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Big benefits in a low profile for food retail stores of all sizes!



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Opportunity



Horizontal InviroPak™ big benefits for stores of all sizes

One Cool Solution

The Problem: Food retailers of all sizes are facing two major issues today:

- How to **reduce costs**
- How to **improve margins**

Research shows traditional supermarkets, mass merchandisers and warehouse membership retailers are reducing their footprints to reduce their bottom line costs. At the same time, small format stores are getting larger to answer customer demand. These current trends have important implications:

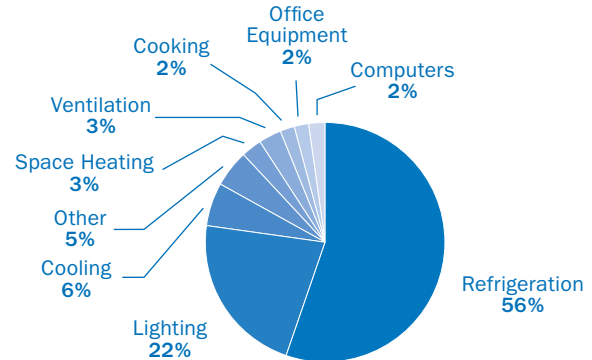
- In traditional food retail stores, refrigeration and lighting make up more than 75% of electricity consumption — while offering significant opportunities for energy savings and cost reduction.
- Stores require retailers to use every square foot of space for sales related activities. Moving the refrigeration systems outside of the building frees up some of this space.

The Solution: Increased flexibility and design of InviroPak

The Horizontal InviroPak is the ideal answer for food retailers looking to reduce costs and improve margins. Here are six reasons why.

Easy to install

- InviroPak is shipped from our factory and ready for installation in an attractively-designed cabinet.
- When used as a distributed system by larger format stores, InviroPak can be located closer to the loads to reduce refrigerant and piping costs.
- For smaller footprint supermarkets, InviroPak can serve as a central system, allowing the retailer to handle all of the store refrigeration requirements with one system. This reduces the cost and complexity of installing multiple single condensing units.



Electricity consumption by end user

Refrigeration and lighting make up more than 75 percent of electricity consumption in grocery and convenience stores and offer significant opportunities for saving money and energy.

Simple to service

- Compressor section is isolated and can be easily accessed while the unit is operational.
- Smart design provides ample room for quickly and easily servicing and maintaining internal components.
- Hinged doors on compressor and electrical sections coupled with removable doors on all sides allow quick and easy access.
- Through-the-door disconnect allows for easy service.
- Fork lift pockets allow for ease of transport.

Reduces refrigerant costs

- As a distributed system, InviroPak can reduce refrigerant by being located closer to the loads. This helps retailers reduce refrigerant costs and the amount of HFC refrigerant in the system on a daily basis.
- Optimized, compressor group design uses fewer brazed joints — so there are fewer locations for costly refrigerant leaks.

Space-saving design

- InviroPak's low profile allows it to be located indoors, above or below existing infrastructure, taking up minimal space within the store.
- Eliminates need for a separate mechanical room inside the store.
- Frees up valuable interior floor space for more product and sales.

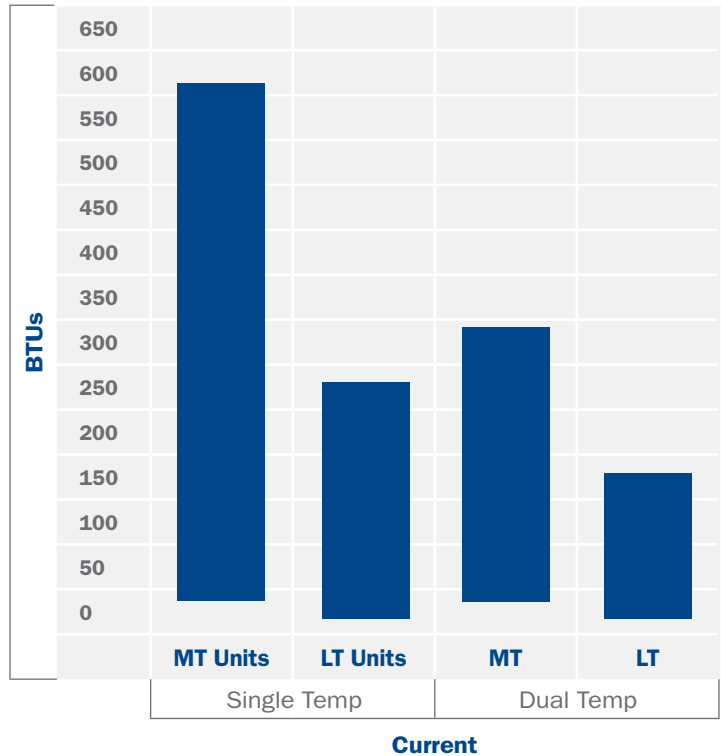
Easy on the eyes

- Compact design coupled with insulated panels make the unit easy on the ears as well as the eyes.

Long-lasting performance

- Each unit receives extensive quality checks before shipping.
- Proven, durable design and construction means years of reliable performance.

Horizontal InviroPak Capacity Range

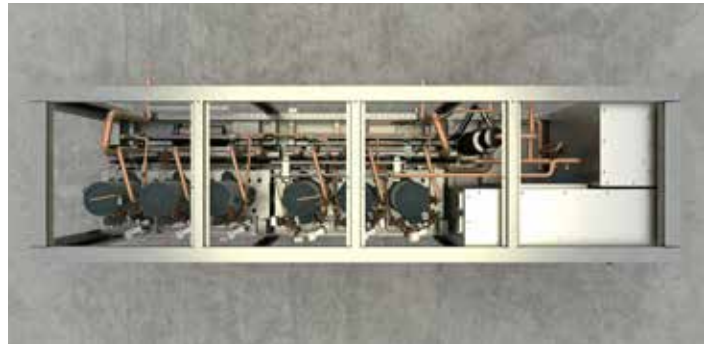


Features and Benefits



Product Snapshots

InviroPak™



Traditional Supermarket Features and Benefits

Compact solution for easy installation

- The Horizontal InviroPak™ is a low profile parallel rack solution with integrated controls.
- For some smaller footprint supermarkets, the Horizontal InviroPak can be used as a central system, allowing the retailer to handle all of the store refrigeration requirements with one system.
- InviroPak reduces refrigerant and piping costs because a distributed system has the flexibility of being located closer to the loads.
- Available with integrated defrost control panel.
- InviroPak is shipped from our factory ready for installation.

