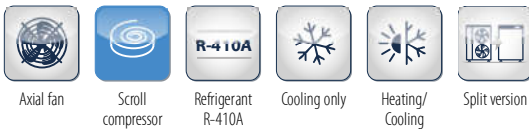


## Motor-driven condensing units MTE

Outdoor motor-driven condensing units

### MTE 5 - 205 kW



#### Efficiency and compactness for commercial air conditioning

MTE Air-cooled motocondensing packaged units are designed for outdoor installation in both residential and industrial applications.

The range uses R410A refrigerant, which assures high levels of performance with relatively low energy consumption and features 29 models in the chiller version, with cooling capacities ranging from 5 to 213 kW and 9 models in the heat pump version, with heating capacities ranging from 38 to 219 kW.

These units are employed in 2-section systems, which are normally connected to air evaporator coils in ducted air conditioning units.

Its extreme compactness facilitates the handling and installation of the units, even in situations with reduced installation space.

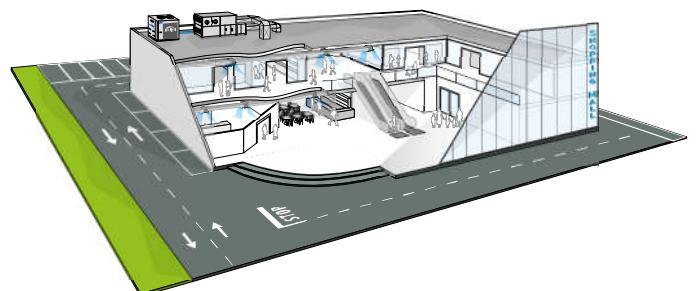
The equipment compartment is completely sealed and may be accessed on 3 sides thanks to easy-to-remove panels that greatly simplify maintenance and/or inspection. On request sound insulation makes it possible to further reduce the unit's noise emissions.

The cooling circuit is completely precharged with nitrogen. The liquid receiver (available as an optional accessory) compensates for variations in the load that occur in the system when the operating conditions change (day/night - summer/winter). Its use is also recommended for long sections of the circuit.

#### PLUS

- » Compact dimensions
- » Up to 4 compressors
- » 1 or 2 cooling circuits
- » Remote connectivity with the most common protocols
- » Available heating pump version on request

MTE condensing units are included in typical commercial applications where it is necessary to combine them with air evaporating units.



## MAIN COMPONENTS

### Structure

Painted galvanised sheet steel structure (RAL9002) for an effective resistance to corrosive agents. Fastening devices are made of non-oxidizable materials, or carbon steel that has undergone surface-passivating treatments.

### Fan drive assembly

Axial fans with airfoil blades made of plastic-aluminum composite, connected to an electric motor with external rotor. The condensation control system continuously and automatically regulates the fan speed.

### Compressor

Hermetic scroll type (rotary up to 7 kW), housed in a completely closed compartment that can be sound insulated. There is a heating element (standard feature) on the compressor's cover to counter oil dilution.

### Electric control board

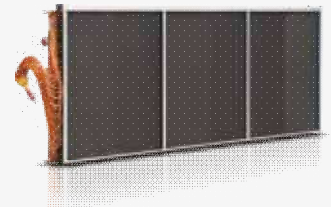
Electrical control panel with microprocessor controller accessible from the outside and low-voltage output for dry-contact thermostatic control of the unit, external disconnect switch, phase sequence control.

### Cooling circuit

- Dehydrating filter
- Flow indicator with humidity indicator
- High and low pressure switch
- Safety valve
- Shut-off valves on the liquid and gas line
- Nitrogen precharge under pressure
- Thermostatic valve, refrigerant pressure gauges, and liquid receiver as optional accessories

### Heat exchanger

Made of 8 mm diameter copper pipes and aluminium fins, generously sized. A protection grille is available as an accessory.



## CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11	12	13
MTE074COAA		0	2	S	0	C	1	1	M	0	0	G	1	1

To verify the compatibility of the options, use the selection software or the price list.

