

USA



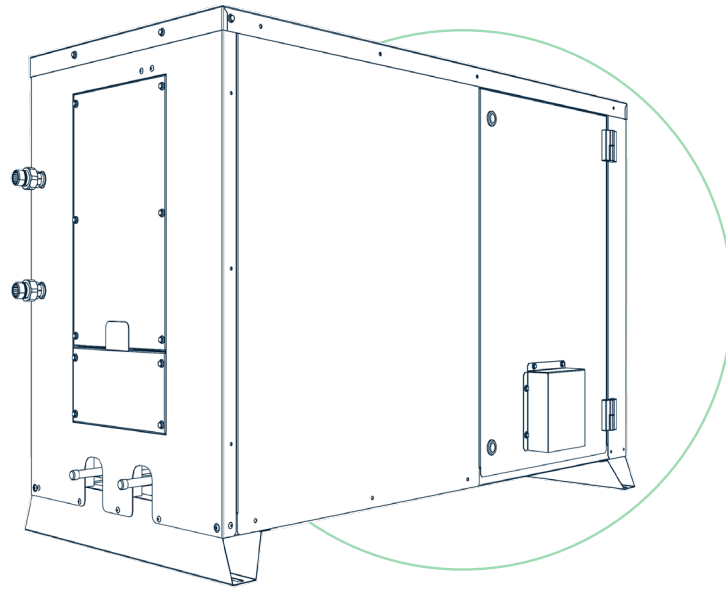
SUSTAINABLE COLD SOLUTIONS

Transcritical CO₂ndensing units



We know the art of achieving
the *perfect temperature*

BEIJER REF



Condensing unit for transcritical CO₂ applications, equipped with a TOSHIBA BLDC compressor, water/brine brazed plate heat exchanger (BHE) gas cooler, and inverter. Its compact design ensures easy installation, and it can communicate directly with refrigeration units. These features guarantee high efficiency, even at part load.

MAIN ADVANTAGES



CO₂ REFRIGERANT



EFFICIENT SOLUTION



SMALL FOOTPRINT



EASY START-UP



DC BRUSHLESS ROTARY
COMPRESSOR



WATER
COOLER EQUIPPED



PLUG & PLAY HYDRAULIC
CONNECTIONS

Cooling Capacity

Transcritical Condensing Units DX

UMT T MTDX



682 BTU/h
0.057 Ton

28,320 BTU/h
2.36 Ton

UMT T BTDX



1,126 BTU/h
0.094 Ton

22,519 BTU/h
1.88 Ton

Standard Accessories

- Toshiba BLDC compressors
- Carel controller
- Inverter modulation for capacity control 25–100%
- BHPE water/brine gas cooler
- Design pressure 130 bar / 1885 PSI (high pressure side) | 80 bar/1160 PSI (liquid line) | 80 bar / 1160 PSI (suction line)
- ASME Liquid receiver 0.424 ft³
- UL Certified equipment
- K65 connections

Accessories on Request

- Oil management (oil separator + reservoir, oil level control, oil return solenoid valve)
- Winter kit (suggested for ambient temperature < -4 °F)

Software Calculation Tool

Select your unit and check its CO₂ charge

Configuration

Selection

Verify

Serie

Cubo2ACQUA

Options

Toshiba BLDC



Input data

Selection

Required Capacity

Tolerance

Evaporation temperature

Fluid temperature In

Fluid temperature Out

Fluid

Btu/h

17.00

34.00

°F

14.00

°F

95.00

°F

113.00

Water

There are no warnings

Model

Series

Unit

Min Load

Max Load

Compressor Model

Cubo2ACQUA

UMTWGTN45BTDX

3297.55 Btu/h

9082.81 Btu/h

NY45D1F-10GU

Working Point

Capacity

Absorbed power

COP

Flow Rate evaporator

Current

Recommended protection

Discharge Temperature

9082.81 Btu/h

1.73 kW

1.54

87.06 lb/h

16.10 A

-

186.00 °F

Options

Standard enclosure

Carel controller

Gas cooler ad acqua

Inverter with modulation 25-100%

Design pressure 120/80/80

Power supply 230V/1+N/50Hz

Liquid receiver 8 liters (PED II) - Phase out

Liquid receiver 12 liters (PED II)

