



SMART AC

VARIABLE REFRIGERANT

R- 410A



Tropicalized

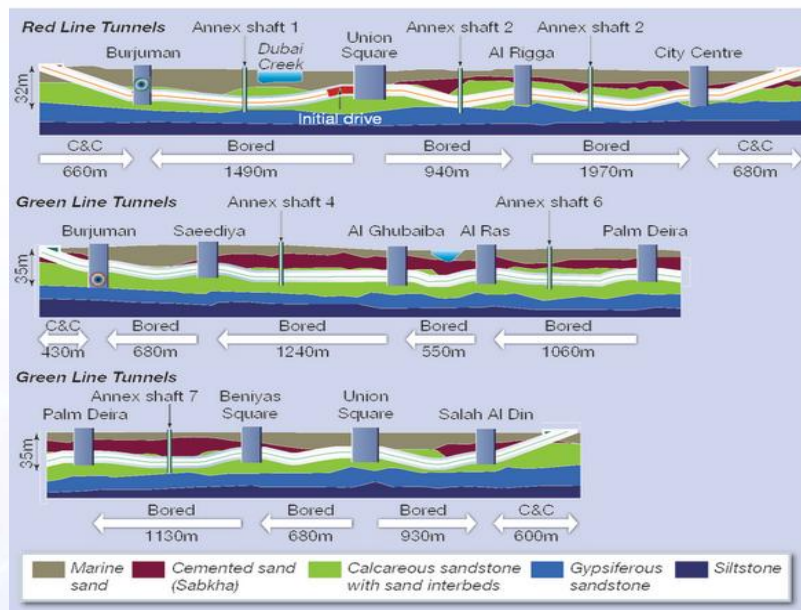


WOLF at DUBAI METRO



WOLF International FZC, has launched WI Brand SMART AC, Variable Refrigerant system based on Digital Scroll Technology in 2009, in association with GDM company, which was chosen for a critical application of maintaining temperature & humidity for Control panels located at 7 annexes, along underground DUBAI Metro, for ventilation & other applications. Units are situated on roof of G+1 structure and the piping run down upto 50 metres below connecting 4 units by single circuit to Condensing unit. Stand by unit is provided at each level with independent Condensing unit. All the units are commissioned and are running satisfactorily for over a year of continuous operation.

In addition to this, WOLF International has successfully tested SMART AC for a G+30 storeyed building in UAE, where units were located with 16 floors between Condensing and ducted indoor units. It can easily provide a perfect alternative for Chiller system for high rise building application.





Bigger airflow volume, lower noise

Adopt dual turbofan which make bigger airflow volume with lower noise.



Smaller pressure loss, lower noise

The grille of fan air inlet and fan air outlet have airflow direction adjusting function, which leads to lower pressure loss.



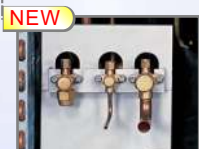
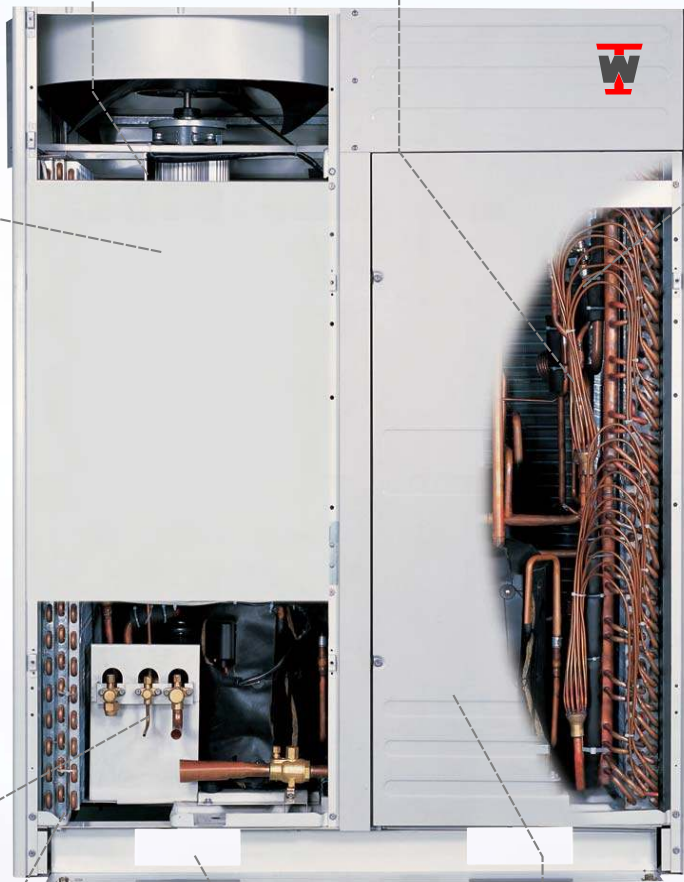
Creative design, precisely refrigerant control

Double electrical expansion valve, which achieves up to 960 steps refrigerant adjusting precision to get the best refrigerant distribution effect.



