

● IDU lineup

Series	Type	Fan motor	Model	Capacity range(x100w)																									
				18	22	25	28	32	36	40	45	50	56	63	71	80	90	100	112	125	140	160	220	280	450	560			
 360° Q8 cassette	Cooling & Heating	DC	TMV-V(**) Q8/NIDY(E)				●		●		●	●	●	●	●	●	●	●	●	●									
 compact cassette	Cooling & Heating	DC	TMV-V(**) Q4R/NIDY (E)	●	●	●	●	●	●	●	●	●	●																
 Slim duct	Cooling & Heating	DC	TMV-V(**) F5/NIDY (E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
 Free static pressure duct	Cooling & Heating	DC	TMV-V(**) F2/NIDY (E)								●	●	●	●	●	●	●	●	●	●	●								
 Wall-mounted (External EXV)	Cooling & Heating	DC	TMV-V(**)G/ NIDY-B(E)	●			●		●		●	●	●		●	●	●	●											
 Wall-mounted (Built-in EXV)	Cooling & Heating	AC	TMV-V(**)G/ NIY-B(E)	●			●		●		●	●	●		●	●													
 Wall-mounted (Built-in EXV)	Cooling & Heating	AC (60Hz)	TMV-V(**)G/ NIY-B(E)	●			●		●		●	●	●	●	●	●													
 High static pressure duct	Cooling & Heating	AC	TMV-V(**) F1/NIY(E)																					●	●	●	●		
 Fresh air duct	Cooling & Heating	AC	TMV-V(**) F1/XFN1Y(E)																	●				●	●	●			
 Ceiling & Floor	Cooling & Heating	AC	TMV-V(**) ZD/NIY(E)								●	●	●	●	●	●	●	●	●	●	●								
 One-way cassette (Developing)	Cooling & Heating	DC	TMV-V(**) Q1/NIDY(E)	●			●		●		●	●	●	●	●														
 Two-way cassette	Cooling & Heating	AC	TMV-V(**) Q2/NIY€	●			●		●		●	●	●	●	●														

● Mini VRF Parameters

Items		Unit			100	120	140	160	180	224
Model: TMV-Vd(**)W/NI-C(E3)										
Power Supply		V-,Hz,Ph			220-240V, 50/60Hz, 1N				380-415V, 50/60Hz, 3N	
Cooling (T1)	Capacity	W			10,200	12,000	14,100	15,900	18,000	22,500
	Power Input	W			2,080	2,750	3,410	4,050	4,600	5,750
	Current	A			9.04	11.96	14.83	17.61	7.02	8.77
	EER	W/W			4.82	4.37	4.13	3.94	3.91	3.87
Cooling (T3)	Capacity	W			9,300	10,500	12,000	13,500	16,500	19,200
	Power Input	W			2,730	3,110	3,390	4,300	5,760	6,860
	Current	A			11.86	13.54	14.75	18.7	8.79	10.46
	EER	W/W			3.47	3.4	3.54	3.16	2.9	2.72
Heating	Capacity	W			11,700	13,800	15,900	18,000	19,800	24,600
	Power Input	W			2,640	3,130	3,630	4,240	4,820	6,050
	Current	A			11.48	13.59	15.76	18.41	7.35	9.23
	COP	W/W			4.43	4.42	4.39	4.25	4.11	4.07
Max. Input Consumption		W			6,000	6,000	6,900	7,200	11,000	12,000
Max. Current		A			27.8	27.8	31.4	33	17.6	19.2
Circuit breaker		A			40	40	40	40	25	25
Air Flow Volume		m³/h			5900	5900	6500	7000	10500	10500
Sound Pressure Level		dB(A)			53	53	54	55	58	61
Dimension (W×D×H)	Net	mm			950×340×1330				1120×400×1560	
	Packing	mm			1080×430×1480	1080×430×1480	1080×430×1480	1080×430×1480	1250×560×1721	1250×560×1721
Weight	Net	kg			91	91	94	99	130	140
	Gross	kg			102	102	105	110	145	163
Cooling operating range	Outdoor side	°C					-5-55			
	Indoor side	°C					16-32			
Heating operating range	Outdoor side	°C					-20-24			
	Indoor side	°C					15-31			

Notes:
1. Cooling (T1) conditions: Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
Cooling (T3) conditions: Indoor air temperature 29°C DB, 19°C WB; outdoor air temperature 46°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Heating Conditions: indoor air temperature: 20°C DB, outdoor air temperature: 7°C DB / 6°C WB, equivalent refrigerant piping length 7.5m with zero level difference.
3. Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