Limits

Envelope

Cond. Pressure [bar A]

Evap. Pressure [bar A]

300.000

250.000

200.000

150.000

100.000

50.000

0

15.000

20.000

25.000

30.000

35.000

40.000

45.000

50.000

55.000

60.000

65.000

AT THE FOLLOWING LINK YOU CAN CHECK THE UNIT CHARGE.

<https://cubo2calculation.scmfrigo.com/#/home>



Technical data Cubo₂ Aqua (a)

LOW TEMPERATURE

UMT WG T N45 BTDX	Ambient Temperature [°F]		Evaporation Temperature [°F]											
			-31			-22			-13			-4		
			Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP
			min	max		min	max		min	max		min	max	
	104		2.354	4.064	1.18	2.832	7.814	1.37	3.310	9.076	1.54	3.890	10.578	1.76
	100.4		2.423	6.585	1.23	2.934	7.916	1.42	3.412	9.179	1.60	4.026	10.680	1.83
	89.6		2.627	6.893	1.41	3.207	8.223	1.64	3.787	9.486	1.86	4.470	10.994	2.13
	77		2.764	7.097	1.57	3.378	8.462	1.83	3.992	9.725	2.07	4.743	11.226	2.38
	59		3.105	7.609	2.05	3.787	8.974	2.39	4.470	10.271	2.73	5.323	11.772	3.17
	41		3.310	7.814	2.32	4.026	9.213	2.75	4.777	10.509	3.17	5.630	12.011	3.73
Water flow		3.2 gpm	Sound pressure ^(b)						38.8 dB(A)					
Pressure drop		2.18 psi	Power Supply						230/1+N+PE/60					
Weight		341.7 lbs												
UMT WG T N67 BTDX	Ambient Temperature [°F]		Evaporation Temperature [°F]											
			-31			-22			-13			-4		
			Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP
			min	max		min	max		min	max		min	max	
	104		3.822	10.407	1.27	4.641	12.420	1.45	5.459	14.263	1.62	6.381	16.378	1.80
	100.4		3.890	10.475	1.32	4.709	12.523	1.51	5.528	14.399	1.69	6.449	16.515	1.89
	89.6		4.129	10.782	1.51	4.948	12.898	1.75	5.767	14.877	1.96	6.688	17.061	2.21
	77		4.265	11.021	1.68	5.118	13.205	1.95	5.937	15.218	2.20	6.858	17.470	2.49
	59		4.606	11.601	2.19	5.494	13.853	2.57	6.312	15.969	2.93	7.234	18.323	3.37
	41		4.777	11.840	2.50	5.698	14.160	2.97	6.551	16.310	3.44	7.473	18.733	4.02
Water flow		4.8 gpm	Sound pressure ^(b)						38.8 dB(A)					
Pressure drop		2.90 psi	Power Supply						230/1+N+PE/60					
Weight		341.7 lbs												
UMT WG T 067 BTDX	Ambient Temperature [°F]		Evaporation Temperature [°F]											
			-31			-22			-13			-4		
			Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP
			min	max		min	max		min	max		min	max	
	104		3.242	14.945	0.88	4.060	18.153	1.06	4.641	20.575	1.17	5.664	24.602	1.40
	100.4		3.242	14.945	0.91	4.060	18.153	1.07	4.641	20.575	1.18	5.664	24.602	1.41
	89.6		3.242	14.945	1.09	4.060	18.153	1.20	4.641	20.575	1.37	5.664	24.602	1.57
	77		3.242	14.945	1.24	4.060	18.153	1.37	4.641	20.575	1.57	5.664	24.602	1.71
	59		3.242	14.945	1.68	4.060	18.153	1.88	4.641	20.575	2.13	5.664	24.602	2.35
	41		3.242	14.945	2.04	4.060	18.153	2.32	4.641	20.575	2.59	5.664	24.602	2.68
Water flow		6.2 gpm	Sound pressure ^(b)						41.7 dB(A)					
Pressure drop		3.63 psi	Power Supply						460/3+N+PE/60					
Weight		429.9 lbs												
UMT WG T 100 BTDX	Ambient Temperature [°F]		Evaporation Temperature [°F]											
			-31			-22			-13			-4		
			Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP	Capacity [kBTU/h]		COP
			min	max		min	max		min	max		min	max	
	104		5.186	22.315	0.89	6.449	26.956	1.08	7.302	30.505	1.17	8.872	36.339	1.40
	100.4		5.186	22.315	0.90	6.449	26.956	1.09	7.302	30.505	1.18	8.872	36.339	1.41
	89.6		5.186	22.315	1.18	6.449	26.956	1.27	7.302	30.505	1.43	8.872	36.339	1.58
	77		5.186	22.315	1.36	6.449	26.956	1.47	7.302	30.505	1.65	8.872	36.339	1.77
	59		5.186	22.315	1.91	6.449	26.956	2.08	7.302	30.505	2.33	8.872	36.339	2.51
	41		5.186	22.315	2.35	6.449	26.956	2.66	7.302	30.505	2.92	8.872	36.339	2.93
Water flow		7.9 gpm	Sound pressure ^(b)						41.7 dB(A)					
Pressure drop		4.64 psi	Power Supply						460/3+N+PE/60					
Weight		429.9 lbs												

