

CO₂ solutions for small commercial cold rooms

Get a complete CO₂ cold room package with just four components. Follow these simple steps to find the right match for your application.



1. Optyma™ iCO₂ condensing unit

Type	Code no.	Cooling capacity Q [kW]*
OP-MPAM-005COP04G	114X6001	Variable load from 1.5 to 4.6 kW



* Working conditions EN134215, -10°C evap, 10K superheat, 0K subcooling, 32°C ambient temperature. The evaporator must be designed in accordance with the condensing unit.

2. Optyma™ cold room Controller

Type	Code no.
AK-RC 204B	080Z5001
AK-RC 205C	080Z5002
AK-RC 305W-SD	080Z5003



3. Expansion valve TE 2 for R744

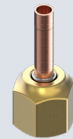
(MWP 90 bar, MOPD 60 bar)

Refrigerant	Type	Range	MOP	Pressure equalization solder [In/mm]	Connection inlet x solder outlet		Code no. Multipack
		[°C]	[°C]		[In]	[mm]	
		[°F]	[°F]				
R744	TE 2	-40 – 0	5	¼	¾ x ½	-	068Z2900
		-40 – 32	41				
	TE 2	-40 – 0	5	6	-	6 x 12	
		-40 – 32	41				



Solder adaptor - without orifice assembly and filter

Connection ODF solder [In]	Connection ODF solder [mm]	Code no.
¼	-	068-2062
-	6	068-2063
¾	-	068-2060
-	10	068-2061



Orifice assembly with filter for solder adaptor

Orifice no.	Code no.
CZ	068Z2100
CY	068Z2101
CX	068Z2102
C0	068Z2103
01	068-2091
02	068-2092
03	068-2093



4. Solenoid valves

Solenoid valve EVUL* (MWP 90 bar, MOPD 36 bar)

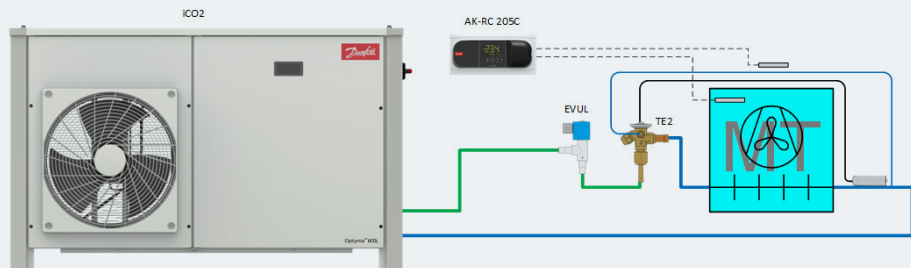
Type	Code no. (In)	Code no. (mm)
EVUL 1	032F9506	032F9508
EVUL 2	032F9510	032F9516
EVUL 3	032F9511	032F9517
EVUL 4	032F9512	032F9518
EVUL 5	032F9513	032F9519
EVUL 6	032F9514	032F9521



* The solenoid coil must be selected from the datasheet based on power supply, IP grade, and cabling. For coil ordering please refer to Coolselector*2 software coolselector.danfoss.com

CO₂ system examples

iCO₂ condensing unit for medium temperature cold room



MT evaporator load

kW	MT	Type
1,44	CZ	EVUL 1
1,97	CY	EVUL 1
2,19	CX	EVUL 1
3,46*	C0	EVUL 2
5,58*	01	EVUL 3
10,6	02	EVUL 4
15,0	03	EVUL 5

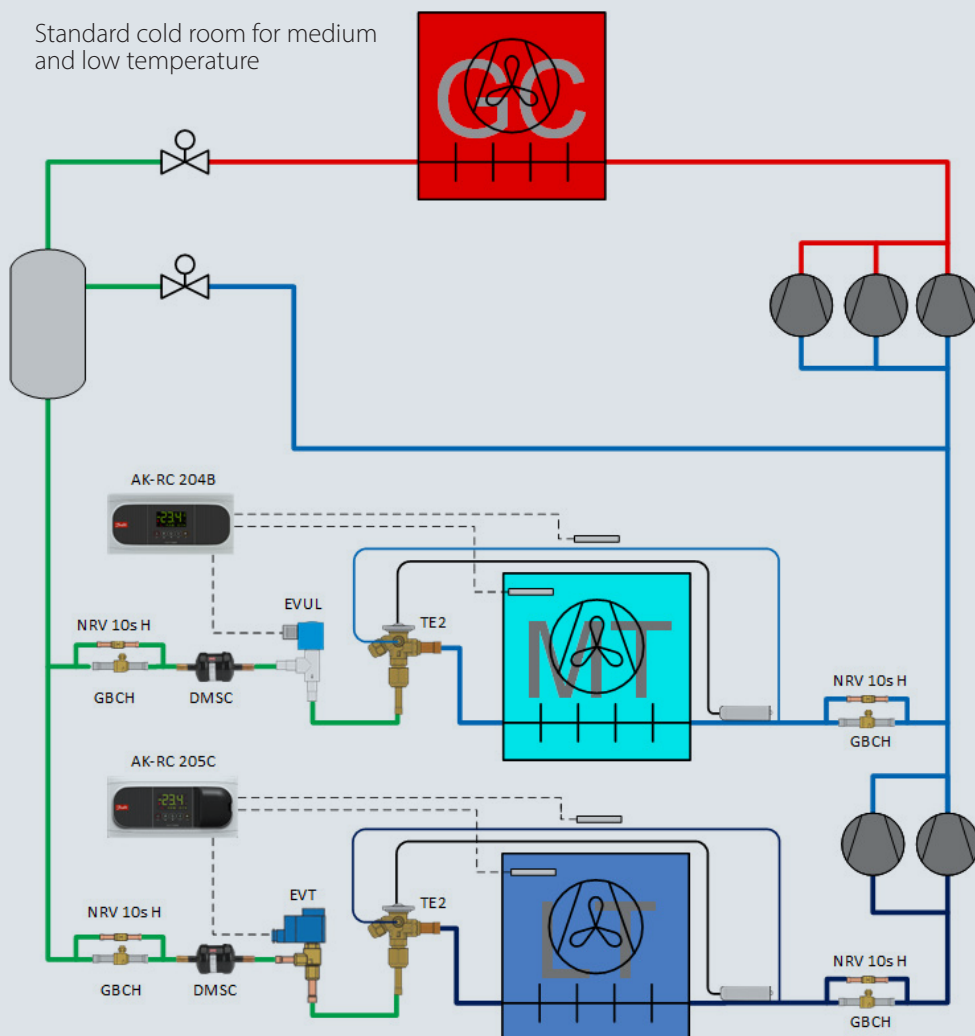
Evaporating temperature $t_e = -10\text{ }^\circ\text{C}$
Receiver temperature $t_c = 0\text{ }^\circ\text{C}$
* Relevant for Optyma™ iCO₂ 4.6kW MT condensing unit, single evaporator

LT evaporator load

kW	LT	Type
1,66	CZ	EVUL 1
2,23	CY	EVUL 1
2,42	CX	EVUL 2
4,23	C0	EVUL 2
6,75	01	EVUL 3
11,6	02	EVUL 4
16,4	03	EVUL 5

Evaporating temperature $t_e = -30\text{ }^\circ\text{C}$
Receiver temperature $t_c = 0\text{ }^\circ\text{C}$

Standard cold room for medium and low temperature



For regular updates and detailed capacities, please refer to Coolselector®2 software coolselector.danfoss.com