Elegant appearance, longevity of usage

Achieving advanced technical process, which gets elegant appearance with longevity of usage.



Patented design, running reliable

Oil balance: Ensure sufficient refrigerant lubricant supply.
Gas balance: Balancing the refrigerant suction volume among different compressors.



New type high efficient heat exchanger

Adopt 3-row inner-screw copper heat-exchanger, which creates higher heat transfer efficiency and powerful heating capacity especially in low ambient temperature.



Reserving special designed transportation position for forklift

Making easy installation for the sling movement.



Powerful refrigerant system configuration

Adopt Digital Scroll Compressor with wide running arrange, multi compressors can be parallel connected, the corresponding capacity range can achieve 2.5%-100% (when 4 models assembled to 64 HP)



Classic design, precisely control heat-exchanger area

The area of outdoor heat-exchanger can be precisely adjusted.



Free combination, wide range

- 5 basic modules, which can be freely assembled. All modules have same dimension.
- 2HP increments of capacity range, which meets customers' needs accurately.
- Maximum capacity is 64HP.

Unit features

Basic modules

5 basic modules

8HP	10HP	12HP	14HP	16HP
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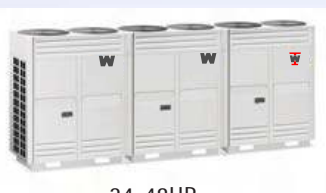
2HP increments of capacity



8-16HP



18-32HP



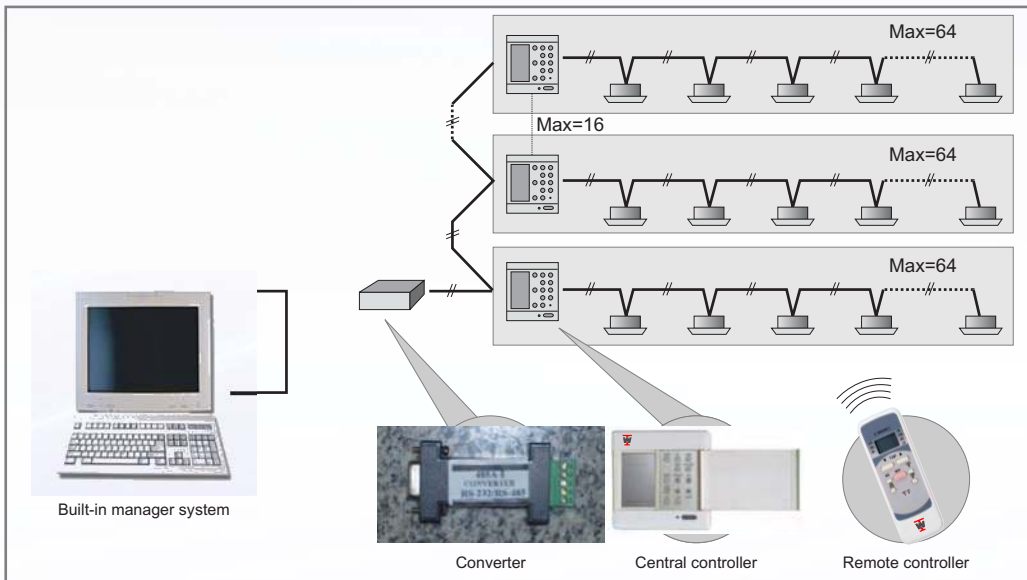
34-48HP



50-64HP

Intelligent Built-in Manager system

Multi control type can be selected



Central controller can manager up to 64 indoor units, the maximum signal wire length is 1200m.
 Central controller can communicate with PC by using Intelligent Built-in Manager system, to realize PC control;
 Intelligent Built-in Manager system can connect up to 1024 indoor units. Independent electricity charge calculation function (approximate calculation), can supply the electricity charge independently

Accessories

Remote controller



R05/BG

- Setting mode
- Fan speed
- On/Off
- Temperature
- Timer
- Clock

Available for all WI direct expansion refrigeration A/c indoor units



R51

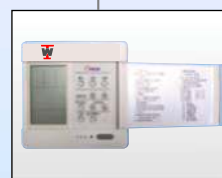
- Setting mode
- Fan speed
- On/Off
- Temperature
- Timer

