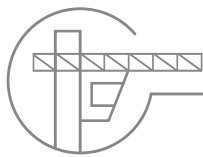


# VKS Series Crane Cab Coolers

VP Package/Monoblock Type Units



Crane Cabins



E-Containers/Shelters



VKS Series Crane Cabin Coolers are perfectly efficient, reliable and long lasting units engineered to operate in harsh environments. Depending on the working conditions, VKS Series units are engineered to fit the highest quality industry requirements and customer needs.

VP Package/Monoblock Type units are designed for heavy-duty operations in harsh environmental conditions such as process cranes in metallurgy, oil & gas, cement, mining and port industries. The main features and advantages of this product are: wide range of models with all-in-one design, perfect optimizing solution with variable air flow directions and ease of maintenance. The cooling, fan only and heating function modes are available while the filtering is always operating.

General Specifications\*



2,5 kW - 28 kW

cooling capacity



+95°C

upper limit ambient temperature for operation



TMS

"Tailor Made Solutions" designed and produced according to your needs.



Dust Resistant

Durable design against dust.



Corrosion Resistant

Durable design against corrosion.



Vibration Resistant

Durable design against vibration.

- R134a, R227ea, R236fa, R513a and R450a refrigerants are used according to different ambient temperatures
- All-in-one design with ease of maintenance
- Heavy-duty<sup>2</sup>, welded carbon steel body and C4 class coating
- Heavy-duty<sup>2</sup>, welded stainless steel body
- Perfect insulation at evaporator section and A/C control panel with IP55 class protection
- Semi-Hermetic reciprocating compressor with built-in overload protection, high performance lubricant and oil heater
- Vibration absorbers on the compressor, both on discharge and suction sides
- Condenser coil is made with copper tubes and aluminum straight fins with wide fin space<sup>3</sup>
- Condenser coil is made with copper tubes and copper straight fins with wide fin space<sup>3</sup>
- Heavy duty<sup>2</sup> condenser fan with the protection grid
- Evaporator coil is made with copper tubes and aluminum straight fins with wide fin space<sup>3</sup>
- Evaporator coil is made with copper tubes and copper straight fins with wide fin space<sup>3</sup>
- Direct triggered radial evaporator fan with low sound level
- Thermostatic expansion valve with external equalizer
- Stainless steel drain water pan
- Pressure relief valve, liquid solenoid valve, sight glass for humidity and refrigerant level
- Liquid receiver
- Winter kit<sup>1</sup>
- EU4 class air filter and clogging alarm
- Electrical heater
- High/low pressure switches with aluminum body
- Remote thermostat and on/off switch with IP66 class protections
- Variant remote control and monitoring options
- Contactors, motor protection switches and circuit breakers for all motors, fire contact
- Auto switch-over and cycling<sup>5</sup>
- Power supply; 400VAC/3Ph/50Hz (standard) and 460VAC/3Ph/60Hz<sup>4</sup> (optional).

1.

Available at low environmental temperatures.

2.

High ambient temperature, high vibratory, dusty and corrosive environments.

3.

Fin spacing is 3,6 mm. The fin spaces show differences depending of material changes on condenser and evaporator coils.

4.

Variant power supplies are available, please contact us for more information.

5.

This feature is applicable when more than one unit is desired to be used with keeping the next one as standby.

\*Please contact us for further customization requests.

VKS Series VP Package/Monoblock Type Units

tmsgrup.com

Nomenclature

Configure your product\*

Product Type Code

VP350V70

Package type

Crane Cabin Cooler

350x10= 3500 Watt (nominal)

