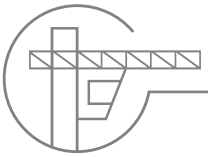
TMS
INDUSTRIAL REFRIGERATION

VKS Series Crane Cab Coolers

VS Split 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.

VS Split 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 are provided with variant indoor and outdoor units and ease of maintenance. The cooling, fan only, heating function modes are available while the filtering is always operating. VS Split series are providing the best option when the projects need the top flexibility.

General Specifications*

2,5 kW - **46** 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
- Flexible design, adaptable to variant scenarios
- Heavy-duty[2], welded carbon steel body and C4 class coating
- Heavy-duty[2], welded stainless steel body
- 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[3]
- Condenser coil is made with copper tubes and copper straight fins with wide fin space[3]
- Heavy duty[2] condenser fan with the protection grid
- 5 (five) different evaporator units are available
- Evaporator coil is made with copper tubes and aluminum straight fins with wide fin space[3]
- Evaporator coil is made with copper tubes and copper straight fins with wide fin space[3]
- Direct triggered 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[1]
- 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[5]
- Power supply; 400VAC/3Ph/50Hz (standard) and 460VAC/3Ph/60Hz[4] (optional)

1. Available at low environmental temperatures.
2. High ambient temperature, high vibratory, dusty and corrosive environments.
3. Fin spacing is 4mm. 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.**

Nomenclature

Configure your product*

Product Type Code **VS 420 7 0 0** *Product Specification Code* **4 1 F 1 1 T 1 1 1**

VS — Split type Crane Cabin Cooler

420 — 420x10= 4200Watt (nominal)

7 —
550
720
850
1050
1200
1650
2050
2500
3200

0 —
4: R134a[1]
7: R227ea[3]
6: R236fa[4]
3: R513a[1]
0: R450a[2]

0 —
0: CDST type Indoor unit
1: CSST type Indoor unit
2: WT type Indoor unit
3: WCT type Indoor unit

0 — 0: 380-420V/3Ph/50Hz

4 —
F: Semi-hermetic Reciprocating Compressor
B: Semi-hermetic Reciprocating Compressor
G: Semi-hermetic Reciprocating Compressor

1 —
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

1 —
0: Welded and epoxy coated carbon steel body, C4
4: Stainless steel made welded body

1 —
1: Control voltage; 230 VAC/1Ph
4: Control voltage; 24VDC

1 —
1: Remote control and monitoring (basic)[5]
2: Remote control and monitoring (extended)[5]
3: Remote control and monitoring (pro)[5]

T — T: Condenser is on top
B: Condenser is in the unit

1 —
1: Electrical panel; detached, stand alone
2: Electrical panel; left side
3: Electrical panel; right side
4: Electrical panel; top

1 —
1: Connection port; coupling with copper tube extension
2: Connection port; coupling with flexible hose extension
3: Connection port; copper tube

1 —
1: Electrical connections; easy plug
2: Electrical connections; straight

1 — 1: Electrical connections; easy plug

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.**

Outdoor Units

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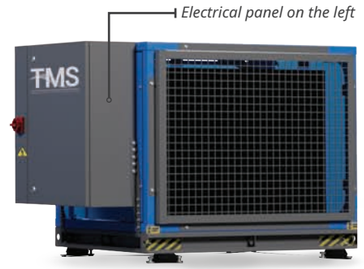