Wire controller



KJR-10B/dP(T)

- Setting mode
- Fan speed
- On/Off
- Temperature
- Timer
- Display

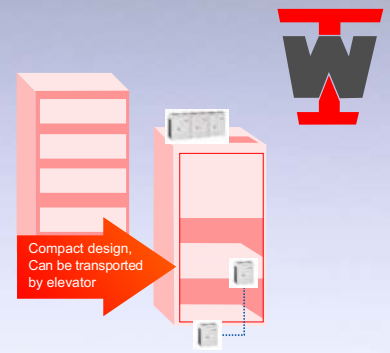


KJR-01B/dP(T)

- Setting mode
- Fan speed
- On/Off
- Temperature
- Timer

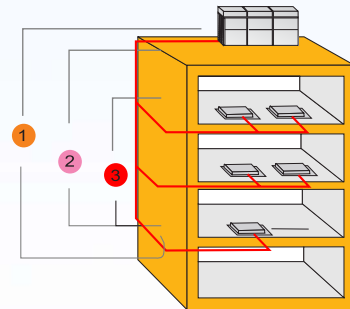
Compact design, flexibly installation

- Compact design, flexibly installation, Slim body benefit delivery especially when transported by elevator for installation at the top of building, time saving and labor saving.
- Occupied area remarkably decreased.
- Freely combination, flexible installation



SMART AC system allow longer refrigerant pipe

- 1 The maximum pipe equivalent length between indoor unit and outdoor unit is 150m.
- 2 The maximum height difference between indoor unit and outdoor unit is 50m.
- 3 The maximum height difference between indoor units is 15m.



Patented design, running reliable

Oil balance

1. Smart AC adopts oil balance technology, which can balance the refrigerant lubricant distribution among different outdoor modules.
2. Adopts high efficient centrifugal-type oil separator, which separate the lubricant from discharge
3. New designed low pressure liquid receiver with high efficiency of oil-return effect. refrigerant with up to 99% effect to make all the lubricant discharged from compressor can be returned in time.
4. Oil balance: ensure sufficient refrigerant lubricant supply.
Elaborately designed oil-return hole, which ensure reliable oil-return for every compressor.

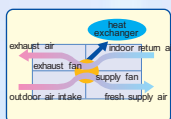
Gas balance

Smart AC adopts unique gas balance device among compressors, which balancing the gas suction volume among different compressors.

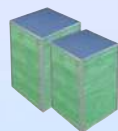
Heat Recovery Box (HRB)

Features:

- Employing centrifugal fan with lower power consumption and longer air supply distance;
- Easy control, operation friendly;
- Compact design, easy installation & maintenance;
- Optional for humidifying device to increase unit heat-exchanging efficiency.
- Can be controlled together with other indoor units.



Energy saving



High efficiency



Flexible multi control ways



Outdoor unit

Design	Power supply (V~,Hz,Ph)	Horse Power (HP)	Combination	Nom Tons at 35°C	Actual Tons at 46°C	Model	Max. connection indoor units
	380~415, 50, 3	8	8	7.17	6.44	WMDV-D252W/CS(N2)	13
		10	10	8.00	7.15	WMDV-D280W/CS(N2)	16
		12	12	9.53	8.56	WMDV-D335W/CS(N2)	16
		14	14	11.38	10.22	WMDV-D400W/CS(N2)	16
		16	16	12.80	11.50	WMDV-D450W/CS(N2)	16
	380~415, 50, 3	18	8 + 10	15.17	13.59	WMDV-D532W/CS(N2)	20
		20	10+10	16.00	14.30	WMDV-D560W/CS(N2)	20
		22	10+12	17.53	15.71	WMDV-D615W/CS(N2)	20
		24	10+14	19.38	17.37	WMDV-D680W/CS(N2)	20
		26	10+16	20.80	18.65	WMDV-D730W/CS(N2)	20
		28	12+16	22.33	20.06	WMDV-D785W/CS(N2)	20
		30	14+16	24.18	21.72	WMDV-D850W/CS(N2)	32
		32	16+16	25.60	23.00	WMDV-D900W/CS(N2)	32
	380~415, 50, 3	34	10x2+14	27.38	24.52	WMDV-D960W/CS(N2)	32
		36	10x2+16	28.80	25.80	WMDV-D1010W/CS(N2)	32
		38	10+12+16	30.33	27.21	WMDV-D1065W/CS(N2)	32
		40	10+14+16	32.18	28.87	WMDV-D1130W/CS(N2)	40
		42	10+16x2	33.60	30.15	WMDV-D1180W/CS(N2)	40
		44	12+16x2	35.13	31.56	WMDV-D1235W/CS(N2)	40
		46	14+16x2	36.98	33.22	WMDV-D1300W/CS(N2)	40
		48	16x3	38.40	34.50	WMDV-D1350W/CS(N2)	40
	380~415, 50, 3	50	12x3+14	39.97	35.90	WMDV-D1405W/CS(N2)	50
		52	12x3+16	41.39	37.18	WMDV-D1455 W/CS(N2)	50
		54	12x2+14+16	43.24	38.84	WMDV-D1520W/CS(N2)	50
		56	12x2+16x2	44.66	40.12	WMDV-D1570W/CS(N2)	50
		58	10+16x3	46.4	41.65	WMDV-D1630W/CS(N2)	50
		60	12+16x3	47.93	43.06	WMDV-D1685W/CS(N2)	64
		62	14+16x3	49.78	44.72	WMDV-D1750W/CS(N2)	64
		64	16x4	51.2	46.00	WMDV-D1800W/CS(N2)	64

