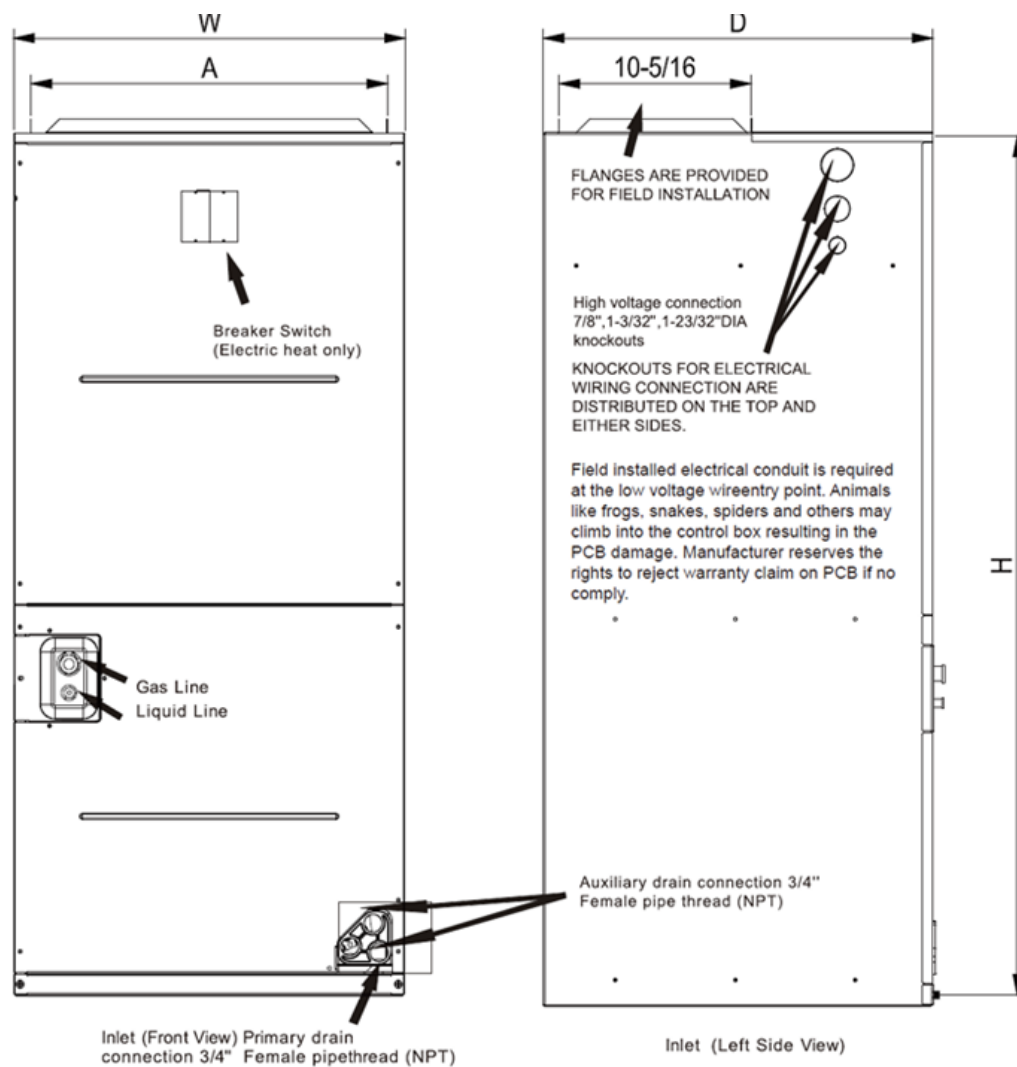


# **TCL** Top Discharge Inverter Type Central System Heat Pump and AHU





## Unit Dimensions

Model	Dimensions (in.)					
	H	W	D	A	Liquid Line Connection	Gas Line Connection
24/36K	46-1/2	21	21	19-1/4	3/8	3/4
48/60K	56	24-1/2	21	22-3/4	3/8	7/8

