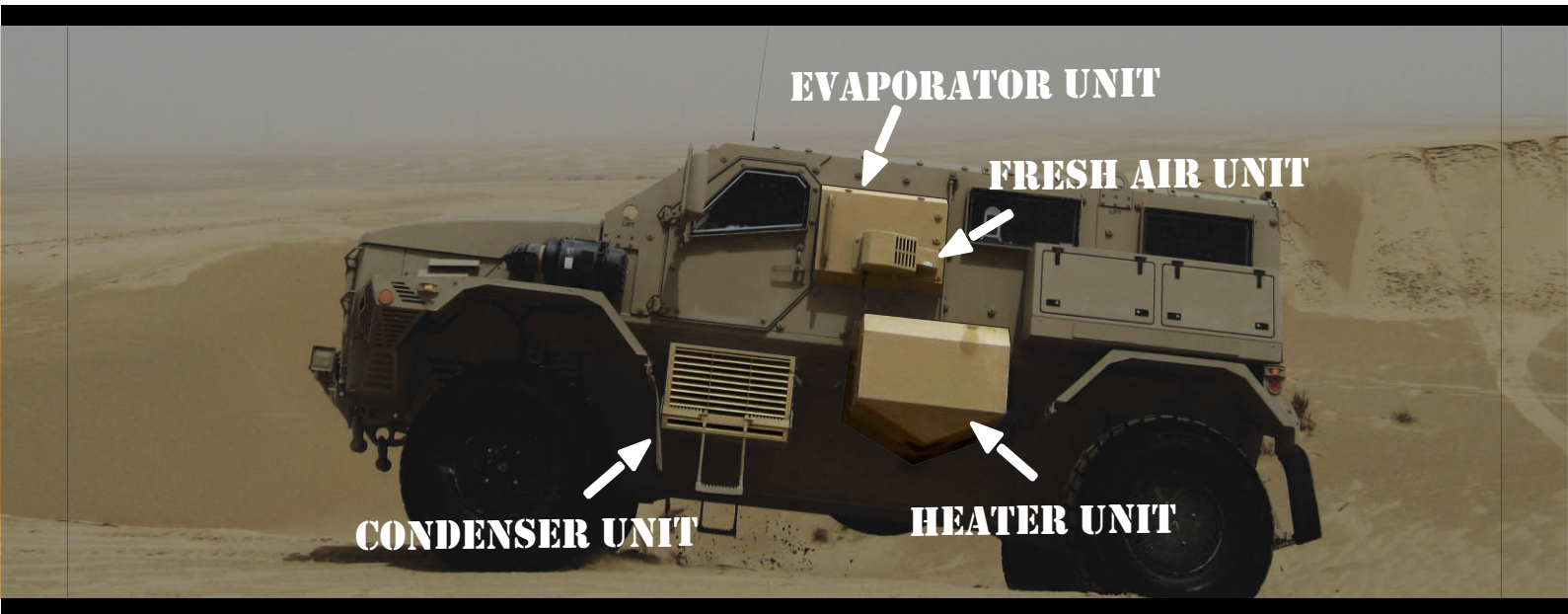


## HVAC

Air-conditioning, Heating, Ventilation and Filtration



# Air-conditioning, Heating, Ventilation and Filtration

- **SYSTEM CONFIGURATIONS:** MODULAR BOLT ON SYSTEMS; ROOF TOP SYSTEMS; INTEGRATED SYSTEMS
- **COOLING CAPACITY:** 3-5kW; 5-7kW; 8-10kW,12-18kW
- **HEATING:** ELECTRICAL; DIESEL; WATER
- **POWER INPUTS:** 12VDC; 24VDC; HYDRAULIC POWER
- **FILTRATION:** DUST; RIOT & NBC
- **OPTIONAL:** OVER PRESSURE; CLIMATE CONTROL SYSTEMS; VEHICLE INTEGRATED COMMS & CANBUS





## MSDI8 DUAL

16kW Dual evaporator integrated Airconditioning system.

## MSDI8 DUAL

The MDI8 DUAL is a 16kW dual evaporator air conditioning unit. The evaporators are purposely designed to be an universal coil that can be mounted in multiple positions inside a military vehicle.