Caution: The system enables the connection of indoor units with a total capacity of between 50 % to 130% of that of the corresponding outdoor unit but when this capacity ratio exceeds 100% then the actual capacity of each indoor unit will decrease compared to rated capacity when all the units operated simultaneously. To counter this it is advisable to do zoning between peak loads so that sum of loads of all the zone any time of the day is less than the Outdoor unit capacity.

Single module unit specification

Outdoor Capacity			8HP	10HP	12HP	14HP	16HP
Power supply					3N~380V 50Hz		
Cooling/Heating		kW	25.2/27	28/31.5	33.5/35	40/43	45/47
Dimension	WxHxD	mm			1380x1630x830		
Compressor	Motor Power consumption X Number	kW	(1.0+4.4)x1	(2.1+4.4)x1	(3.5+4.4)x1	(1.2+4.4+4.4)x1	(2.6+4.4+4.4)x1
Fan	Motor Power consumption X Number	kW	0.4x2	0.4x2	0.4x2	0.45x2	0.45x2
Pipe	Air volume	m ³ /h	6000x2	6000x2	6000x2	7000x2	7000x2
	Liquid	mm	*12.7(Flaring nut)	*12.7(Flaring nut)	*12.7(Flaring nut)	*15.9(Flaring nut)	*15.9(Flaring nut)
	Gas	mm	*28.6(Weldingn)	*28.6(Weldingn)	*28.6(Weldingn)	*38(Weldingn)	*38(Weldingn)
	Oil balance	mm	/	/	/	/	/
	Gas balance	mm	/	/	/	/	/
Weight		kg	325	325	325	390	390
Safety device			High-pressure switch, Low-pressure switch, Thermostat				
Capacity adjusting rate		%	14~100%	14~100%	14~100%	10~100%	10~100%
Refrigerant	Refrigerant type		R410A	R410A	R410A	R410A	R410A
	Weight	kg	13	13	13	18	18
Noise		dB(A)	58	58	58	60	60
Qty per 20/40/40HQ		Pieces	11/23/23	11/23/23	11/23/23	11/23/23	11/23/23
Standard accessories			Installation Manual Users' Manual Gas pipe connection elbow				