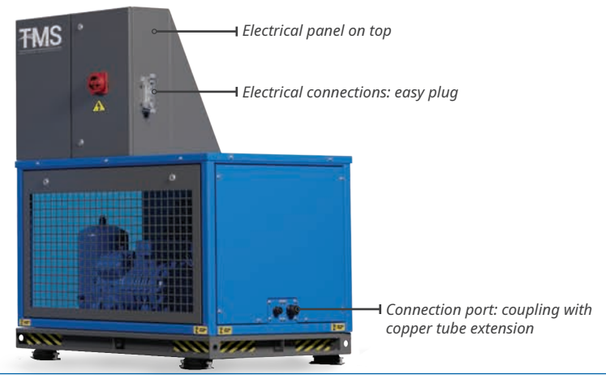

Outdoor Units Technical Specifications

		VS420	VS550	VS720	VS850	VS1050	VS1200	VS1650	VS2050	VS2500	VS3200
Cooling Capacity R134a[1]	*kW*	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	20,82-30,47	26,42-42,96
Cooling Capacity, R513a[1]	*kW*	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	23,33-35,16	29,59-45,53
Cooling Capacity, R227ea[2]	*kW*	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	14,14-26,39	16,58-33,66	26,17-45,04
Cooling Capacity, R450a[2]	*kW*	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	20,65-34,28	27,22-45,83
Cooling Capacity, R236fa[3]	*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	16,5-33,68	22,41-43,17
Power Input, cooling mode, R134a[4]	*kW*	2.31	2.38	2.75	4.44	4.33	5.77	5.89	9.38	11.94	18.71
Power Input, cooling mode, R513a[4]	*kW*	2.50	2.59	2.93	4.66	4.54	6.13	6.27	9.78	12.64	19.40
Power Input, cooling mode, R227ea[4]	*kW*	2.10	2.39	2.98	4.79	5.43	6.07	6.89	9.89	13.90	18.60
Power Input, cooling mode, R450a[4]	*kW*	2.13	2.42	2.93	4.14	4.63	5.69	6.38	8.60	11.68	18.40
Power Input, cooling mode, R236fa[4]	*kW*	-	2.69	3.02	4.33	4.24	5.29	5.25	9.98	11.96	18.00
Condenser Fin Space	*mm*	3.2	3.6	3.6	3.6	3.6	3.6	3.6	3.2	3.2	3.6
Dimensions (WxDxH)	*mm*	1175x820x770	1175x820x770	1330x830x900	1330x830x900	1400x950x1000	1400x950x1000	1550x1050x1050	1950x1100x1150	1950x1100x1150	2150x1550x1200
Dimensions (WxDxH) with condenser on top	*mm*	1100x650x1350	1100x650x1350	1200x650x1560	1200x650x1560	1260x735x1810	1260x735x1810	1410x835x1860	1810x900x1950	1810x900x1950	2050x1100x2000
Net/Gross Weight[5] R134a/R513a	*kg*	185/285	195/295	285/410	290/415	380/530	385/535	520/670	675/875	680/880	980/1230
Net/Gross Weight[5] R450a	*kg*	195/295	200/300	290/415	315/440	385/535	390/540	560/710	680/780	730/930	985/1235
Net/Gross Weight[5] R227ea	*kg*	205/305	210/310	315/440	315/440	425/575	435/585	575/725	745/945	750/950	1020/1270
Net/Gross Weight[5] R236fa	*kg*	230/330	230/330	355/480	380/505	435/585	485/635	635/785	780/980	800/1000	1140/1390
Power Supply; standard[6]	*V/Ph/Hz*	400VAC/3Ph/50Hz									

1. The cooling capacities are given in the conditions; indoor temperature between 22-35°C, outdoor temperature between 35-65°C. Contact us for the capacity table.
2. The cooling capacities are given in the conditions; indoor temperature between 22-35°C, outdoor temperature between 35-70°C. Contact us for the capacity table.
3. The cooling capacities are given in the conditions; indoor temperature between 22-35°C, outdoor temperature between 35-80°C. Contact us for the capacity table.
4. Power may vary according to indoor/outdoor temperatures. Please contact us for a more detailed review on power consumption options in specific operation temperatures.
5. Weight may vary according to changes in optional features. Gross weight is given including palette + wooden box. This value may vary depending on the packing type.
6. Standard power supply. Please contact us for different power supply options.

• Operational temperature range for R134a/R513a is -15/65°C, R227ea is 0/80°C, R450a is 0/75°C and R236fa is 10/95°C. Different working temperatures are available, please contact with us.