NOTES

^(a) Interstage SST variable from 23 °F to 32 °F according to operating conditions. Inverter modulation from 25 - 100%, corresponding to 1500-6000 rpm

^(b) Based on free field area weed semi-spherical sound emission in 32.8 ft distance; tolerance ± 2 dB(A)

^(c) Minimum Energy Performance Standards, calculated according to Ecodesign Directive EN 2009/125/EC

Technical data Cubo₂ Aqua (a)

MEDIUM TEMPERATURE

Evaporation Temperature [°F]															
UMT WG T 030 MTDX	Ambient Temperature [°F]	5		14		23		32		41		COP			
		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]					
		min	max	min	max	min	max	min	max	min	max				
	104	1.024	5.869	1.24	1.331	7.097	1.48	1.672	8.530	1.75	2.047	10.100	2.06	2.491	11.908
100.4	1.126	6.415	1.35	1.433	7.780	1.61	1.808	9.315	1.92	2.252	11.055	2.26	2.730	13.034	2.65
89.6	1.365	7.234	1.74	1.740	8.735	2.08	2.150	10.407	2.48	2.627	12.352	2.94	3.173	14.570	3.47
77	1.570	7.814	2.11	1.945	9.349	2.53	2.388	11.158	3.02	2.900	13.205	3.58	3.515	15.559	4.24
59	2.116	9.759	3.43	2.593	11.635	4.13	3.139	13.819	4.95	3.787	16.344	5.92	4.538	19.210	7.05
41	2.627	11.567	4.99	3.173	13.751	6.01	3.856	16.310	7.22	4.606	19.279	8.66	-	-	-
Water flow	3.17 gpm			Sound pressure ^(b)		37.3 dB(A)									
Pressure drop	2.18 psi			Power Supply		230/1+N+PE/60									
Weight	332.9 lbs														
Evaporation Temperature [°F]															
UMT WG T 045 MTDX	Ambient Temperature [°F]	5		14		23		32		41		COP			
		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]					
		min	max	min	max	min	max	min	max	min	max				
	104	1.774	9.827	1.19	2.218	11.704	1.41	2.764	13.819	1.65	3.344	16.174	1.93	4.060	18.835
100.4	1.911	10.748	1.30	2.423	12.796	1.54	3.003	15.116	1.81	3.685	17.709	2.11	4.436	20.643	2.45
89.6	2.320	11.908	1.68	2.866	14.126	1.98	3.515	16.651	2.33	4.265	19.517	2.74	5.118	22.759	3.20
77	2.593	12.625	2.03	3.207	14.945	2.40	3.890	17.607	2.83	4.675	20.678	3.34	5.596	24.124	3.91
59	3.412	15.389	3.30	4.163	18.187	3.92	5.016	21.394	4.66	5.971	25.113	5.52	7.097	29.379	6.53
41	4.163	17.948	4.81	5.016	21.224	5.74	6.039	25.011	6.84	7.165	29.379	8.15	-	-	-