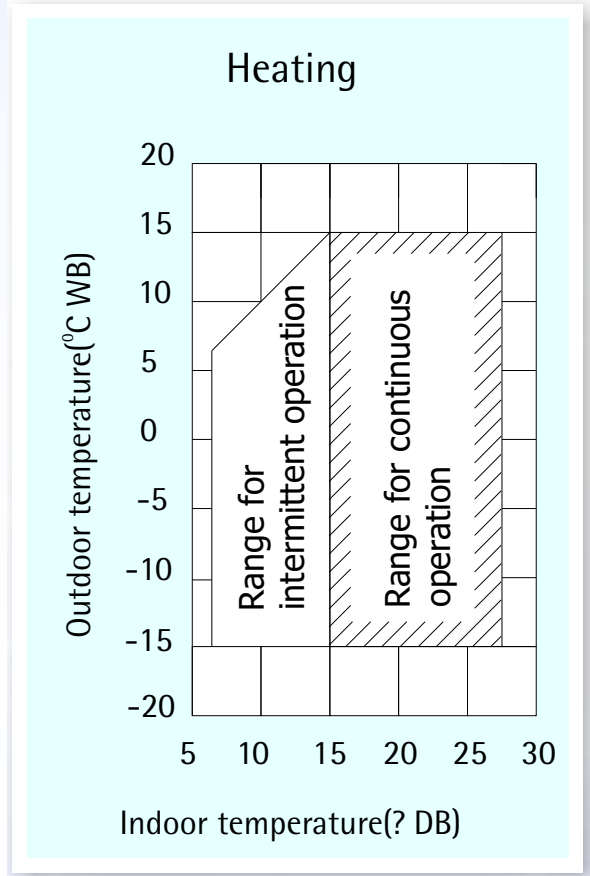
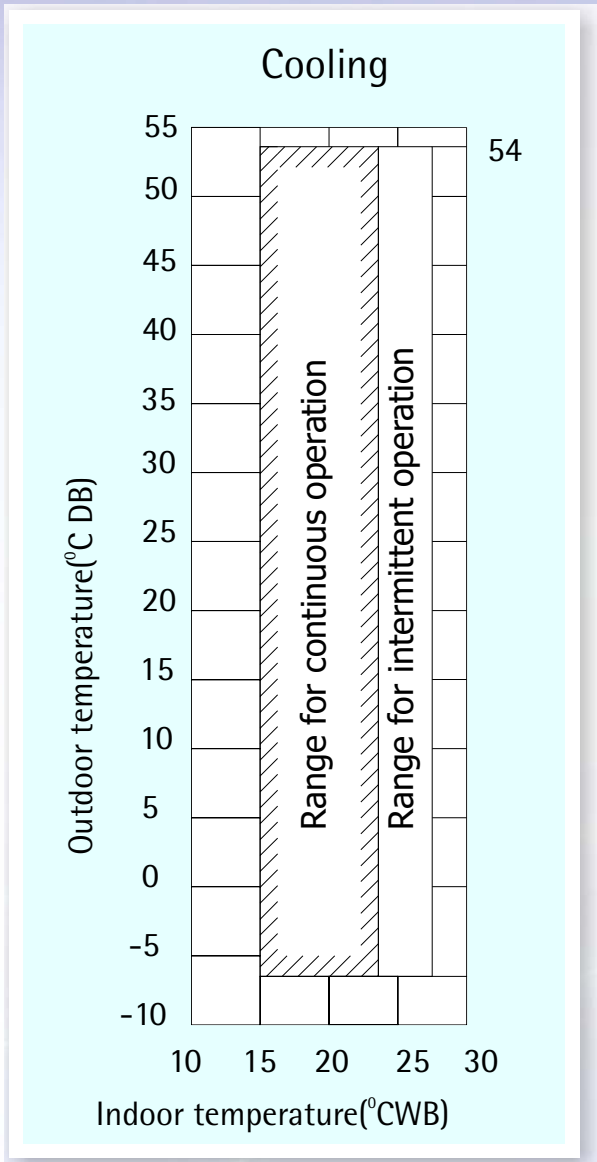
Indoor unit

Unit: X100W

Model	Refrigerant	Capacity											
		22	28	36	45	56	71	80	90	112	140	280	
Four-way cassette (compact) 	R410A R22		●	●	●								
Four-way cassette 	R410A R22		●	●	●	●	●	●	●	●	●		
One-way cassette (compact) 	R410A R22		●	●									
One-way cassette 	R410A R22				●	●	●						
Low static pressure duct (compact) 	R410A R22		●	●									
Low static pressure duct 	R410A R22				●	●	●						
Duct 	R410A R22				●	●	●	●	●	●	●	●	●
Duct (compact) 	R410A R22	●	●	●									
High static pressure duct 	R410A R22						●	●	●	●	●	●	●
Ceiling&floor 	R410A R22			●	●	●	●	●	●	●	●		
Wall-mounted 	R410A R22	●	●	●	●	●							



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Refrigerant distributor

Model	Picture	Function
SMRT-BY51		distribute refrigerant into next distributor or indoor unit
SMRT-BY101		distribute refrigerant into next distributor or indoor unit, Apply to 8-12HP unit
SMRT-BY102		distribute refrigerant into next distributor or indoor unit, Apply to 14-24HP unit
SMRT-BY103		distribute refrigerant into next distributor or indoor unit, Apply to 26-32HP unit
SMRT-BY104		distribute refrigerant into next distributor or indoor unit, Apply to 34-48HP unit
SMRT-BY105		distribute refrigerant into next distributor or indoor unit, Apply to 50-64HP unit
SMRT-AY01		balance between outdoor modules when combination, include Liquid tee, gas tee, oil balance tee and gas balance tee (picture only for reference)

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