Ease of service/accessibility

- Smart design allows room enough to quickly and easily service/maintenance internal components.
- Hinged doors on compressor and electrical sections coupled with removable panels on all sides allow quick and easy access.
- Through-the-door disconnect allows for easy service.
- Fork lift pockets allow for ease of transport.

Reduced refrigerant charge

- As a distributed system, InviroPak can reduce refrigerant by being located closer to the loads; enabling the retailer to reduce refrigerant costs and the amount of HFC refrigerant in the system.
- The optimized, low profile design also uses less brazed joints which in turn reduces refrigerant leaks.

Compact design

- The Horizontal InviroPak has a small footprint and can be located indoors eliminating the need for a mechanical room that allows critical floor space to be dedicated to sales.

Aesthetically-pleasing design

- The small footprint allows the unit to be located anywhere within a store, including above or below existing infrastructure, taking up minimal space.
- The attractive enclosure and insulated panels make it easy on the ears as well as the eyes.

Standard vs. Options Configuration

Standard Configuration	Options
Installed in Unit	Installed in Unit
Galvanized Steel Cabinet	Integrated Defrost Panel with Optional Components
208V–230V Main Power	460V Main Power
Scroll Compressors (Only)	Low Pressure Control per Compressor
One Digital Scroll per Suction Group (4-6 compressor models)	Crankcase Heater
Replaceable Core Filter/Drier and Sight Glass	Controls: CPC/Carel/Danfoss/Micro Thermo
Through the Door Disconnect	Shipped Loose
IEC Contactors	Split Condenser Valve
Defrost Panel	Hot Gas Defrost Valve
Integrated Liquid Receiver	Heat Reclaim Valve Package
Phase Loss Monitoring	
One Low Pressure Control per Suction	
One High Pressure Control per Suction	
Mechanical Liquid Level Gauge	
Digital Liquid Level Indicator	
Discharge Oil Separator	
Centrifugal with Integrated Oil Reservoir	
OMB per Compressor	
Refrigerant Options: R-407A, R-448A, R-449A	
Shipped Loose	
Suction Filter per Suction Group	
Ball Valves	

Model Overview

HIPAK CAPACITIES IN BTUH AT 95F AMBIENT AND 20TD (407A)										
	MODEL NAME	-5 SST	-10 SST	-15 SST	-20 SST	-25 SST	10 SST	20 SST	25 SST	30 SST
Low Temp Units	HIP-M0000-L0099	144,300	127,700	112,500	98,700	86,500	–	–	–	–
	HIP-M0000-L0109	159,500	141,200	124,400	109,000	95,400	–	–	–	–
	HIP-M0000-L0122	178,400	157,900	139,100	122,000	106,900	–	–	–	–
	HIP-M0000-L0132	193,600	171,400	151,000	132,300	115,800	–	–	–	–
	HIP-M0000-L0145	212,500	188,100	165,700	145,300	127,300	–	–	–	–
	HIP-M0000-L0165	240,900	213,300	188,100	165,300	145,300	–	–	–	–
	HIP-M0000-L0193	281,300	249,200	219,800	193,100	169,800	–	–	–	–
	HIP-M0000-L0226	329,600	292,000	257,600	226,400	199,200	–	–	–	–
	HIP-M0000-L0246	358,000	317,200	280,000	246,400	217,200	–	–	–	–
	HIP-M0000-L0266	386,400	342,400	302,400	266,400	235,200	–	–	–	–
Medium Temp Units	HIP-M0198-L0000	–	–	–	–	–	156,100	197,900	222,000	247,200
	HIP-M0224-L0000	–	–	–	–	–	178,700	224,100	250,000	277,600
	HIP-M0253-L0000	–	–	–	–	–	202,300	252,700	281,400	312,200
	HIP-M0299-L0000	–	–	–	–	–	238,500	298,900	333,400	370,200
	HIP-M0343-L0000	–	–	–	–	–	273,700	342,700	382,000	424,000
	HIP-M0402-L0000	–	–	–	–	–	321,200	402,000	448,000	497,200
	HIP-M0448-L0000	–	–	–	–	–	357,400	448,200	500,000	555,200
	HIP-M0474-L0000	–	–	–	–	–	380,000	474,400	528,000	585,600
	HIP-M0522-L0000	–	–	–	–	–	416,000	520,800	580,000	–
	HIP-M0592-L0000	–	–	–	–	–	472,400	590,400	658,000	–
	HIP-M0616-L0000	–	–	–	–	–	491,200	613,600	684,000	–
Dual Suctions	HIP-M0048-L0032	46,200	40,800	36,000	31,600	27,600	38,100	48,400	54,300	60,600
	HIP-M0079-L0032	46,200	40,800	36,000	31,600	27,600	62,000	79,100	88,900	99,200
	HIP-M0106-L0032	46,200	40,800	36,000	31,600	27,600	83,700	105,500	118,000	131,200
	HIP-M0125-L0032	46,200	40,800	36,000	31,600	27,600	98,200	125,300	140,900	157,200
	HIP-M0152-L0032	46,200	40,800	36,000	31,600	27,600	119,900	151,700	170,000	189,200
	HIP-M0178-L0032	46,200	40,800	36,000	31,600	27,600	142,500	177,900	198,000	219,600
	HIP-M0198-L0032	46,200	40,800	36,000	31,600	27,600	156,100	197,900	222,000	247,200
	HIP-M0224-L0032	46,200	40,800	36,000	31,600	27,600	178,700	224,100	250,000	277,600
	HIP-M0253-L0032	46,200	40,800	36,000	31,600	27,600	202,300	252,700	281,400	312,200
	HIP-M0299-L0032	46,200	40,800	36,000	31,600	27,600	238,500	298,900	333,400	370,200
	HIP-M0343-L0032	46,200	40,800	36,000	31,600	27,600	273,700	342,700	382,000	424,000
	HIP-M0048-L0052	76,100	67,300	59,300	52,100	45,700	38,100	48,400	54,300	60,600
	HIP-M0079-L0052	76,100	67,300	59,300	52,100	45,700	62,000	79,100	88,900	99,200
	HIP-M0106-L0052	76,100	67,300	59,300	52,100	45,700	83,700	105,500	118,000	131,200
	HIP-M0125-L0052	76,100	67,300	59,300	52,100	45,700	98,200	125,300	140,900	157,200
	HIP-M0152-L0052	76,100	67,300	59,300	52,100	45,700	119,900	151,700	170,000	189,200

*Not available with split condenser due to single coil design--available with heated and insulated receiver for low ambient applications

^ Uses fixed speed scroll in lieu of digital scroll on low temp due to compressor availability

Model Overview continued...

