

ENCASED OUTDOOR CONDENSING UNIT DUAL-COMPRESSORS

Corner shops
Supermarkets - Hypermarkets
Central kitchens



HFC

DUO CU MT/LT

MT  7 > 48 kW

R404A R134a R407F R407A R448A R449A R450A R513A

LT  6 > 15 kW

R404A R407F R448A R449A

- **Compact and low-noise**
- **Micro-channel technology:** 75% reduction in refrigerant volume
- **Two Scroll compressors**, one of which **Digital™**
- Available in fan versions **with** or **without available pressure** (indoor installation)
- **Multi-fluid:** R404A, R134a, R407F, R407A, R448A, R449A, R450A and R513A
- **Energy saving:** floating HP, heat recovery for MT models
- **Safety and reliability:**
 - Anti-corrosion treatment (according to the models)
 - Back-up operation with pressure control switch.
 - Electrical oil monitoring system.
- **Ready to install:** supplied with refrigeration and electrical systems complete
- **Easy maintenance:** total accessibility to components.



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REFRIGERATION

The DUO CU encased condensing units are comprised of 25 models and declined in fans with or without available pressure for medium temperature (MT) and low temperature (LT) applications.

DUO CU are compatible with the use of R404A, R134a, R407F, R407A, R448A, R449A, R450A, R513A for DUO CU MT and R404A, R407F, R448A, R449A for DUO CU LT

These units contain two Scroll compressors, one of which Digital™ providing modulation of the capacity from 10 to 100% suitable for multi-station cooling applications.

DESCRIPTION

Frame / Casing

- Thick and robust frame.
- The casing is made of painted sheet steel and Epoxy treated.
- The front and side panels may be easily removed.

Compressor

- Two Scroll compressors, one of which Digital™ (except DUO CU LT 26) enabling modulation of capacity.
- Shut-off valve on the suction and delivery sides, casing heater and rigid suspension elements.
- The compressors are equipped with a noise-insulating jacket.

Collectors

- Copper suction and delivery pipes.
- Filter on the suction side.

Oil line

- HP oil separator comprising an oil tank with high and low level indicators.
- HP oil return line with filter.
- Electrical oil monitoring system per compressor.

Condenser

- Coil with micro-channel technology (T1A / T1C - T3A / T3C - T4A / T4C) and Epoxy treated (T1A / T1C).
- Aluminium finned coil and copper tubes (T2A / T2C).
- Two axial or centrifugal condenser fans with speed controller or EC motors according to models.
- **Heat recovery system (only on DUO CU MT):**
 - Tapping with stand-by valves upstream of the condenser
 - Optional heat recovery module for production of ECS at 55°C or heating (contact us).
 - Regulation incorporated.

Liquid receiver

- Vertical receiver with a capacity of 18 or 45 l. and safety valve.
- Two inlet/outlet shut-off valves.
- Liquid outlet equipped with a dryer filter, an indicator and a liquid outlet valve.

Control and safety

- Complete electrical enclosure included.
- Electronic control with PLC and back-up operation with pressure switch
- Socalled "floating" HP regulator with exterior sensor.
- Idc 15kA
- Main isolator switch.
- Switch-over to back- up operation:
 - Automatic with LPE/HPE support pressure switches
 - Manual with a switch on the electrical enclosure door.
- 2 condenser fan protection outputs
- 4 cooling station outputs 2x10A

Monitoring devices

- 1 general LP safety pressure switch.
- 1 LPE support pressure switch (switch-over to back-up mode).
- 1 LP regulator pressure switch per compressor.
- 1 automatic-reset HP pressure switch per compressor.
- 1 HPE support pressure switch (switch-over to back-up mode).
- 1 HP and BP sensor.

DESIGNATION

DUO CU⁽¹⁾ MT⁽²⁾ 45⁽³⁾ A⁽⁴⁾

- (1) Condensing unit
- (2) **MT** = Medium Temperature range
LT = Low Temperature range
- (2) Model (compressor)
- (3) **A** = fans without available pressure
C = fans with available pressure

CERTIFICATIONS



ADVANTAGES

Installation

Unit ready to install, all components are factory pre-fitted.

Back-up operation with integrated pressure control switch.

Electrical elements supplied complete allowing rapid installation.