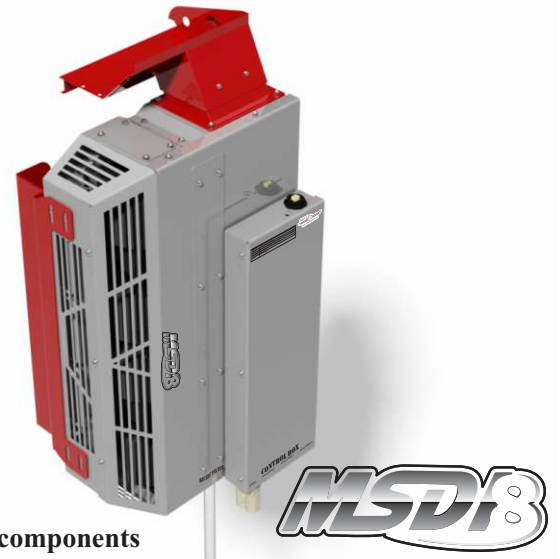
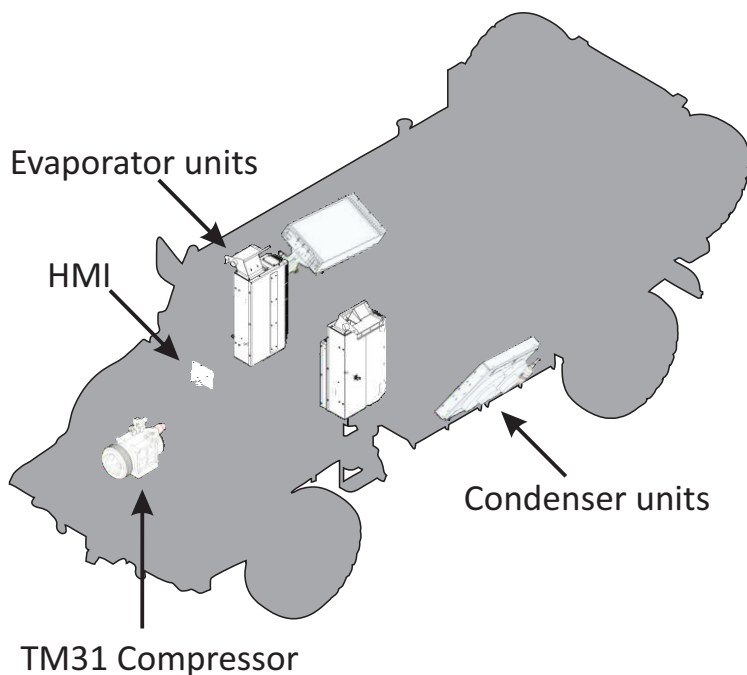
The ducting interface is custom designed to suit the vehicle specific duct layout.

Mounting brackets are custom designed to fit the required interface.

Each evaporator unit contains two (2) double scroll blowers.

Electrical Control box can be mounted on either Evaporator Enclosure or as a freestanding unit.

A choice of two configurations is available with this air-conditioning system: A single unit 8kW (MSDI8) or a dual unit 16kW (MSDI8 DUAL).



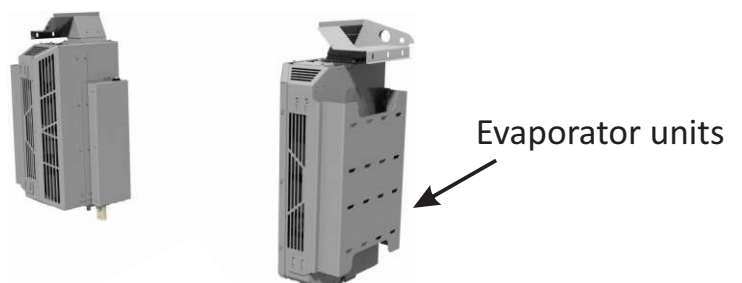
■ Custom components

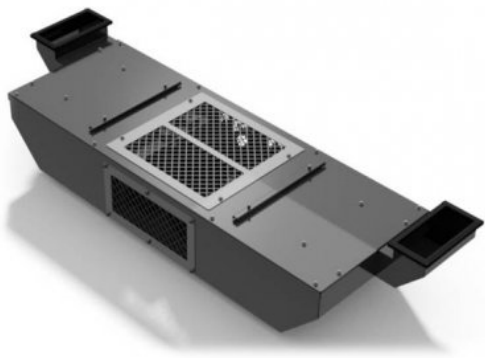
### Properties

Capacity (Single unit):	8kW
Capacity (Dual unit):	16kW
Max Input current (@28V):	80A (Dual)
Refrigerant:	R134A
Max ambient:	Up to 55°C
Fresh air supply (Optional):	Externally mounted unit