Dual Suctions	HIP-M0178-L0052	76,100	67,300	59,300	52,100	45,700	142,500	177,900	198,000	219,600
	HIP-M0198-L0052	76,100	67,300	59,300	52,100	45,700	156,100	197,900	222,000	247,200
	HIP-M0224-L0052	76,100	67,300	59,300	52,100	45,700	178,700	224,100	250,000	277,600
	HIP-M0253-L0052	76,100	67,300	59,300	52,100	45,700	202,300	252,700	281,400	312,200
	HIP-M0299-L0052	76,100	67,300	59,300	52,100	45,700	238,500	298,900	333,400	370,200
	HIP-M0343-L0052	76,100	67,300	59,300	52,100	45,700	273,700	342,700	382,000	424,000
	HIP-M0048-L0076	110,200	97,500	85,900	75,400	66,100	38,100	48,400	54,300	60,600
	HIP-M0079-L0076	110,200	97,500	85,900	75,400	66,100	62,000	79,100	88,900	99,200
	HIP-M0106-L0076	110,200	97,500	85,900	75,400	66,100	83,700	105,500	118,000	131,200
	HIP-M0125-L0076	110,200	97,500	85,900	75,400	66,100	98,200	125,300	140,900	157,200
	HIP-M0152-L0076	110,200	97,500	85,900	75,400	66,100	119,900	151,700	170,000	189,200
	HIP-M0178-L0076	110,200	97,500	85,900	75,400	66,100	142,500	177,900	198,000	219,600
	HIP-M0198-L0076	110,200	97,500	85,900	75,400	66,100	156,100	197,900	222,000	247,200
	HIP-M0224-L0076	110,200	97,500	85,900	75,400	66,100	178,700	224,100	250,000	277,600
	HIP-M0253-L0076	110,200	97,500	85,900	75,400	66,100	202,300	252,700	281,400	312,200
	HIP-M0048-L0099	144,300	127,700	112,500	98,700	86,500	38,100	48,400	54,300	60,600
	HIP-M0079-L0099	144,300	127,700	112,500	98,700	86,500	62,000	79,100	88,900	99,200
	HIP-M0106-L0099	144,300	127,700	112,500	98,700	86,500	83,700	105,500	118,000	131,200
	HIP-M0125-L0099	144,300	127,700	112,500	98,700	86,500	98,200	125,300	140,900	157,200
	HIP-M0152-L0099	144,300	127,700	112,500	98,700	86,500	119,900	151,700	170,000	189,200
	HIP-M0178-L0099	144,300	127,700	112,500	98,700	86,500	142,500	177,900	198,000	219,600
	HIP-M0048-L0109	159,500	141,200	124,400	109,000	95,400	38,100	48,400	54,300	60,600
	HIP-M0079-L0109	159,500	141,200	124,400	109,000	95,400	62,000	79,100	88,900	99,200
	HIP-M0106-L0109	159,500	141,200	124,400	109,000	95,400	83,700	105,500	118,000	131,200
	HIP-M0125-L0109	159,500	141,200	124,400	109,000	95,400	98,200	125,300	140,900	157,200
	HIP-M0152-L0109	159,500	141,200	124,400	109,000	95,400	119,900	151,700	170,000	189,200
	HIP-M0178-L0109	159,500	141,200	124,400	109,000	95,400	142,500	177,900	198,000	219,600
	HIP-M0048-L0122	178,400	157,900	139,100	122,000	106,900	38,100	48,400	54,300	60,600
	HIP-M0079-L0122	178,400	157,900	139,100	122,000	106,900	62,000	79,100	88,900	99,200
	HIP-M0106-L0122	178,400	157,900	139,100	122,000	106,900	83,700	105,500	118,000	131,200
	HIP-M0125-L0122	178,400	157,900	139,100	122,000	106,900	98,200	125,300	140,900	157,200
	HIP-M0152-L0122	178,400	157,900	139,100	122,000	106,900	119,900	151,700	170,000	189,200
	HIP-M0178-L0122	178,400	157,900	139,100	122,000	106,900	142,500	177,900	198,000	219,600
	HIP-M0048-L0145	212,500	188,100	165,700	145,300	127,300	38,100	48,400	54,300	60,600
	HIP-M0079-L0145	212,500	188,100	165,700	145,300	127,300	62,000	79,100	88,900	99,200
	HIP-M00106-L0145	212,500	188,100	165,700	145,300	127,300	83,700	105,500	118,000	131,200
	HIP-M0048-L0165	240,900	213,300	188,100	165,300	145,300	38,100	48,400	54,300	60,600
	HIP-M0079-L0165	240,900	213,300	188,100	165,300	145,300	62,000	79,100	88,900	99,200
	HIP-M0106-L0165	240,900	213,300	188,100	165,300	145,300	83,700	105,500	118,000	131,200