● Modular VRF Parameter

Capacity Range		8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP	34HP
Model Name: TMV-VD+(**)/W/AS-M(E3)		252	280	335	400	450	504	560	615	680	730	785	850	900	950
Power Supply		V,Ph,Hz		380-415V 3N ~ 50/60Hz											
Cooling (T1)	Capacity	kW	25.2	28.2	33.6	40.0	45.0	50.5	56.5	61.5	68.0	73.5	78.5	85.0	95.0
	Capacity	Btu/h	86000	96000	115000	136000	154000	172000	192000	210000	232000	250000	268000	290000	324000
	Power Input	kW	5.60	6.34	8.21	10.30	12.37	13.44	15.87	17.57	19.41	21.83	23.41	25.33	29.30
	EER	Btu/ (W-h)	15.35	15.15	14.00	13.20	12.45	12.80	12.10	11.95	11.95	11.45	11.45	11.10	11.05
Cooling (T3)	Capacity	kW	22.20	24.6	28.2	35.4	37.2	42.00	44.50	47.50	53.50	58.00	61.50	64.00	67.00
	Capacity	Btu/h	76000	84000	96000	121000	127000	144000	152000	162000	182000	198000	210000	218000	224000
	Power Input	kW	6.9	7.9	9.4	11.8	12.4	13.8	15.1	17.0	19.5	21.5	23.2	24.6	25.7
	EER	Btu/ (W-h)	11.00	10.65	10.20	10.25	10.25	10.45	10.05	9.55	9.35	9.20	9.05	8.85	8.70
Heating	Capacity	kW	27	30.9	37.5	45	50	56	63	69	75	81.5	87.5	95	106.00
	Power Input	kW	5.35	5.98	7.40	9.25	10.96	12.48	14.10	15.72	17.34	18.95	20.57	22.19	23.79
	Current	A	5.04	5.17	5.07	4.87	4.56	4.49	4.47	4.39	4.32	4.3	4.25	4.28	4.20
	COP	W/W	5.05	5.15	5.07	4.87	4.56	4.49	4.47	4.39	4.32	4.3	4.25	4.28	4.19
Air Volume		m³/h	11000	11000	12000	14000	15500	19000	19000	20000	26000	26000	27000	27000	29000
Sound Pressure Level		dB(A)	56	57	58	60	61	61	62	63	63	64	65	65	67
Dimension (W×H×D)	Net	mm			925×1780×845		1340×1780×845		1760×1780×845		1900×1780×845				
	Packing	mm			1000×1940×925		1415×1940×925		1835×1940×925		1975×1940×925				
Weight	Net	kg	215	215	230	270	270	315	315	315	380	380	420	420	480
	Gross	kg	225	225	240	290	290	335	335	335	405	405	445	445	505
Refrigerant type/ Quantity	Type	/			R410A										
	Factory Charged	kg	7	7	8	11	11	13	13	13	15	15	21	21	23
Refrigerant Piping	Liquid Side	mm	φ9.52	φ9.52	φ12.7	φ12.7	φ12.7	φ15.88	φ15.88	φ15.88	φ15.88	φ19.05	φ19.05	φ19.05	φ19.05
	Gas Side	mm	φ19.1	φ22.2	φ25.4	φ25.4	φ28.6	φ28.6	φ28.6	φ28.6	φ31.8	φ31.8	φ31.8	φ34.9	φ38.1
Ambient Temp Operation Range	Cooling	°C			-15-56										
	Heating	°C			-25-28										

Notes:
1. Cooling (T1) conditions: Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
Cooling (T3) conditions: Indoor air temperature 29°C DB, 19°C WB; outdoor air temperature 46°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
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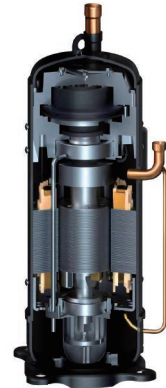
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High Efficiency

DC Inverter Scroll Compressor

The DC variable frequency compressor adopts an asymmetric scroll structure to effectively reduce the leakage loss of refrigerant gas during suction and inside the compression chamber, to improve the efficiency and reliability of compressor operation.



Optimized asymmetric vortex line

Using new type of asymmetric scroll profile can reduce leakage loss and ineffective suction overheating.

Concentrated winding motor

The coil height of the concentrated winding motor is reduced, the copper loss is less the efficiency is higher in the middle and low speed areas.

