

# INVISAIR DX-TO | Heat Pump Energy Saving Air Curtains For TOSHIBA Outdoor Units (1:1)



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> emissions (heating mode).
- Specially designed for applications where the body of the air curtain is to be installed inside a column or bulkhead for architectural reasons. It can be vertically or horizontally mounted.
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- The air flow of Invisair follows a straight line from the air inlet grille to the discharge. Inlet area inside a bulkhead or column should be designed with suitable grille provided by others.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires TOSHIBA DX Interface KIT adapted for air curtain and programmable control, please consult.
- Ready to connect to TOSHIBA Inverter outdoor heat pump unit (R410A / R32) with expansion valve, not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Outdoor Unit (*)		Power	Current	Noise	Weight kg
		230Vx1	400Vx3	Fan 230V-50Hz kW	Fan 230V-50Hz A	Level (5 m) dB(A)	
IECG 1500 DX13-TO	2920	RAV SM1404ATP-E	RAV SP1404AT8-E	0,284	2,48	62	69
IECG 1500 DX15-TO	2920	RAV-SM1603AT-E	RAV-SP1604AT8-E	0,284	2,48	62	69
IECG 2000 DX22-TO	4380	-	RAV-SM2244AT8-E	0,426	3,72	63	89
IECG 2000 DX24-TO	4380	-	RAV-SM2804AT8-E	0,426	3,72	63	89
IECG 2500 DX22-TO	5110	-	RAV-SM2244AT8-E	0,497	4,34	64	94
IECG 2500 DX27-TO	5110	-	RAV-SM2804AT8-E	0,497	4,34	64	94

(\*) Includes direct expansion valve.

TOSHIBA Inverter Outdoor Units	Heating Capacity kW	Heating Power kW	SCOP or COP	Cooling Capacity kW	Cooling Power kW	SEER or EER	Power Supply	Pipes Gas Liquid inch	Pipes Minimum Length m	Pipes Maximum Length m	Pipes Maximum Height m
R410A (*)											
RAV SM1404ATP-E	14,0	3,80	3,68	12,0	3,74	3,21	230Vx1	5/8 3/8	5	50	30
RAV SP1404AT8-E	14,0	3,42	4,09	12,5	3,46	3,61	400Vx3	5/8 3/8	3	75	30
RAV-SM1603AT-E	16,0	4,43	3,61	14,0	4,49	3,12	230Vx1	5/8 3/8	5	50	30
RAV-SP1604AT8-E	16,0	4,30	3,72	14,0	4,49	3,12	400Vx3	5/8 3/8	3	75	30
RAV-SM2244AT8-E	22,4	6,49	3,45	20,0	7,20	2,78	400Vx3	1"1/8 1/2"	7,5	70	30
RAV-SM2804AT8-E	27,0	8,15	3,31	23,0	8,75	2,63	400Vx3	1"1/8 1/2"	7,5	70	30

Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.

Outdoor unit capacities depending on standard conditions: heating 20°CDB indoor / 7°CDB and 6°CWB outdoor, cooling 27°CDB and 19°CWB indoor / 35°CDB outdoor.

When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.

(\*) Also compatible with outdoor units with R32 gas: RAV-GM1101ATJP-E, RAV-GM1101AT8JP-E, RAV-GM1401ATJP-E, RAV-GM1401AT8JP-E

# INVISAIR VRF-TO | Heat Pump Energy Saving Air Curtains For TOSHIBA Outdoor Units (VRF)



## Characteristics



- Energy saving heat pump air curtains: Up to 70% reduction in costs and CO<sub>2</sub> emissions (heating mode).
- Specially designed for applications where the body of the air curtain is to be installed inside a column or bulkhead for architectural reasons. It can be vertically or horizontally mounted.
- Self-supporting casing construction made of galvanized steel plate, finished in structural epoxy-polyester painting white colour RAL9016 as standard. Other colours or stainless steel are available on request.
- The air flow of Invisair follows a straight line from the air inlet grille to the to the discharge. Inlet area inside a bulkhead or column should be designed with suitable grille provided by others.
- Anodized aluminium outlet vanes, airfoil shaped, adjustable from 0 to 15° each side.
- EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficiency fans.
- Includes direct expansion coil with sensors. Optional condensate water pump.
- CS-5DX-NE Plug&Play control with 5 speeds and telephone cable 7m included.
- Requires TOSHIBA VRF Interface KIT adapted for air curtain, programmable control and expansion valve, please consult.
- Ready to connect to TOSHIBA VRF outdoor heat pump unit (R410A), not included, the customer should purchase it.