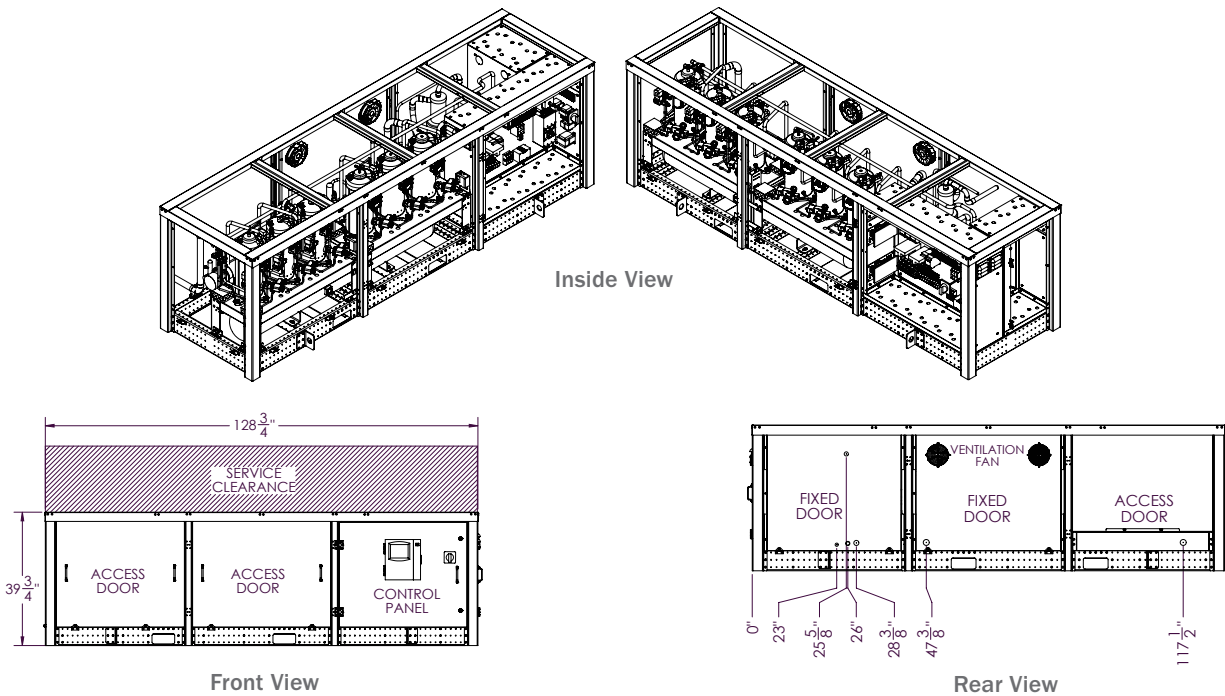
*Not available with split condenser due to single coil design--available with heated and insulated receiver for low ambient applications

^ Uses fixed speed scroll in lieu of digital scroll on low temp due to compressor availability