### AVAILABLE VERSIONS

#### Only cooling versions

**MTE..COAA** Power supply 400V-3N-50Hz  
**MTE..CMAA** Power supply 230V-1-50Hz

#### Heat pump versions

**MTE..HOAA** Power supply 400V-3N-50Hz

### CONFIGURATION OPTIONS

- |   |  |
|---|--|
| <p><b>1 Expansion valve</b></p> <ul style="list-style-type: none"> <li>0 Absent (not available for heat pump)</li> <li>A Electronic</li> <li>T Mechanical</li> </ul> <p><b>2 Liquid receiver</b></p> <ul style="list-style-type: none"> <li>0 Absent (not available for heat pump)</li> <li>2 Present with valve</li> </ul> <p><b>3 Refrigerant circuit accessories</b></p> <ul style="list-style-type: none"> <li>0 Absent (not available for heat pump)</li> <li>S Solenoid valve</li> </ul> <p><b>4 Partial heat recovery</b></p> <ul style="list-style-type: none"> <li>0 Absent</li> </ul> <p><b>5 Air flow modulation</b></p> <ul style="list-style-type: none"> <li>0 Absent</li> <li>C Condensation control by phase-cut fans (heat pump mandatory)</li> </ul> <p><b>6 Phase sequence switch</b></p> <ul style="list-style-type: none"> <li>0 Absent (not available for heat pump)</li> <li>1 Present (only 400 V - 3 N - 50 Hz)</li> </ul> <p><b>7 Acoustic insulation and attenuation</b></p> <ul style="list-style-type: none"> <li>0 Absent</li> <li>1 Compressor compartment acoustic insulation</li> <li>2 Compressor sound blanket</li> <li>3 Compressor compartment acoustic insulation and sound blanket</li> </ul> <p><b>8 Refrigerant pipework accessories</b></p> | <ul style="list-style-type: none"> <li>0 Absent</li> <li>M Refrigerant pressure gauges</li> </ul> <p><b>9 Remote control / Serial communication</b></p> <ul style="list-style-type: none"> <li>0 Absent</li> <li>2 RS485 serial board (Carel / Modbus protocol)</li> <li>S Remote simplified user panel</li> </ul> <p><b>10 Special coils / Protective treatments</b></p> <ul style="list-style-type: none"> <li>0 Standard</li> <li>B Pre-painted fins with polyester paint</li> <li>C Cataphoresis treatment on fins and coil carpentry</li> <li>I Hydrophilic</li> <li>R Copper-copper</li> </ul> <p><b>11 Outdoor finned coil heat exchanger protection</b></p> <ul style="list-style-type: none"> <li>0 Absent</li> <li>G Selected</li> </ul> <p><b>12 Compressors options</b></p> <ul style="list-style-type: none"> <li>0 Absent (not available for heat pump)</li> <li>1 Outdoor coil trace heater (heat pump)</li> <li>2 Soft starter</li> <li>3 Power factor capacitors</li> <li>4 Power factor capacitors + soft starter</li> <li>5 Outdoor coil trace heater (heat pump) + Rephasing capacitors</li> </ul> <p><b>13 Onboard controller</b></p> <ul style="list-style-type: none"> <li>1 Basic</li> </ul> |
|---|--|

## ACCESSORIES

<b>A</b>	Rubber anti vibration shock mounts	<b>C</b>	Mechanical and unidirectional remote valve KIT
<b>B</b>	Spring anti vibration shock mounts		

# Motor-driven condensing units MTE

## RATED TECHNICAL DATA MOTOR-DRIVEN CONDENSING UNIT MTE C

MTE C			005M	007M	009	009M	010	010M	012	013
Power supply		V-ph-Hz	230 - 1 - 50	230 - 1 - 50	400 - 3N - 50	230 - 1 - 50	400 - 3N - 50	230 - 1 - 50	400 - 3N - 50	400 - 3N - 50
Cooling capacity	(1)	kW	5,40	7,16	9,04	8,84	9,66	9,66	12,5	13,7
Total power input	(1)	kW	1,71	2,24	2,90	3,59	3,27	3,27	4,24	4,31
EER	(1)		3,16	3,19	3,12	2,46	2,95	2,95	2,95	3,18
Maximum current absorption		A	12,0	16,0	7,00	20,0	9,00	23,0	11,0	11,0
Start up current		A	57	57	40	57	43	87	57	57
Compressors / circuits			1 / 1							
Sound power level	(2)	dB(A)	67	67	67	67	69	69	69	70
Transport / operating weight		kg	72	85	94	94	165	165	168	170