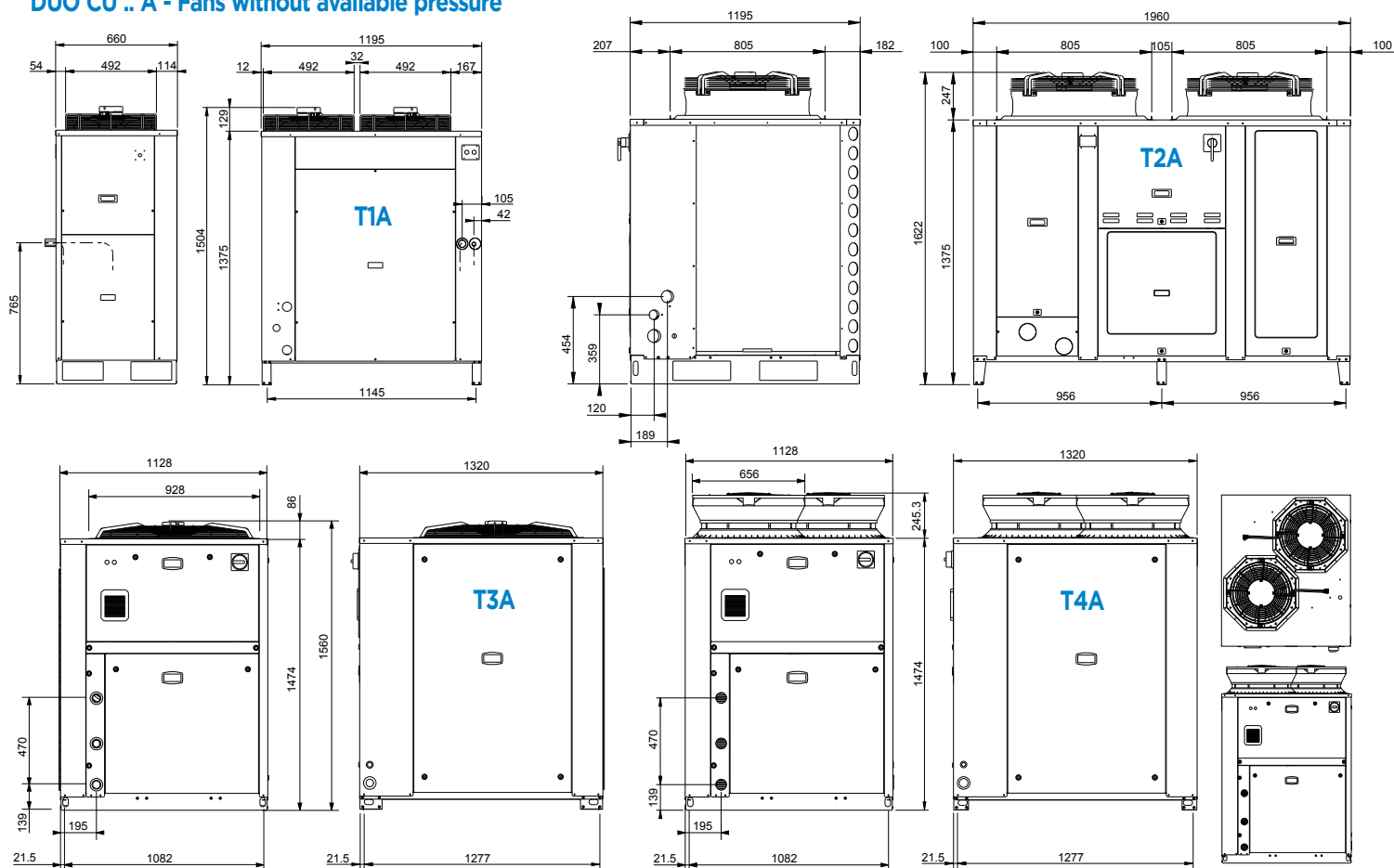
Regulator factory pre-set for multi-fluid use.