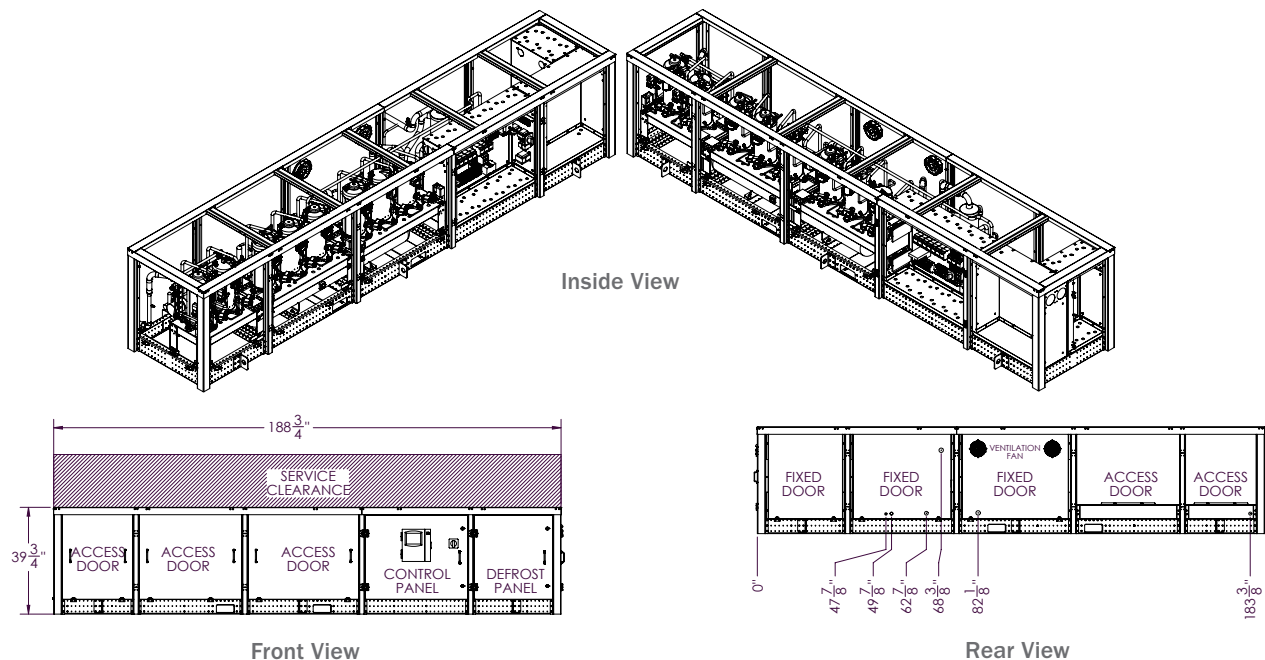
Horizontal InviroPak™ Specifications

Complete Submittal Drawings available

Small Cabinet: 4 to 6 compressor



Large Cabinet: 7 to 8 compressor

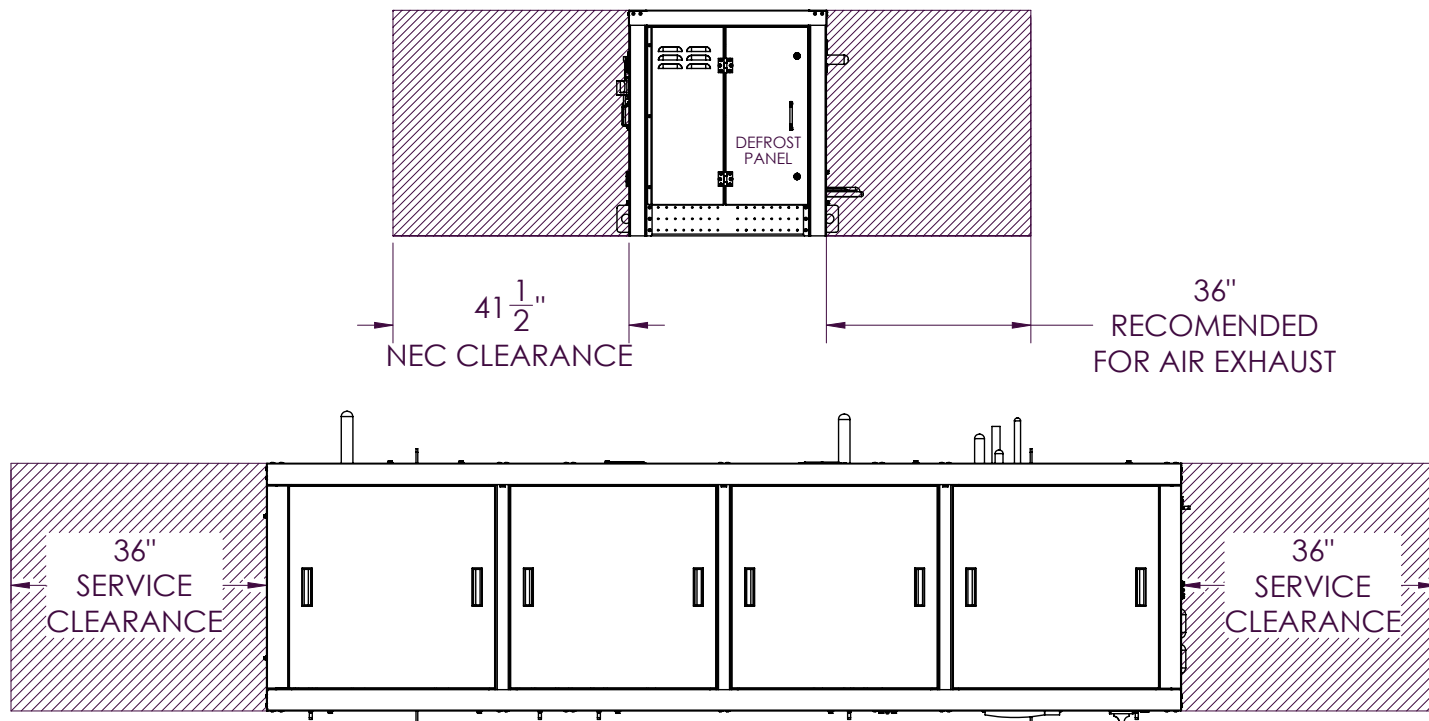


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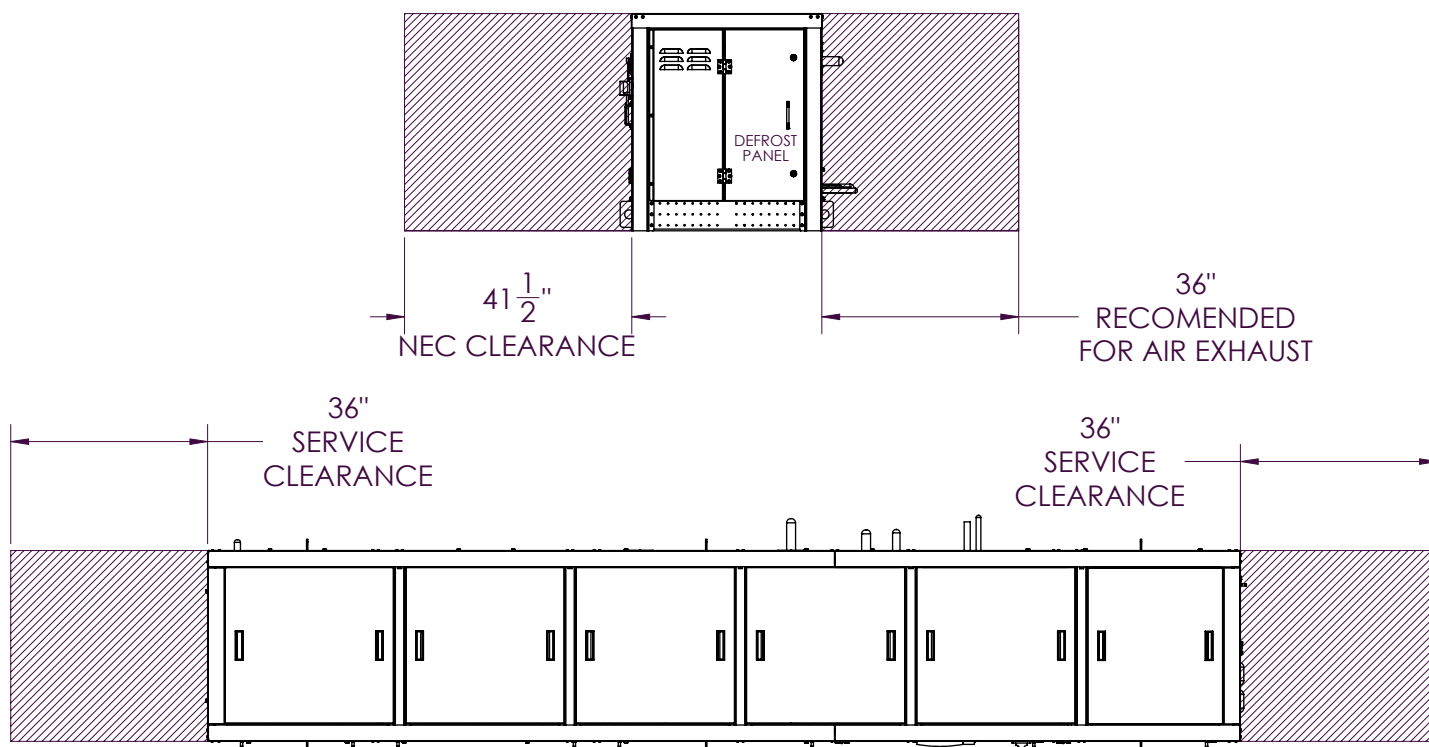
<https://www.hillphoenix.com/drawings/?s=horizontal+inviropak&post-type=>

Horizontal InviroPak™ Clearance Recommendations

Small Cabinet: 4 to 6 compressor



Large Cabinet: 7 to 8 compressor



Horizontal InviroPak™

Model Number Explanation

HIP-MXXXX-LXXXX-

HIP = InviroPak Platform

MXXXX = Medium Temp Load in KBTUs

LXXXX = Low Temp Load in KBTUs

Options Key

Split Condenser	Hot Gas Defrost	Crank Case Heater	Hail Guard	Heat Reclaim	LP Switch/Comp
S	G	K	H	R	P

