

Data Sheet

Optyma™ iCO₂ condensing unit

Type **OP-UPAC015COP04E**



Optyma™ iCO₂ condensing unit (CDU) qualified with R744/ CO₂ refrigerant (0 ozone depleting potential, minimum global warming potential) and designed to meet harsh environmental conditions up to 43°C ambient temperature.

The Optyma™ iCO₂ condensing unit has a hermetic and inverter type compressor (2 stage). combining the scroll and rotary compression mechanism achieves high efficiency within application envelope

The speed control by inverter allows to change the capacity more finely. It is better to install a multiple number of evaporators up to 8, to control respective liquid solenoid valves individually, for effective operation.

Optyma™ iCO₂ condensing unit features fin and tube, gas cooler and DC fan assembly configuration with speed regulation for robust operation at different ambient conditions.

Optyma™ iCO₂ condensing units are factory assembled at state of the art production environment for hassle free safe reliable operation. Optyma™ iCO₂ condensing units are factory tested/inspected for mechanical, electrical and electronic controller according to PED/EU Regulations and Danfoss Internal quality standards.

Features



Compressor technology
Scroll + Rotary



Receiver
2 X 7.6 L (PED II)



Connectivity
Connectable to Danfoss System Manager



Plug and play
Module controller Interface



Remote interface
MMILDS display



PED Approval
PED Category II certified by notified body



Fan
DC fan
Fan speed variation



Servicing
Quick access for servicing



Easy maintenance
Service valves



Ambient temperature
Max. Ambient temperature: 43°C



Gas cooler
Copper fin and tube technology



Low ambient operation
Factory assembled crankcase heater



Longer piping
Oil separator



Easy maintenance
Sight glass



Reliable operation
Liquid By Pass Valve



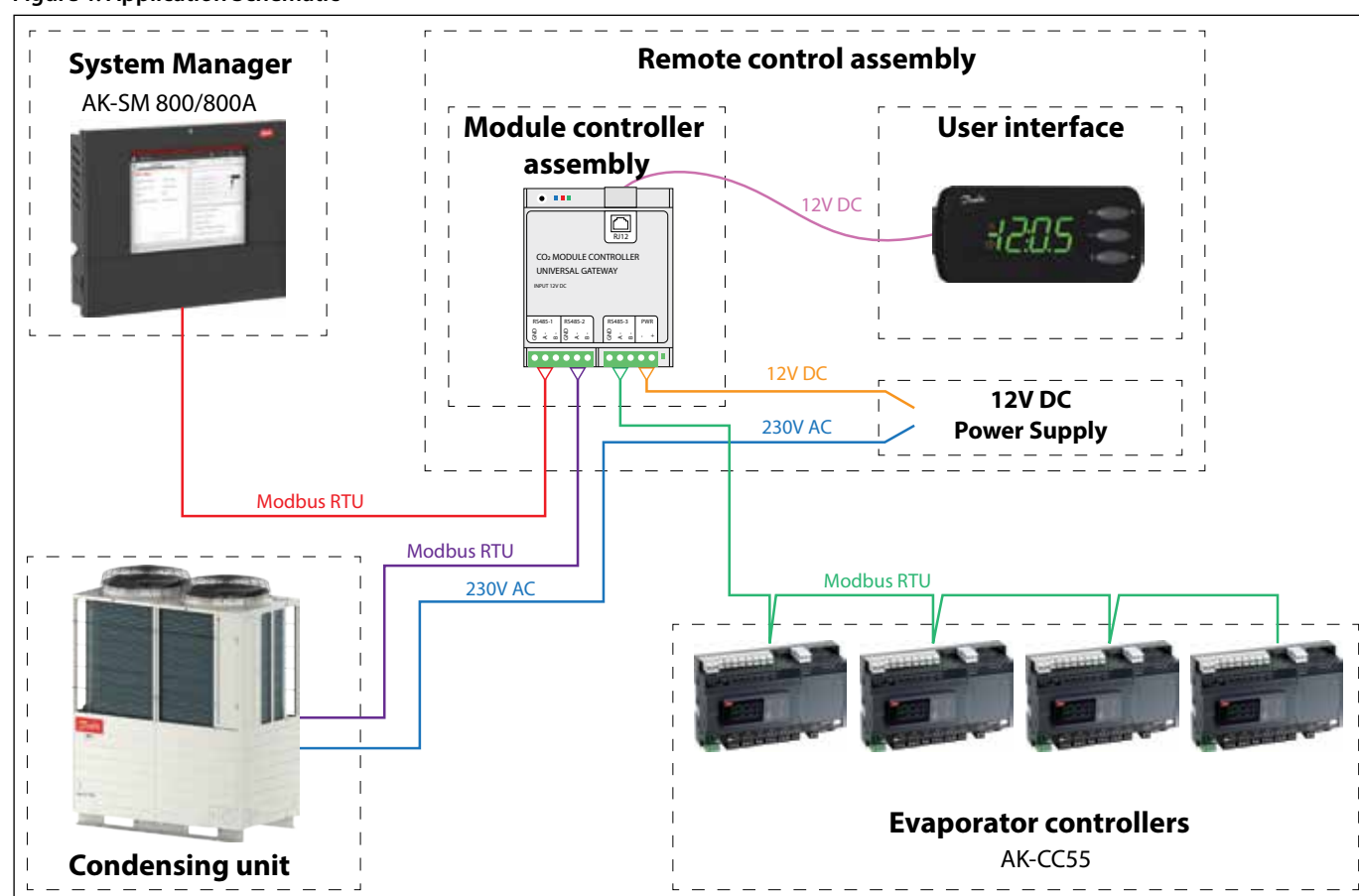
Application

Application range

Table 1: Application range

Features	Description
Code number	114X6003
Model designation	OP-UPAC015COP04E
Nominal Power	10HP
Application	Refrigeration (LBP and MBP)
Ambient temperature ranger	-20 °C to +43 °C
Evaporating temp range	-45 °C to +5 °C
Maximum pipe length	100m horizontally 22 m Vertically (Condensing unit is up and evaporating unit down)
Power supply range	380 ~ 400 V ±10%, 3 phase, 50Hz