### Size HxWxD

External Condenser :	775x420x190
Evaporator :	480x210x900





## MSI 11

12kW Under seat Airconditioning system

## MSI 11

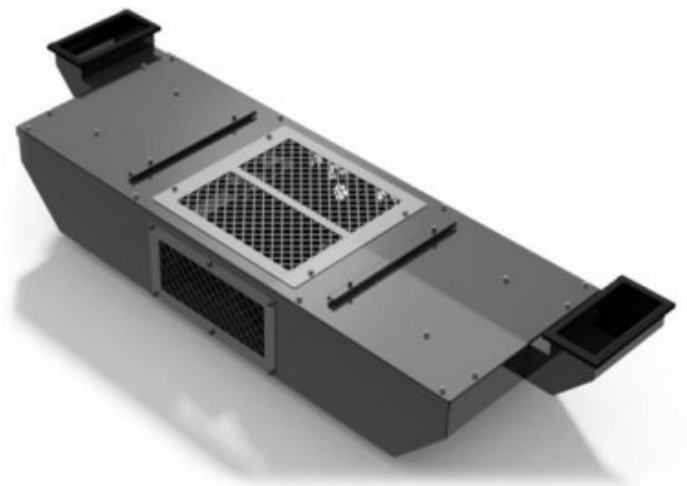
The MSI 11 is a 11kW dual evaporator air conditioning unit. The evaporator is purposely designed to be mounted inside the vehicle below the driver and co-driver's seat frame.

The evaporator unit supplies cool air into ducting which is connected on the left and right side of the seats. The evaporator unit contains four double scroll blowers and two evaporator cores.

A choice of two condenser configurations are available with this air-conditioning system: A condenser pack that is mounted inside the engine bay that utilizes of the engine cooling fan and a second option of an enclosed condenser unit which is mounted on the outside of the vehicle containing condenser heat exchanger cores and cooling fans.

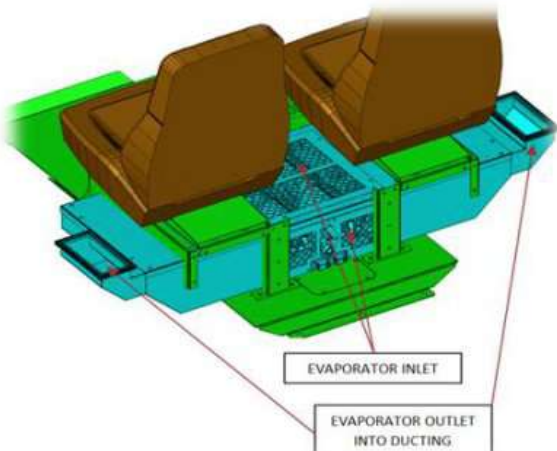
The aircon control is done via the SME developed multi application controller (MAC) the MAC can interface with the vehicle control for a total integrated system solution. Alternatively the HVAC control also can be done with conventional dash mounted switches.

The compressor is mounted in the engine bay and belt driven from the engine pulley.

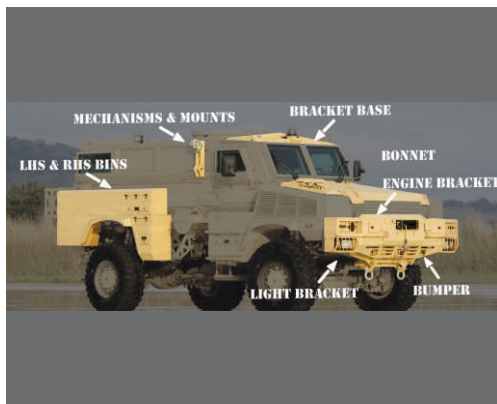


### Properties

Capacity:	10kW
Max Input current (@24V):	80A
Refrigerant:	R134A
Operating envelope:	Up to 55°C
Fresh air supply:	N/A
<u>Size HxWxD</u>	
External Cond:	650x1090x440
Internal Cond:	650x620x50
Evaporator (x2 ):	290x1600x490
Fresh air unit:	N/A