* Global Warming Potential

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

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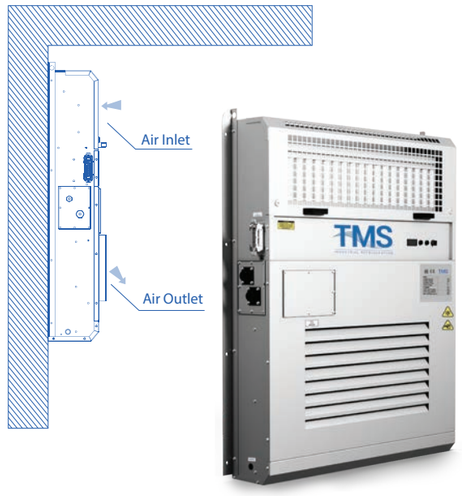
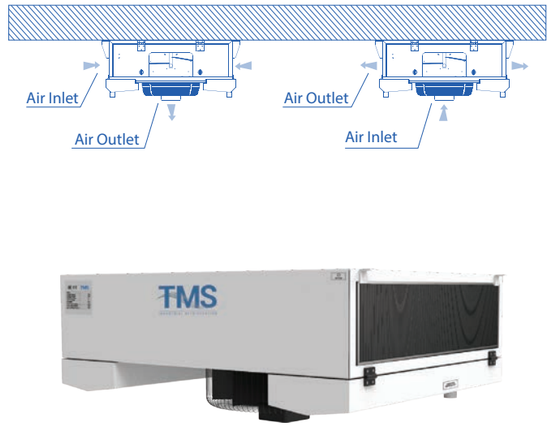
Indoor Units Technical Specifications

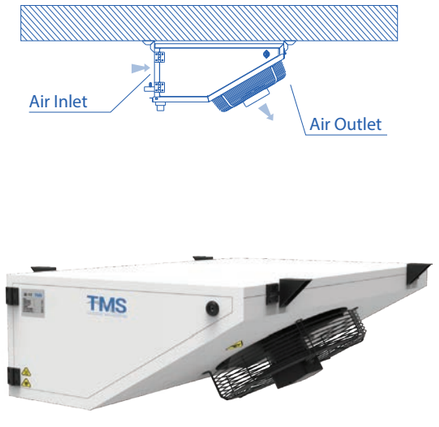
WCT Indoor Unit



WT Indoor Unit



CDST Indoor Unit



CSST Indoor Unit

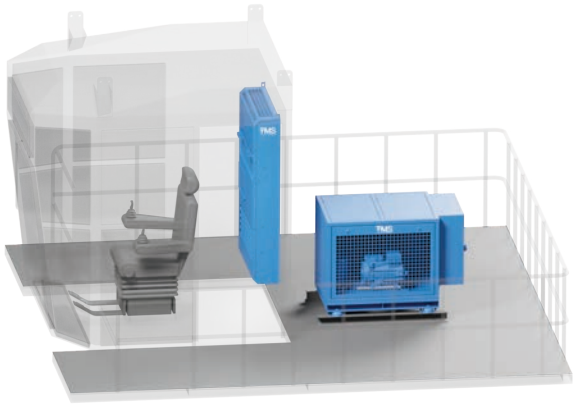
		WCT 500	WCT 800	WT 500	WT 800	WT 1200	WT 1600	CDST 101	CDST 201	CDST 301	CDST 501	CSST 101	CSST 201	CSST 301	CSST 501
Cooling Capacity R134a[1]	*kW*	3,44-6,66	5,62-10,64	3,44-6,66	5,62-10,64	8,09-14,64	12,43-20,3	3,44-6,66	5,62-10,64	8,09-14,64	12,43-20,3	3,44-6,66	5,62-10,64	8,09-14,64	12,43-20,3
Cooling Capacity R513a[1]	*kW*	3,81-7,17	6,17-10,89	3,81-7,17	6,17-10,89	8,86-15,54	15,45-22, 6	3,81-7,17	6,17-10,89	8,86-15,54	15,45-22,6	3,81-7,17	6,17-10,89	8,86-15,54	15,45-22,6
Cooling Capacity R227ea[2]	*kW*	2,57-6,3	5,19-10,55	2,57-6,3	5,19-10,55	6,4-15,99	11,47-21,17	2,57-6,3	5,19-10,55	6,4-15,99	11,47-21,17	2,57-6,3	5,19-10,55	6,4-15,99	11,47-21,17
Cooling Capacity R450a[2]	*kW*	3,29-7,15	5,52-11,56	3,29-7,15	5,52-11,56	8,52-16,05	13,27-21,82	3,29-7,15	5,52-11,56	8,52-16,05	13,27-21,82	3,29-7,15	5,52-11,56	8,52-16,05	13,27-21,82
Cooling Capacity R236fa[3]	*kW*	2,93-6,65	4,9-10,9	2,93-6,65	4,9-10,9	6,41-14,7	10,09-21,66	2,93-6,65	4,9-10,9	6,41-14,7	10,09-21,66	2,93-6,65	4,9-10,9	6,41-14,7	10,09-21,66
Heating Capacity[7]	*kW*	3	3	3	4	4	6	3	4	4	6	3	4	4	6
Power Input, Cooling Mode[4]	*kW*	0.16	0.32	0.21	0.45	0.63	0.84	0.07	0.16	0.16	0.19	0.08	0.04	0.33	0.22
Power Input, Heating Mode[7]	*kW*	3.16	3.32	3.21	4.45	4.63	6.84	3.07	4.16	4.16	6.19	3.08	4.04	4.33	6.22
Evaporator Air Flow Rate	*m3/h*	1000	1800	1100	2300	3000	4000	1516	2865	2674	4038	1461	1741	4416	4061
Dimensions (WxDxH)	*mm*	852X965X305	952X965X305	445x1600x250	1100x1700x250	1250x1700x250	1460x1700x250	906x870x322	941x1020x393	1081x1020x398	1186x1250x465	764x970x347	724x1620x277	764x1640x347	764x2270x347
Net Weight[5]	*kg*	70	105	90	175	190	220	25	35	45	60	16	25	26	45
Power Supply[6]	*V/Ph/Hz*	230VAC/1Ph/50Hz													