420

550

720

850

1050

1200

1650

2050

V: Vertical Type

H: Horizontal Type

4: R134a<sup>1</sup>

7: R227ea<sup>3</sup>

6: R236fa<sup>4</sup>

3: R513a<sup>1</sup>

0: R450a<sup>2</sup>

0: 380-420V/3Ph/50Hz

Product Specification Code

411F11011E11

0: Electrical panel; detached, stand alone

1: Electrical panel; left side

2: Electrical panel; right side

3: Electrical panel; back side

E1: Cooling Unit; left sided

E2: Cooling Unit; right sided

E3: Cooling Unit; top

E4: Cooling Unit; below

1: Air flow directions; top side supply and return air connections

2: Air flow directions; bottom side supply and return air connections

3: Air flow directions; back side supply and return air connections

1: Remote control and monitoring (basic)<sup>5</sup>

2: Remote control and monitoring (extended)<sup>5</sup>

3: Remote control and monitoring (pro)<sup>5</sup>

0: No heating

1: Electrical heating

1: Control voltage; 230 VAC/1 Ph

4: Control voltage; 24VDC

1: EU4 class filter

2: EU4 class filter + filter clogging alarm

F: Semi-hermetic reciprocating compressor

B: Semi-hermetic reciprocating compressor

G: Semi-hermetic reciprocating compressor

0: Condenser coil with copper tubes and aluminium fins + epoxy coated

1: Condenser coil with copper tubes and fins + epoxy coated

2: Condenser coil with copper tubes and aluminium fins + electrofin coated

3: Condenser coil with copper tubes and fins + electrofin coated

0: Evaporator coil with copper tubes and aluminium fins + epoxy coated

1: Evaporator coil with copper tubes and fins + Epoxy coated

2: Evaporator coil with copper tubes and aluminium fins + electrofin coated

3: evaporator coil with copper tubes and fins + electrofin coated

0: Welded and epoxy coated carbon steel body, C4

4: Stainless steel made welded body

1.

Up to 65°C ambient temperatures

2.

Up to 75°C ambient temperatures

3.

Up to 80°C ambient temperatures

4.

Up to 95°C ambient temperatures

5.

The remote monitoring system is provided with dry contacts supplied by relays connected to the fault outputs.

\*Please contact us for further customization requests.

Technical Specifications

		VP350	VP420	VP550	VP720	VP850	VP1050	VP1200	VP1650	VP2050
Cooling Capacity, R134a <sup>1</sup>	kW	2,66-4,12	3,44-5,55	4,15-6,66	5,62-8,84	6,69-10,64	8,09-13,15	9,39-14,64	12,43-20,3	14,52-23,83
Cooling Capacity, R513a <sup>1</sup>	kW	2,87-4,29	3,81-5,9	4,69-7,17	6,17-9,38	7,1-10,89	8,86-13,96	10,24-15,54	15,45-22,6	17,24-25,88
Cooling Capacity, R227ea <sup>2</sup>	kW	2,39-4,36	2,57-5,31	3,41-6,3	5,19-9,56	5,65-10,55	6,4-13,1	8,68-15,99	11,47-21,17	16,89-28,79
Cooling Capacity, R450a <sup>2</sup>	kW	2,91-4,87	3,29-5,81	4,31-7,15	5,52-9,35	6,7-11,56	8,52-13,89	9,83-16,05	13,27-21,82	16,29-26,41
Cooling Capacity, R236fa <sup>3</sup>	kW	-	2,93-5,52	3,74-6,65	4,9-9,9	5,7-10,9	6,41-12,49	7,59-14,70	10,09-21,66	14,64-26,01
Heating Capacity <sup>9</sup>	kW	3.00	3.00	3.00	4.00	4.00	6.00	6.00	6.00	9.00
Power Input, cooling mode R134a <sup>4</sup>	kW	2.67	2.89	3.47	5.22	5.45	7.08	7.96	12.00	12.52
Power Input, cooling mode R513a <sup>4</sup>	kW	2.86	3.10	3.65	5.44	5.66	7.44	8.34	12.40	12.92
Power Input, cooling mode R227ea <sup>4</sup>	kW	2.46	2.90	3.70	5.57	6.55	7.38	8.96	12.51	14.60
Power Input, cooling mode R450a <sup>4</sup>	kW	2.49	2.93	3.65	4.92	5.75	7.00	8.45	11.22	13.10
Power Input, cooling mode R236fa <sup>4</sup>	kW	-	3.20	3.74	5.11	5.36	6.60	7.32	12.60	14.74
Power Input, heating mode <sup>9</sup>	kW	3.70	4.04	5.04	6.60	7.60	8.10	8.10	8.58	12.30
Evaporator Air Flow Rate <sup>5</sup>	m³/h	900	1250	1800	2200	2400	2700	3200	4000	5000
Maximum external air static pressure <sup>6</sup>	Pa	210	240	180	315	260	415	360	410	475
Condenser Fin Space	mm	3.6	3.2	3.6	3.6	3.6	3.6	3.6	3.6	3.2
Dimensions (WxDxH) Vertical Type <sup>10</sup>	mm	1175x820x1450	1175x820x1450	1175x820x1450	1330x830x1710	1330x830x1710	1400x950x1910	1400x950x1910	1550x1050x2010	1950x1200x2210
Dimensions (WxDxH) Horizontal Type <sup>10</sup>	mm	2125x820x770	2125x820x770	2125x820x770	2410x830x900	2410x830x900	2550x950x1000	2550x950x1000	2850x1050x1050	3650x1200x1150
Net/Gross Weight <sup>7</sup> R134a/R513a	Kg	385/510	390/515	400/525	510/655	535/680	570/740	575/745	780/1000	945/1225
Net/Gross Weight <sup>7</sup> R450a	Kg	390/515	395/520	410/535	520/665	560/705	575/745	580/750	820/1040	950/1230
Net/Gross Weight <sup>7</sup> R227ea	Kg	395/520	400/525	415/540	545/690	560/705	615/785	625/795	835/1055	1020/1300
Net/Gross Weight <sup>7</sup> R236fa	Kg	-	435/560	445/570	585/730	625/770	625/795	675/845	895/1115	1045/1325
Power Supply; standard <sup>8</sup>	V/Ph/Hz	400VAC/3Ph/50Hz								

