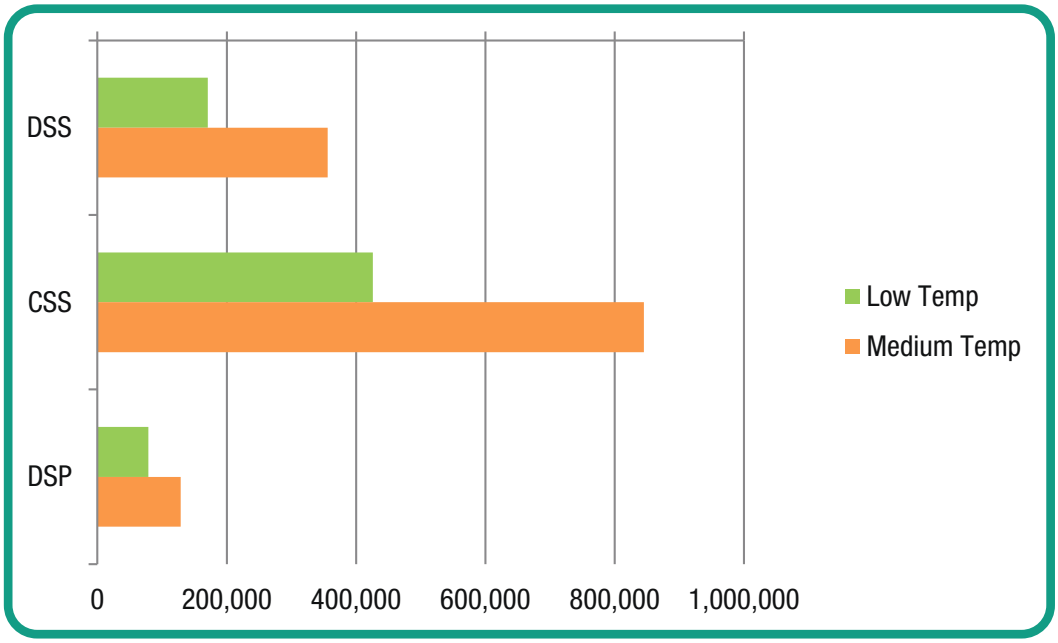


*Distributed Scroll Pack System*




## INSIDE DSS

# DISTRIBUTED SYSTEMS
## CAPACITY RANGES




| | DSS | | CSS | | DSP | |
|---|---|---|---|---|---|---|
| | Low end of capacity | Top end of capacity | Low end of capacity | Top end of capacity | Low end of capacity | Top end of capacity |
| LOW TEMPERATURE | 50,700 BTUH | 170,900 BTUH | 50,700 BTUH | 425,800 BTUH | 44,367 BTUH | 78,959 BTUH |
| MEDIUM TEMPERATURE | 92,600 BTUH | 355,900 BTUH | 92,600 BTUH | 845,000 BTUH | 47,554 BTUH | 128,847 BTUH |

*ASSUMPTIONS:*
*-LOW TEMPERATURE: 100°F AMBIENT/110 SCT/-20 SST/50°F SUBCOOLING (LT LOW END IS NON-SUBCOOLED)*
*-MEDIUM TEMPERATURE: 100°F AMBIENT/115 SCT/20 SST/ NON-SUBCOOLED*

## Typical Applications

| SYSTEM TYPE | | | | |
|---|---|---|---|---|
| | DISTRIBUTED SCROLL SYSTEM | COMPACT SCROLL SYSTEM | DISTRIBUTED SCROLL PACK | OUTDOOR SYSTEMS |
| Common Applications | ▪ Behind interior store wall<br>▪ Back walkways or hallways<br>▪ Store mezzanine<br>▪ Retrofits/remodels<br>▪ Small back rooms or closets<br>▪ Traditional machine rooms | ▪ On top of walk-in coolers/ freezers<br>▪ Spaces with limited height clearance<br>▪ Traditional machine rooms | ▪ On top of roof<br>▪ Retrofits/remodels | ▪ OHW/OHN - outdoors, ground mounted<br>▪ OHD/OHS - outdoors, roof mounted |