Suction directly

Small suction preheating, high volume efficiency.

Intermediate pressure servo mechanism

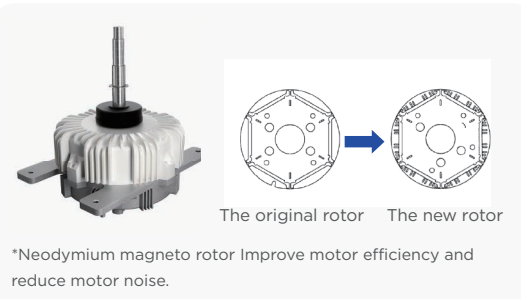
The intermediate pressure is dynamically adjusted according to the operating pressure to achieve axial flexibility, optimize the orbiting and fixed scroll teeth, and improve product performance.

High Voltage (Concentrated Coil) DC Motor

The outdoor unit fan motor adopts a high-voltage centralized winding DC motor, which has a more stable and reliable output, effectively reduces losses and improves operating efficiency.

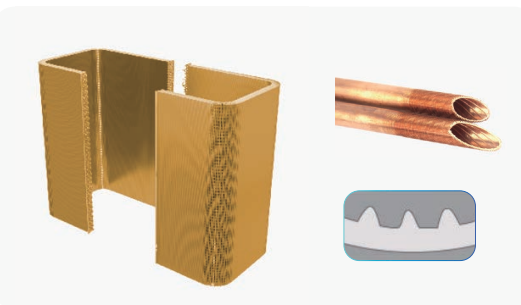
Fan motor backup operation

Reduced coil height, reduced copper loss, higher efficiency in low and medium speed zones.



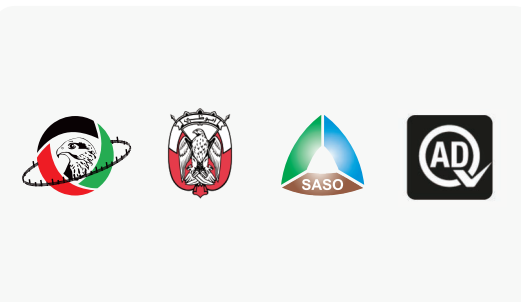
Gold Fin Double C Heat Exchanger

With double C type heat exchanger and inner threaded copper tube design, the condenser area increased by 6% and efficiency increased by 10% compared with old model. Standard gold fin heat exchanger to achieve anti-corrosion.



Middle East Certifications

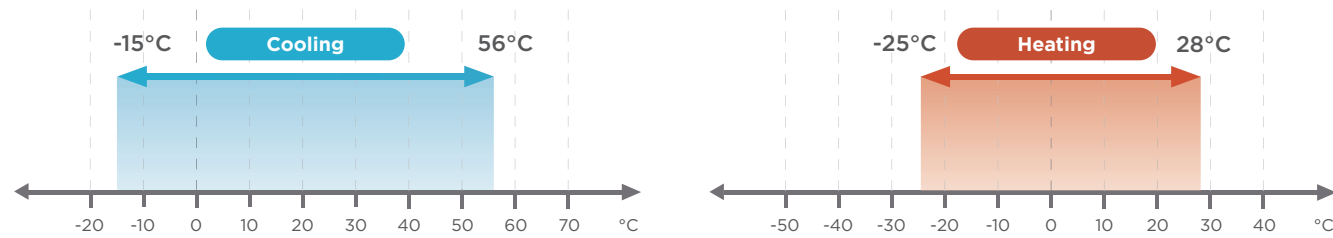
The TMV6 series full inverter VRF units, through the compressor core frequency conversion technology upgrade, the overall optimization of the refrigeration system and the control system, makes the unit energy-saving performance even better, and can fulfill all requirements of GULF countries, such as ESMA, SASO and ADQCC.



High Reliability

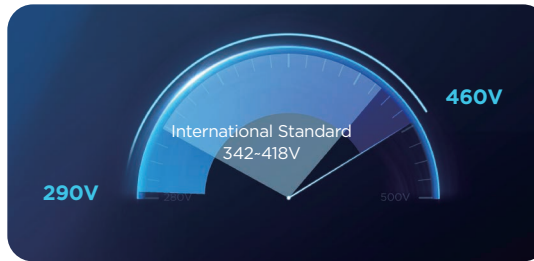
Wide Operation Temperature Range -25°C ~ 56°C

Wide operation range, cooling:-15°C-56°C heating: -25°C-28°C.