Maintenance

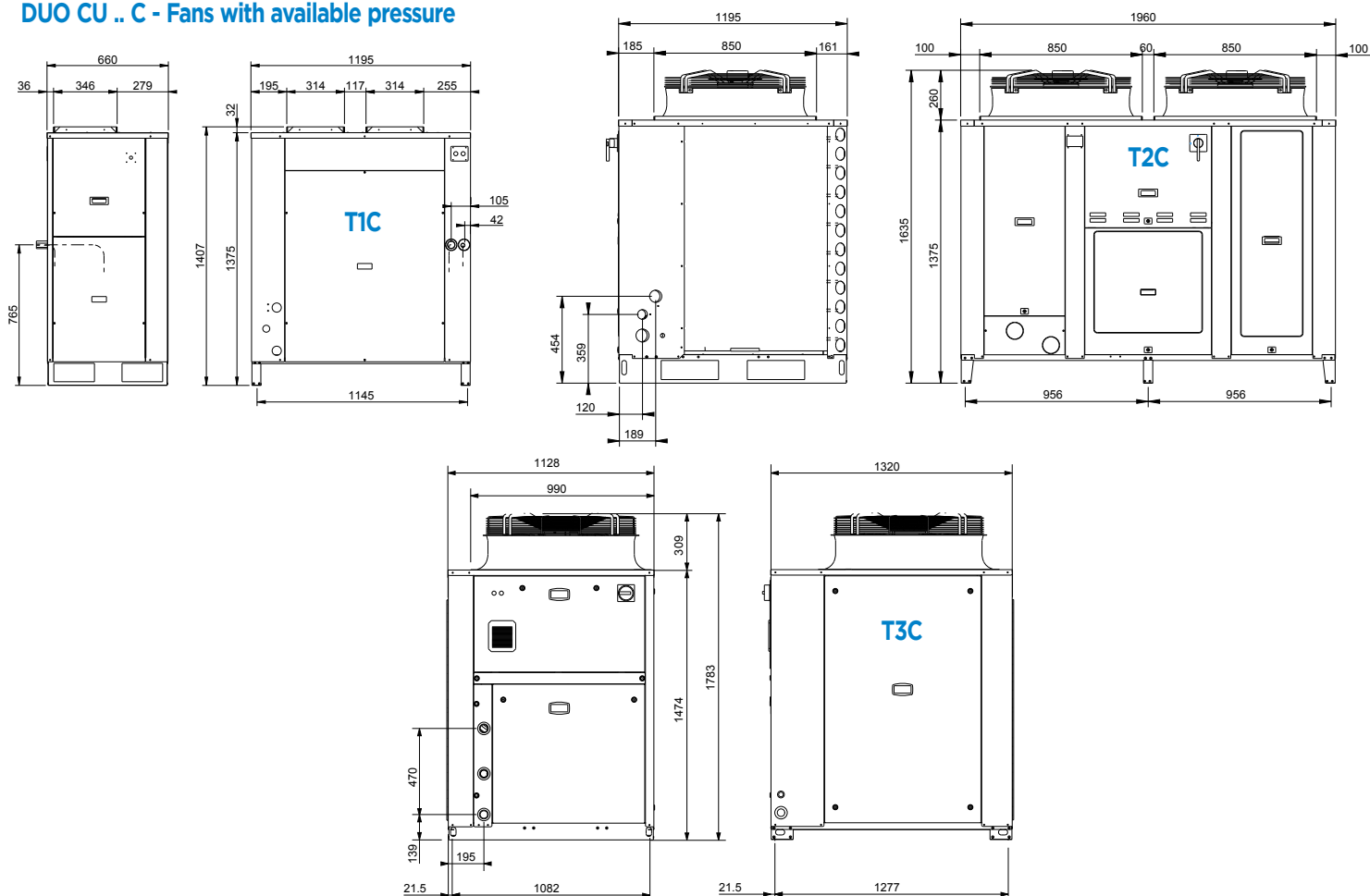
Total accessibility to main components.