MTE C			015	018	021	024	029	033	038	042
Power supply		V-ph-Hz	400 - 3N - 50							
Cooling capacity	(1)	kW	15,6	18,5	21,0	24,7	28,7	32,4	37,9	42,6
Total power input	(1)	kW	5,36	6,59	7,40	8,28	10,1	11,7	12,2	13,3
EER	(1)		2,90	2,80	2,83	2,98	2,83	2,77	3,10	3,21
Maximum current absorption		A	12,0	17,0	18,0	20,0	28,0	31,0	34,0	36,0
Start up current		A	59	66	92	92	117	147	142	144
Compressors / circuits			1 / 1							
Sound power level	(2)	dB(A)	70	77	77	77	80	80	80	82
Transport / operating weight		kg	170	175	190	204	230	239	259	360

MTE C			053	059	066	074	082	096	108	129
Power supply		V-ph-Hz	400 - 3N - 50							
Cooling capacity	(1)	kW	53,6	59,1	67,0	74,6	82,3	98,4	110	130
Total power input	(1)	kW	15,9	17,9	20,9	23,3	27,0	32,2	38,3	39,5
EER	(1)		3,36	3,30	3,21	3,20	3,04	3,05	2,88	3,29
Maximum current absorption		A	46,0	49,0	56,0	61,0	69,0	81,0	90,0	103
Start up current		A	196	202	218	237	262	295	339	363
Compressors / circuits			2 / 1							
Sound power level	(2)	dB(A)	76	76	76	77	80	82	82	82
Transport / operating weight		kg	525	530	540	545	650	700	700	700

MTE C			142	163	169	193	214
Power supply		V-ph-Hz	400 - 3N - 50				
Cooling capacity	(1)	kW	140	166	166	191	213
Total power input	(1)	kW	44,0	57,1	55,9	67,9	81,1
EER	(1)		3,19	2,90	2,97	2,81	2,63
Maximum current absorption		A	112	136	137	155	174
Start up current		A	379	467	349	416	450
Compressors / circuits			2 / 1	2 / 1	4 / 2	4 / 2	4 / 2
Sound power level	(2)	dB(A)	82	83	83	84	84
Transport / operating weight		kg	910	970	1180	1260	1320

(1) Outdoor air temperature 35°C, evaporation temperature 5°

(2) Sound power level measured according to ISO 9614

**RATED TECHNICAL DATA MOTOR-DRIVEN CONDENSING UNIT MTE H**

MTE H		038	053	074	096	108	129	142	163	214
Power supply		400-3N-50								
Cooling capacity	(1) kW	36,0	49,9	68,8	90,6	100	118	129	155	203
Total power input	(1) kW	12,6	16,1	24,6	33,4	40,0	41,4	45,2	60,3	80,2
EER	(1)	2,86	3,09	2,80	2,71	2,50	2,86	2,85	2,58	2,53
Heating capacity	(2) kW	37,4	50,3	70,8	93,3	106	120	132	161	219
Total power input	(2) kW	11,9	15,7	21,9	29,4	33,5	37,3	40,4	51,0	68,3
COP	(2)	3,14	3,20	3,23	3,17	3,15	3,23	3,27	3,15	3,20
Maximum current absorption	A	34,0	45,0	59,0	79,0	88,0	100	107	133	165
Start up current	A	150	153	175	233	242	287	294	361	321
Compressors / circuits		1/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	4/2
Sound power level	(3) dB(A)	77	77	78	81	81	82	82	85	84
Transport / operating weight	kg	319	536	549	714	714	906	939	988	1370

