

## Our Best Just Got Better\*




**electronic door lock**

Electronic Door Lock for improved security & EZlatch handle providing easy access



**near field communication**

Electronic Door Lock and IC Card



115V 220V

**ECO**  
natural refrigerants

Energy Star® Certified using only 5.4kWh per day.



**facial recognition**

New Touchscreen with Facial Recognition

\* Based on <https://www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/> Website accessed January 11, 2023

# Better Energy Efficiency

## VIP® ECO SMART

MDF-DU703VHA-PA 115V | 220V

**ENERGY STAR® Certified**  
**Natural Refrigerant -80°C Freezer**



Independently tested and documented, the ENERGY STAR Certified VIP® ECO SMART delivers the lowest daily energy usage of our ultra-low temperature freezers in its class: **5.40 kWh per day**. Purpose designed for reliable storage of biologicals, this freezer is our best yet.



**Lowest Energy Consumption Yet**  
 Our ENERGY STAR leading model

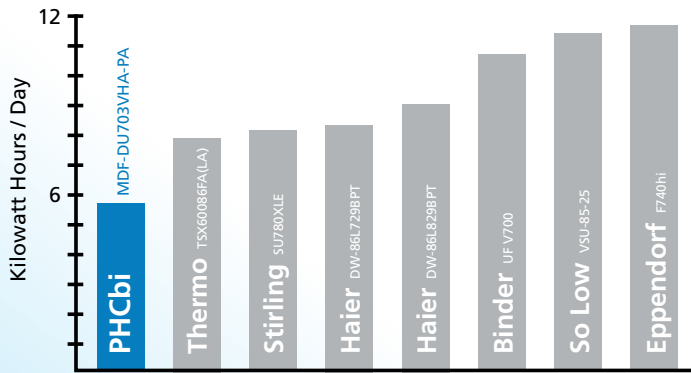
**Less Heat Output**  
 Lowers HVAC costs, contributing to an overall reduction in energy consumption

### OUR 703 MODEL VS. ITS COMPETITORS: A POWER COMPARISON\*

MANUFACTURER:	PHCbi	Thermo Fisher	Stirling	Eppendorf Cryocube	Haier	Haier	Binder	So Low
Gross Capacity (L)	729	811.84839	779	739	729	829	728	750
Series	VIP® ECO SMART	TSX	Ultracold	Cryocube	Ultra-Low Energy Series	Ultra-Low Energy Series	UFV	U-85 Series
Model Number	MDF-DU703VHA-PA	TSX60086FA(LA)	SU780XLE	F740hi	DW-86L729BPT	DW-86L829BPT	UF V 700	U-85-25
2" Box Capacity	576	600	600	528	500	600	528	480
Energy Consumption (kWh/day) <sup>1</sup>	5.4	7.7	7.9	12.2	8.2	8.4	9.2	11.9
Energy cost per year per liter	\$0.39	\$0.50	\$0.54	\$0.87	\$0.60	\$0.54	\$0.67	\$0.84
Energy cost per year per box	\$0.50	\$0.68	\$0.70	\$1.22	\$0.87	\$0.74	\$0.92	\$1.31
Energy cost in \$ per year (energy cost: \$0.136/kWh) <sup>2</sup>	\$285.80	\$407.52	\$418.11	\$645.69	\$433.99	\$444.57	\$486.91	\$629.81
Energy cost in \$ per 10 years (energy cost: \$0.136/kWh) <sup>2</sup>	\$2,857.95	\$4,075.23	\$4,181.08	\$6,456.85	\$4,339.85	\$4,445.70	\$4,869.10	\$6,298.08
Conditions at which energy cost was measured <sup>1</sup> Maximum Daily Energy Consumption (MDEC) Requirements (kWh/day/ft <sup>3</sup> ) for ENERGY STAR Certified Ultra-Low Temperature Freezers @ -75 °C								
Difference in \$ per 10 years		\$1,217.28	\$1,323.13	\$3,598.90	\$1,481.90	\$1,587.75	\$2,011.15	\$3,440.13

\*Sources:  
 1. <https://www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/> Website accessed approximately December 17, 2024  
 2. [https://www.globalpetrolprices.com/USA/electricity\\_prices/](https://www.globalpetrolprices.com/USA/electricity_prices/) Website accessed approximately December 17, 2024

# Better Performance

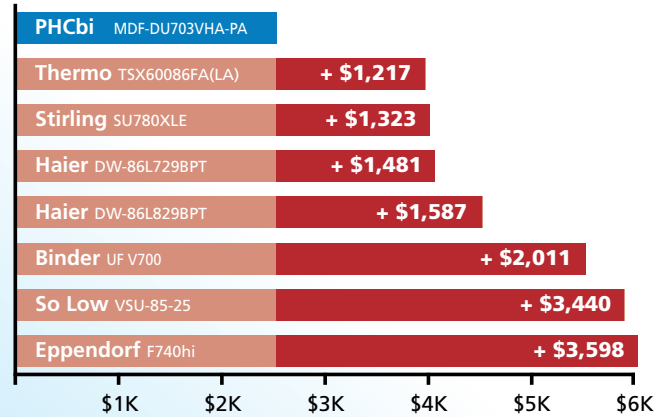


## ENERGY USE BY BRAND

VIP® ECO SMART has the lowest energy use rate among popular brands.

*Data found in table on page 2*

From the inside out, VIP® ECO freezers are designed for optimal storage and operation.



## COST DIFFERENCE OVER 10 YEARS

VIP® ECO SMART will save you money over the life of the unit.

