

# Optyma™ iCO<sub>2</sub>

## Features and benefits

### MBP - 1.5 to 4.6 kW



Danfoss GBC service valves



Night mode operation



PED class 1



Danfoss MMILDS display



Microchannel condenser



2.5 L Suction accumulator



Danfoss filter drier



Sight glass



2 X 2.5 L Receiver



Stacking up to 2 units



2 doors for servicing



Integrated controller and drive



Gas By Pass Valve



Variable speed scroll compressor: 37 Hz to 117 Hz



Main switch



Connectable to Danfoss System Managers



DC fan



Charge indication

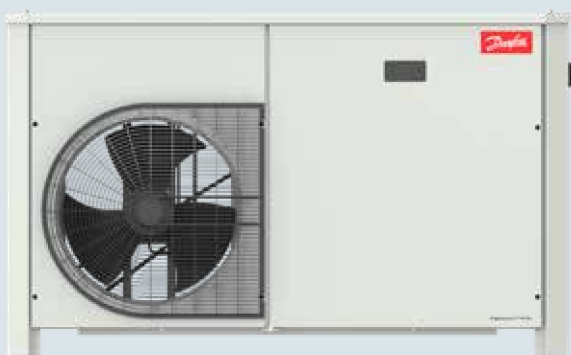


Relief valve

**Remote monitoring & management** and integration into DES thanks to connectivity to Danfoss System Managers

**Better food preservation** by continuously matching the load fluctuations with variable speed compressor and drive

**Reduce operational costs** as one unit can handle multiple cold rooms or e.g., 1.5 to 5 meters of display cabinets



**Reduce disruption** with a fast setup, commissioning and servicing (2 service doors, preset controller, remote control)

**Reduce commissioning costs** with a PED class 1 unit avoiding check by certified body

**Reduce footprint and installation** time with stack mounting units (up to 2)

**Silent operation**, thanks to best-in-class BLDC compressor, high performance sound insulation and low noise level fan this unit don't exceed 35dB(A) at 10 meter and decrease by nearly two noise level from other variable load systems

Model	Code	Version	Electrical code (1)	Compressor load	Tamb [°C]	Cooling capacity Q [kW] (preliminary) (2)					EcoDesign (3)		Min Fuse rating gL/gG (A)	Sound pressure level @ 10m dB(A)
						Evaporating Temperature (Mid point) [°C]								
						-15	-10	-5	0	5	COP	SEPR		
OP-MPAM005CO	114X6001	P04	G	Max. speed	38	3.14	3.82	4.20	4.61	4.81	-	3.2	16	35
					32	3.89	4.58	5.11	5.59	5.90				
					27	4.46	5.16	5.76	6.30	6.84				
				Min. speed	38	1.02	1.24	1.40	1.50	1.56				
					32	1.26	1.49	1.66	1.79	1.96				
					27	1.45	1.68	1.87	2.05	2.22				

(1) G - Compressor 230V/1~/50Hz, fan 230V/1~/50Hz

(2) Nominal conditions (EN13215), Evaporating temperatures at Mid point, Superheat 10K, Subcooling 0K



For regular updates and detailed capacities, please refer to **Coolselector®2** software



Application	Code number	Model number	Compressor Model	Electrical Code (1)	Refrigerant (2)	Condenser Coil			Fan		Receiver	Dimensions			Connection		Weight		
						Type	Airflow	Internal Volume	Number	Blade ø	Volume	Housing	Height	Width	Length	Suction valve	Liquid valve	Gross	Net
							(m³/h)	(dm³)					(mm)	(L)	mm	mm	mm		
MBP	114X6001	OP-MPAM005COP04G	Scroll	G	R744	D1	2500	0.27	1	400	2 x2.5	TBC	800	480	1290	3/8'	3/8'	136	116

Component type	Component code	Component description	Additional informations
Compressor	118U4105	SPARE PART COMPRESSOR 005CO	
Circuit breaker	118U4131	ABB EP8864	No safety stocks
Contactor	118U4134	ABB AF16301013	No safety stocks
Controller	080G0233	MMILDS Elect.Control Panel I/25	
EMI Filter	118U4120	SPARE PART NOISE FILTER (Type: EMI FILTER)	
Fan assembly	118U4129	SPARE PART FAN ASSEMBLY (D 415)	
Filter drier	023Z8409	Filter drier DMT 083S I/12	
Gas cooler	118U4112	SPARE PART First GAS COOLER D1	
Gas cooler	118U4116	SPARE PART second GAS COOLER D1	
Gateway	118U4119	SAPRE PART GATEWAY D1	
Main switch	118U4130	ABB MSHDLTB main switch	No safety stocks
Main switch bracket	118U4132	ABB OXS6X085	No safety stocks
Main switch plastic conection	118U4133	ABB MSMNO	No safety stocks
Oil	118U4144	SPARE PART OIL TANK (1 can, 250 ml)	
Optyma Controller	118U4126	SPART PART CONTROLLER D1	
Pressure sensore	118U4108	SPARE PART PRESSUR SENSOR (0-10 MPa Ratiometric 0.5-4-5 VDC)	
Pressure sensore	118U4109	SPARE PART HIGH PR SWITCH (14 MPa)	
Pressure sensore	118U4110	SPARE PART HIGH PR SWITCH (0-19.6 MPa Ratiometric 0.5-4-5 VDC)	
Reactor	118U4124	SPARE PART REACTOR (Type VFD, Drive)	
Reactor	118U4125	SPARE PART REACTOR (Type VFD, Drive)	
Service valve	118U4106	SPARE PART RELEIF VALVE 80B (15.6 mm2)	
Service valve	118U4107	SPARE PART EXP VALVE (3/8")	
Service valve	118U4117	SPARE PART EXP VALVE (3/8")	
Service valve	118U4118	SPARE PART EXP VALVE (3/8")	
Service valve	009L7555	GBC 10s CO2 45bar BallValve With AP M/25	
Sight glass	118U4111	SPARE PART SIGHT GLASS	
Temperatur sensore	118U4121	SPARE PART THERMAL SWITCH KIT	
Temperatur sensore	118U4122	SPARE PART REACTOR THERMAL KIT	
Temperatur sensore	118U4123	SPARE PART THERMISTOR KIT	