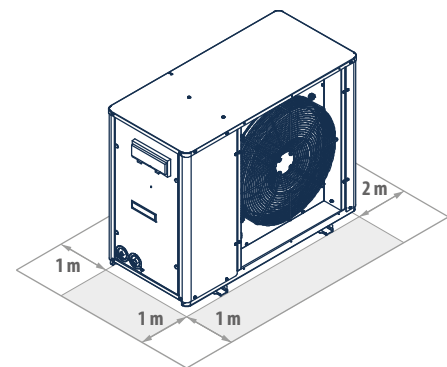
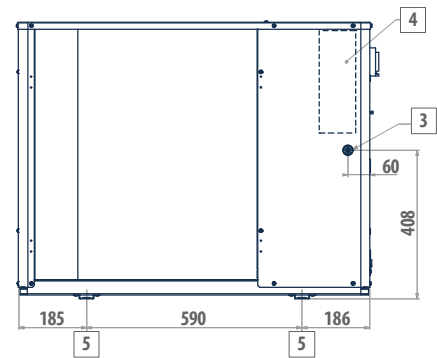
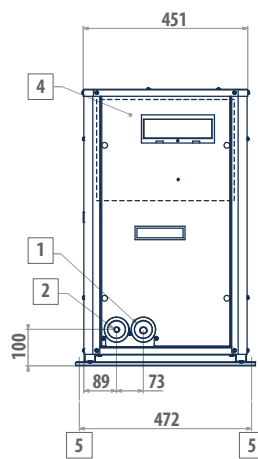
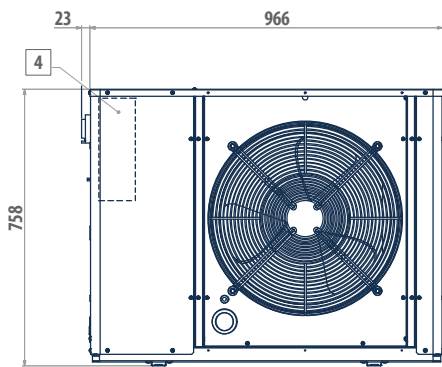
- (1) Outdoor air temperature 35°C, evaporation temperature 5°
- (2) Outdoor air temperature 7°C dry bulb / 6°C wet bulb, condensation temperature 45°C
- (3) Sound power level measured according to ISO 9614

Note: for other heat pump models contact the manufacturer.

# Motor-driven condensing units MTE

## DIMENSIONAL DRAWINGS

MTE 05 - 09

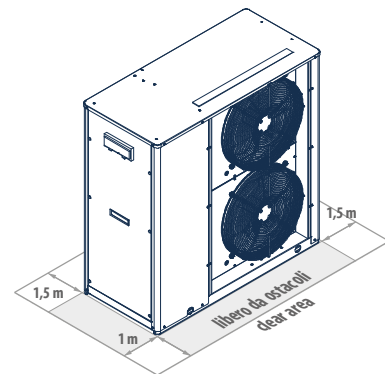
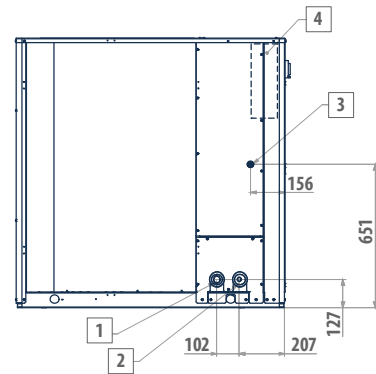
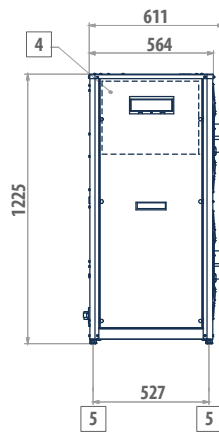
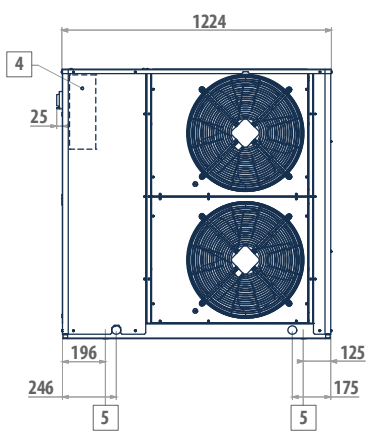