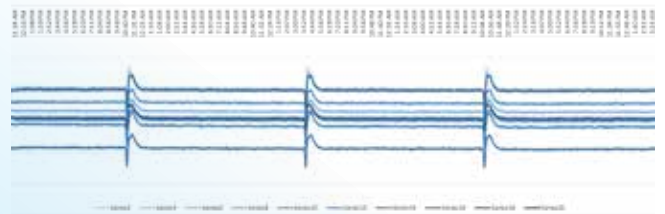
*Data found in table on page 2*



## EZLATCH

Simplified one-handed operation maintains the integrity of the door seal. NOW with integrated electronic lock.

## Internal Temperature (°C) Over Time



## BETTER TEMPERATURE UNIFORMITY

Next generation engineering harnesses the power of inverter compressor technology to yield greater temperature uniformity.

## LESS FROST

Proven frost mitigation technology lowers the cost of ownership.



## QUICKER TEMPERATURE RECOVERY

Reserve refrigeration power delivers fast temp recovery following door openings.



# Better Security & Monitoring

## 3 WAYS TO LOCK

Facial recognition

Keypad

Optional proximity card\*



\* NFC module only available in the US and Canada

## CONTROLLED FREEZER ACCESS

Know who entered the freezer and when

Track how long the door was open



## DATA DOWNLOADABLE VIA USB ON FRONT PANEL



Access

Event log/alarms

Temperature readings



# TECHNICAL SPECIFICATIONS

Model Number		MDF-DU703VHA-PA	
External Dimensions (W x D x H) <sup>1</sup>	inches   mm	40.6 x 34.7 x 78.5   1030 x 882 x 1993	
Internal Dimensions (W x D x H)	inches   mm	34.3 x 23.6 x 55.1   870 x 600 x 1400	
Volume	cu. ft.   liters	25.7   729	
Net Weight	lbs   kg	608   276	
2" box and Racks- Capacity	Box   Rack	576   24	
3" box and Racks- Capacity	Box   Rack	384   24	
Performance			
Temperature Control Range	°C	-40 to -86	
Uniformity <sup>2</sup>	°C	+/- 3 (-80 Set point)	
Power Consumption	kWh/Day	5.4 (-80°C Steady State)	
BTU Nominal	Per hour	768	
Noise Level <sup>3</sup>	dB(A)	46	
Ambient Temperature Operating Range	°C	+5 to +30	
Control			
Controller		Microprocessor with non-volatile memory, USB connectivity, IOT Ready <sup>4</sup>	
Digital Temperature Display		LCD Touchscreen	
Controller Security		Screen lock w/ password protection, facial recognition, NFC <sup>5</sup>	
Temperature Sensor		RTD	
Refrigeration			
Cooling Method		Cold Wall (Synchronized variable speed cascade system)	
Compressor	High Stage   Low Stage	750 W Variable   750 W Variable	
Refrigerant Type (Natural Refrigerant)	High Stage   Low Stage	R-290   R-170	
Insulation		Rigid polyurethane foam (PUF) + VIP Plus vacuum insulated panels	
Construction			
Exterior Material		Painted steel	
Interior Material		Painted steel	
Outer Door	qty	1 lock with set of 2 keys and electronic lock. (Provision for pad lock)	
Inner Doors	qty	2 insulated stainless steel with latch	
Shelves	qty	3 (Adjustable)	
Shelf Dimensions (W x D)	inches   mm	33.7 x 21   855 x 534	
Max. Load - Per Shelf	lbs   kg	110   50	
Access Port, Qty, Position, Diameter	qty	3: upper back wall (back-up system), bottom left (recorder sensor), bottom right (access) 0.6 in   17 mm	
Casters   Leveling Legs	qty	4   2	
Vacuum Release	qty	1 Auto	
Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm, A = Adjustable, L = Logged, D = Settable Delay)			
Power Failure		V-B-R-L	
High and Low Temperature		V-B-R-L-A	
Sensor Failure		V-B-R-L	
Door Open		V-B-L	
Maintenance Alerts		V	
Remote Alarm Contacts		DC 30V 2A (normally open, normally closed, common)	
Electrical			
Power Supply	 	NEMA 6-15P 220V 60 Hz 8 ft cord length (220V Power cord in chamber with standard accessories)	NEMA 5-15P 115V 60 Hz 8 ft cord length (Standard configuration)
Max Amps		6.7	11
Options			
Backup system	Liquid CO2   Liquid N2	MDF-UB9-PW   MDF-UB9-PW-LN2	
Inner Door kit with Smaller Doors	qty	(4) MDF-7ID4-PW / (5) MDF-7ID5-PW	
Proximity Cards	qty 5	MTR-IC-PW	
NFC Module		MTR-NFC-PW	
Optional Communication System			
Wireless, Cloud-Based, Automatic Data Management		LabSVIFT (Gen3)   LabAlert**   V-SafeRX	
4-20mA Output Module		MTR420MAC <sup>-</sup> - Self Powered   MTR420MAL <sup>-</sup> - Loop Powered   MTR-420MA-PW	
Certifications and Warranty			
Certification		QPS Listed and Energy Star	
Warranty <sup>6</sup>		5 years parts and labor	

<sup>1</sup> Exterior dimensions of cabinet excluding handle, rear stand-off brackets and other external projections.

<sup>2</sup> 3rd party testing lab using 9 temperature points with 75°F Ambient Temperature.

<sup>3</sup> Nominal value, background noise 20 dB(A).

<sup>4</sup> Unit software ready for future IOT options.

<sup>5</sup> NFC is an optional unlock method for Electronic Lock, accessory part number MTR-NFC-PW and MTR-IC-PW  
US and Canada only.

<sup>6</sup> Current warranty offered at time of printing and may be subject to change, US and Canada only.

\*\* Manufactured by others

Specifications are subject to change without notice.