Figure 1: Application Schematic



Note: No direct possible link between System Manager and unit controller, you need to connect to Module controller

Product specification

Specification

Table 2: Specification

Features			Description
Condensing unit	Code number		114X6003
	Model designation		OP-UPAC015COP04E
	Power source		380~400V/3 Ph/50 Hz
	Refrigerant		R744 (CO ₂)
	Enclosure protection		IP24
	Evaporating temperature range		-45 °C ~ +5°C
	Ambient temperature range		-20 °C ~ +43°C
	Design pressure	High pressure	140 bar
		Low pressure	80 bar
	Capacity modulation		Inverter control by low-pressure sensor
	Unit exterior dimension in mm (Width × Depth × Height)		1350 × 764 × 1691.5 mm
	Accumulator	Volume	7.2 L
	Receiver (Medium pressure)	Volume	7.6L X 2
	Oil separator	Volume	0.87 L
	Connection	Suction connection	Ø19.05 mm (Brazing)
		Liquid connection	Ø12.7 mm (Brazing)
	Net weight		340 Kg
	Sound pressure at 1 m distance		62.0 dB(A)
	Enclosure painting specification		Stucco white
	PED category		II
Compressor	Approval		CE, UKCA
	Type		Hermetic inverter Type
	Oil		Diamond freeze MA68
	Displacement		15 CC
	Technology		Scroll + Rotary
	Nominal output		6.4 kW
Gas cooler and fan assembly	Crank case heater		24W
	Type		Axial flow type (Top discharge)
	Fan blade diameter		572 mm
	Power source		DC
	Motor output		386 W
	No. of fans		2
Electrical specifications	Starting current		5A (Inverter Start)
	MCC		19A
	Power input		10.54 kW
	Earth leakage breaker - rated current		30 A
	Earth leakage breaker - sensitivity	Class B	30mA at 0.1sec
	Power cord specification		8 sq.mm X 3 core X 70 m length
	Main switch rating		30 A
	Fuse rating		25 A
Module controller assembly	Dimension in mm		182 × 180 × 90
	Enclosure protection		IP64
	Gateway power input		12VDC

Version control

Table 3: Version control

Specifications	Optyma™ iCO ₂
Version	(P04)
Condensing unit: IP level	IP24
Refrigerant	R744 / CO ₂
Compressor technology	2 stage – Scroll+Rotary
Control box (pre-wired E-panel)	Yes
Fin and Tube condenser	Yes
Fan speed controller	Yes
Main switch (circuit breaker)	Yes
Filter drier	Yes
Sight glass	Yes
Crankcase heater	Yes
HP Switch	Auto/Manual reset mode
Acoustic insulation	Yes
Condensing unit electronic controller	Yes
Network connectivity	Yes
Stack mounting	Not possible
Oil separator	Yes
Discharge gas Temperature Sensor	Yes
Suction gas Temperature Sensor	Yes
Ambient Temperature Sensor	Yes
HP/LP Alarm	Yes
Injection kit	Premounted
Adjustable time delay (Compressor)	Yes (available in Controller)
Electronic Expansion Valve	Yes
Solenoid valve	Yes
Receiver	Yes
Service valves	Yes
Accumulator	Yes
Oil separator	Yes
Subcooling coil	Yes
Pressure relief valve	Yes
Stop valve	Yes
Check Valve	Yes

Performance data

Table 4: Performance data - Seasonal Energy Performance Ratio

Ambient Temperature	Parameter	Symbol	Values		Unit
	Evaporating temperature	t_e	-10	-35	°C
	Application		MBP	LBP	
	Suction super heat		10	10	K
	Sub cooling		0	0	K
	Annual electricity consumption	Q	30535	43818	kWh/a
	Seasonal Energy Performance Ratio	SEPR	3.95	1.74	
32 °C	Rated cooling capacity	P_A	19.60	10.20	kW
	Rated power input	D_A	10.54	10.39	kW
	Rated COP	COP_A	1.86	0.98	
25 °C	Rated cooling capacity	P_B	17.57	9.67	kW
	Rated power input	D_B	6.92	7.65	kW
	Rated COP	COP_B	2.54	1.26	
15 °C	Rated cooling capacity	P_C	14.66	8.92	kW
	Rated power input	D_C	4.01	5.37	kW
	Rated COP	COP_C	3.65	1.66	
5 °C	Rated cooling capacity	P_D	11.76	8.16	kW
	Rated power input	D_D	2.09	3.90	kW
	Rated COP	COP_D	5.63	2.09	
43 °C	Rated cooling capacity	P_3	15.82	8.44	kW
	Rated power input	D_3	10.99	10.68	kW
	Rated COP	COP_3	1.44	0.79	
	Capacity control	Step / Variable			
	Degradation coefficient for fixed and staged units	0.25			