### LEGEND

- |   |  |
|---|--|
| 1 | Gas inlet $\varnothing$ 12 MTE 5; $\varnothing$ 16 MTE 07-09 |
| 2 | Liquid outlet $\varnothing$ 12                               |
| 3 | Power supply $\varnothing$ 37                                |
| 4 | Electric control board                                       |
| 5 | Vibration dumpers  |

DIMENSIONAL DRAWINGS

MTE 10 - 24



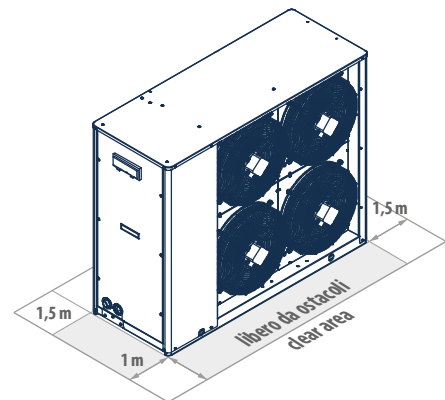
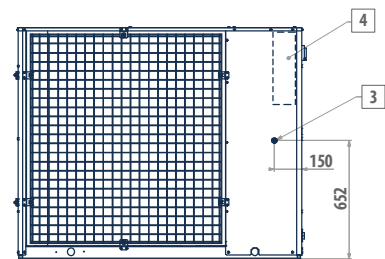
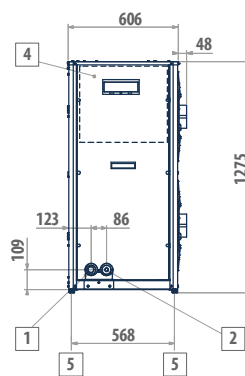
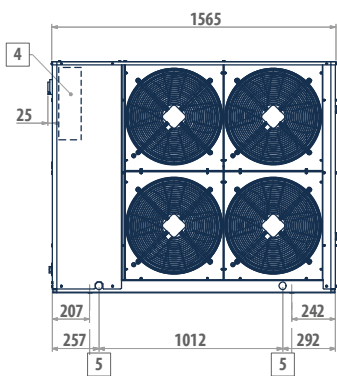
LEGEND

- |   |  |
|---|--|
| 1 | Gas inlet $\varnothing$ 22 MTE 10-18; $\varnothing$ 28 mm MTE 21-24  |
| 2 | Liquid outlet $\varnothing$ 12 MTE 10-18; $\varnothing$ 16 MTE 21-24 |
| 3 | Power supply $\varnothing$ 37  |
| 4 | Electric control board   |
| 5 | Vibration dumpers  |

# Motor-driven condensing units MTE

## DIMENSIONAL DRAWINGS

MTE C 29 - 38 MTE H 38

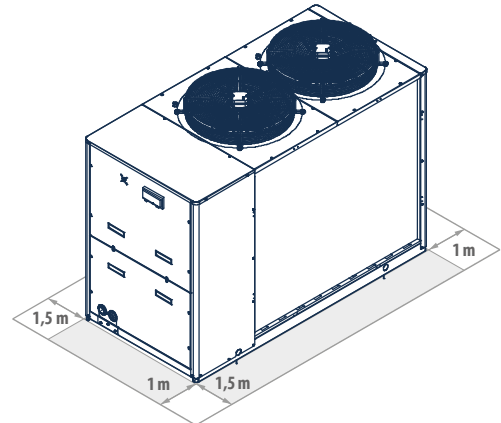
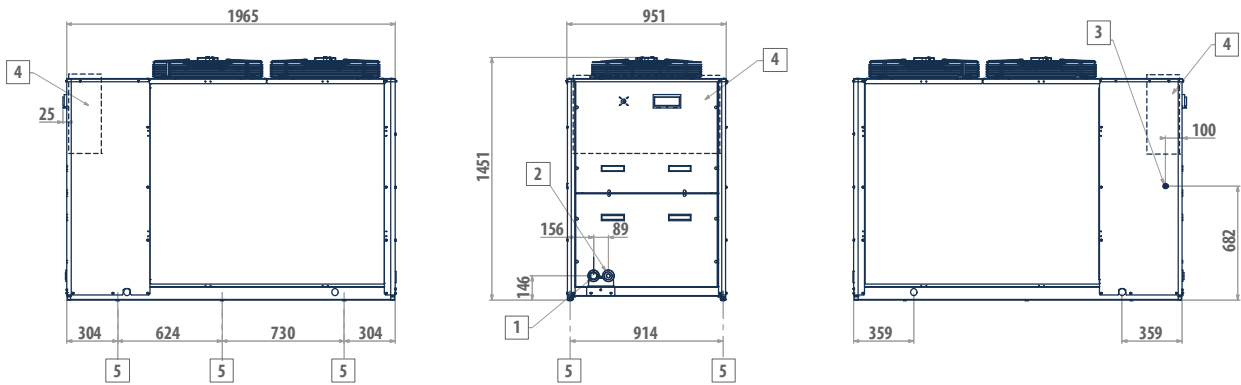