## Specifications

Model	Airflow m <sup>3</sup> /h	Toshiba Direct Expansion Valve	Power Fan 230V-50Hz kW	Current Fan 230V-50Hz A	Noise Level (5 m) dB(A)	Weight kg
IECG 1500 VRF13-TO	2920	MMDXV140	0,284	2,48	62	69
IECG 1500 VRF15-TO	2920	MMDXV140	0,284	2,48	62	69
IECG 2000 VRF20-TO	4380	MMDXV280	0,426	3,72	63	89
IECG 2000 VRF24-TO	4380	MMDXV280	0,426	3,72	63	89
IECG 2500 VRF25-TO	5110	MMDXV280	0,497	4,34	64	94
IECG 2500 VRF29-TO	5110	MMDXV280	0,497	4,34	64	94

### TOSHIBA VRF Outdoor Units

Mini, Mini SMMSe, SMMSe (Heat Pump)

SHRMe (Heat Recovery)

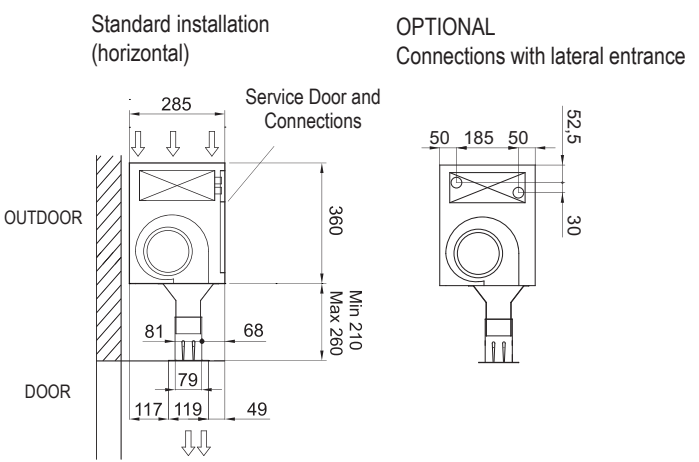
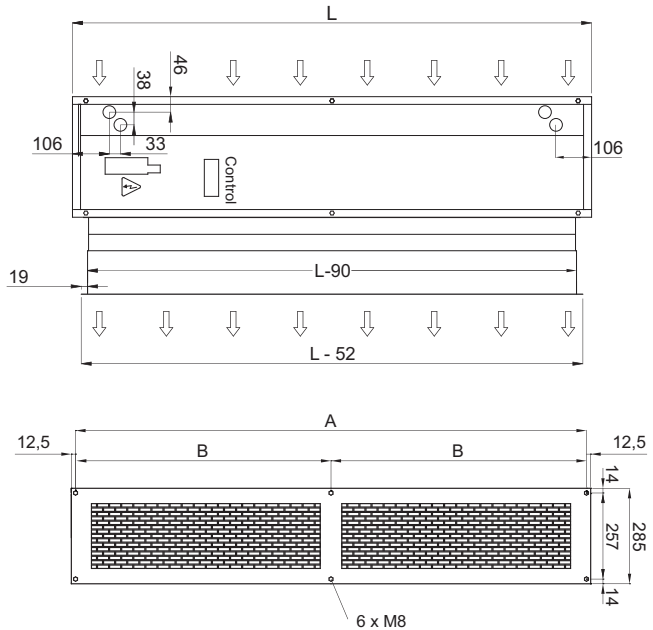


When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.

# INVISAIR DX/VRF-TO | Heat Pump Energy Saving Air Curtains For TOSHIBA Outdoor Units (1:1/VRF)



## Layouts and dimensions



Invisair	L	A	B
1500	1550	1525	762,5
2000	2055	2030	1015
2500	2555	2530	1265

## Installation example