Example: HIP-M0079-L0012-GK is an InviroPak Platform Model with Hot GAs Defrost option and Crank Case Heater option

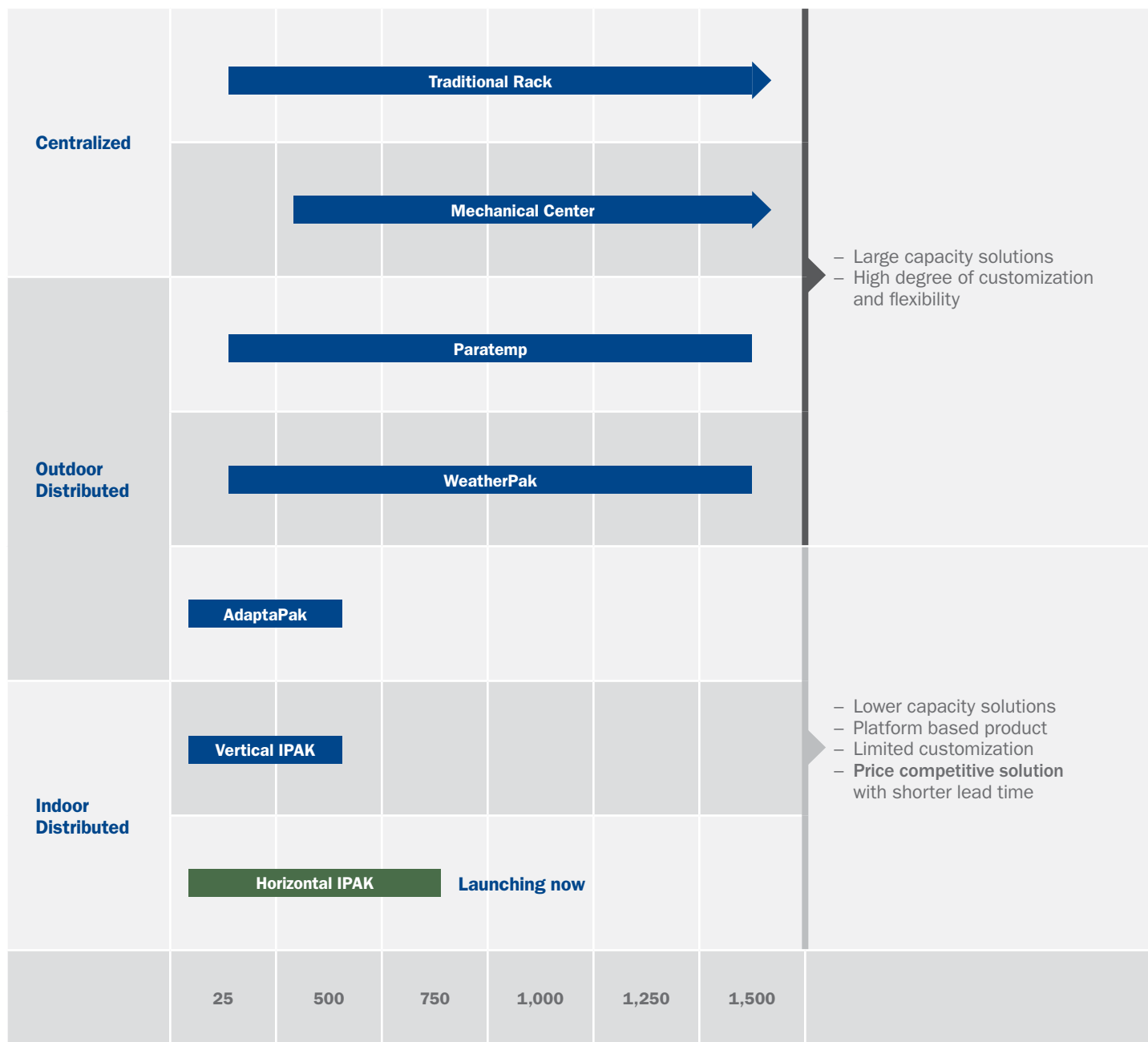
45 Models in Horizontal InviroPak Portfolio

Low Temp Single Suction	Med Temp Single Suction	Medium and Low Temp Dual Suction		
HIP-M0000-L0099	HIP-M0198-L0000	HIP-M0048-L0032	HIP-M0253-L0052	HIP-M0048-L0109
HIP-M0000-L0109	HIP-M0224-L0000	HIP-M0079-L0032	HIP-M0299-L0052	HIP-M0079-L0109
HIP-M0000-L0122	HIP-M0253-L0000	HIP-M0106-L0032	HIP-M0343-L0052	HIP-M0106-L0109
HIP-M0000-L0132	HIP-M0299-L0000	HIP-M0125-L0032	HIP-M0048-L0076	HIP-M0125-L0109
HIP-M0000-L0145	HIP-M0343-L0000	HIP-M0178-L0032	HIP-M0079-L0076	HIP-M0152-L0109
HIP-M0000-L0165	HIP-M0402-L0000	HIP-M0198-L0032	HIP-M0106-L0076	HIP-M0178-L0109
HIP-M0000-L0193	HIP-M0448-L0000	HIP-M0224-L0032	HIP-M0125-L0076	HIP-M0048-L0122
HIP-M0000-L0226	HIP-M0474-L0000	HIP-M0253-L0032	HIP-M0152-L0076	HIP-M0079-L0122
HIP-M0000-L0246	HIP-M0522-L0000	HIP-M0299-L0032	HIP-M0178-L0076	HIP-M0106-L0122
HIP-M0000-L0266	HIP-M0592-L0000	HIP-M0343-L0032	HIP-M0198-L0076	HIP-M0125-L0122
	HIP-M0616-L0000	HIP-M0048-L0052	HIP-M0224-L0076	HIP-M0152-L0122
		HIP-M0079-L0052	HIP-M0253-L0076	HIP-M0178-L0122
		HIP-M0106-L0052	HIP-M0048-L0099	HIP-M0048-L0145
		HIP-M0125-L0052	HIP-M0079-L0099	HIP-M0079-L0145
		HIP-M0152-L0052	HIP-M0106-L0099	HIP-M0106-L0145
		HIP-M0178-L0052	HIP-M0125-L0099	HIP-M0048-L0165
		HIP-M0198-L0052	HIP-M0152-L0099	HIP-M0079-L0165
		HIP-M0224-L0052	HIP-M0178-L0099	HIP-M0106-L0165