### LEGEND

- |   |   |
|---|---|
| 1 | MTE C. gas inlet $\varnothing$ 35; MTE H gas inlet $\varnothing$ 22 |
| 2 | Liquid outlet $\varnothing$ 16                                      |
| 3 | Power supply $\varnothing$ 37                                       |
| 4 | Electric control board  |
| 5 | Vibration dumpers   |

DIMENSIONAL DRAWINGS

MTE 42



**LEGEND**

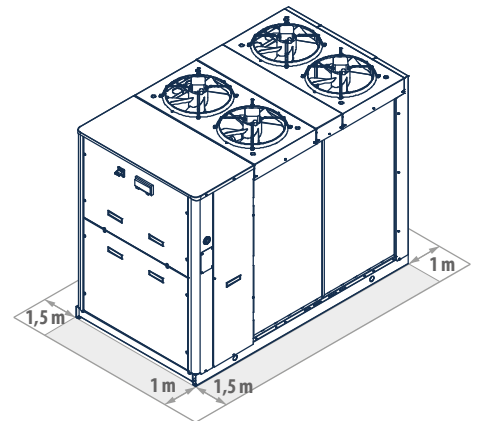
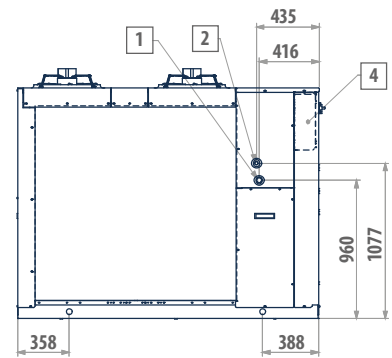
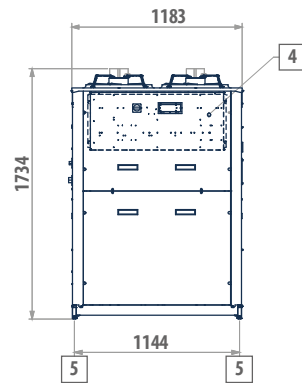
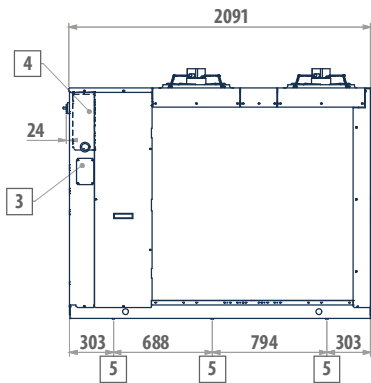
- |   |                                |
|---|--------------------------------|
| 1 | Gas inlet $\varnothing$ 42     |
| 2 | Liquid outlet $\varnothing$ 22 |
| 3 | Power supply $\varnothing$ 37  |
| 4 | Electric control board         |
| 5 | Vibration dumpers              |