1. Cooling capacity range is given between room temperature 22-35 ° C and ambient temperature 35-65 ° C. Please contact us for detailed information.

2. Cooling capacity range is given between room temperature 22-35 ° C and ambient temperature 35-70 ° C. Please contact us for capacity table.

3. Cooling capacity range is given between room temperature 22-35 ° C and ambient temperature 35-80 ° C. Please contact us for capacity table.

4. Power may vary according to indoor/outdoor temperatures. Please consult us for a more detailed review on power consumption options in specific operation temperatures.

5. It is the air flow rate given at the external static pressure specified in the table.

6. It is the pressure value provided by the evaporator fan used in the standard product. Higher pressure options are available, please contact us.

7. The specified weight value belongs to the standard units. Optional features to be added may vary in weight values. Gross weight is given as crate + pallet. It may vary according to the type of packaging.

8. The standard power supply of the air conditioning units is 400VAC / 3Ph / 50Hz. Please contact us for different power supply options.

9. The heating mode is an optional feature for compact type units. Heating capacity values on the table are based on the standard capacities. Heating capacity may vary based on product customization.

10. Dimensions of the electrical panel are included. Please contact us if you need dimensions otherwise.

• Operating temperature range -15 / 65 ° C for R134a / R513a, 0/80 ° C for R227ea, 0/75 ° C for R450a and 10/95 ° C for R236fa. Different operating temperatures are available.