# DISTRIBUTED SCROLL SYSTEM
## REFRIGERATION SYSTEM

### *Reduced Refrigerant Charge. Ease of Installation. Accessibility.*

The redesigned Distributed Scroll System from Kysor Warren includes an environmentally friendly design offering reduced refrigerant charge and leak potential. The enhanced space-saving design allows for ease of installation and accessibility in one product solution for supermarkets. This innovative system significantly reduces refrigerant charge when applied near refrigeration loads.



*DSS with open cabinet*

#### Reduced Refrigerant Charge and Leak Potential

- Up to a 70% reduction in refrigerant charge as compared to a traditional centralized rack system
- Features a 35% reduction in brazed joints compared to previous models, drastically reducing the potential for leaks

#### Ease of Installation and Operation

- Maximizes merchandising space by eliminating need for a machine room
- Reduction of field braze joints means easier installation (less brazing and pipe work) and reduced leak potential
- Additional units can be added to existing facilities

#### Ease of Accessibility

- Sliding side doors allow for ease of servicing
- Hinged front doors provide easy access to compressor and electrical components
- Easily combined with a Kysor Warren Condenser Assembly to provide a complete high-side refrigeration system solution

#### Energy Efficient Design

- Features energy efficient Scroll compressors
- Optimal grouping of systems to more closely match suction temperature requirements

The refrigerant reducing Distributed Scroll System is an innovative product solution that significantly improves the total Life Cycle Climate Performance (LCCP) of refrigeration systems, helping our customers become better environmental stewards.