Cooling capacity

Table 5: Cooling capacity

Model	Code	Version	Compressor	Electrical code	Compressor speed [rps]	Tamb [°C]	Cooling capacity Q (kW)										EcoDesign		Sound power level dB(A)	Sound Pressure level dB(A)	
							Evaporating Temperature [°C]														
							-45 °C	-40 °C	-35 °C	-30 °C	-25 °C	-20 °C	-15 °C	-10 °C	-5 °C	0 °C	5 °C	COP			SEPR
OP-UPAC015CO	114X6003	P04	CO2	E	40	5	3.18	3.76	4.43	5.19	6.01	6.91	7.87	8.88	9.61	10.73	11.91	1.72	-	-	-
						10	3.10	3.66	4.29	4.99	5.78	6.65	7.59	8.59	9.44	10.54	11.68				
						15	3.00	3.55	3.90	4.62	5.47	6.39	7.40	8.37	9.23	10.30	11.40				
						27	2.70	3.20	3.75	4.36	5.04	5.78	6.59	7.44	8.32	9.22	10.12				
						32	2.47	2.93	3.55	4.12	4.75	5.45	6.20	6.99	7.79	8.60	9.43				
						38	2.37	2.81	3.32	3.85	4.44	5.08	5.76	6.49	7.22	7.90	8.52				
						40	2.25	2.68	3.15	3.67	4.23	4.84	5.49	6.14	6.71	7.17	7.31				
						43	2.05	2.43	2.85	3.32	3.84	4.34	5.04	5.74	6.71	7.36	7.82				
					50	5	4.11	4.85	5.70	6.65	7.69	8.82	10.03	11.43	12.30	13.69	15.10	1.84	-	-	-
						10	3.70	4.43	5.30	6.21	7.31	8.49	9.71	10.97	12.08	13.45	14.85				
						15	3.63	4.27	5.10	6.05	7.08	8.31	9.46	10.68	11.82	13.15	14.52				
						27	3.55	4.17	4.89	5.69	6.56	7.49	8.49	9.55	10.65	11.79	12.94				
						32	3.28	3.87	4.67	5.38	6.21	7.10	8.04	9.01	10.01	11.01	12.03				
						38	3.15	3.73	4.39	5.09	5.82	6.65	7.53	8.45	9.32	10.16	10.94				
						40	3.02	3.58	4.19	4.86	5.59	6.35	7.18	7.96	8.67	9.24	9.44				
						43	2.78	3.26	3.82	4.44	5.10	5.68	6.59	7.02	7.46	8.34	9.19				
					70	5	6.01	7.09	8.30	9.62	11.06	12.59	14.22	15.90	17.53	19.21	20.32	1.98	-	-	-
						10	5.89	6.93	8.08	9.37	10.79	12.31	13.92	15.62	17.31	19.06	20.67				
						15	5.76	6.78	7.92	9.17	10.53	12.00	13.56	15.21	16.97	18.73	20.45				
						27	5.28	6.20	7.28	8.44	9.68	10.99	12.38	13.83	15.32	16.83	18.31				
						32	4.93	5.81	6.91	8.04	9.25	10.51	11.80	13.13	14.48	15.81	17.15				
						38	4.78	5.66	6.60	7.58	8.74	9.96	11.22	12.42	13.61	14.74	15.74				
						40	4.63	5.44	6.35	7.34	8.37	9.54	10.65	11.70	12.63	14.17	14.95				
						43	4.01	5.06	6.13	7.21	8.29	9.32	10.49	11.41	12.20	13.38	14.12				
					90	5	7.90	9.30	10.84	12.51	14.27	16.07	17.70	19.30	21.54	23.51	25.55	1.74	-	-	-
						10	8.18	9.10	10.60	12.26	14.05	15.94	17.88	19.80	21.75	22.32	22.18				
						15	7.61	8.93	10.40	12.01	13.75	15.57	17.41	19.11	21.69	21.90	22.67				
						27	7.20	8.28	9.66	11.16	12.75	14.43	16.19	17.98	19.67	21.17	22.31				
						32	6.62	7.77	9.24	10.71	12.24	13.84	15.49	17.15	18.75	20.00	19.80				
						38	6.89	7.63	8.84	10.18	11.69	13.23	14.78	16.31	17.77	19.08	20.11				
						40	6.66	7.35	8.54	9.85	11.22	12.63	14.02	15.87	17.18	18.24	18.93				
						43	5.24	6.85	8.44	9.98	11.48	12.96	14.40	15.80	16.95	18.42	19.04				
					104	5	9.49	10.76	12.51	14.39	16.33	18.08	20.29	22.49	23.82	26.26	28.82	1.86	-	-	-
						10	9.19	10.55	12.27	14.16	16.18	18.27	20.34	22.22	23.21	25.57	23.68				
						15	9.31	10.36	12.04	13.88	15.87	17.89	19.55	21.50	24.23	25.07	24.90				
						27	8.77	9.70	11.25	12.94	14.75	16.68	18.68	20.62	22.07	-	-				
						32	7.09	8.32	10.20	12.10	13.90	15.80	17.70	19.60	20.90	-	-				
						38	6.51	8.39	10.36	11.82	13.39	15.01	16.33	18.63	18.75	-	-				
						40	-	-	-	-	-	-	-	-	-	-	-				
						43	-	-	-	-	-	-	-	-	-	-	-				

E - Compressor 400V/3~/50Hz, fan 230V/1~/50Hz

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

Rated conditions (EN13215), Evaporating temperature (Dew point) -10°C, Ambient air temperature +32°C, Superheat 10K, Subcooling 0K

SEPR, Seasonal Energy Performance Ratio

Q [kW], Cooling Capacity

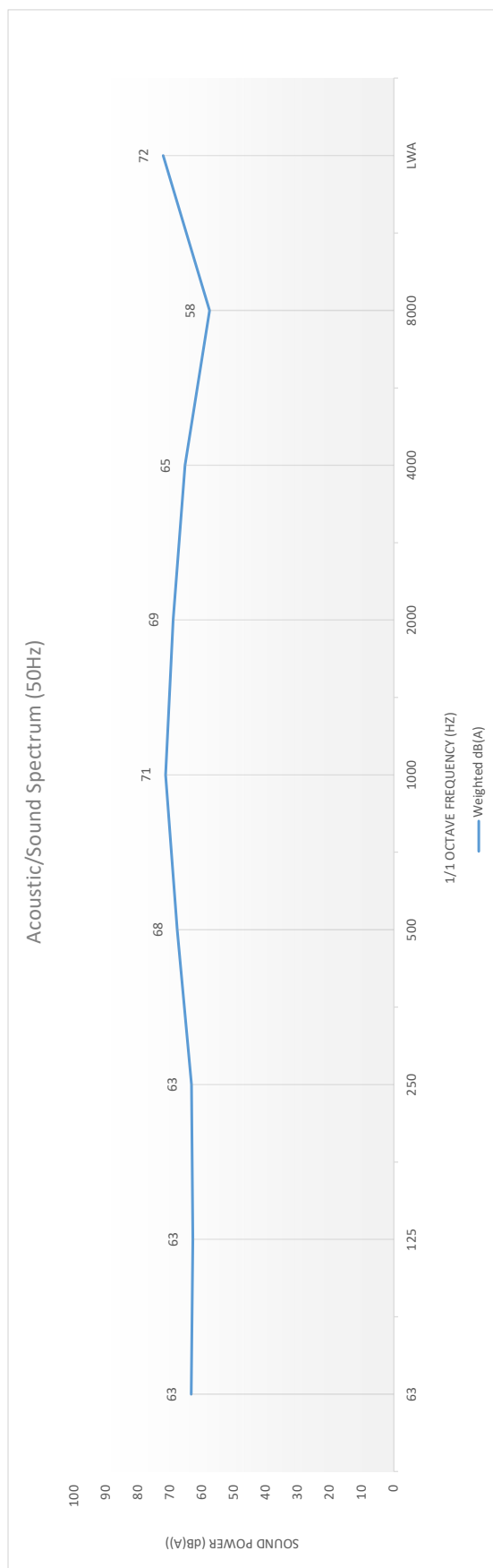
P [kW], Power Input

Acoustic / Sound spectrum data (50Hz)

