DRV PRO

Full DC Inverter VRF System With EVI Technology

Controllers & Software

Wireless Remote Controllers

- Indoor unit address inquiry
- Indoor unit address setting
- Temperature setting
- Operation mode setting
- Fan speed setting
- Timer function

Wired Controllers

- Bidirectional communication
- Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function
- Electrical standard dimensions

Standard Optional

Touch Screen Wired Controllers

- Curved screen design
- Compact design
- Easy to operate with sensible screen
- New 3 cores communication cable
- Weekly timer function
- Control AC by your phone

Simplify Centralized Controller

- Easy to install. Controller connects to outdoor units only.
- 1 Controller can control max. 100 indoor units.
- Operation mode restriction
- Error or protection code display
  Can control single unit or all units together

Touch Screen Centralized Controller

- Wireless WIFI connection
- Touch screen, easy to use
- Can control single unit or groups
- Can be used with internet
- Weekly schedule management
- Mode lock, temperature lock

DRV-smart (centralized Control App)

- Available on iOS and Android
- Single unit controller or group control
- Weekly schedule management
- Operation parameter enquiry

DRV-NET (Centralized Control System)

- Centralized control
- Electricity charge management
- Operation data record
- Schedule management

Doctor Kit Pro

- Fast to install, easy to use
- All indoor / outdoor units data can be enquired
- Indoor unit can be long distance remote controlled and diagnosed

Wide Capacity Range

13 Basic Modules

8/10/12HP 14/16HP 18/20HP 22HP 24HP 26/28/30/32HP

Maximum 128HP

Modules can be freely combined to become larger unit.
Recommended maximum capacity of single system is 96HP.
Maximum capacity of single system can be up to 128HP.

Specification

Model name			D252N(C)XB1	D280W(C)XB1	D335N(C)XB1	D400W(C)XB1	D450W(C)XB1	D500W(C)XB1	D560W(C)XB1	D615W(C)XB1
Power Supply			220V-3N-60Hz	220V-3N-60Hz	220V-3N-60Hz	220V-3N-60Hz	220V-3N-60Hz	220V-3N-60Hz	220V-3N-60Hz	220V-3N-60Hz
Performance Data										
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
		kW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5
		Btu/h	86000	95500	114000	136500	153500	170600	191000	209800
		RT	7.2	8.0	9.5	11.4	12.8	14.2	16.0	17.5
	Rated current	A	9.04	11.30	14.51	18.10	21.60	23.29	26.10	29.06
	Power input	kW	5.31	6.22	8.35	9.76	11.63	12.22	14.66	16.62
	EER	W/W	4.75	4.50	4.01	4.10	3.87	4.09	3.82	3.70
Heating	Capacity	kW	27.4	31.5	37.5	45.0	50.0	56.0	63.0	69
		Btu/h	93500	107500	128000	153500	170600	191000	214900	235400
		RT	7.8	9.0	10.7	12.8	14.2	16.0	18.0	19.7
	Rated current	A	8.93	11.25	14.34	18.00	20.25	22.61	25.70	28.4
	Power input	kW	4.98	5.86	7.35	9.34	10.87	11.89	14.16	16.80
	COP	W/W	5.50	5.38	5.10	4.82	4.60	4.71	4.45	4.11
Max.input consumption		kW	13.4	14.3	14.8	18.3	18.8	22.0	24.4	25.0
Max.current		A	23.13	24.70	25.50	30.89	31.70	37.40	41.10	42.10
Capacity adjustment range			50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%
Compressor Data										
Compressor	Quantity		1	1	1	1	1	1	1	1
	Type		Scroll Compressor	Scroll Compressor	Scroll Compressor	Scroll Compressor	Scroll Compressor	Scroll Compressor	Scroll Compressor	Scroll Compressor
	Brand		HITACHI	HITACHI	HITACHI	HITACHI	HITACHI	HITACHI	HITACHI	HITACHI
Physical Data										
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a	R410a	R410a
	Volume	kg	9	9	11	14	14	15	16	16
	Throttle type		EXV	EXV	EXV	EXV	EXV	EXV	EXV	EXV
Dimension (W×H×D)	Net	mm	990×1740×840	990×1740×840	990×1740×840	1340×1740×840	1340×1740×840	1340×1740×840	1340×1740×840	1340×1740×840
	packing	mm	1060×1900×910	1060×1900×910	1060×1900×910	1410×1900×910	1410×1900×910	1410×1900×910	1410×1900×910	1410×1900×910
Weight	Net	kg	228	228	230	275	275	285	290	297
	Gross	kg	240	240	242	293	293	303	308	315
Outdoor sound level		dB(A)	58	58	60	60	61	62	63	63
Max.operating range		Mfa	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Piping Data										
Pipe Size	Liquid pipe	mm	Ø12.7	Ø12.7	Ø12.7	Ø15.88	Ø15.88	Ø15.88	Ø15.88	Ø15.88
	Gas pipe	mm	Ø25.4	Ø25.4	Ø25.4	Ø31.8	Ø31.8	Ø31.8	Ø31.8	Ø31.8
Max.pipe length	Total pipe length	m	1000	1000	1000	1000	1000	1000	1000	1000
	ODU to farthest IDU(Acual length)	m	190	190	190	190	190	190	190	190
	ODU to farthest IDU(Equivalent length)	m	220	220	220	220	220	220	220	220
	1st IDU distributor to farthest IDU	m	40/90	40/90	40/90	40/90	40/90	40/90	40/90	40/90
Max. vertical length	Between ODUs&IDU(ODU above IDU)	m	90	90	90	90	90	90	90	90
	Between ODUs&IDU(ODU below IDU)	m	110	110	110	110	110	110	110	110
	Between IDUs	m	30	30	30	30	30	30	30	30
	Between ODUs)	m	0	0	0	0	0	0	0	0
Operation temperature range										
Cooling	Outdoor side	℃	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55
	Indoor side	℃	16~32	16~32	16~32	16~32	16~32	16~32	16~32	16~32
Heating	Outdoor side	℃	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
	Indoor side	℃	16~32	16~32	16~32	16~32	16~32	16~32	16~32	16~32