## Advantage



Consistent Room Temperature



Universal Match for 24V or 485



High Efficiency And Energy Saving



Multi-protection



## Outdoor Unit Installation



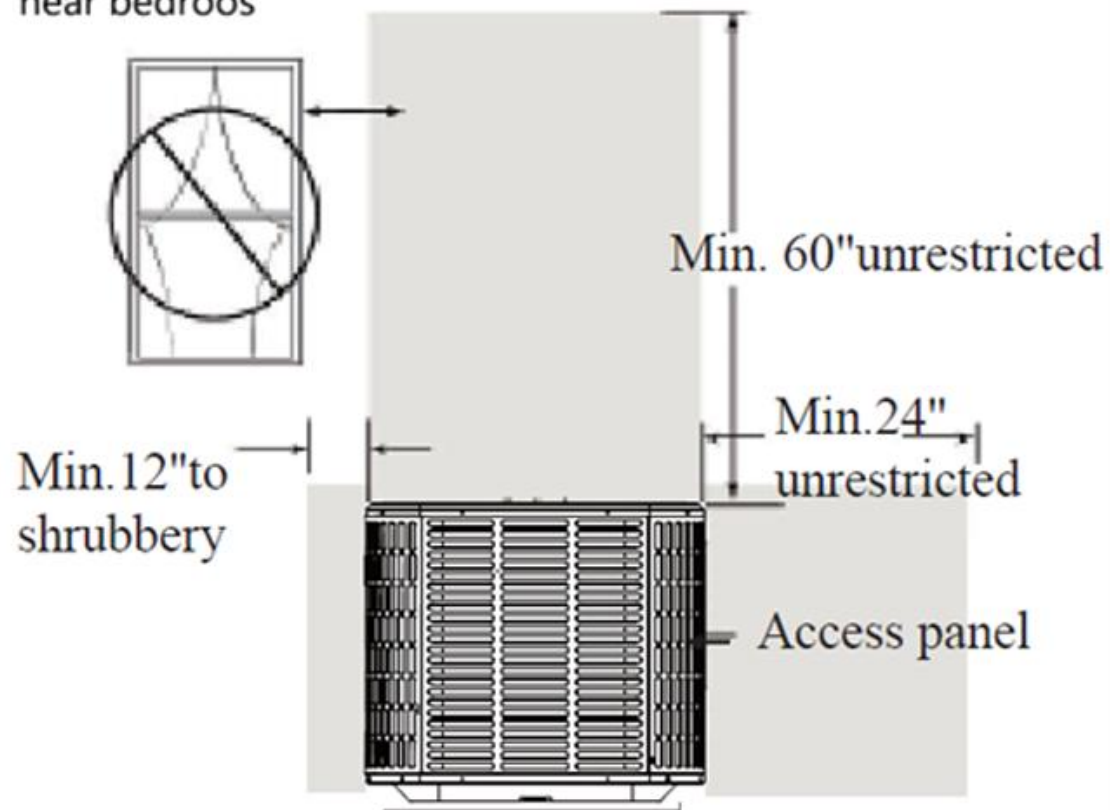
MODEL	Gas Pipe	Liquid Pipe	Maximum pipe length (feet)	Maximum height difference (feet)
24K	3/4'	3/8'	100	50
36K	3/4'	3/8'	100	50
48K	7/8'	3/8'	100	50
60K	7/8'	3/8'	100	50



# Outdoor Unit Installation

## Space requirement

Avoid installing  
near bedrooms



## Piping Distance

H	50ft/15m
L	100ft/30m

• Maximum line length = 100 feet.

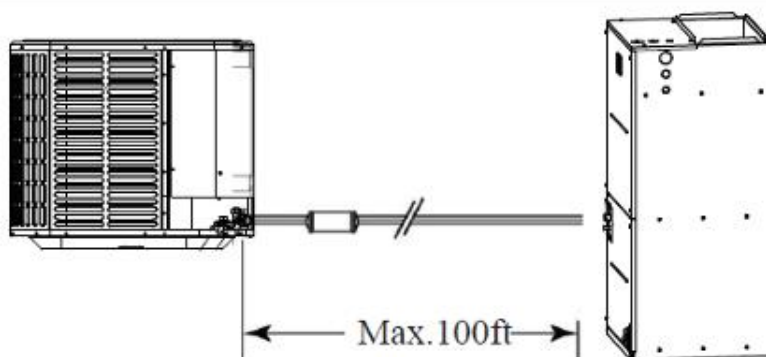


Fig 5-1 Line length limit

• Maximum elevation difference = 50 feet.