Figure 2: Cooling mode - MBP

Model	Sound Power Spectrum 1/1 Octave dB(A)	Sound Power Spectrum, 1/1 Octave									
		63	125	250	500	1000	2000	4000	8000	16k	L _{WA}
OP-UPAC015COP04E	63	63	63	63	68	71	69	65	58	-	72

EN13215 Conditions - MBP				Calculated Sound Pressure (Free Field) (dB(A))			
Evaporation temperature (°C)	Ambient temperature (°C)	Superheat (K)	Compressor speed (rps)	Fan Speed (rps)	Distance (in Meters)		
-10	32	10	104	2 fans x 16.67	1m	3m	10m
				Sound Pressure (dB(A))			
				62	52.5	42	

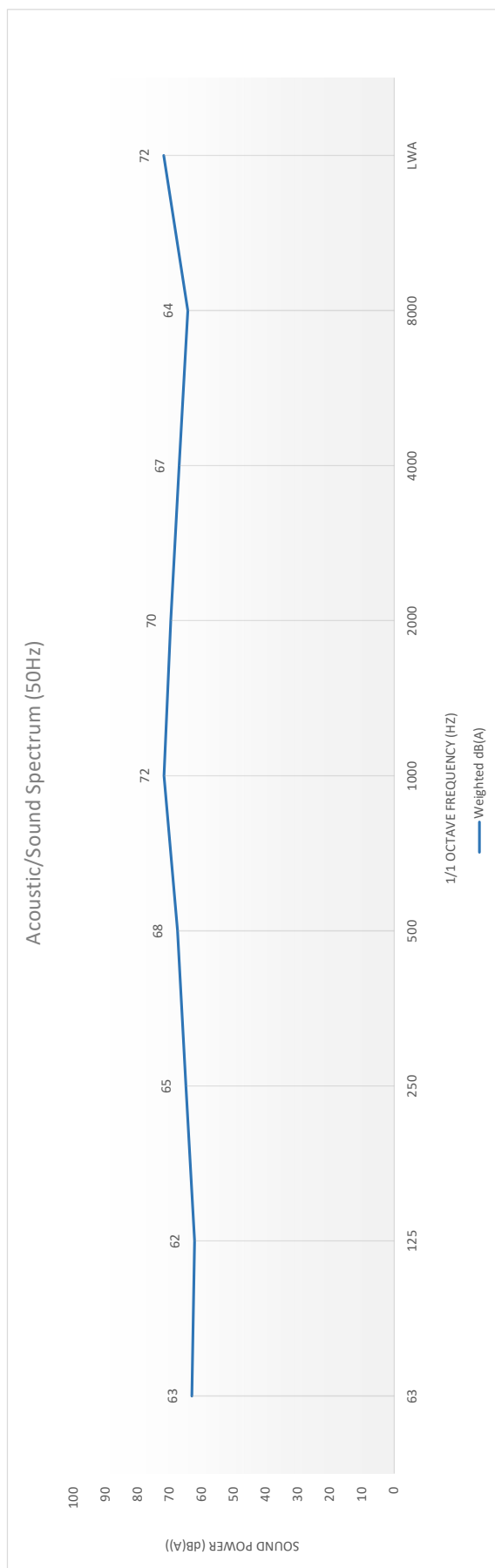


Acoustic spectrum data are calculated and validated at addition of sound power levels of compressor and fan motor at full speed according to EN13215 conditions. As compressor and fan motor are placed in a packaged unit, effect of noise reduction due to enclosure and insulation was considered for evaluation of sound power. The values are declared according to EN13215 at MBP conditions at full speed of compressor (104 rps) and full speed of fan motors (2 fans X 16.67 rps)

Figure 3: Freezing mode - LBP

Model	Sound Power Spectrum	Sound Power Spectrum, 1/1 Octave									
		63	125	250	500	1000	2000	4000	8000	16k	L _{WA}
OP-UPAC015COP04E	1/1 Octave dB(A)	63	62	65	68	72	70	67	64	-	72