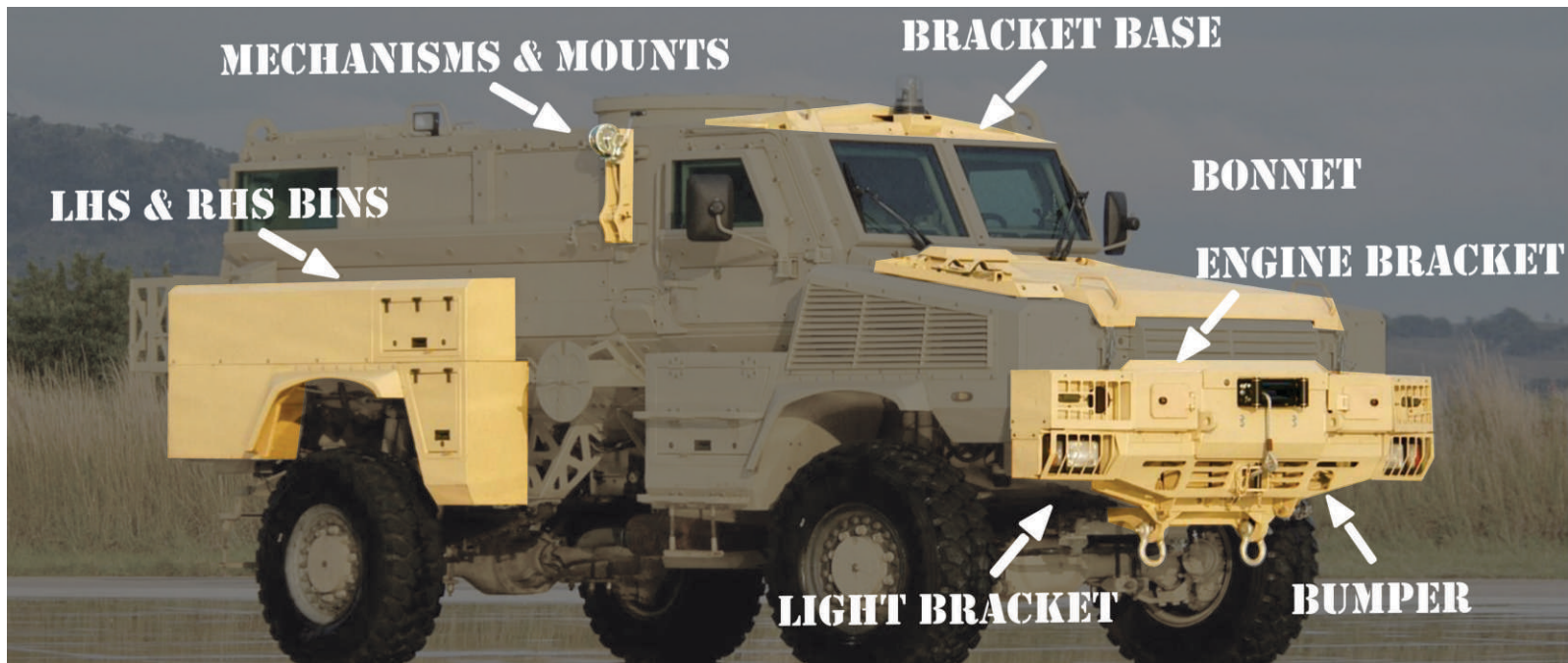






## Manufacturing

Custom Design & Manufacturing for Military



## Custom Design & Manufacturing

- WELDING: ROBOT, MIG, TIG & ARC WELDING
- WELDING METALS: FERROUS, NON-FERROUS & ARMOUR
- BEND PRESSES: SHEET METAL BENDING UP TO 6.0mm
- MACHINE WORKSHOP: CNC LATHE & CNC MILLING MACHINE



• [www.specmech.co.za](http://www.specmech.co.za) • [admin@specmech.co.za](mailto:admin@specmech.co.za)



## MMSF 20

Modular stand alone Aircon for field shelters / tents & base camps 9kW - 30kW

## MMSF 20

This Mk2000 air-conditioner provides reliable cooling for industrial enclosures in extremely high temperature environments. It is also equipped with a filtration system for harmful chemical vapours as well as the removal of coarse and fine dust particles.

The chemical filtration system can deal with nearly all known harmful chemical gasses including tear gas, fluorides and sulphides. Typical applications are high temperature factory environments with high dust and chemical loads in the operational environment. It can be used to cool switch gear, PLC's, variable speed motor drives, electronics and human operators.

One of the additional benefits of the chemical filtration unit is that it will remove corrosive agents and thereby improve the life expectancy of all electrical/electronic components commonly found in electrical enclosures.

The trademark aspect of all the aircons in the MicroKool series is that it can be applied and used in ambient temperatures up to 65°C. This aircon is also very easy to maintain and all spare parts are readily available.

It is also versatile and the controller can be customised to suit client requirements and for virtually any application. It is also possible to set the enclosure temperature to any given value.



*20 000 Watt  
@ 55°C*

### Typical Properties

Cooling Capacity: 20kW (9 - 30kW)

Max Input current (@400V): 31A

Refrigerant: R134A

Operating envelope: Up to 55°C

Network Interface: CANBUS

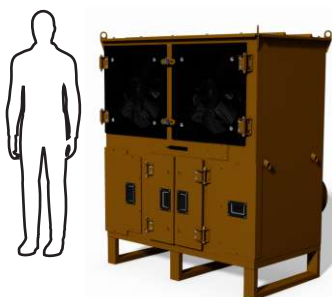
Fault Finding: Bluetooth & HMI

#### Optional

Fresh air supply: 6.5 m3/min

Heating Capacity: 12kW

Single Control on 2 systems with CANBUS communication



Dimensions (DxWxH): 700 x 1388 x 1340  
Weight: 448kg