Water flow	4.76 gpm			Sound pressure ^(b)		37.3 dB(A)									
Pressure drop	2.90 psi			Power Supply		230/1+N+PE/60									
Weight	332.9 lbs														
Evaporation Temperature [°F]															
UMT WG T 067 MTDX	Ambient Temperature [°F]	5		14		23		32		41		COP			
		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]					
		min	max	min	max	min	max	min	max	min	max				
	104	2.423	13.034	1.08	3.071	15.832	1.29	3.856	18.937	1.52	4.709	22.486	1.80	5.732	26.478
100.4	2.627	14.263	1.18	3.378	17.300	1.41	4.197	20.746	1.67	5.186	24.636	1.97	6.278	29.037	2.31
89.6	3.139	16.105	1.52	3.958	19.415	1.81	4.982	23.203	2.16	5.971	27.502	2.56	7.200	32.381	3.02
77	3.515	17.368	1.84	4.368	20.848	2.20	5.357	24.840	2.62	6.517	29.413	3.12	7.848	34.599	3.69
59	4.709	21.667	2.99	5.767	25.898	3.59	6.995	30.743	4.31	8.428	36.339	5.15	10.066	42.720	6.14
41	5.835	25.693	4.34	7.097	30.607	5.23	8.530	36.305	6.29	9.725	41.014	6.77	-	-	-
Water flow	6.34 gpm			Sound pressure ^(b)		40.2 dB(A)									
Pressure drop	3.63 psi			Power Supply		230/1+N+PE/60									
Weight	335.1 lbs														
Evaporation Temperature [°F]															
UMT WG T 100 MTDX	Ambient Temperature [°F]	5		14		23		32		41		COP			
		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]		Capacity [kBtU/h]					
		min	max	min	max	min	max	min	max	min	max				
	104	3.992	19.927	1.10	5.016	23.987	1.29	6.210	28.525	1.51	7.575	33.678	1.76	9.076	39.444
100.4	4.368	21.804	1.20	5.494	26.205	1.41	6.790	31.221	1.65	8.292	36.885	1.93	9.963	43.232	2.23
89.6	5.152	24.465	1.55	6.415	29.276	1.83	7.848	34.736	2.15	9.486	40.980	2.51	11.397	48.043	2.92
77	5.732	26.239	1.89	7.029	31.255	2.23	8.564	37.022	2.62	10.339	43.641	3.07	12.352	51.114	3.59
59	7.507	32.347	3.11	9.145	38.421	3.69	11.021	45.416	4.37	13.205	53.502	5.16	15.696	62.715	6.09
41	9.179	38.045	4.60	11.089	45.143	5.48	13.307	53.298	6.52	15.901	62.783	7.75	-	-	-
Water flow	7.93 gpm			Sound pressure ^(b)		40.2 dB(A)									
Pressure drop	4.64 psi			Power Supply		460/3+N+PE/60									
Weight	335.1 lbs														