# Motor-driven condensing units MTE

## DIMENSIONAL DRAWINGS

MTE C 53 - 82 MTE H 53-74

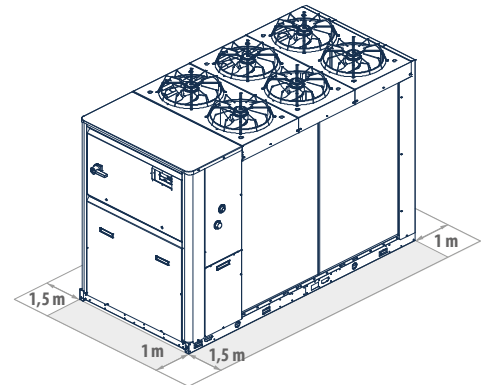
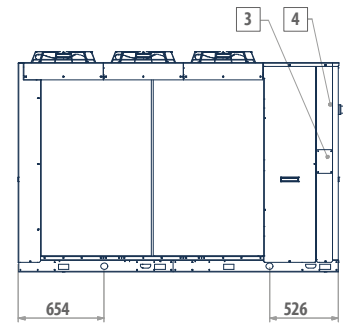
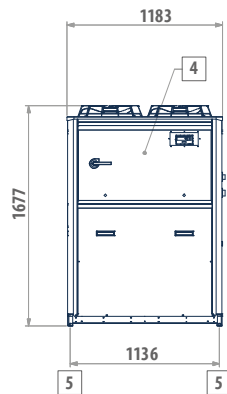
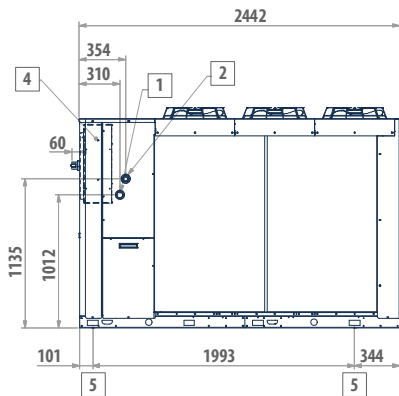


### LEGEND

1	MTE C. gas inlet $\varnothing$ 35; MTE H gas inlet $\varnothing$ 22
2	Liquid outlet $\varnothing$ 22
3	Power supply
4	Electric control board
5	Vibration dumpers

DIMENSIONAL DRAWINGS

MTE 96-108



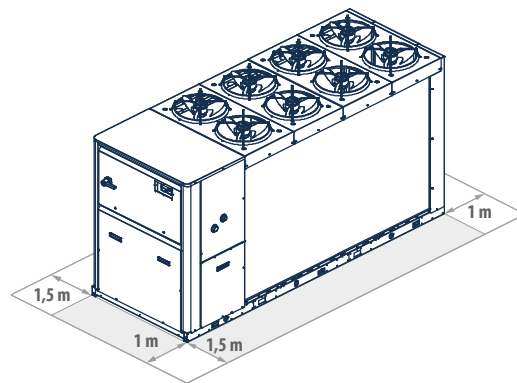
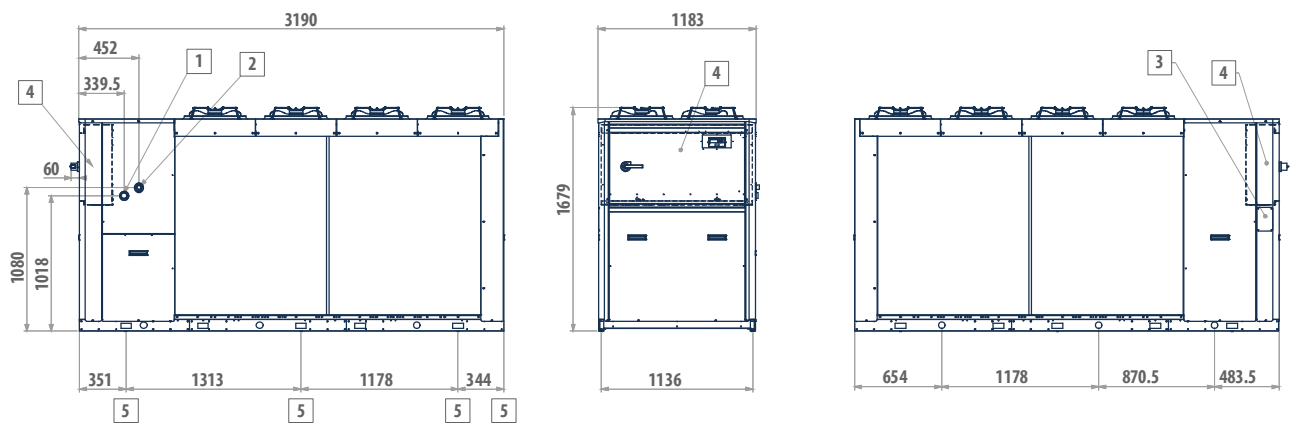
**LEGEND**