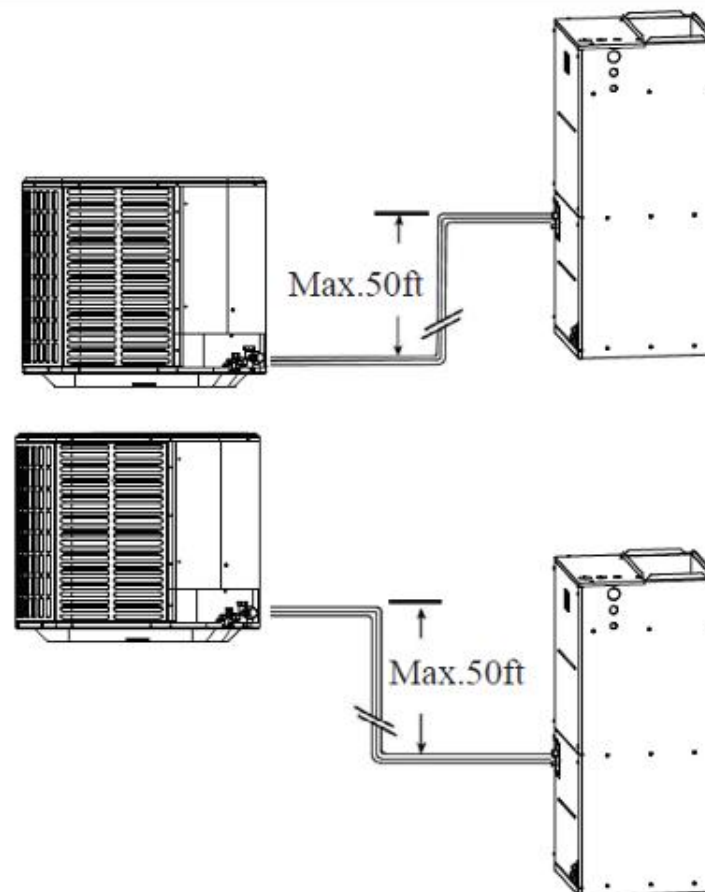
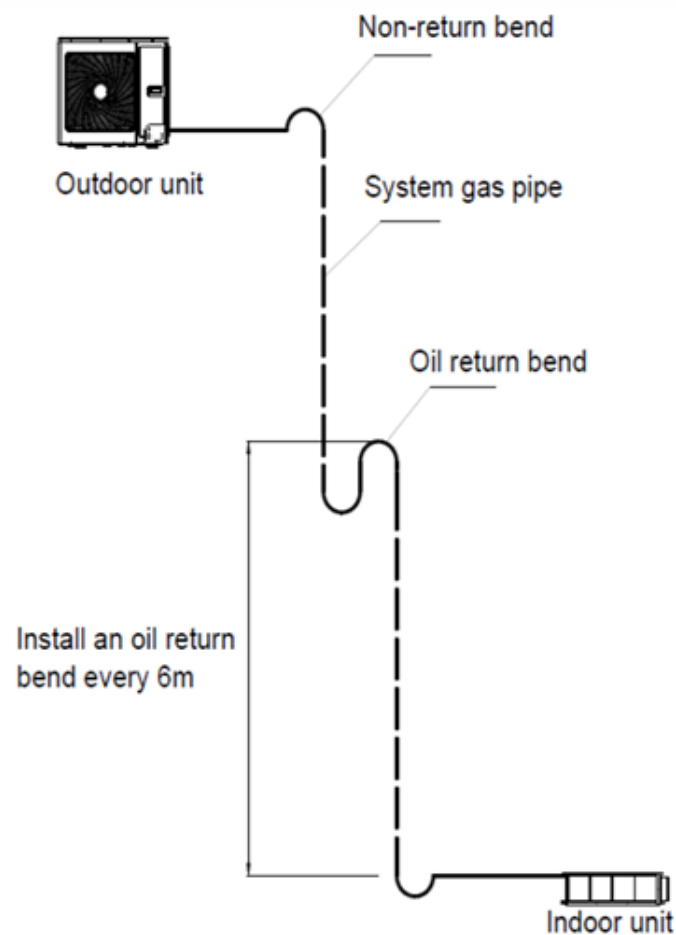
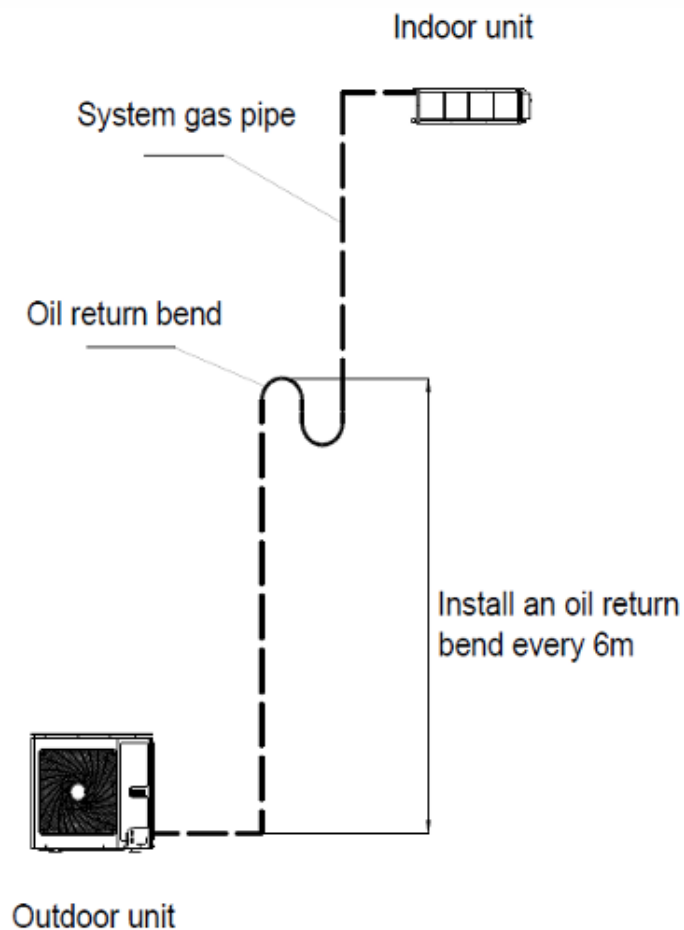