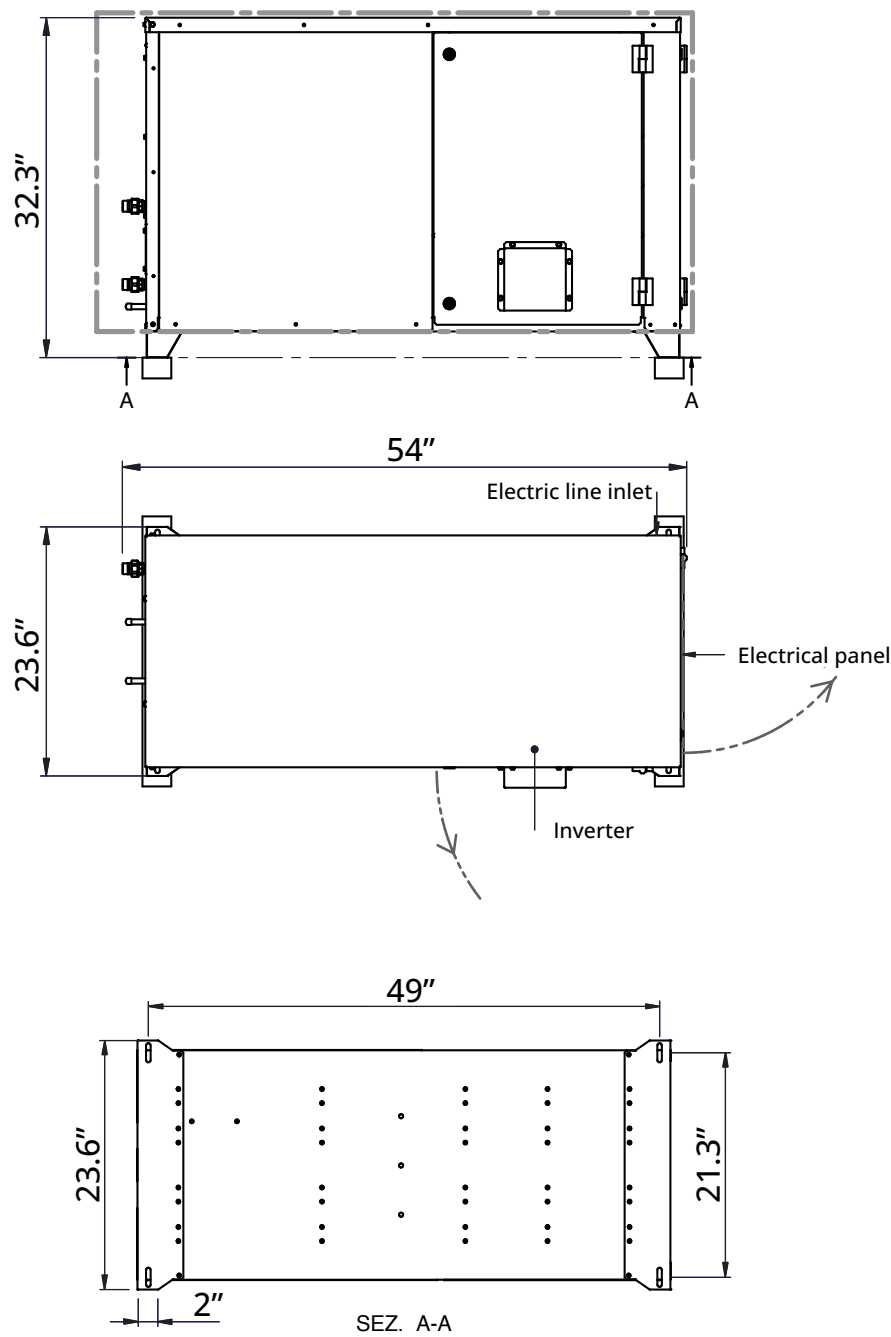
NOTES

(a) Interstage SST variable from 23 °F to 32 °F according to operating conditions. Inverter modulation from 25 - 100%, corresponding to 1500-6000 rpm

(b) Based on free field area weed semi-spherical sound emission in 32.8 ft distance; tolerance ± 2 dB(A)

(c) Minimum Energy Performance Standards, calculated according to Ecodesign Directive EN 2009/125/EC

Dimensional Data



[illegible]



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