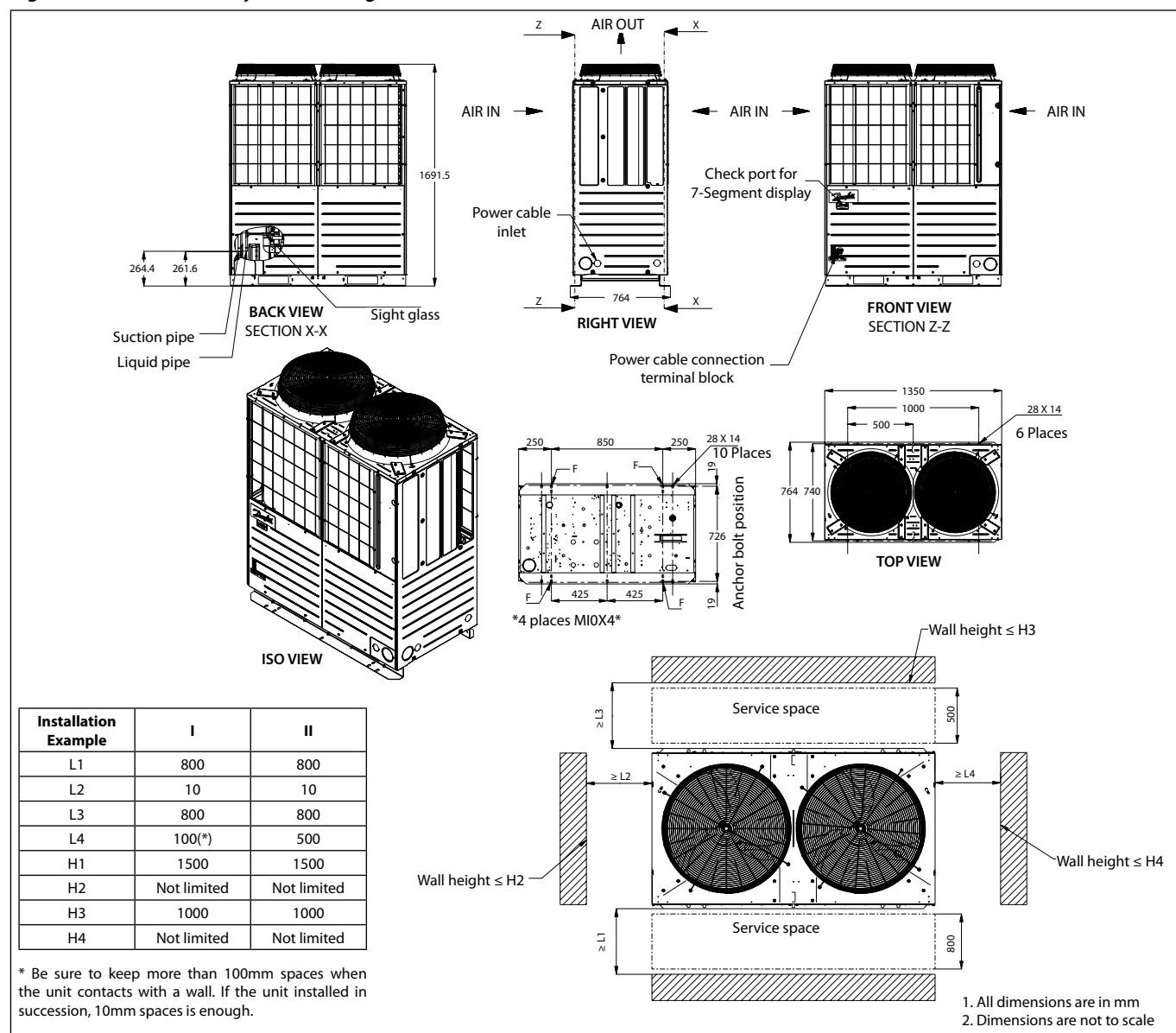
EN13215 Conditions - LBP					Calculated Sound Pressure (Free Field) (dB(A))			
Evaporation temperature (°C)	Ambient temperature (°C)	Superheat (K)	Compressor speed (rps)	Fan Speed (rps)	Distance (in Meters)	1m	3m	10m
-35	32	10	104	2 fans x 16.67	Sound Pressure (dB(A))	62	52.1	42



Acoustic spectrum data are calculated and validated at addition of sound power levels of compressor and fan motor at full speed according to EN13215 conditions. As compressor and fan motor are placed in a packaged unit, effect of noise reduction due to enclosure and insulation was considered for evaluation of sound power. The values are declared according to EN13215 at LBP conditions at full speed of compressor (104 rps) and full speed of fan motors (2 fans X 16.67 rps)