Fig 5-2 Elevation difference limit

## Oil Trap

All the traps installed on the gas pipe  
Each 6m(20ft) for 1 oil trap on the vertical pipe.



## Piping/ Pressure/ Vacuum

**TCL**

### Additional Refrigerant

Model	24K	36K	48K	60K
Length of pipe with standard charge(ft)	25	25	25	25
Refrigerant capacity of standard charge(bls)	4.74	6.28	8.82	8.82
The longest pipe length(ft)	100	100	165	165
Additional refrigerant charge(bls/ft)	0.0335	0.0335	0.0335	0.0335
Max. diff. in level between indoor and outdoor unit(ft)	50	50	50	50



### Operation after connecting the power

- (1) If all the above works are finished, power on the unit.
- (2) If the outside temperature is more than 30°C(86°F) , heating mode can't be enabled.
- (3) Before test operation, make sure unit is power on and compressor has been preheated for more than 8 hours. Touch the unit to check whether it's normally preheated. Start test operation after unit is normally preheated, otherwise compressor might be damaged. Debugging must be performed by professional technicians or under the guide of professional technicians.
- (4) Make sure the units can run normally.
- (5) If there's sound of liquid shock when the compressor is running, then stop the air conditioner immediately. Wait until the electric heating belt is heated enough, and then restart the air conditioner.

# Consistent Room Temperature

TCL Inverter Technology keeps the Room temperature changes within  $\pm 1^{\circ}\text{F}$



## Universal Match for 24V and 485

The inverter outdoor unit is compatible with 24V third-party indoor units and thermostats, and can independently achieve variable frequency operation



# Smart Control

1



## 24V thermostat

Compatible to all 3<sup>rd</sup> party 24V thermostat

2



## RS485 Wired controller

To activate smart functions such as dehumidification, energy saving, sleep mode, etc.



Adaptable to most third-party indoor or outdoor units and thermostats, without the need to change line sets and wiring

Adaptable to most third-party indoor or outdoor units and thermostats, without the need to change line sets and wiring

A diagram illustrating the connection between an outdoor air conditioning unit and an indoor unit. The outdoor unit is on the left, and the indoor unit is on the right. Two blue arrows indicate the flow of refrigerant: one arrow points from the outdoor unit to the indoor unit, and another arrow points from the indoor unit back to the outdoor unit, forming a cycle.



## DC-inverter Compressor

All outdoor units use DC variable frequency compressors, with intelligent adjustment of operating frequency, more precise temperature control, greater efficiency, and more reliable safety control.

## High Efficiency and Energy Saving

SEER2 reaches up to 19, reliable low temp heating as low as -4°F





## Multi-protection

High/low pressure, temperature and current protection to adapt to various extreme conditions. With pressure sensors, it can achieve refrigeration anti-freezing and heating overload protection.