1. Cooling capacities are given in the conditions; indoor temperature between 22-35°C, outdoor temperature between 35-65°C. Contact us for the capacity table.
2. Cooling capacities are given in the conditions; indoor temperature between 22-35°C, outdoor temperature between 35-70°C. Contact us for the capacity table.
3. Cooling capacities are given in the conditions; indoor temperature between 22-35°C, outdoor temperature between 35-80°C. Contact us for the capacity table.
4. Power may vary according to indoor/outdoor temperatures. Please contact us for a more detailed review on power consumption options in specific operation temperatures.
5. Standard weight values. Weight may vary according to changes in optional features.
6. Standard power supply. Please contact us for different power supply options.
7. The heating mode is an optional feature for indoor units. Heating capacity values on the table are based on the standard capacities. Heating capacity may vary based on product customization.

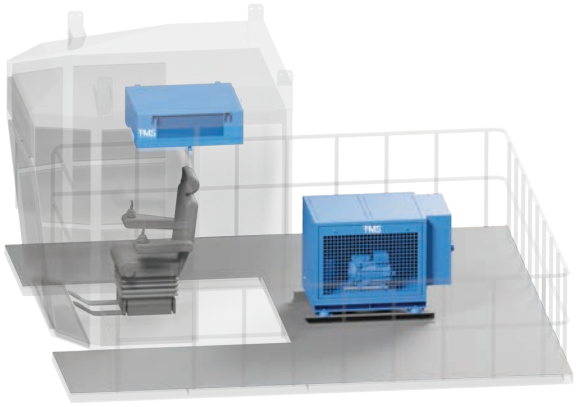
Application Examples

1. Crane Cabin Applications

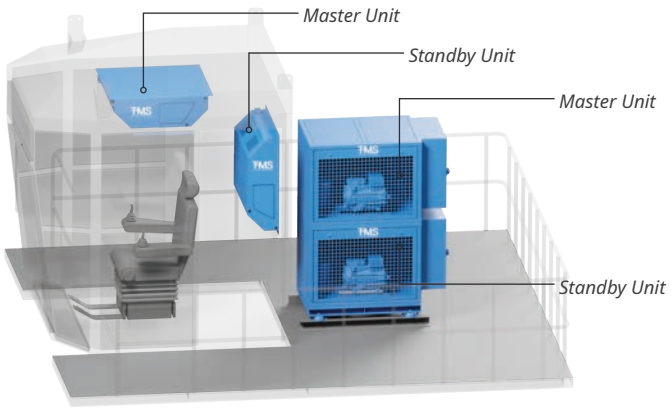
Wall Type (WT) Indoor Unit



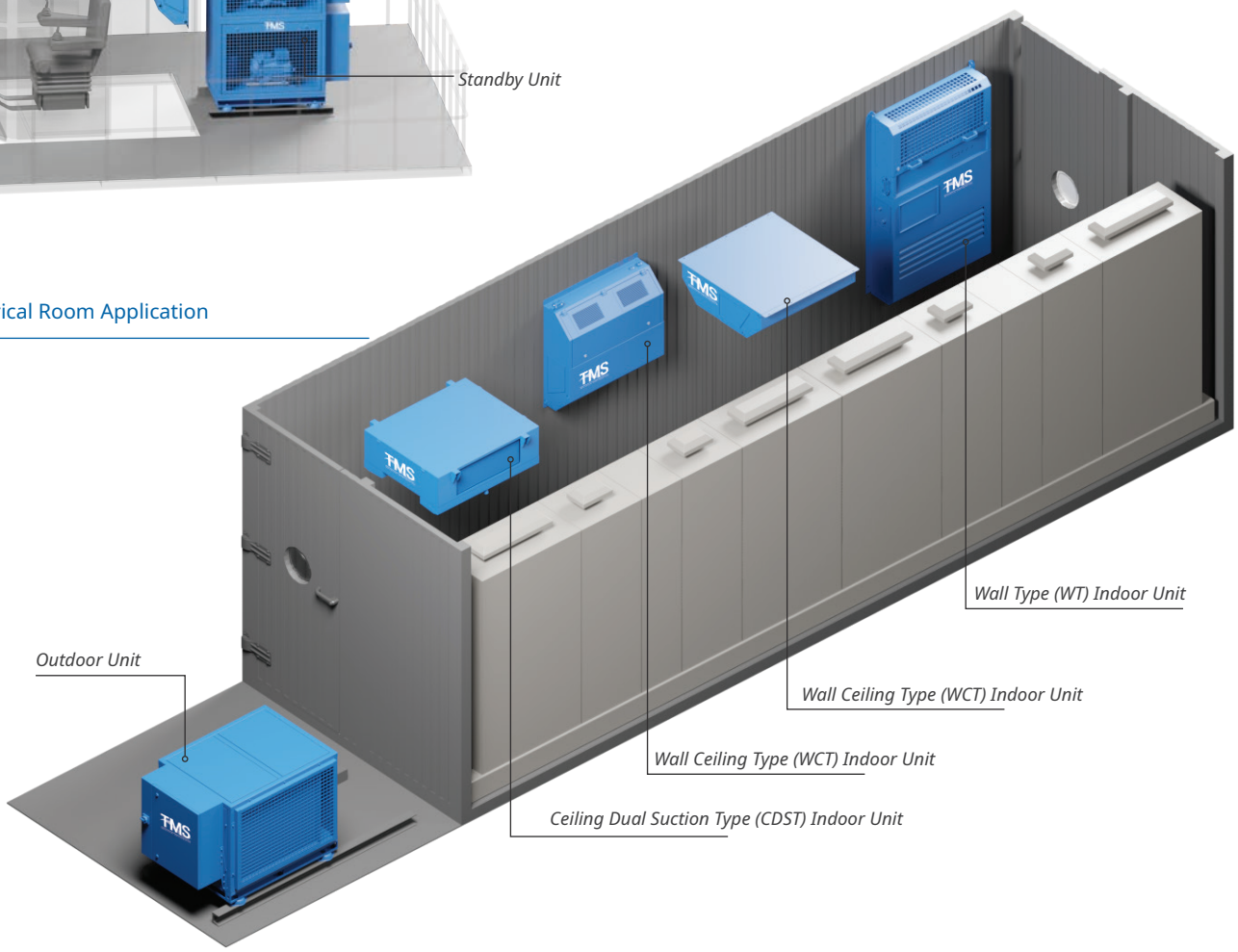
Ceiling Dual Suction Type (CDST) Indoor Unit



Wall Ceiling Type (WCT) Indoor Unit, Automatic Switch Over with Standby



2. Electrical Room Application



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