Wide Voltage Range

The unit can operate in the range of voltage 290V-460V (International standard voltage 380V±10%), satisfy all kinds of voltage conditions.



Auto-dust Removal Function

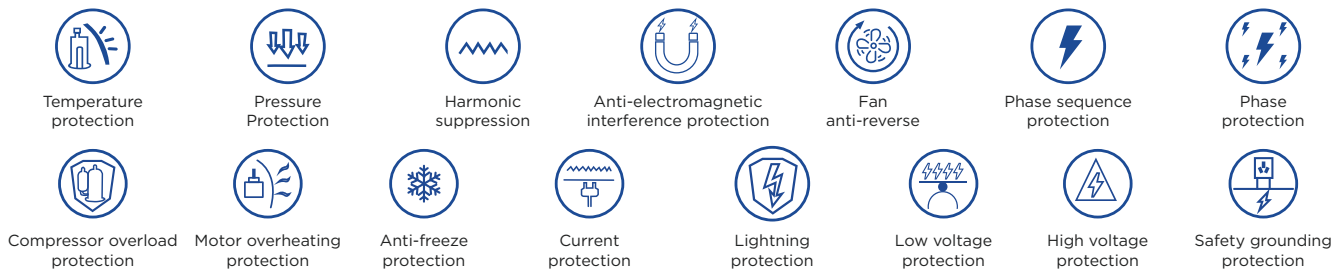
Auto-dust removal function, which features the outdoor fan can rotate in opposite direction to remove the dust on heat exchanger to ensure the heat exchange performance, and the system can operate steadily in severe environment without manual cleaning frequently.

*Note: Auto-dust removal function is optional.



Multiple Protection Functions

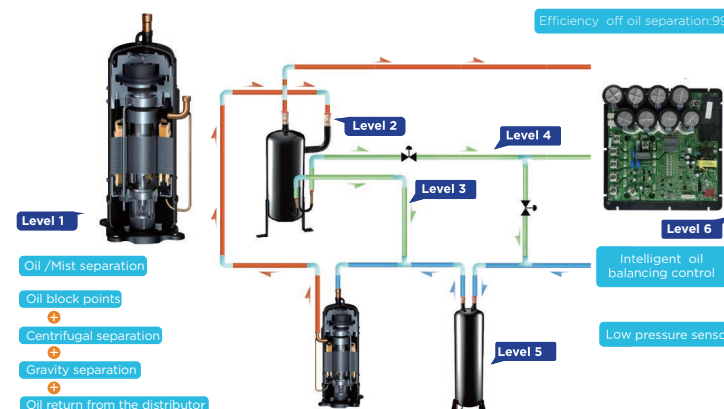
Multiple protection functions to ensure the safe operation of the system.



Multistage Oil Control Technology

The VRF system have sufficient and balanced oil in working condition to ensure safety and avoid potential oil shortages.

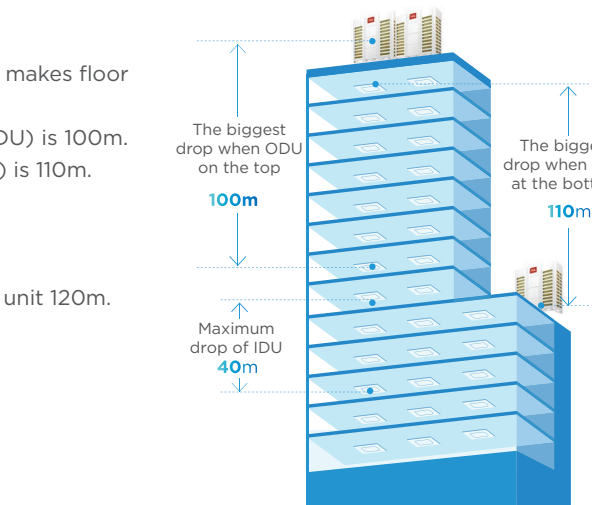
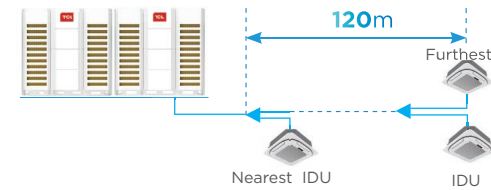
Level 1: Compressor internal oil separate
Level 2: Compressor external oil separate
Level 3: High-efficiency centrifugal oil separator
Level 4: Oil balance pipes between compressors to ensure compressors running normally
Level 5: Automatic oil balance system improves the compressor reliability
Level 6: Smart oil return program to ensure the oil return completely