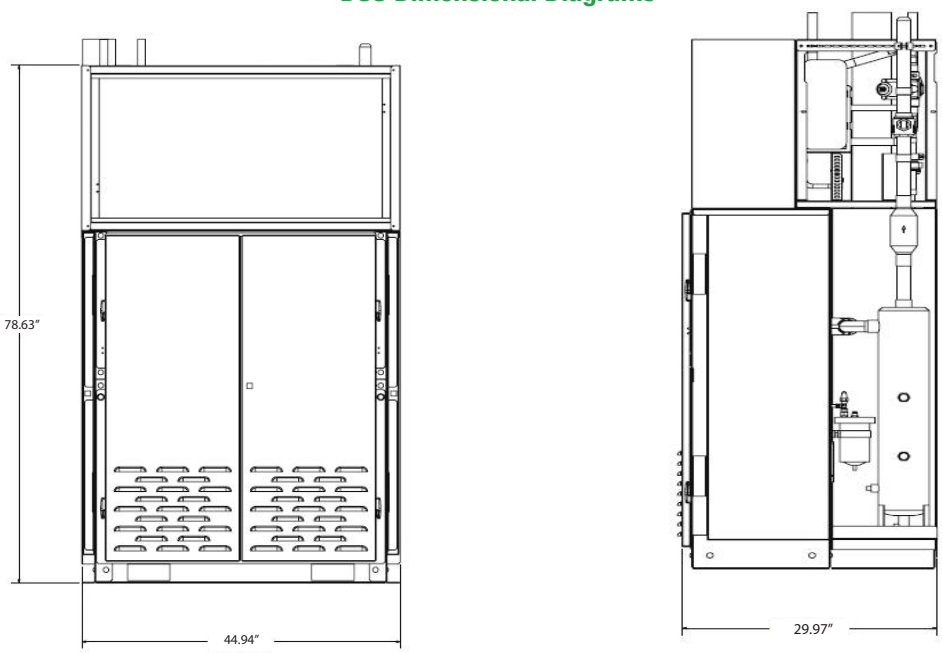
*DSS - rear view*

# DISTRIBUTED SCROLL SYSTEM
## SPECIFICATIONS

| STANDARD | |
|---|---|
| Design and Construction | ▪ Galvanized steel cabinet featuring forklift cutouts for lifting; no disassembly required<br>▪ Hinged doors on front access areas<br>▪ Removable side doors for service access<br>▪ Sound attenuating insulation<br>▪ Available in 208V, 460V or 575V power input (dependent upon compressor availability) |
| Compressors and Piping | ▪ Up to 6 compressors<br>• 3 compressors of up to 6 hp each on top level<br>• 3 compressors of up to 6 hp each OR 2 compressors of up to 15 hp each on bottom level<br>▪ Designed for loop piping<br>▪ High pressure Oil System (Centrifugal)<br>▪ One suction group<br>▪ Off-cycle defrost |
| Components | ▪ Front-accessible electrical panel<br>▪ Factory mounted microprocessor rack controller, if selected, is accessible without opening the electrical box<br>▪ Factory installed disconnect up to 200A |

| OPTIONS (CONTACT FACTORY) | |
|---|---|
| Compressors and Piping | ▪ Subcooler with brazed plate heat exchanger and electronic expansion valve<br>▪ Up to 2 suction groups<br>▪ Electric defrost or connections for hot gas defrost<br>▪ Horizontal receiver in lieu of compressors on bottom rack<br>▪ Optional auxiliary/shipped loose heat reclaim |
| Components | ▪ Novar, Emerson or Danfoss rack controllers |

### DSS Dimensional Diagrams



# COMPACT SCROLL SYSTEM
## REFRIGERATION SYSTEM

### *Reduced Refrigerant Charge. Ease of Installation. Accessibility.*

The redesigned Compact Scroll System from Kysor Warren includes an environmentally friendly design offering reduced refrigerant charge and leak potential. The enhanced space-saving design is intended to be mounted over a walk-in box or similar structure where a low height is needed. This innovative system significantly reduces refrigerant charge when applied near refrigeration loads.



*CSS - front view without skin*

### Reduced Refrigerant Charge and Leak Potential

- Up to a 50% reduction in refrigerant charge as compared to a traditional centralized rack system

### Ease of Installation and Operation

- Maximizes merchandising space by placing refrigeration system over a walk-in or in similar space
- Reduction of field braze joints means easier installation (less brazing and pipe work) and reduced leak potential
- Additional units can be added to existing facilities



*CSS - rear view without skin*

### Ease of Accessibility

- Can be configured with or without skin and access panels
- Easily combined with a Kysor Warren Condenser Assembly to provide a complete high-side refrigeration system solution

### Energy Efficient Design

- Features energy efficient Scroll compressors
- Optimal grouping of systems to more closely match suction temperature requirements

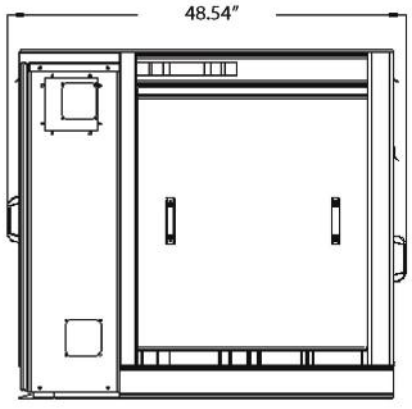
The refrigerant reducing Compact Scroll system is an innovative product solution that significantly improves the total Life Cycle Climate Performance (LCCP) of refrigeration systems, helping our customers become better environmental stewards.