Application Selection Guide

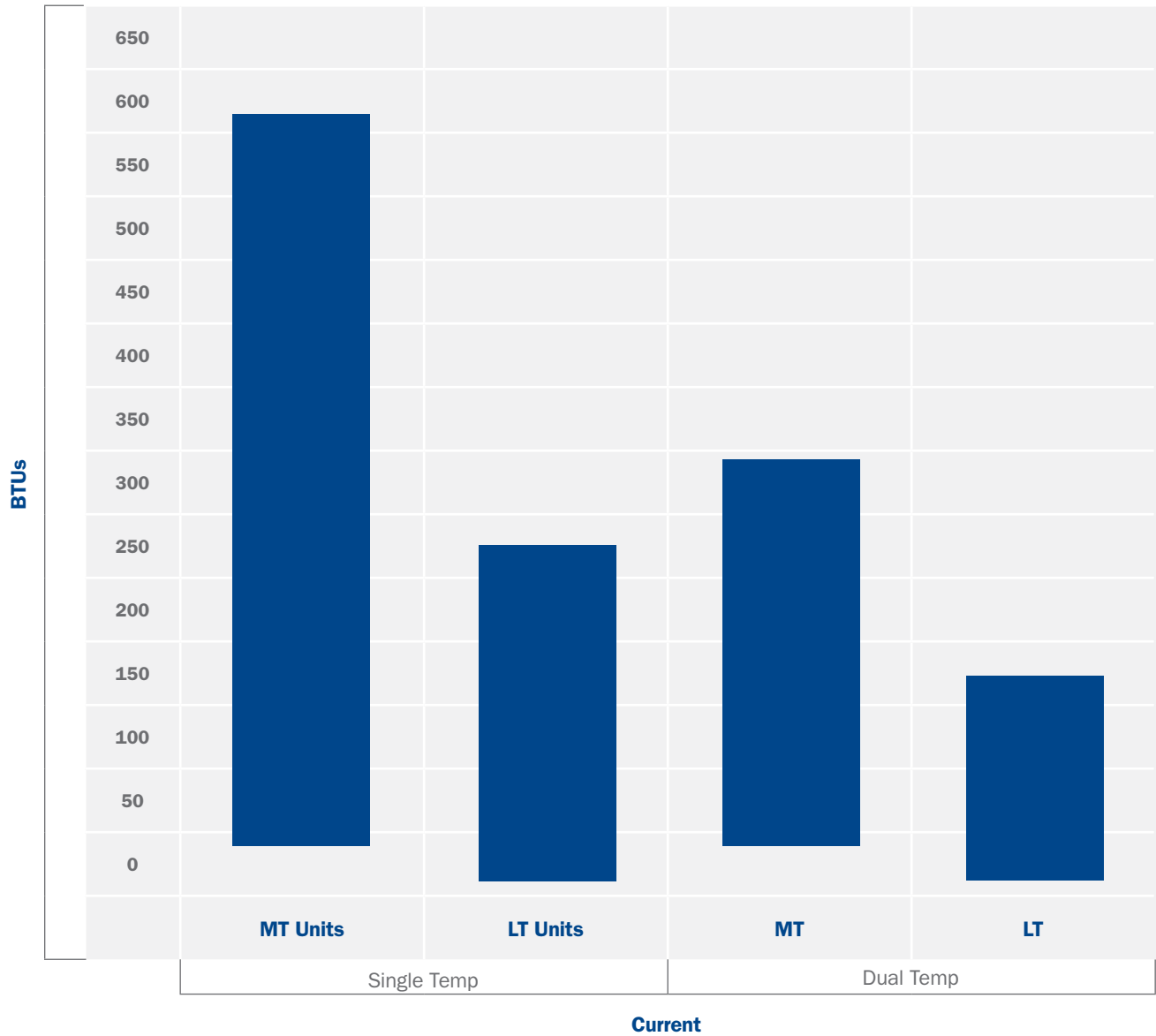


Portfolio Positioning – HFC Systems

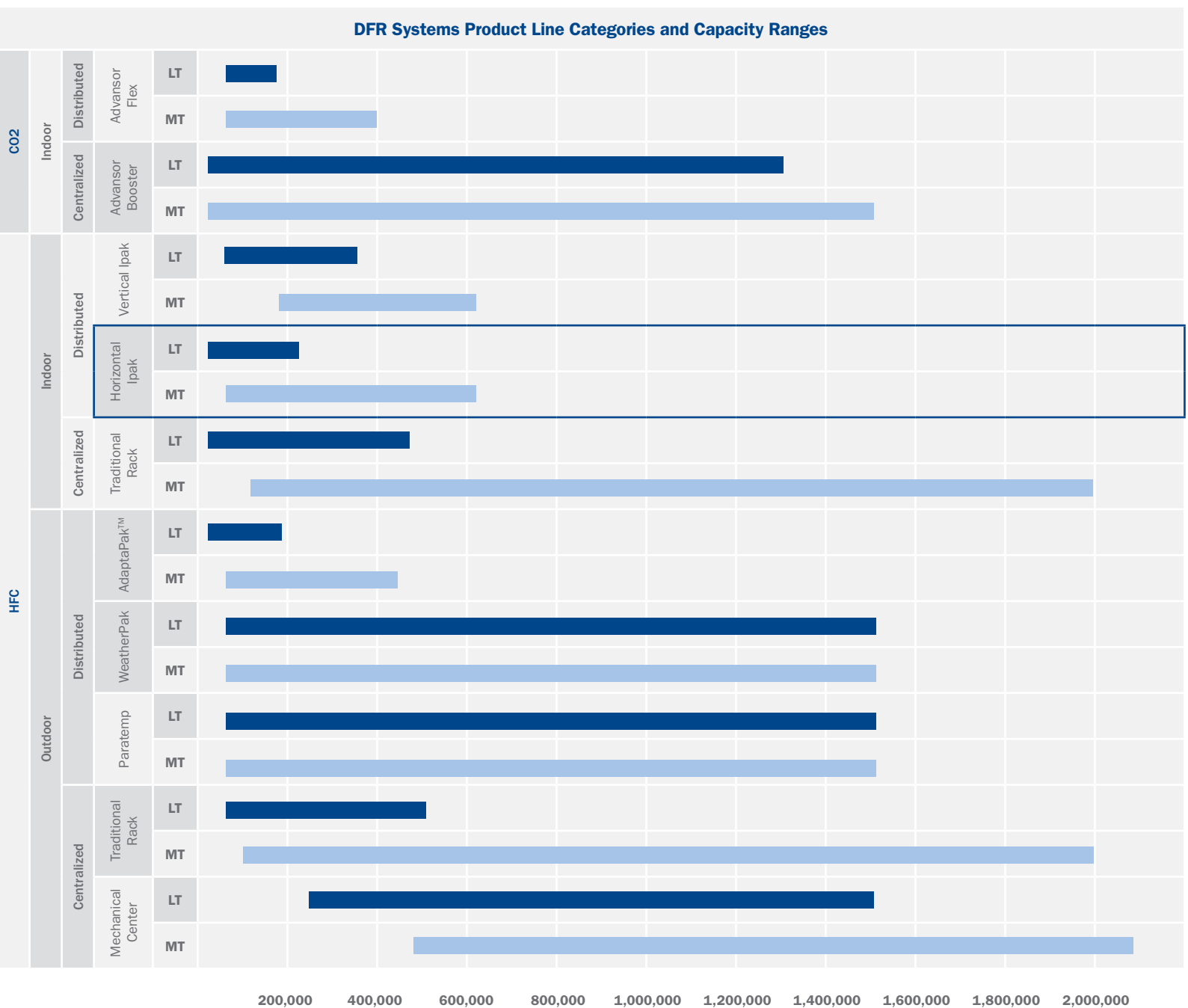


Capacity Range (K BTUH)

Horizontal InviroPak™ Capacity Range



Systems Product Line Capacities



Sales Literature



Fresh thinking.
Responsible solutions.

Refrigeration
Systems

Big Benefits in a Low Profile Package.

InviroPak Indoor Distributed Systems

Food retailers continue to search for ways to reduce costs and improve margins no matter what their size. Traditional supermarkets, mass merchandisers and warehouse membership retailers are reducing their footprints to trim bottom line costs to answer customer demand. The new indoor horizontal InviroPak™ provides customers a unique way to address these demands in a small footprint.



DOVER

Indoor Distributed Systems

Refrigeration Systems



Multiple, angled access compartments. Sub-cooler for evaporator compartments. Centrifugal style discharge coil (superior heat efficiency). Frame-mounted electrical control panel with IEC connectors and ground line. Integrated defrost control panel. Through-the-door disconnect. Lock (6) provides for ease of transport. Integrated drain and condensate pump (no pump-out required for food). No panels required for food.

Easy-to-Install
InviroPak™ units from the factory ready for installation in a new, mechanically-planned cabinet. It can be located closer to the loads to reduce refrigerant and piping costs.

Designed with Maintenance in Mind
The compressor section of the InviroPak is isolated and can be easily accessed without opening up the entire unit. Single doors are individually gasketed to prevent leaks. The compressor and electrical sections, while smart design, keep these primary areas to easily service and for maximum internal protection.

InviroPak Uses Low Refrigerant, Proven
From installation day, the only air leaving the unit, refrigerant costs are less with InviroPak. First, because when used as a distributed system the unit can be located closer to each load, lowering the amount and the costs of the initial refrigerant charge. Second, the most efficient, compact design of InviroPak contains fewer internal joints and consequently fewer locations for potential costly refrigerant leaks.