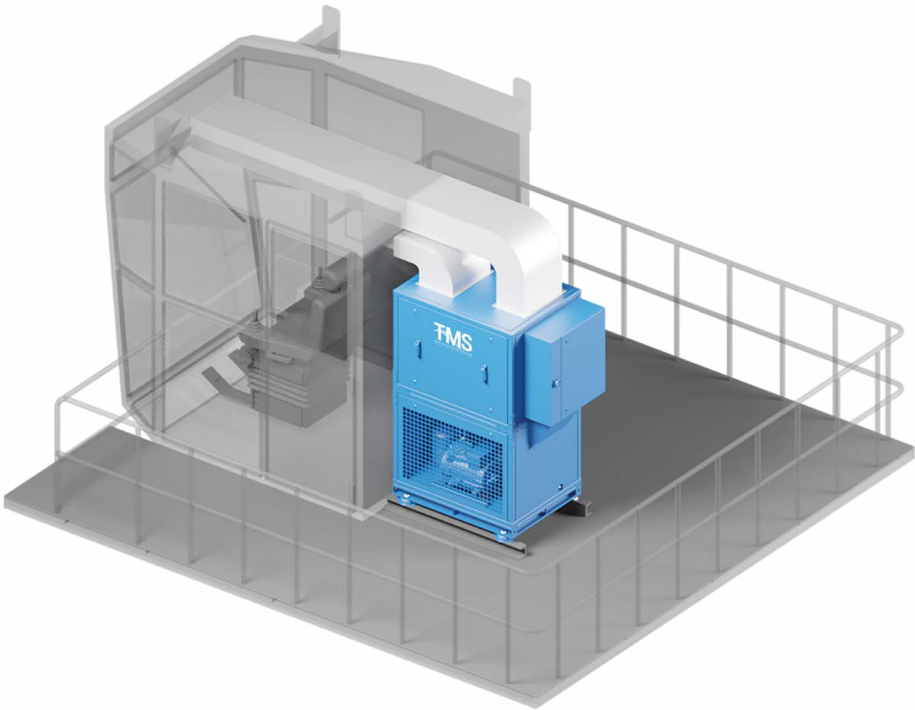
Global Warming Potential

Refrigerant	GWP*
R450a	605
R513a	631
R134a	1430
R227ea	3220
R236fa	9810



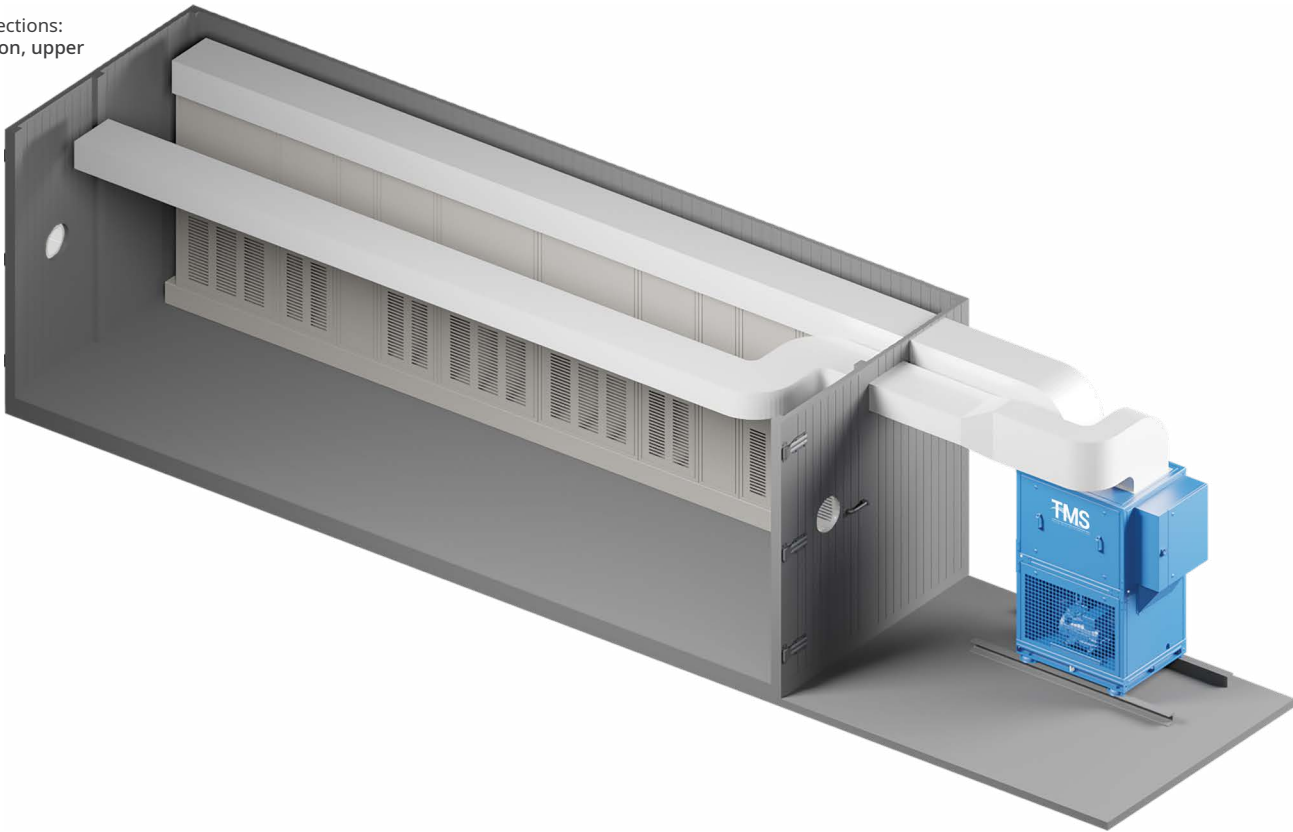
Application Examples

1. Crane Cabin Application



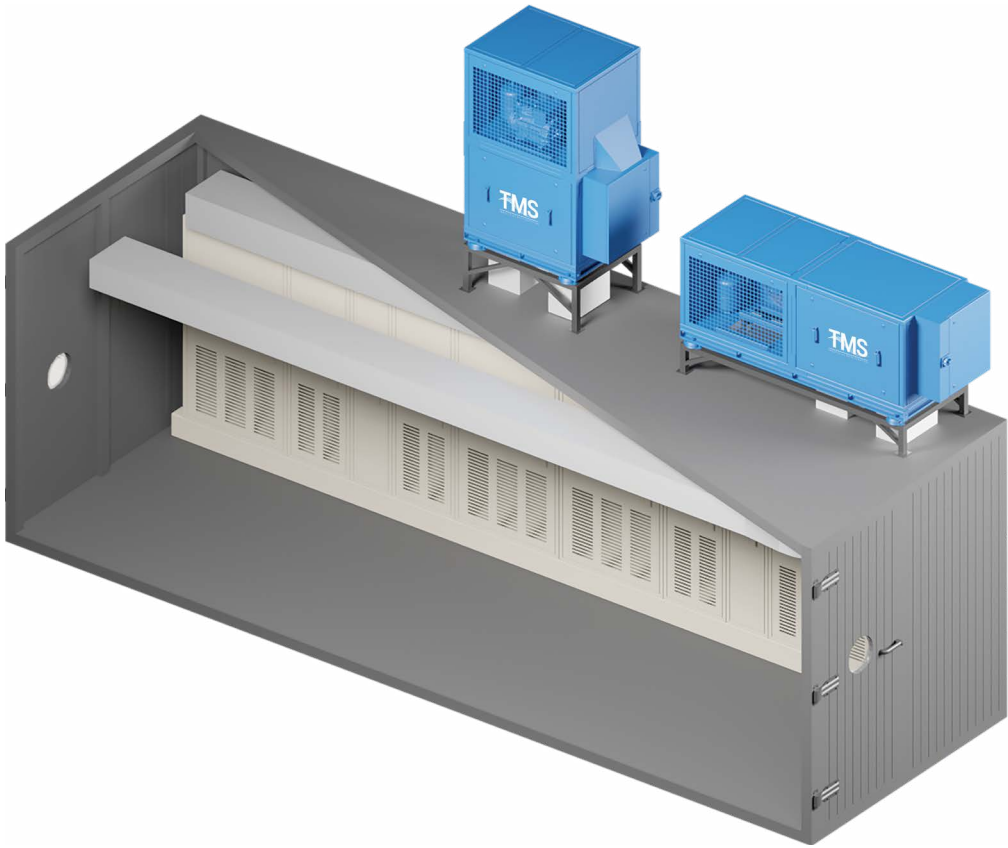
2. Electrical Room Application

Type: Vertical  
Air Flow Directions:  
Upper suction, upper  
discharge



3. Electrical Room Application

From left to right,  
1<sup>st</sup> Unit;  
Type: Vertical  
Air Flow Directions: Down  
suction, down discharge  
  
2<sup>nd</sup> Unit;  
Type: Horizontal  
Air Flow Directions: Down  
suction, down discharge



4. Automatic Switch Over Electrical Room Application

