

PHCbi Ultra-Low Freezer Model Comparison



	502	503	702	700Z	703	901	702VXC	502VXC
Series	VIP Eco	VIP Eco Smart	VIP Eco	FrostLess	VIP Eco Smart	VIP Eco	Twin Guard	Twin Guard
Model Number	MDF-DU502VH-PA MDF-DU502VHA-PA	MDF-DU503VH-PA MDF-DU503-VHA-PA	MDF-DU702VH-PA MDF-DU702VHA-PA	MDF-DU700ZHA	MDF-DU703VH-PA MDF-DU703VHA-PA	MDF-DU901VHA-PA	MDF-DU702VXC-PA	MDF-DU502VXC-PA
Voltage and Plug Requirement	208/220V 15A 115V 20A	208/220V 15A 115V 15A	208/220V 15A 115V 20A	115V 15A	208/220V 15A 115V 15A	115V 20A	208/220V 15A	208/220V 15A
Gross Capacity	18.6 cu. Ft. (528 L)	18.6 cu. Ft. (528 L)	25.7 cu. Ft. (730 L)	25.6 cu. Ft. (725 L)	25.7 cu. Ft. (730 L)	29.8 cu. Ft. (845 L)	25.7 cu. Ft. (730 L)	18.6 cu. Ft. (528 L)
2" / 3" Box Capacity	384/256 (600 Box Option)	384/256 (600 Box Option)	576/384 (600 Box Option)	528 336	576/384 (600 Box Option)	672/448 (700 Box Option)	576/384 (600 Box Option)	384/256 (600 Box Option)
GENERAL								
Labor & Parts Warranty	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L
Compressor Warranty	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L	5 years P & L
Net Weight (lbs/kg)	542/246	531/241	613/278	622 282	608/276	723/328	723/328	542/246
Shipping Weight (lbs/kg)	628/285	606 275	694/315	692 313	678/307	855/388	805/365	723/328
Refrigeration System	"Reciprocating inverter variable speed compressor cascade system",						Dual autocascode with legendary highly reliable TCCJ compressor	
Normal Running Amps	Less than 3 amps (approx.)	2	3	2.2	less than 4	6	5.9	Less than 6 amps (approx.)
Maximum Running Amps	3.8 9.6	6 8.5	4.3 11.2	10.5	6.7 11	11.2	8.3	8.3
Energy Star Rating	0.35 3.7	0.27 0.27	0.31 0.29	0.29	0.21 0.21	0.3	N/A	N/A
kWh/Cubic Foot (Energy Star Listing Criteria)	0.35	0.27	0.31 0.29	0.29	0.21	0.3	N/A	N/A
Steady State energy at -80C	7.1 Energy Star testing 7.6 Energy Star testing	4.99 kWh/day	8.4 Energy Star testing 8.2 Energy Star testing	7.9 Energy Star Testing	5.4 kWh/day	9.5 Energy Star testing	19.98 Normal / 19.97 Eco	17.8 Energy Star testing
Steady State energy at -70C	5.91 Energy Star Testing 6.19 Energy Star testing	4.06 kWh/day	6.19 Energy Star testing 5.91 Energy Star testing	6.2 Energy Star Testing	4.5 kWh/day	7.2 Energy Star testing	13.96 Normal / 12.05 Eco	12.5 Energy Star testing
Temperature Uniformity	2.51 @-70, 1.38 @-80 2.44 @-70, 2.34@-80	+/- 2 @ -70 or -80	1.95 @-70, 2.67@-80 1.86 @-70, 2.01 @-80	±3 @ -70 or -80	+/- 2 @ -70 or -80	2.37 @-70, 2.17@-80	+/- 1.5	2.18 @-70, 2.9@-80
Temp Uniformity at Other Temp Settings	better than +/-5 to -40C	N/A	better than +/-5 to -40C	better than ±5 up to -70	+/- 3 to -40	better than +/-5 to -50C	better than +/-5 to -50C	better than +/-5 to -50C
Warm Up -80 to -50	3 hours	3 hours	3 hours	2.5 hours	3 hours	3 hours	5 hours	3 hours
Pull down to -80	5.5 hours	5.5 hours	6 hours	6 hours	6 hours	6 hours	5.5 hours	5 hours
BTU Output	Approx. 1009 @-80. Results pending	710	810 @-70, 1109 @ -80, 23C ambient Approx. 980 @-80. Results pending	1118 @ -80	768	Approx. 1350 @-80. Results pending	4402 in 35C ambient	Approx. 4470 @-80. Results pending
Noise Level (dB)	52	52	52	52	52	52	52	52
Total Footprint	7.49 square feet	7.49 square feet	9.78 square feet	9.78 square feet	9.78 square feet	10.79 square feet	9.78 square feet	7.49 square feet
Refrigerants	R-290 and R-170	R-290 and R-170	R-290 and R-170	R-290 and R-170	R-290 and R-170	R-290 and R-170	HC/ HFC Blend	HC/ HFC Blend
ACCESSORIES								
	Liquid CO2 Back-up	Liquid CO2 Back-up	Liquid CO2 Back-up	Liquid CO2 Back-up	Liquid CO2 Back-up	Liquid CO2 Back-up	Liquid CO2 Back-up	Liquid CO2 Back-up
	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up	Liquid Nitrogen Back-up
	Extra Shelf	Extra Shelf	Extra Shelf	Extra Shelf	Extra Shelf	Extra Shelf	Extra Shelf	Extra Shelf
	Additional Inner Doors	Additional Inner Doors	Additional Inner Doors	Additional Inner Doors	Additional Inner Doors	Additional Inner Doors	Additional Inner Doors	Additional Inner Doors
	Inventory Racks	Inventory Racks	Inventory Racks	Inventory Racks	Inventory Racks	Inventory Racks	Inventory Racks	Inventory Racks
	4-20 mA Output	4-20 mA Output	4-20 mA Output	4-20 mA Output	4-20 mA Output	4-20 mA Output	4-20 mA Output	4-20 mA Output
	Electric Door Lock	Electric Door Lock	Electric Door Lock	Electric Door Lock	Electric Door Lock	Electric Door Lock	Electric Door Lock	Electric Door Lock
	7-day Circular Chart Recorder	7-day Circular Chart Recorder	7-day Circular Chart Recorder	7-day Circular Chart Recorder	7-day Circular Chart Recorder	7-day Circular Chart Recorder	7-day Circular Chart Recorder	7-day Circular Chart Recorder
	Calibration	Calibration	Calibration	Calibration	Calibration	Calibration	Calibration	Calibration
	Factory Acceptance Testing	Factory Acceptance Testing	Factory Acceptance Testing	Factory Acceptance Testing	Factory Acceptance Testing	Factory Acceptance Testing	Factory Acceptance Testing	Factory Acceptance Testing
	Validation Documents	Validation Documents	Validation Documents	Validation Documents	Validation Documents	Validation Documents	Validation Documents	Validation Documents
	On-site Validation	On-site Validation	On-site Validation	On-site Validation	On-site Validation	On-site Validation	On-site validation	On-site validation
	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System	LabAlert Wirelss Monitoring System

Temp Recovery is Majority of probes are within +/- 5 of set point