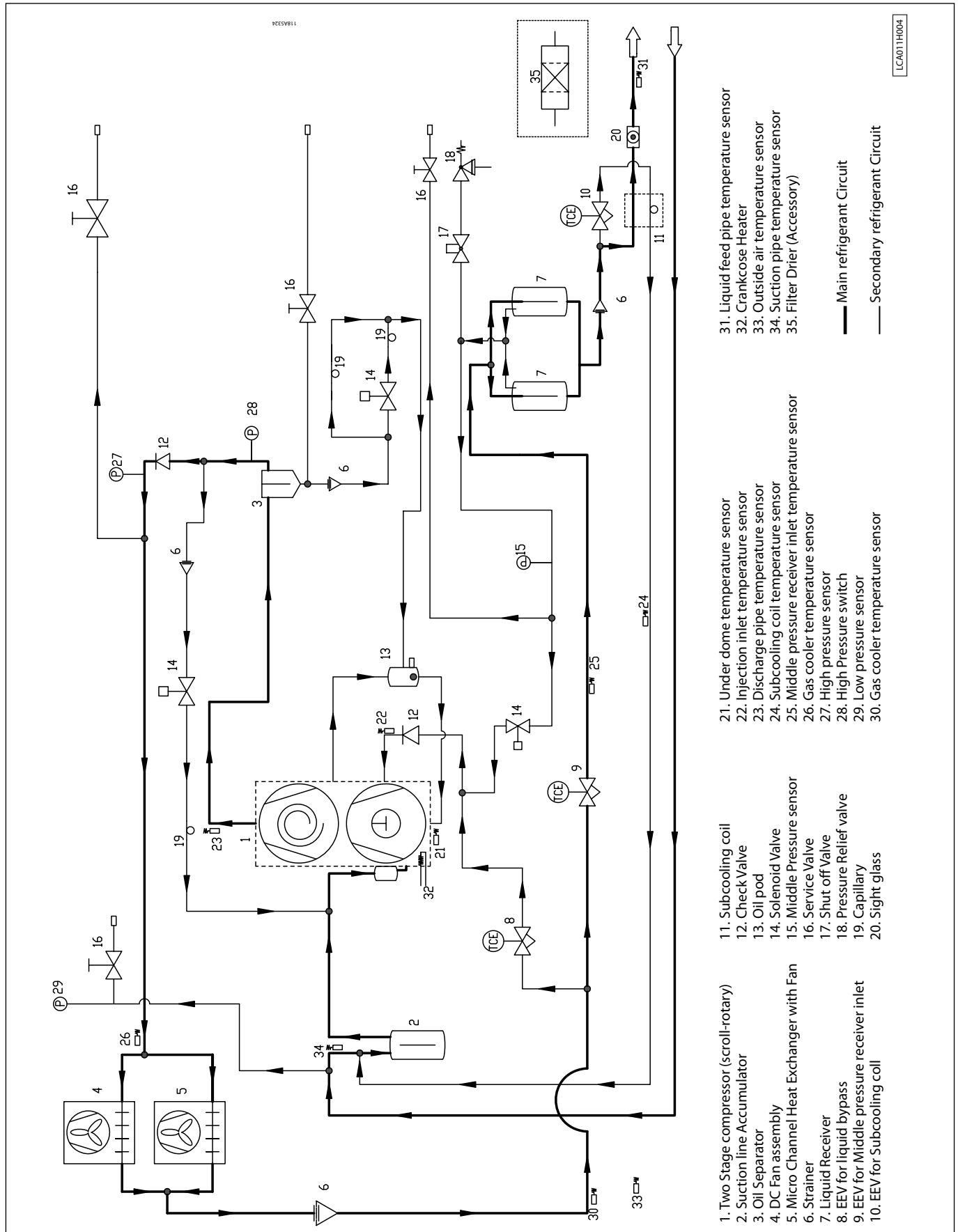
General assembly (GA) drawing

Figure 4: General assembly (GA) drawing



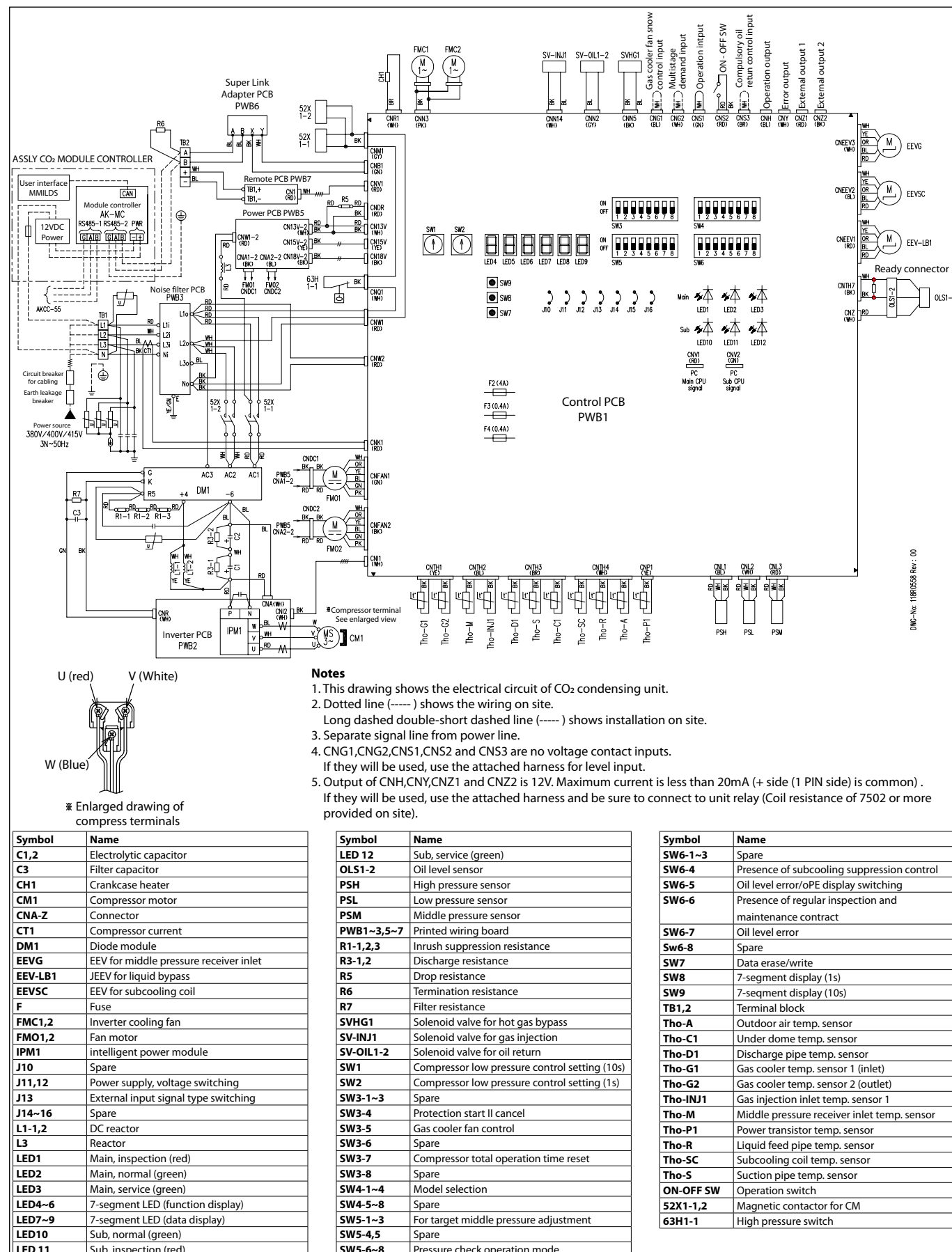
Piping and instrumentation diagram (PID)

Figure 5: Piping and instrumentation diagram (PID)



