

# The Best Just Got Better\*



electronic door lock



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



facial recognition

New Touchscreen with Facial Recognition



near field communication

Electronic Door Lock and IC Card

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

VIP® ECO SMART  
MDF-DU703VH-PA | MDF-DU703VHA-PA



# Better Energy Efficiency

## VIP® ECO SMART MDF-DU703VH-PA | MDF-DU703VHA-PA

ENERGY STAR® Certified  
Natural Refrigerant -80°C Freezer

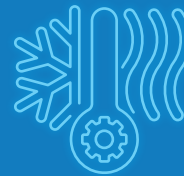


Independently tested and documented, the ENERGY STAR Certified VIP® ECO SMART delivers the lowest daily energy usage of any ultra-low temperature freezer in its class: **5.40 kWh per day**. Purpose designed for reliable storage of biologicals, this freezer is our best yet.



### Lowest Energy Consumption Yet

30% less than our ENERGY STAR leading model



### Less Heat Output

Lowers HVAC costs, contributing to an overall reduction in energy consumption

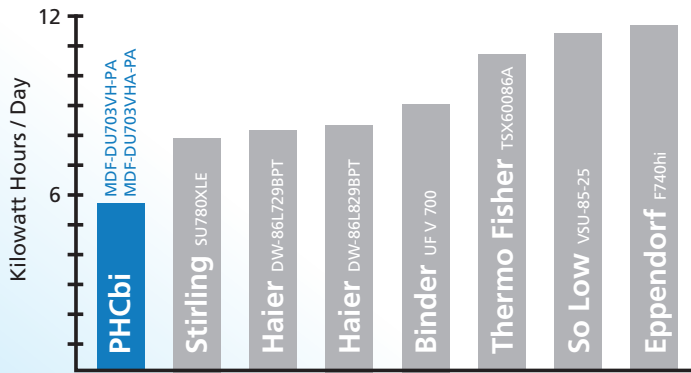
## OUR 703 MODEL VS. ITS COMPETITORS: A POWER COMPARISON\*

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	Ultradold	Cryocube	Ultra-Low Energy Series	Ultra-Low Energy Series	UFV	U-85 Series
Model Number	MDF-DU703VH-PA MDF-DU703VHA-PA	TSX60086A	SU780XLE	F740hi	DW-86L729BPT	DW-86L829BPT	UF V 700	VSU-85-25
2" Box Capacity	576	600	600	528	500	600	528	480
Energy Consumption (kWh/day) <sup>1</sup>	5.4	11.1	7.9	12.2	8.2	8.4	9.2	11.9
Energy cost per year per liter	\$0.37	\$0.68	\$0.50	\$0.82	\$0.56	\$0.50	\$0.63	\$0.79
Energy cost per year per box	\$0.47	\$0.92	\$0.65	\$1.15	\$0.81	\$0.69	\$0.86	\$1.23
Energy cost in \$ per year (energy cost: \$0.136/kWh) <sup>2</sup>	\$268.06	\$551.00	\$392.16	\$605.61	\$407.05	\$416.98	\$456.69	\$590.72
Energy cost in \$ per 10 years (energy cost: \$0.136/kWh) <sup>2</sup>	\$2680.56	\$5,510.04	\$3,921.56	\$6,056.08	\$4,070.48	\$4,169.76	\$4,566.88	\$5,907.16
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		\$2,829.48	\$1,241.00	\$3,375.52	\$1,389.92	\$1,489.20	\$1,886.32	\$3,226.60

\*Sources:

- <https://www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/> Website accessed January 11, 2023
- [https://www.globalpetrolprices.com/USA/electricity\\_prices/](https://www.globalpetrolprices.com/USA/electricity_prices/) Website accessed January 11, 2023

# Better Performance

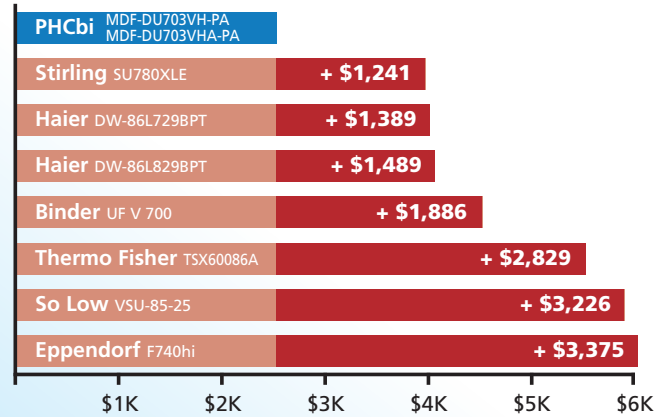


## ENERGY USE BY BRAND

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.

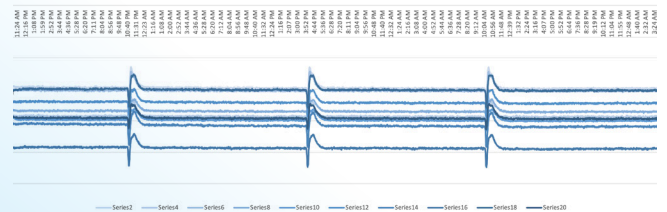
*Data found in table on page 2*



## 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 for lower 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/alarm

Temperature readings



## TECHNICAL SPECIFICATIONS

Model Number		MDF-DU703VH-PA	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	
<b>Performance</b>			
Temperature Control Range	°C	-40 to -86	
Uniformity <sup>2</sup>	°C	+/- 3 (-80°C Set point)	
Power Consumption	kWh/Day	5.4 (-80 Steady State)	
BTU Nominal	Per hour	768	
Noise Level <sup>3</sup>	dB(A)	52	
Ambient Temperature Operating Range	°C	+5 to +30	
<b>Control</b>			
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	
<b>Refrigeration</b>			
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	
<b>Construction</b>			
Exterior Material		Painted steel	
Interior Material		Painted steel	
Outer Door	qty	1 with 1 key 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	
<b>Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm, A = Adjustable, L = Logged, D = settable delay)</b>			
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		DC30V 2 A (normally open, normally closed, common)	
<b>Electrical</b>			
Power Supply		NEMA 6-15P 220V 60 Hz 8 ft cord length	NEMA 5-15P 115V 60 Hz 8 ft cord length
Max Amps		6.7	11
<b>Options</b>			
Circular Type Chart Recorders		MTRC954	
Chart Paper / Ink Pen		C7100386REV / R252	
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	
<b>Optional Communication System</b>			
Wireless, Cloud-Based, Automatic Data Management		Lab Alert <sup>6</sup>	
4-20mA Output Module		MTR420MAC- Self Powered   MTR420MAL- Loop Powered	
<b>Certifications and Warranty</b>			
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.

Specifications are subject to change without notice.



Life Science Innovator Since 1966