DUO CU .. A - Fans without available pressure



DUO CU .. C - Fans with available pressure



DUO CU MT - Fans without available pressure - Multi refrigerant

Medium temperature range

-10°C/+32°C (1)		DUO CU MT ... A	29	45	57	76	114
Capacity (1)	R404A	kW	14,6	20,6	25,3	36,9	48,1
	R134a	kW	8,4	12,9	16,1	22,1	31,6
	R407F	kW	14,1	20,0	-	36,3	-
	R407A	kW	13,6	19,9	-	35,0	45,6*
	R448A	kW	13,3	19,9	25,0*	35,0	45,6*
	R449A	kW	13,6	19,9	24,8*	35,0	45,5*
	R450A	kW	7,5	-	13,8	-	-
	R513A	kW	9,0	13,6	16,7	23,2	31,6
Input power (1)	R404A	kW	6,4	9,8	12,7	17,4	28,0
	R134a	kW	3,8	5,6	7,7	10,2	15,2
	R407F	kW	6,8	10,0	-	17,7	-
	R407A	kW	6,2	9,4	-	16,7	26,1*
	R448A	kW	6,3	9,3	11,5*	16,6	27,9*
	R449A	kW	6,3	9,3	11,5*	16,6	27,9*
	R450A	kW	3,5	5,1	6,4	9,4	14,1
	R513A	kW	4,0	5,9	7,5	10,7	16,4
Compressor		Nb	2	2	2	2	2
Input current (1)		A max.	17,5	24,4	29,5	37,4	58,4
Fan	Typ		AC	AC	AC	AC	AC
	Nb x Ø	mm	2x 450	2x 450	2x 450	2x 710	2x 710
Acoustic	Lp 10m (2)	dB(A)	41	42	45	44	46
Air flow (max.)		m³/h	11500	11500	11500	26000	26000
Liquid capacity		l.	18	18	18	45	45
Connections	Suction	Ø	1"3/8	1"3/8	1"5/8	2"1/8	2"1/8
	Liquid	Ø	5/8"	5/8"	7/8"	7/8"	1"1/8
Casing	Size		T1A	T1A	T1A	T2A	T2A
Dimensions	LxPxH	mm	1195x660x1504	1195x660x1504	1195x660x1504	1960x1195x1635	1960x1195x1635
Net weight		kg	290	300	310	530	540
Maximal outdoor temperature : -10°C (R449A)		°C	+43°C	+40°C	+36°C	+41°C	+37°C
Coil (4)			()	()	()		

Use our software to get complete technical data

DUO CU MT - Fans with available pressure - Multi refrigerant

Medium temperature range

-10°C/+32°C (1)		DUO CU MT ... C	29	45	57	76	114
Capacity (1) 150 Pa (3)	R404A	kW	14,6	20,6	25,3	36,9	48,4
	R134a	kW	8,4	12,9	16,1	22,1	31,6
	R407F	kW	14,2	20,1	-	36,6	-
	R407A	kW	13,7	19,3	-	34,4	45,2*
	R448A	kW	13,7	20,0	25,0*	35,3	46,3*
	R449A	kW	13,7	20,0	25,0*	35,3	16,3*
	R450A	kW	7,5	11,4	13,8	19,5	26,3
	R513A	kW	9,0	13,6	16,8	23,2	31,7
Input power (1)	R404A	kW	7,8	11,0	13,9	20,6	31,2
	R134a	kW	4,6	6,7	9,1	13,1	18,1
	R407F	kW	8,2	11,4	-	21,1	-
	R407A	kW	7,7	10,9	-	20,1	29,3*
	R448A	kW	7,7	10,7	12,9*	20,0	31,0*
	R449A	kW	7,7	10,7	12,9*	20,0	31,0*
	R450A	kW	4,4	6,3	7,7	12,5	17,0
	R513A	kW	4,9	7,2	8,9	14,0	19,7
Compressor		Nb	2	2	2	2	2
Input current (1)		A max.	19,5	26,4	28,9	43,9	64,9
Fan	Typ		AC	AC	AC	AC	AC
	Nb x Ø	mm	2x 346x314	2x 346x314	2x 346x314	2x 630	2x 630
Acoustic	Lp 10m (2)	dB(A)	56	56	56	57	57
Air flow (max.)		m³/h	11900	11900	11900	28400	28400
Liquid capacity		l.	18	18	18	45	45
Connections	Suction	Ø	1"3/8	1"3/8	1"5/8	2"1/8	2"1/8
	Liquid	Ø	5/8"	5/8"	7/8"	7/8"	1"1/8
Casing	Size		T1C	T1C	T1C	T2C	T2C
Dimensions	LxPxH	mm	1195x660x1407	1195x660x1407	1195x660x1407	1960x1195x1622	1960x1195x1622
Net weight		kg	330	340	350	540	550
Maximal outdoor temperature : -10°C (R449A)		°C	+43°C	+40°C	+37°C	+42°C	+37°C
Coil (4)			()	()	()		

* New possibilities - Attention! Outdoor temperature limited to +34°C

(1) Evaporation temperature / Outdoor temperature - 10K total superheating and 3K subcooling.

(2) Sound pressure level in dB(A) measured at 10 m, line of sight, on a reflective parallelepiped measurement surface, given for information only.

(3) Additional pressure available in Pascals.