Notes:
1. Cooling operating temperature range is from -5°C to 55°C (It can be customized down to -10°C). Heating operating temperature
2. The cooling conditions: Indoor side 27°C(80.6°F) DB, 19°C(66°F)WB outdoor side 35°C(95°F) DB.
3. The heating conditions: Indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB.
4. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
5. The above data may be changed without notice for future improvement on quality and performance.

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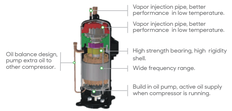
Excellent Features

Features For Users

DC Inverter Compressor

- Small suction refrigerant superheat, refrigerant volume efficiency is high large refrigerant discharge buffer volume, low vibration and noise



High Efficiency DC Brushless Motor

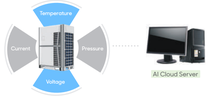
- High efficiency DC fan motor is from well-known brand
- Low noise and high efficiency because of high-density wire winding engineering
- Brushless with built-in sensor

Long Distance Remote Control

Long distance remote control by phone or tablet.

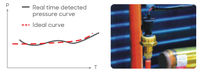
Malfunction Forecasting

- Thanks to the AI cloud server, malfunction can be forecasted when system running parameter is abnormal.
- Technician can be sent to site to check then system before the it stops.



DC Motor Stepless Control

High precision pressure control. By adopting high precision pressure sensor, fan motor speed and can be stepless regulated to fit system's load requirement.



Power Saving Mode

In the case of power shortage, DRV PRO can run power saving mode to ease generator's pressure.

Refrigerant Cooling Design

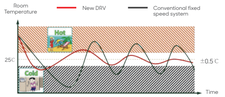
We use refrigerant to cool down inverter modular board, to keep it in a safe condition even when outdoor temperature is up to 55℃.

Dust-proof Function (optional)

Fan motor can be reverse running to blow off the dust on the heat exchanger.

