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_2 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.
- 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 15º 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 (R32) with expansion valve, not included, the customer should purchase it.

Specifications

Model	Airflow	Outdoor Unit (*)	Outdoor Unit (*)	Power Fan 230V-50Hz	Current Fan 230V-50Hz	Noise Level (5 m)	Weight
	m^3/h	230Vx1	400Vx3	kW	A	dB(A)	kg
IECG 1500 DX13-TO	2920	RAV-GM1401ATJP-E	RAV-GM1401AT8JP-E	0,284	2,48	62	69
IECG 1500 DX15-TO	2920	RAV-GM1601ATP-E	RAV-GM1601AT8JP-E	0,284	2,48	62	69
IECG 2000 DX22-TO	4380	-	RAV-GM2201AT8-E	0,426	3,72	63	89
IECG 2000 DX24-TO	4380	-	RAV-GM2801AT8-E	0,426	3,72	63	89
IECG 2500 DX22-TO	5110	-	RAV-GM2201AT8-E	0,497	4,34	64	94
IECG 2500 DX27-TO	5110	-	RAV-GM2801AT8-E	0,497	4,34	64	94

(*) Includes direct expansion valve.

TOSHIBA Inverter Outdoor Units	Heating Capacity	Heating Power	SCOP or COP	Cooling Capacity	Cooling Power	SEER or EER	Power Supply	Pipes Gas	Pipes Liquid	Pipes Minimum Length	Pipes Maximum Length	Pipes Maximum Height
R32	kW	kW		kW	kW			inch		m	m	m
RAV-GM1401ATP-E	13,0	3,60	3,61	12,1	4,42	2,74	230Vx1	5/8"	3/8"	5	50	30
RAV-GM1401AT8JP-E	13,0	3,60	3,61	12,1	4,42	2,74	400Vx3	5/8"	3/8"	5	50	30
RAV-GM1601ATP-E	16,0	4,57	3,50	14,0	4,49	3,12	230Vx1	5/8"	3/8"	5	50	30
RAV-GM1601AT8JP-E	16,0	4,57	3,50	14,0	4,49	3,12	400Vx3	5/8"	3/8"	5	50	30
RAV-GM2201AT8-E	22,4	5,71	3,92	19,0	5,86	3,24	400Vx3	1"1/8	1/2"	5	60	30
RAV-GM2801AT8-E	27,0	7,52	3,59	22,5	7,98	2,82	400Vx3	1"1/8	1/2"	5	60	30

Energy efficiency: SCOP/SEER seasonal ≤12kW, COP/EER >12kW.
Outdoor unit capacities depending on standard conditions: heating 20ºCDB indoor / 7ºCDB and 6ºCWB outdoor, cooling 27ºCDB and 19ºCWB indoor / 35ºCDB outdoor.
When adverse weather conditions, the outdoor unit capacity can decrease. It is recommendable to oversize the units.

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_2 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.
- 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 15º 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	Toshiba Direct Expansion Valve	Power Fan 230V-50Hz	Current Fan 230V-50Hz	Noise Level (5 m)	Weight
	m^3/h		kW	A	dB(A)	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

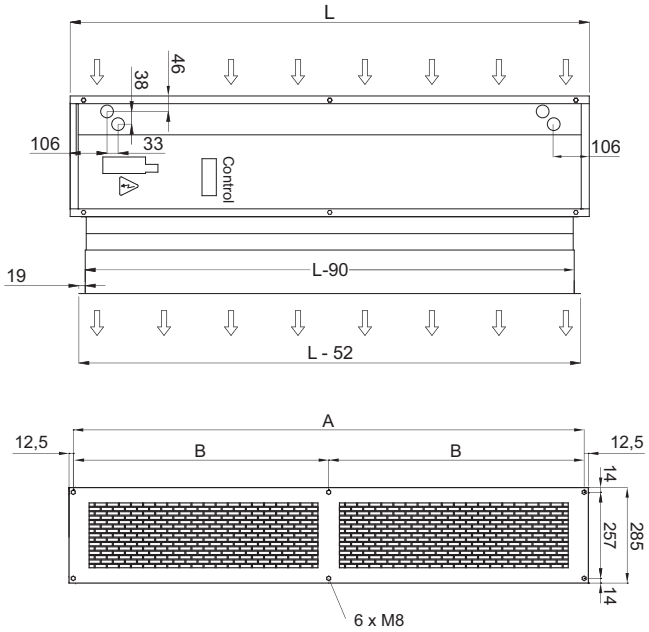
TOSHIBA VRF Outdoor Units

Mini, Mini SMMSe, SMMSe (Heat Pump)

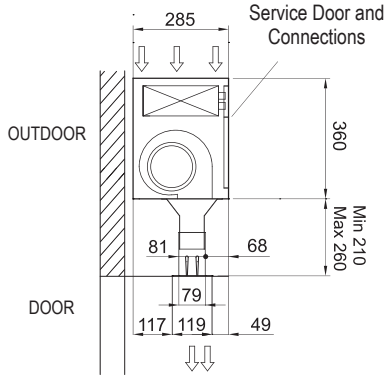
SHRMe (Heat Recovery)

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

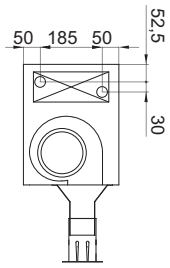
Layouts and dimensions



Standard installation (horizontal)



OPTIONAL
Connections with lateral entrance



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

Installation example