Low Profile Footprint Yields Big Benefits
InviroPak's compact footprint, especially in a low-profile footprint and can be placed anywhere in the store, including above walk-in coolers. This means valuable interior floor space that can be put to better use for more product and more sales!

Base Model Features

- Self-contained unit
- 208-230V main power
- Energy-efficient scroll compressors
- Single or dual suction group models available
- Back-suction coil (flexible and right-angle)
- Through-the-door disconnect
- Back-suction filter per section group
- 40°C condenser
- Phase-loss monitor with internal protection
- One fan pressure control per section
- One fan pressure control per compressor
- Digital fan speed indicator
- Discharge of evaporator (centrifugal) with integral oil separator
- Mechanical sight glass (optional)
- OMR per compressor

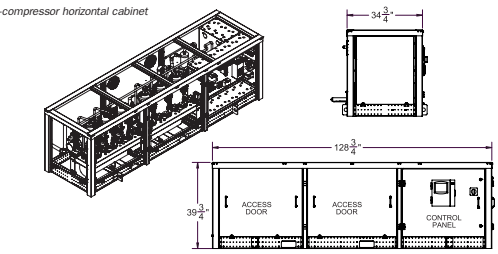
Available Options

- Refrigerant options R404A, R448A and R450A
- Integrated head receiver
- AEDS main power
- Integrated control panels with optional components
- Condensate heater
- Heat recovery valve package (remote only)
- Low-pressure control per compressor
- Split condenser valve
- Hot gas defrost valve
- Heat recovery valve package

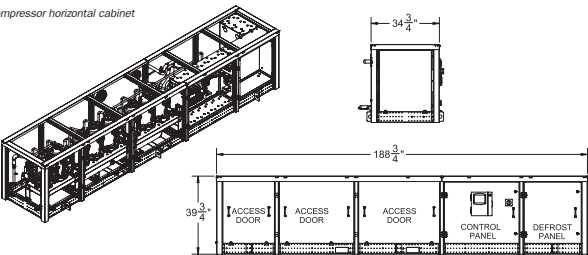
INVIRO pak

InviroPak — Low-profile cabinets

6-compressor horizontal cabinet



8-compressor horizontal cabinet



InviroPak Unit	Estimated Weight	Dimensions
6-compressor horizontal cabinet	2,178 lbs	L 128 3/4" x W 34 3/4" x H 39 3/4"
8-compressor horizontal cabinet	2,765 lbs	L 188 3/4" x W 34 3/4" x H 39 3/4"

Please consult Hillphoenix Engineering Reference Manual for dimensions, plan views and technical specifications. Specifications are subject to change without notice. Certified to UL 471 and ANSI/NFPA standard 7.

RS-IPAK-LPV0719

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