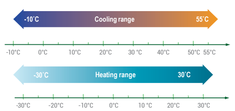
Outstanding Comfort Ability

- Precisely room temperature control by adopting large pulse. Indoor temperature fluctuation can be maintain within 0.5℃, offers outstanding comfort ability.
- Fast heating, can maximum heating capacity output in 60s.

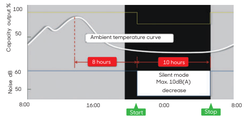


Wide Outdoor Operation Range

- Due to EVI technology, DRV PRO s heating performance increased by 35% compare to conventional VRF system.
- Due to EVI technology, DRV PRO still has 85% of rated capacity even in -15℃



Night Time Noise Control



All Outdoor Units Cycle Operation

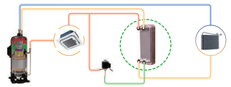
- In one combination system, any outdoor unit can run as master unit.
- Balance the lifespan among outdoor units in one system.

Time	Start order
X	A→B→C
X+1	B→C→A
X+2	C→A→B

Two-Stage Subcooling

Based on subcooling flow path design, DRV PRO is building in subcooling design structure, max subcooling temperature is up to 30℃.

First step: Subcooling Flow Path Design



Second step: Secondary Subcooling Design

Backup Function

- **Module back up function**
  When some modules are failure, the others can keep running by simply settings.

- **Compressor back up function**
  When one compressor is failure, the other one can keep running by simply settings.

- **Fan motor back up function**
  When one fan motor is failure, the other one can keep running by simply settings.

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Excellent Features

Features For Installers

More Indoor Units

Max. 100 Indoor units can be connect in ONE system.

Adjustable Outdoor Fan Static Pressure

- Thanks to DC fan motor, the external static pressure of outdoor fan is adjustable.
- Outdoor units can be installed in the service floor or facility room.
- Maximum ESP 110Pa

Oil Control Technology

Core oil control technology makes system safety & reliable.

3-phase Power Protector (optional)

- Wide operation voltage range: 295V ~ 456V.
- Protect the outdoor unit from instable voltage.
- High quality and reliable protector.

Wireless Communication (optional)

- Wireless communication between indoor units
- Wireless communication between indoor unit and outdoor unit

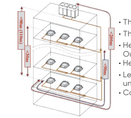
On Site Diagnosis

Technician can do the commissioning & diagnosis by phone or tablet on site.

Electrical Lock Function (optional)

- In case of end user doesn't pay as contract, electrical lock function can be used to stop VRF system, and end user can not start the system without permission.
- System can be unlock with password by authorized technician.

Long Pipe & Height Difference



- The total pipe length: 1000 m
- The longest pipe length: 200 /240m
- Height deference: Outdoor unit above +90m; Outdoor unit below -110m
- Height difference between indoor units: 30m
- Length from first indoor distributor to last indoor unit: 90 m
- Communication wire length can be up to 1000m.

Wired Controller

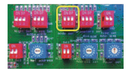
- Bidirectional communication
- Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function
- Electrical standard dimensions

Mode Restriction

- 6 mode restriction

First start indoor units priority mode	Cooling only mode
Cooling priority mode	Heating only mode
Heating priority mode	VIP unit priority or majority priority mode

- Mode restriction function can be selected on the outdoor PCB.



Wired Controller

User can check the error code and inquiry unit status very easy, safe and convenient.

Automatic Addressing

- 2 addressing methods:
- Automatically addressing: system will distribute address to indoor unit automatically
- Manually setting by wireless remote controller
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.

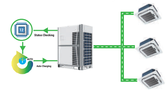
Refrigerant Status Detection

- Built-in with smart refrigerant auto check function, which can give suggestion about refrigerant status.
- Different code means different refrigerant status:

4 ▸ Extremely insufficient
12 ▸ Insufficient
11 ▸ Slightly insufficient
0 ▸ Normal
1 ▸ Slightly excess
2 ▸ Overmuch

Auto Charging Refrigerant (optional)

DRV PRO can customize with auto refrigerant charging function, additional solenoid valve will be added in gas pipe, and outdoor unit will control the valve to charge refrigerant.



Service Window On Front Cover

Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the front cover.