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

0523 Lit. No.160291W
VWR, part of Avantor, is an authorized distributor for PHC Corporation of North America.

TECHNICAL SPECIFICATIONS

Model Number		MDF-DU703VH-PA | 76637-154	MDF-DU703VHA-PA | 76637-152
External Dimensions (W × D × H)[1]	inches | mm	40.6 x 34.7 x 78.5 | 1030 x 882 x 1993	
Internal Dimensions (W × D × 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[2]	°C	+/- 3 (-80 Set point)	
Power Consumption	kWh/Day	5.4 (-80°C Steady State)	
BTU Nominal	Per hour	768	
Noise Level[3]	dB(A)	52	
Ambient Temperature Operating Range	°C	+5 to +30	
Control			
Controller		Microprocessor with non-volatile memory, USB connectivity, IOT Ready[4]	
Digital Temperature Display		LCD Touchscreen	
Controller Security		Screen lock w/ password protection, facial recognition, NFC[5]	
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 × 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	NEMA 5-15P 115V 60 Hz 8 ft cord length
Max Amps		6.7	11
Options			
Circular Type Chart Recorders		MTRC954 | **97014-882**	
Chart Paper / Ink Pen		C7100386REV | **76490-366** / R252 | **76452-714**	
Backup system	Liquid CO2 | Liquid N2	MDF-UB9-PW | **76637-156** | MDF-UB9-PW-LN2	
Inner Door kit with Smaller Doors	qty	(4) MDF-7ID4-PW | **76501-142** / (5) MDF-7ID5-PW | **76501-144**	
Proximity Cards	qty 5	MTR-IC-PW | **76637-158**	
NFC Module		MTR-NFC-PW | **76637-160**	
Optional Communication System			
Wireless, Cloud-Based, Automatic Data Management		LabAlert®	
4-20mA Output Module		MTR420MAC- Self Powered | MTR420MAL- Loop Powered	
Certifications and Warranty			
Certification		QPS Listed and Energy Star	
Warranty[6]		5 years parts and labor	

[1] Exterior dimensions of cabinet excluding handle, rear stand-off brackets and other external projections.
[2] 3rd party testing lab using 9 temperature points with 75°F Ambient Temperature.
[3] Nominal value, background noise 20 dB(A).
[4] Unit software ready for future IOT options.
[5] NFC is an optional unlock method for Electronic Lock, accessory part number MTR-NFC-PW \| **76637-160** and MTR-IC-PW \| **76637-158**. US and Canada only.
[6] Current warranty offered at time of printing and may be subject to change, US and Canada only.

Specifications are subject to change without notice.

PHC Corporation of North America

PHCBI

The Best Just Got Better*

2023 OUTSTANDING NEW PRODUCT AWARD

isber

New Touchscreen with Facial Recognition

facial recognition

electronic door lock

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

near field communication

Electronic Door Lock and IC Card

VIP ECO SMART Natural Refrigerants

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

VIP® ECO SMART

MDF-DU703VH-PA \| **76637-154**
MDF-DU703VHA-PA \| **76637-152**

avantor delivered by VWR **VWR.COM**

VIP® ECO SMART

MDF-DU703VH-PA | 76637-154
MDF-DU703VHA-PA | 76637-152

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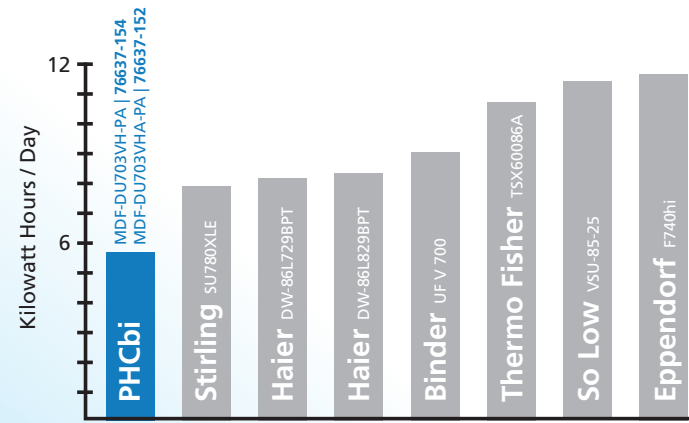
OUR 703 MODEL VS. ITS COMPETITORS: A POWER COMPARISON*

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	Ultracold	Cryocube	Ultra-Low Energy Series	Ultra-Low Energy Series	UFV	U-85 Series
Model Number	MDF-DU703VH-PA	76637-154 MDF-DU703VHA-PA	76637-152	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)[1]	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)[2]	$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)[2]	$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[1]	Maximum Daily Energy Consumption (MDEC) Requirements (kWh/day/ft3) 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:
1. https://www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/ Website accessed January 11, 2023
2. https://www.globalpetrolprices.com/USA/electricity_prices/ Website accessed January 11, 2023

PHC Corporation of North America

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

ENERGY USE BY BRAND
VIP® ECO SMART has the lowest energy use rate among popular brands.

Data found in table on page 2

COST DIFFERENCE OVER 10 YEARS
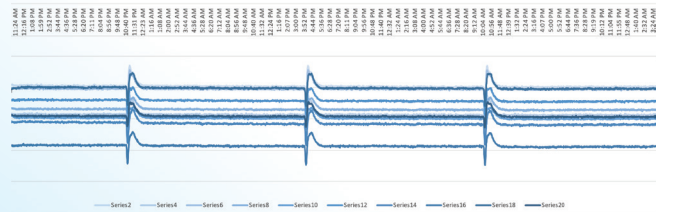VIP® ECO SMART will save you money over the life of the unit.

Data found in table on page

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.