1	MTE C: inlet gas Ø 45; MTE H 96: inlet gas Ø 28; MTE H 108: inlet gas Ø 35
2	MTE C: Liquid outlet Ø 28; MTE H: Liquid outlet Ø 22
3	Power supply
4	Electric control board
5	Vibration dampers

# Motor-driven condensing units MTE

## DIMENSIONAL DRAWINGS

### MTE 129 - 163

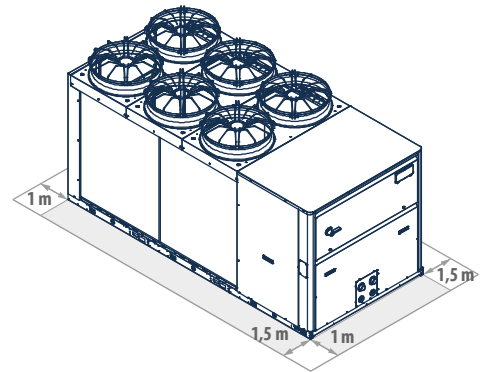
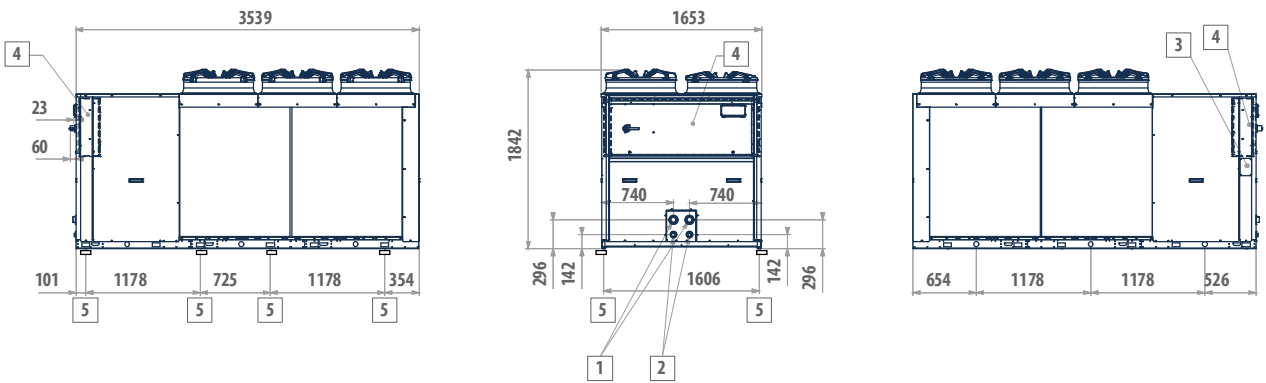


#### LEGEND

- |   |   |
|---|---|
| 1 | MTE C and MTE H 163: gas inlet $\varnothing$ 42; MTE H 129 gas inlet $\varnothing$ 35 |
| 2 | Liquid outlet $\varnothing$ 28  |
| 3 | Power supply  |
| 4 | Electric control board  |
| 5 | Vibration dumpers   |

DIMENSIONAL DRAWINGS

MTE C 169 - 214 MTE H 214



**LEGEND**

1	MTE C: gas inlet Ø 54; MTE H: gas inlet Ø 35
2	MTE C: Liquid outlet ø 28; MTE H: Liquid outlet Ø 22
3	Power supply
4	Electric control board
5	Vibration dumpers