(4)  Aluminium finned coil and copper tubes  Coil with micro-channel technology () Coil with micro-channel technology and Epoxy treated

DUO CU LT - Fans without available pressure - R404A

Low temperature range

-35°C/+32°C (1)	DUO CU LT ... A	13	18	25
Capacity (1)	R404A kW	7,8	11,9	14,8
Input power (1)	R404A kW	6,4	9,0	10,8
Compressor	Nb	2	2	2
Input current (1)	A max.	19,6	25,2	29,2
Fan	Typ	AC	AC	AC
	Nb x Ø	2x 450	2x 450	2x 450
Acoustic	Lp 10m (2) dB(A)	42	44	46
Air flow (max.)	m³/h	11500	11500	11500
Liquid capacity	l.	18	18	18
Connections	Suction Ø	1"1/8	1"3/8	1"3/8
	Liquid Ø	1/2"	5/8"	5/8"
Casing	Size	T1A	T1A	T1A
Dimensions	LxPxH mm	1195x660x1504	1195x660x1504	1195x660x1504
Net weight	kg	290	300	310
Maximal outdoor temperature : -35°C (R449A)	°C	+43°C	+43°C	+40°C
Coil (4)		()	()	()

DUO CU LT - Fans without available pressure - Multi refrigerant

Low temperature range

-35°C/+32°C (1)	DUO CU LT ... A	13 1F	18 1F	25 1F	13 2F	18 2F	25 2F
Capacity (1)	R407F kW	6,9	10,1	13,1	6,8	10,1	13,1
	R448A kW	6,5	9,9	12,3	6,4	9,9	12,3
	R449A kW	6,5	9,8	12,3	6,4	9,8	12,3
Input power (1)	R407F kW	6,7	8,9	10,7	6,5	9,3	11,1
	R448A kW	6,4	8,1	9,1	5,8	8,6	9,5
	R449A kW	6,4	8,2	9,1	5,8	8,6	9,5
Compressor	Nb	2	2	2	2	2	2
Input current (1)	A max.	17,9	26,3	27,1	19,9	26,6	27,4
Fan	Typ	AC	AC	AC	AC	EC	EC
	Nb x Ø	1 x 800	1 x 800	1 x 800	2 x 450	2 x 500	2 x 500
Acoustic (R449A)	Lp 10m (2) dB(A)	46	45	46	43	56	53
Air flow (max.)	m³/h	20000	20000	20000	11500	19000	19000
Liquid capacity	l.	18	18	18	18	18	18
Connections	Suction Ø	1"1/8	1"3/8	1"3/8	1"1/8	1"3/8	1"3/8
	Liquid Ø	1/2"	5/8"	5/8"	1/2"	5/8"	5/8"
Casing	Size	T3A	T3A	T3A	T1A	T4A	T4A
Dimensions	LxPxH mm	1320x1128x1560	1320x1128x1560	1320x1128x1560	1195x660x1504	1320x1128x1965	1320x1128x1965
Net weight	kg	320	325	325	320	325	325
Maximal outdoor temperature : -35°C (R449A)	°C	+42°C	+40°C	+38°C	+37°C	+40°C	+38°C
Coil (4)		()	()	()	()	()	()

DUO CU LT - Fans with available pressure - Multi refrigerant

Low temperature range

-35°C/+32°C (1)	DUO CU LT ... C	18	25
Capacity (1)	R407F kW	10,1	13,1
150 Pa (3)	R448A kW	9,9	12,3
	R449A kW	9,8	12,3
Input power (1)	R407F kW	9,6	11,3
	R448A kW	8,8	9,6
	R449A kW	8,8	9,7
Compressor	Nb	2	2
Input current (1)	A max.	26,9	27,7
Fan	Typ	AC	AC
	Nb x Ø	1 x 800	1 x 800
Acoustic (R449A)	Lp 10m (2) dB(A)	46	47
Air flow (max.)	m³/h	19000	19000
Liquid capacity	l.	18	18
Connections	Suction Ø	1"3/8	1"3/8
	Liquid Ø	5/8"	5/8"
Casing	Size	T3C	T3C
Dimensions	LxPxH mm	1320x1128x1783	1320x1128x1783
Net weight	kg	325	325
Maximal outdoor temperature : -35°C (R449A)	°C	+40°C	+38°C
Coil (4)		()	()

(1) Evaporation temperature / Outdoor temperature - 10K total superheating and 3K subcooling.

(2) Sound pressure level in dB(A) measured at 10 m, line of sight, on a reflective parallelepiped measurement surface, given for information only.

(3) Additional pressure available in Pascals.

(4)  Aluminium finned coil and copper tubes  Coil with micro-channel technology () Coil with micro-channel technology and Epoxy treated

