



Ultra Low Temp Freezer Model Comparison



	Best Performance, Small Footprint	Best Performance, Small Footprint	Best Performance	Best Performance	Best Performance, Largest Capacity	Best Redundancy Security	Best Redundancy Security, Small Footprint
Model Number	MDF-DU502VH-PA	MDF-DU502VHA-PA	MDF-DU702VHA-PA	MDF-DU702VH-PA	MDF-DU901VHA-PA	MDF-DU702VXC-PA	MDF-DU502VXC-PA
Voltage and Plug Requirement	208/220V 15A	115V 20A	115V 20A	208/220V 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)	25.7 cu. Ft. (730 L)	29.8 cu. Ft. (845 L)	25.7 cu. Ft. (730 L)	18.6 cu. Ft. (528 L)
Series	VIP Eco	VIP Eco	VIP Eco	VIP Eco	VIP Eco	Twin Guard	Twin Guard
2"/3" Box Capacity	384/256 (600 Box Option)	384/256 (600 Box Option)	576/384 (600 Box Option)	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
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
Net Weight (lbs/kg)	542/246	542/246	613/278	613/278	723/328	723/328	542/246
Shipping Weight (lbs/kg)	628/285	628/285	694/315	694/315	855/388	805/365	723/328
Refrigeration System	Reciprocating inverter variable speed compressor	Reciprocating inverter variable speed compressor	Reciprocating inverter variable speed compressor	Reciprocating inverter variable speed compressor	Reciprocating inverter variable speed compressor	Dual autocasade with legendary highly reliable TCCJ compressor	Dual autocasade with legendary highly reliable TCCJ compressor
Voltage	220/208	115V	115V	220/208	115V	220/208	220/208
Normal Running Amps	Less than 3 amps (approx.)	Less than 3 amps (approx.)	3	3	6	5.9	Less than 6 amps (approx.)
Maximum Running Amps	3.8	9.6	11.2	11.2	11.2	8.3	8.3
Energy Star Rating	0.35	0.37	7.87	7.87	0.3	N/A	N/A
kWh/Cubic Foot (Energy Star Listing Criteria)	0.35	0.35	0.29	0.31	0.3	N/A	N/A
Steady State energy at -80C	7.1 Energy Star testing	7.6 Energy Star testing	8.2 Energy Star testing	8.4 Energy Star testing	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	5.91 Energy Star Testing	6.19 Energy Star testing	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	3.72 @-70, 4.01 @-80	1.95 @-70, 2.67@-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	better than +/-5 to -50C	better than +/-5 to -50C	better than +/-5 to -40C	better than +/-5 to -50C	better than +/-5 to -50C	better than +/-5 to -50C
Temperature Recovery	9.5 minutes to -75C.	9.5 minutes to -75C.	8 minutes to -75C.	8 minutes to -75C.	14 minutes to -75C.	8 minutes to -75C.	9.5 minutes to -75C.
Warm Up -80 to -50	3 hours	3 hours	5 hours	5 hours	3 hours	5 hours	3 hours
Pull down to -80	6 hours	6 hours	5 hours	5 hours	6 hours	5.5 hours	5 hours
BTU Output	Approx. 1009 @-80. Results pending	Approx. 1080 @-80. Results pending	Approx. 980 @-80. Results pending	810 @-70, 1109 @ -80, 23C ambient	Approx. 1350 @-80. Results pending	4402 in 35C ambient	Approx. 4470 @-80. Results pending
Noise Level (dB)	46	46	46	46	52	52	52
Total Footprint	7.49 square feet	7.49 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	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 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
	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
	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
	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
	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
	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