Flexible Installation, Commissioning and Maintenance

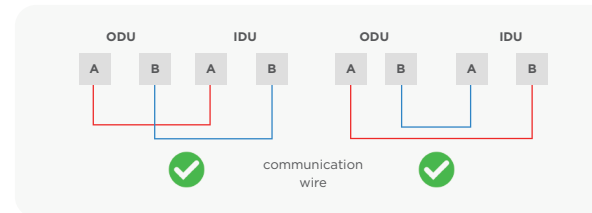
1100m Super Long Piping Design

- The industry-leading piping length, with a total length of 1100m, makes floor design more flexible.
- The max distance between the IDU and the ODU (the higher ODU) is 100m. The max distance between the IDU and the ODU (the lower ODU) is 110m.
- The maximum distance between indoor units is 40m.
- The maximum actual single pipe length is 220m.
- The maximum equivalent single tube length is 240m.
- The equivalent length from first indoor distributor to last indoor unit 120m.



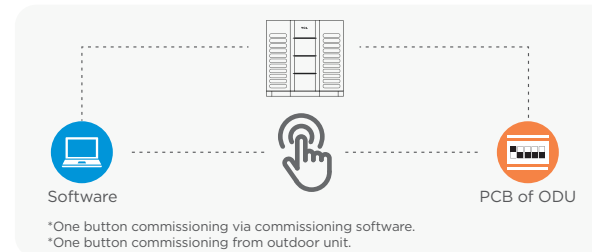
Non-polarity Communication Connection

CAN bus communication mode is applied between indoor and outdoor unit, no need to distinguish between positive and negative poles, and the installation is simpler and more efficient.



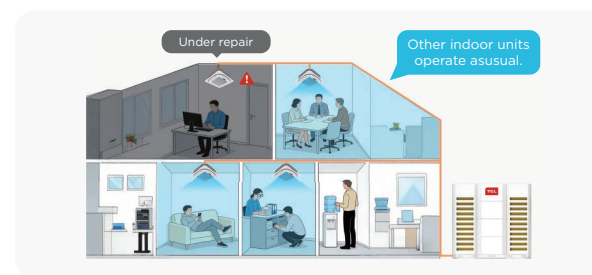
One-button Commissioning Function

You can choose to debug on the outdoor unit side or remotely through the monitoring software to realize the cooling and heating trial operation, no need opening the indoor units one by one, which is convenient for on-site debugging and improves the quality of construction at the project site.



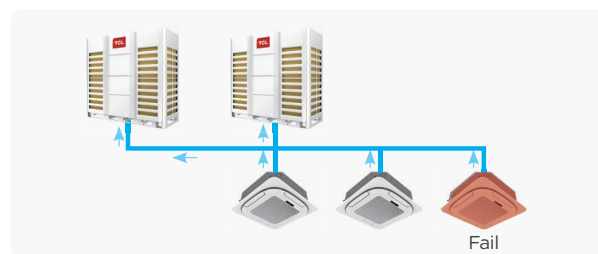
Emergency Power-off Function for IDU Maintenance

If an indoor unit requires power outage for maintenance due to a malfunction, it can be independently powered off for repair without affecting the operation of the entire system. Other indoor units within the system can continue to operate normally.



Auto Address Function

Auto address function, avoid manual address setting of IDU&ODU, simplify installation.



Refrigerant Recycle Function (Pump Down)

Pump down most of refrigerant back to outdoor unit when the indoor unit need to be added, removed or maintenance, which save the refrigerant and cost.



Completed Intelligent Control Solution

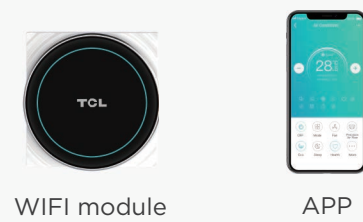
IDU Wireless Controller



IDU Wired Controller



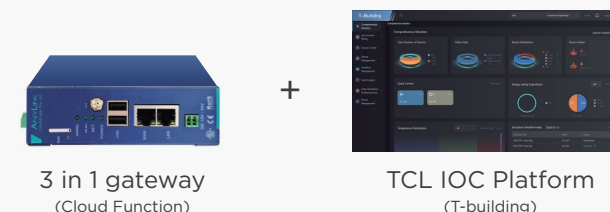
WIFI APP Control



System Centralized Controller



System Cloud Control and Management



System BMS Control

