

LIAT GR-CO₂ Series

Non F-Gas (CO₂ Refrigerant) Chiller

GVS010-W-32F/GVD010-W-32F

Precision temperature stability **±0.1°C**

Natural refrigerant R744 / CO₂ **GWP=1**

Lower management / recovery burden **No F-Gas**

Global Compliance

R744(CO₂) natural refrigerant with GWP=1 and zero ODP, fully compliant with Kigali Amendment and EU Chips Act, avoiding carbon tax risks

Fluorinated Liquid Optimized

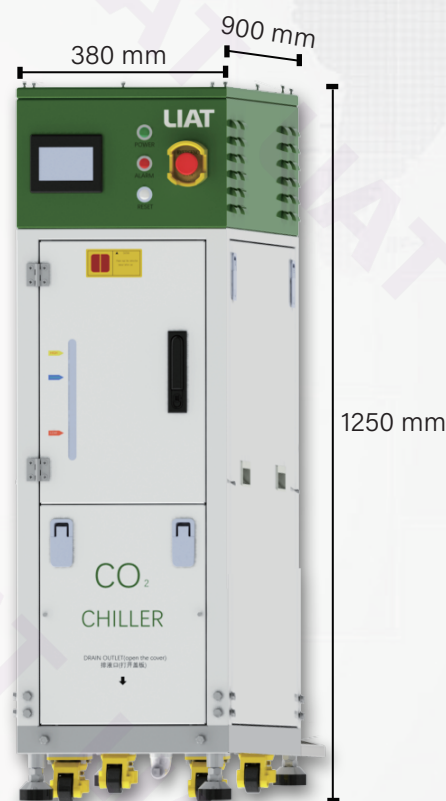
Designed exclusively for semiconductor fluorinated liquid circulation, corrosion-free and residue-free, suitable for Class 1000 clean rooms

Energy Efficient

Transcritical cycle frequency conversion technology, 30% higher comprehensive COP, reducing long-term Fab operating costs

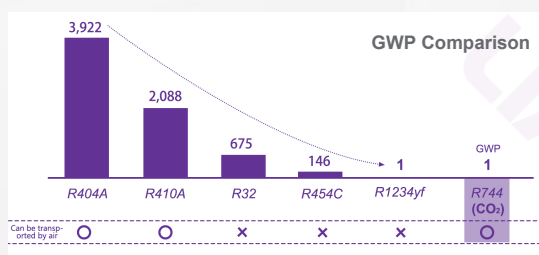
Precision Control

±0.1°C steady-state accuracy, meeting TSMC's 5nm and below fluorine-free process requirements



GVS010-W-32F

SEMI Standard
S2, S8



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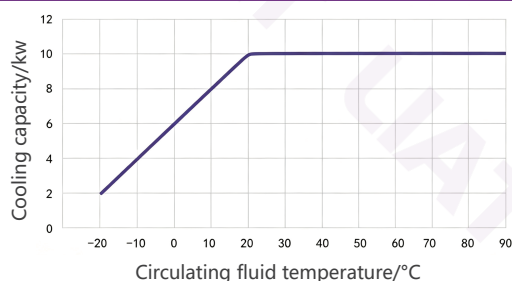


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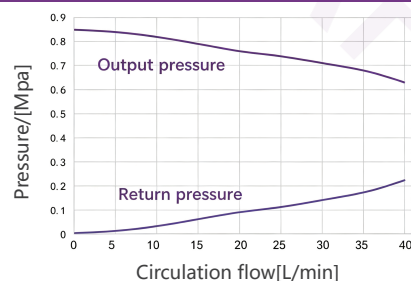
Non F-Gas (CO₂ Refrigerant) Chiller

Model		GVS010-W-32F	GVD010-W-32F
Channels		1	2
Temperature Range		-20°C to +90°C	
Fluid		Fluorinated fluid	
Tank Volume		20 L	20 L × 2
Temperature Stability (Idle)		± 0.1 °C	
Temperature Control		PID control	
Compressor	Type	Inverter compressor	
	Power	3 kW	3 kW × 2
Refrigerant		CO ₂ (R744)	
Heat Exchanger	Cooling Capacity	4 kW @ -10°C / 10 kW @ +20°C	4 kW @ -10°C / 10 kW @ +20°C (per channel)
	PCW Requirement	15 LPM @15 ~ 25 °C@0.3~0.4Mpa	15 LPM @15 ~ 25 °C@0.3~0.4Mpa(per channel)
	Type	Plate heat exchanger	Plate heat exchanger
Heater Power		3kW	3 kW × 2
Pump	Type	Magnetic drive pump (inverter)	Magnetic drive pump (inverter)
	Power	1.5 kW	1.5 kW × 2
	Capacity	20 LPM @0.7MPa	20 LPM @0.7MPa(per channel)
Certification		SEMI S2, S8, CE	
Communication		RS485/EtherCAT	
Rated Power		7.7kW	15.4kW
Rated Current		20.2A	40.4 A
Operating Current		11.7 A*Measured at fluid temperature +20°C, heater output ~ 15%	23.6 A *Measured at fluid temperature +20°C, heater output ~ 15%
Breaker		32A	63A
Dimensions		380W*900D*1250H (mm)	600W*900D*1300H (mm)
Power Supply		3Ph, 208-220V, 50/60Hz	

Cooling capacity curves at different temperatures



Pump performance[50HZ]



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