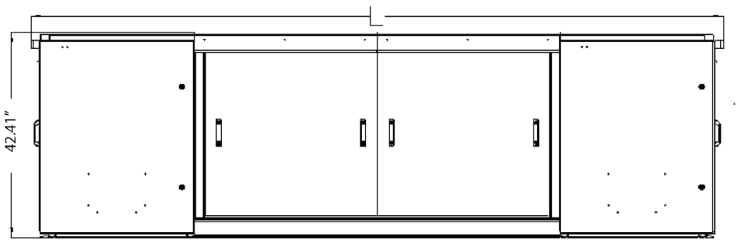
# COMPACT SCROLL SYSTEM
## SPECIFICATIONS

| STANDARD | |
|---|---|
| Design and Construction | ▪ Unpainted Galvanized Steel Cabinet<br>▪ Removable side doors for service access<br>▪ Available in 208V, 460V or 575V power input (dependent upon compressor availability) |
| Compressors and Piping | ▪ Up to 9 scroll compressors<br>▪ Can accommodate Loop, Branch or Circuit piping<br>▪ High pressure Oil System (Centrifugal)<br>▪ One suction group<br>▪ Off-cycle defrost |
| Components | ▪ Front-accessible electrical panel<br>▪ Factory mounted microprocessor rack controller, if selected, is accessible without opening the electrical box<br>▪ Factory installed disconnect up to 200A |

| OPTIONS (CONTACT FACTORY) | |
|---|---|
| Compressors and Piping | ▪ Available with sound attenuation insulation on compressor section<br>▪ Removable access panels<br>▪ Subcooler with brazed plate heat exchanger and electronic expansion valve<br>▪ Up to 2 suction groups<br>▪ Electric or Hot Gas defrost<br>▪ Factory mounted receiver<br>▪ Optional auxiliary/shipped loose heat reclaim<br>▪ Additional electrical box<br>▪ Piping can exit back of unit a top, back of unit at bottom, and through the bottom of the unit<br>▪ Mechanical subcooling |
| Components | ▪ Painted steel cabinet<br>▪ Novar, Emerson or Danfoss rack controllers<br>▪ Water or comfort heat reclaim<br>▪ Electronic stepper regulator or mechanical suction pressure regulators |

### CSS Dimensional Diagrams



# DISTRIBUTED SCROLL PACK
## REFRIGERATION SYSTEM

### *Reduced Refrigerant Charge. Ease of Installation. Accessibility.*

The Distributed Scroll Pack from Kysor Warren includes an environmentally friendly design offering reduced refrigerant charge and leak potential. The integrated rack/condenser package allows for ease of installation and maximum flexibility. This innovative system significantly reduces refrigerant charge when applied near refrigeration loads.



*DSP - exterior view*

### Reduced Refrigerant Charge and Leak Potential

- Up to a 80% reduction in refrigerant charge as compared to a traditional centralized rack system

### Ease of Installation and Operation

- Maximizes merchandising space by eliminating need for a machine room
- Reduction of field braze joints means easier installation (less brazing and pipe work) and reduced leak potential
- Additional units can be added to existing facilities



*DSP - open doors*

### Ease of Accessibility

- Hinged front doors provide easy access to compressor and electrical components
- Assembly to provide a complete high-side refrigeration system solution

### Energy Efficient Design

- Features energy efficient Scroll compressors
- Optimal grouping of systems to more closely match suction temperature requirements

The refrigerant reducing Distributed Scroll Pack is an innovative product solution that significantly improves the total Life Cycle Climate Performance (LCCP) of refrigeration systems, helping our customers become better environmental stewards.

# DISTRIBUTED SCROLL PACK
## SPECIFICATIONS

| | STANDARD |
|---|---|
| Design and Construction | ▪ Painted steel cabinet<br>▪ Hinged doors on front access areas<br>▪ Available in 208V, 460V or 575V power input (dependent upon compressor availability) |
| Compressors and Piping | ▪ Up to three 6hp scroll compressors<br>▪ One suction group<br>▪ Off-cycle defrost |
| Components | ▪ Emerson E2 Controller<br>▪ Factory installed disconnect up to 200A |

| | OPTIONS (CONTACT FACTORY) |
|---|---|
| Compressors and Piping | ▪ Electric defrost or connections for defrost<br>▪ Optional auxiliary/shipped loose heat reclaim<br>▪ Available with piping terminations through bottom or out end of unit |
| Components | ▪ Novar, Emerson or Danfoss rack controllers |

### DSP Dimensional Diagrams