Wiring Diagram

Figure 6: Code E : OP-UPAC015CO



Ordering

Spare part

No.	Parts Name	Parts No	Danfoss Requirements				Packing Style	Remarks
			Gross weight	Unit Dimension (mm)				
				Kg	Length	Width		
Fan Assembly								
1	FAN,PROPELLER	SSA431B242B	4.600	630	630	290	Carton box	Fan, D570mm
2	MOTOR,DC	SSA512T155	8.200	450	250	240	Carton box	Fan motor, UGBTEF-12MMHI08, Rated output:386W, Rated voltage:DC280/339V
Heat Exchange Assembly								
3	HEAT EXCH ASSY(AIR)	LCA301A005	60.600	1420	960	750	Wood crate	Gas cooler front, Volume:3.05L, Connection size:inlet Φ15.88 outlet Φ9.52
4	HEAT EXCH ASSY(AIR)	LCA301A007	60.600	1420	960	750	Wood crate	Gas cooler rear, Volume:3.05L, Connection size:inlet Φ15.88 outletΦ9.52
Piping								
5	COMPRESSOR ASSY	LCA201A010	49.000	510	440	760	Wood crate	Compressor, GSR2115AD2, Rated voltage:133-308V 3 phase
6	SEPARATOR,OIL	LCA354A010	4.000	760	230	150	Carton box	Oil separator, Connection size:inlet Φ12.7 outlet Φ9.52
7	ACCUMULATOR	SSA351A268	21.300	420	380	700	Wood crate	Accumulator, Volume:7.2L, Connection size:inlet Φ19.05 outlet Φ19.05
8	SENSOR,LP	SSA551D031	0.093	105	85	55	Carton box	Low presure sensor PSL, HSK-BC-016, Range:0 to 100bar, Connection size:Φ6.0
9	RECEIVER	SSA352A150	24.200	720	330	310	Wood crate	Middle pressure receiver 1, Volume:7.6L, Connection size:inlet Φ12.7outlet Φ12.7 and Φ9.52
10	RECEIVER	SSA352A150A	24.100	720	330	310	Wood crate	Middle pressure receiver 2, Volume:7.6L, Connection size:inlet Φ12.7outlet Φ12.7 and Φ9.52
11	VALVE,EXP	SSA387F071	0.068	150	125	20	Vinyl bag	EEV for subcooling coil EEVSC, CPM-B06YCSM-1, Connection size:inlet Φ6.35 outlet Φ6.35
12	STRAINER	SSA357A050	0.055	150	85	20	Vinyl bag	Stainer, Connection size:inlet Φ12.7 outlet Φ8.0
13	VALVE,EXP	SSA387F058	0.108	175	150	25	Vinyl bag	EEV for middle pressure receiver inlet EEVG, HPM-BD24SM-1, Connection size:inlet Φ7.94 outlet Φ7.94
14	VALVE,EXP	SSA387F070	0.067	150	125	20	Vinyl bag	EEV for liquid bypass EEV-LB1, CPM-B04YCSM-1, Connection size:inlet Φ6.35 outlet Φ6.35
15	STRAINER	SSA357A050C	0.049	150	85	20	Vinyl bag	Stainer, Connection size:nlet Φ9.52 outlet Φ9.52
16	VALVE,S(2WAY)	SSA382A278A	0.070	150	85	20	Vinyl bag	Solenoid valve for gas injection SV-INJ1, ALS-BCY2SM-2, Connection size:inlet Φ6.35 outlet Φ6.35
17	SENSOR,LP	SSA551D031	0.093	105	85	55	Carton box	Middle pressure sensor PSM, HSK-BC-016, Range:0 to 100bar, Connection size:Φ6.0
18	VALVE,CHECK	SSA385A053	0.185	150	125	25	Vinyl bag	Check valve, CAV-10Y3CSM-1, Connection size:inlet Φ9.6 outlet Φ9.6
19	SENSOR,HP	SSA551D030	0.094	105	85	55	Carton box	High pressure sensor PSH, HSK-BC150D-016, Range:0 to 150bar, Connection size:Φ6.0
20	SWITCH,HP	SSA532A086A	0.162	145	70	70	Carton box	High pressure switch 63H1-1, CCB-4UB08W, PED certified CE 0035, ON;140bar/OFF:90bar, Connection size:Φ6.35
21	CAPILLARY	PCM315B005	0.011	150	85	15	Vinyl bag	Capillary, Length:250mm, Connection size:inlet Φ3.2 outlet Φ3.2
22	VALVE,CHECK	SSA385A053A	0.189	150	125	25	Vinyl bag	Check valve, CAV-10Y4CSM-1, Connection size:inlet Φ12.8 outlet Φ12.8
23	VALVE,S(2WAY)	SSA382A278A	0.070	150	85	20	Vinyl bag	Solenoid valve for gas bypass SV-HG1, ALS-BCY2SM-2, Connection size:inlet Φ6.35 outlet Φ6.35
24	VALVE ASSY,SERVICE	LCA381A004	0.469	195	125	60	Carton box	Service valve for high pressure side service port or middle pressure side service port or oil service port, FCV-B2CSM-1, Connection size:inlet Φ6.35 outlet Φ6.35
25	VALVE ASSY,SERVICE	LCA381A023	0.434	125	125	70	Carton box	Service valve for low pressure side service port, FCV-B2CSM-1, Connection size:inlet Φ6.35 outlet Φ6.35
26	VALVE ASSY,SERVICE	LCA381A024	0.460	195	125	60	Carton box	Service valve for safety valve, FCV-B2CSM-1, Connection size:inlet Φ6.35 outlet Φ6.35
27	VALVE,SAFETY	SSA388P001	0.112	150	85	30	Vinyl bag	Safety valve, CS-001-2, Setting:8.7MPa, Connection size:M16
28	PACKING	SSA932A046	0.003	150	85	5	Vinyl bag	Packing, CSM-1, inner Φ3.5 outside Φ14.6
29	HEATER ASSY(CRANK)	PCA541B016L	0.066	300	175	20	Vinyl bag	Crankcase heater, Rated output 23.8W, Rated voltage:240V 1 phase
30	COIL ASSY,SOLENOID	LCA382F007B	0.185	105	85	55	Carton box	Coli for SV-INJ1, A22-1B28BSM-1, Rated voltage:AC220~240V 1 phase 50/60Hz
31	COIL ASSY,SOLENOID	LCA382F006F	0.168	105	85	55	Carton box	Coil for SV-OIL1, SR10D-79B-9, Rated voltage:AC220V 1 phase 50/60Hz