## Easy Access for Wiring

Pull out the cover of the electrical box, and easy to access the wiring and find the error code.



## Wide Voltage Operation

Full DC compressor and motor, combined with a high-reliability electronic control box, can achieve stable operation with a wide voltage range of 187-253V.



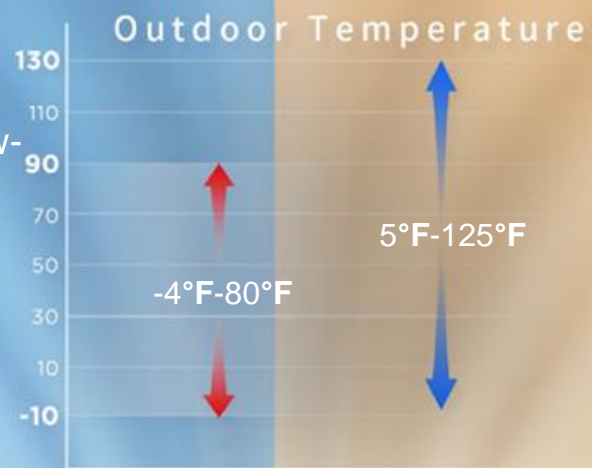


## Wide Operation Range

Compressor preheating, forced air cool driven system, low-temperature speed control.

Heating operation range of the unit is  $-4^{\circ}\text{F}$  to  $80^{\circ}\text{F}$

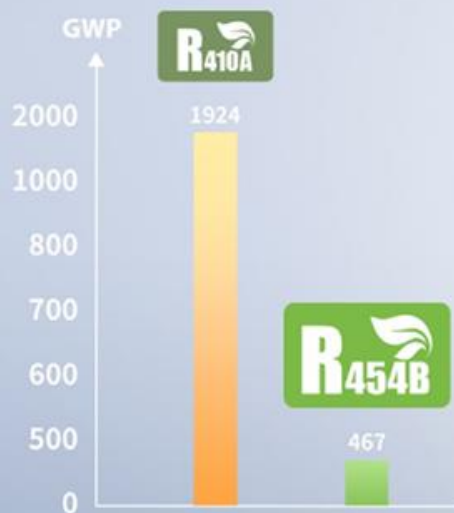
Cooling operation range of the unit is  $5^{\circ}\text{F}$  to  $125^{\circ}\text{F}$





## Environmentally-friendly Refrigerant

Come with the latest R454B environmentally friendly refrigerant, healthy, pollution-free, green, and more energy-efficient.





# 0.8 in.wg.

## Consistent Air Flow

The indoor unit is equipped with a constant torque fan, consistent air output under different static pressures, and is fearless of static pressure challenges.

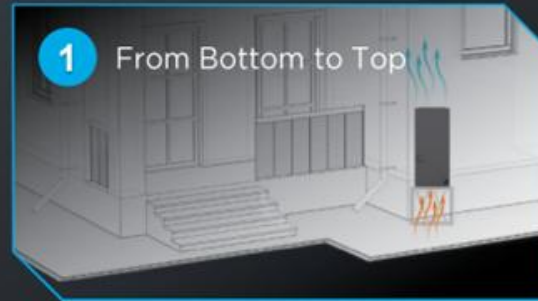
**(0.8 ESP)**

# 4-way Installation

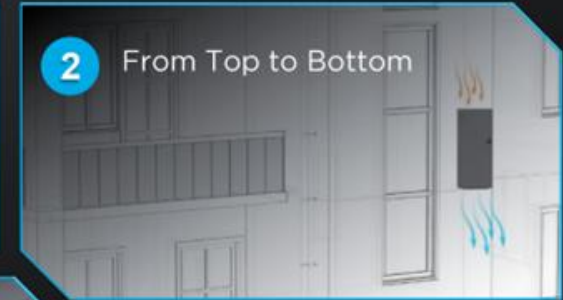


Pull-out Drain Pan  
& Evaporator

...



1 From Bottom to Top



2 From Top to Bottom



3 From Left to Right



4 From Right to Left



## Intelligent Anti-Cold Air Design

The unit can adjust the fan speed based on the comprehensive analysis of the evaporator pipeline temperature, auxiliary electrical heater, and condenser defrosting condition, which can achieve both anti-cold air and protect the auxiliary electric heater







## Quiet Operation

Multi - speed air volume for easy choice  
Automatic noise adjustment in different conditions