Optyma™ iCO₂ Condensing Unit | Type OP-UPAC015COP04E

No.	Parts Name	Parts No	Danfoss Requirements				Packing Style	Remarks
			Gross weight	Unit Dimension (mm)				
				Kg	Length	Width		
32	COIL ASSY,SOLENOID	LCA382F007C	0.175	105	85	55	Carton box	Coil for SV-HG1, A22-1B17BSM-1, Rated voltage:AC220~240V 1 phase 50/60Hz
33	COIL,SOLENOID	SSA382F224B	0.184	110	90	65	Carton box	Coil for EEVG, HPM-MD12SM-6, Rated voltage:DC12V
34	COIL,SOLENOID	SSA382F230	0.152	105	85	55	Carton box	Coil for EEVLB, CPM-MD12SM-1, Rated voltage:DC12V
35	COIL,SOLENOID	SSA382F230A	0.157	105	85	55	Carton box	Coil for EEVSC, CPM-MD12SM-2, Rated voltage:DC12V
36	WIRING ASSY	PCM504A018AV	0.300	225	300	40	Vinyl bag	Wiring for compressor
37	VALVE ASSY,S(OIL)	LCA382A018	1.400	400	340	270	Carton box	Valve ASSY of SV-OIL1-2, Connection size:inlet Φ6.35 outlet Φ6.35
38	VALVE ASSY,S(HG)	LCA382A002	0.474	370	220	100	Carton box	Valve ASSY of SVHG1, Connection size:inlet Φ6.35 outlet Φ9.52
Control								
39	PWB ASSY(CONTROL)	PCM505A011BD	0.9	370	285	85	Carton box	Only for supply parts PWB1
40	PWB ASSY(INV.)	PCB505A107CB	0.468	220	200	80	Carton box	Only for supply parts PWB2
41	PWB ASSY(N.F)	PCB505A035H	1.100	250	180	70	Carton box	PWB3
42	PWB ASSY(POWER)	PCB505A114A	0.989	305	175	100	Carton box	Only for supply parts PWB5
43	PWB ASSY	LCA505A003D	0.145	170	150	70	Carton box	Only for supply parts PWB6
44	PWB ASSY(REMOTE)	PCM505A009A	0.130	195	125	60	Carton box	PWB7
45	TRANSFORMER ASSY	PCB554A021	0.030	300	175	10	Vinyl bag	Current transformer, GJ-4-X, 4.1V±3%/50A(50/60Hz, 150Ω)
46	TRANSISTOR(POWER)	PCB008A177B	0.429	160	95	65	Carton box	Only for supply parts TM, PM50CL1A120
47	DIODE(MODULE)	PCB008A121A	0.231	125	80	55	Carton box	Only for supply parts DM, PGH75N16
48	RESISTOR	SSA553A536	0.124	105	85	55	Carton box	R1-1,2,3, 26500-0600, 7.5Ω
49	CAPACITOR	SSA552F694	0.125	105	85	55	Carton box	Capacitor, PC78D125-225K, Capacitance 2.2μF
50	CAPACITOR	SSA552F427AK	0.811	165	90	85	Carton box	Capacitor, LNX2G472MSEBMZ, Capacitance 4700μF
51	RESISTOR	SSA553A380	0.049	150	80	15	Vinyl bag	R3, 32500-1070, 30kΩ
52	MOTOR ASSY,AC	PCB511A006F	0.725	160	160	80	Carton box	Fan motor, UP12D23-GTEW, Rated output 16W, Rated voltage:230V 1 phase 50/60Hz
53	SENSOR ASSY	LCA551A002	0.052	300	175	10	Vinyl bag	THO-G1,G2
54	SENSOR ASSY	LCA551A002A	0.058	300	175	10	Vinyl bag	THO-M1,INJ1
55	SENSOR ASSY	LCA551A005	0.073	300	175	10	Vinyl bag	THO-D1,S,C1
56	SENSOR ASSY	LCA551A003	0.115	300	225	10	Vinyl bag	THO-SC,R,A
57	WIRING ASSY	PCM504A018AP	0.038	300	175	15	Vinyl bag	PWB3-1 L1 ,PWB3-1 N ,PWB3-1 L2 - PWB1 CNW1,PWB1 CNW2
58	WIRING ASSY	PCM504A006J	0.025	175	150	15	Vinyl bag	52X1-1 5,52X1-2 5,52X1-2 6,52X1-1 6- PWB1 CNM1
59	WIRING ASSY	PCM504A006L	0.084	105	85	55	Carton box	PWB5 CN13-2- PWB1 CNDR,PWB1 CN13V
60	WIRING ASSY	PCM504A006M	0.007	150	125	10	Vinyl bag	PWB1 CN15V- PWB5 CN15V-2
61	WIRING ASSY	PCM504A006N	0.034	175	150	30	Vinyl bag	PWB1 CN18V- PWB5 CN18V-2
62	WIRING ASSY	PCM504A018K	0.055	105	85	55	Carton box	PWB5 CNA1-2- FM1 CNDC1
63	WIRING ASSY	PCM504A018L	0.053	105	85	55	Carton box	PWB5 CNA2-2- FM2 CNDC2
64	WIRING ASSY	PCM504A018AC	0.020	175	150	15	Vinyl bag	PWB1 CNN3- FMC1,FMC2
65	WIRING ASSY	LCA504A004	0.002	150	85	10	Vinyl bag	PWB1 CNS1
66	WIRING ASSY	PCM504A006Z	0.039	300	175	10	Vinyl bag	PWB1 CNI1- PWB2-1 CNI2
67	WIRING ASSY	PCA504A273	0.016	250	175	10	Vinyl bag	DM1 G,DM1 K- PWB2-1 CNR
68	WIRING ASSY	PCM504A018AJ	0.018	175	150	15	Vinyl bag	C2 -,C1 +- PWB2-1 CAN
69	HARNESS ASSY	LCA504A001	0.038	105	85	55	Carton box	OLS1- CNTH7,CNZ
70	WIRING ASSY	PCM504A023	0.022	300	175	10	Vinyl bag	CN1- CNV1
71	DRYER	SSA356A004	1.500	200	110	110	Carton box	Filter dryer, DCY-P8 165 S/MMS, Connection size:inlet Φ16.1 outlet Φ16.1
72	OIL (MA68 4LX6)	LCA006A005	27.000	420	410	290	Carton box	Oil, 6PCS/1pack carton
73	OIL (MA68 0.5LX20)	LCA006A007	23.000	470	380	290	Carton box	Oil, 20PCS/1pack carton
74	OIL (MA68 0.5LX1)	LCA006A008	1.500	90	90	260	Carton box	Oil, 1PCS/1pack carton
CO ₂ MODULE CONTROLLER UNIVERSAL GATEWAY								
75	MODULE CONTROLLER	118U5498	TBD	182	90	180	Carton box	

Notes:

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