



CVD SWCNT Growth System

Using Integrated Design

The stainless steel sealing structure is used as the furnace body, equipped with high-quality furnace chamber, heating section is 1815mm and control system, with accurate temperature control.

01

Stainless steel explosion-proof design and cooling water protection

Combination of cooling water layer and thicker insulation layer ensures the explosion-proof and low energy consumption.

02

Multi-stage atomization ultrasonic feed design

Feed uniform, effective control of directional growth, improve batch consistency.

03

Equipped with vacuum system interface

Quickly purging inner gas of furnace by using argon (carrier gas), hydrogen (reducing gas) and methane (carbon source gas, selected according to process requirements).

04

Air intake configured preheating system preheating system

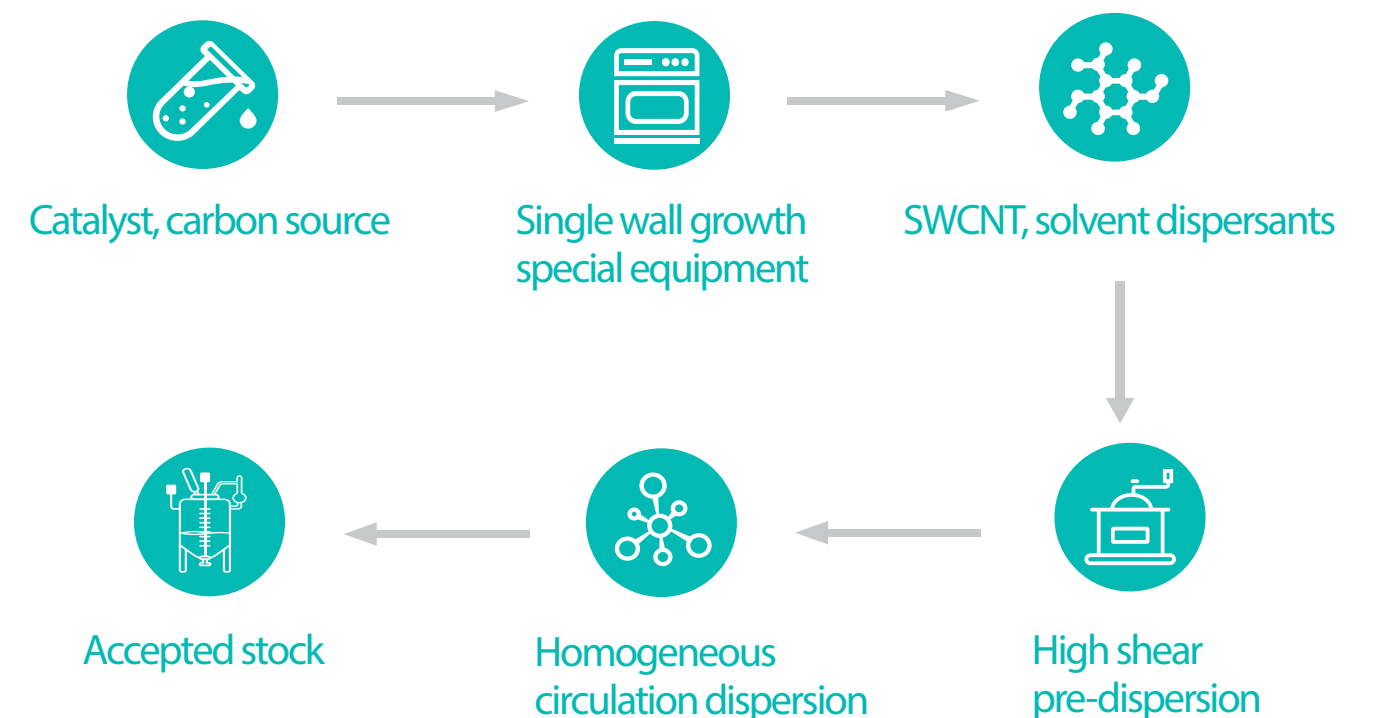
Bringing the gas to the appropriate temperature before entering the furnace to ensure consistent reaction conditions

05

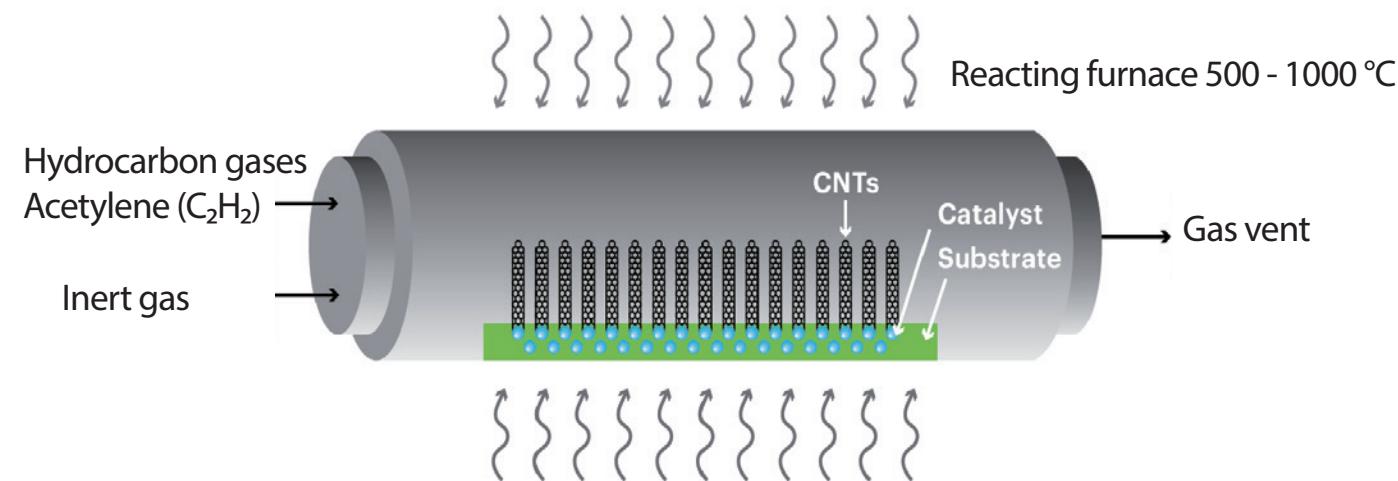
Large diameter furnace tube and shaft receiving mechanism

Ensure production capacity and continuous collection without stopping

SWCNT Manufacturing Process



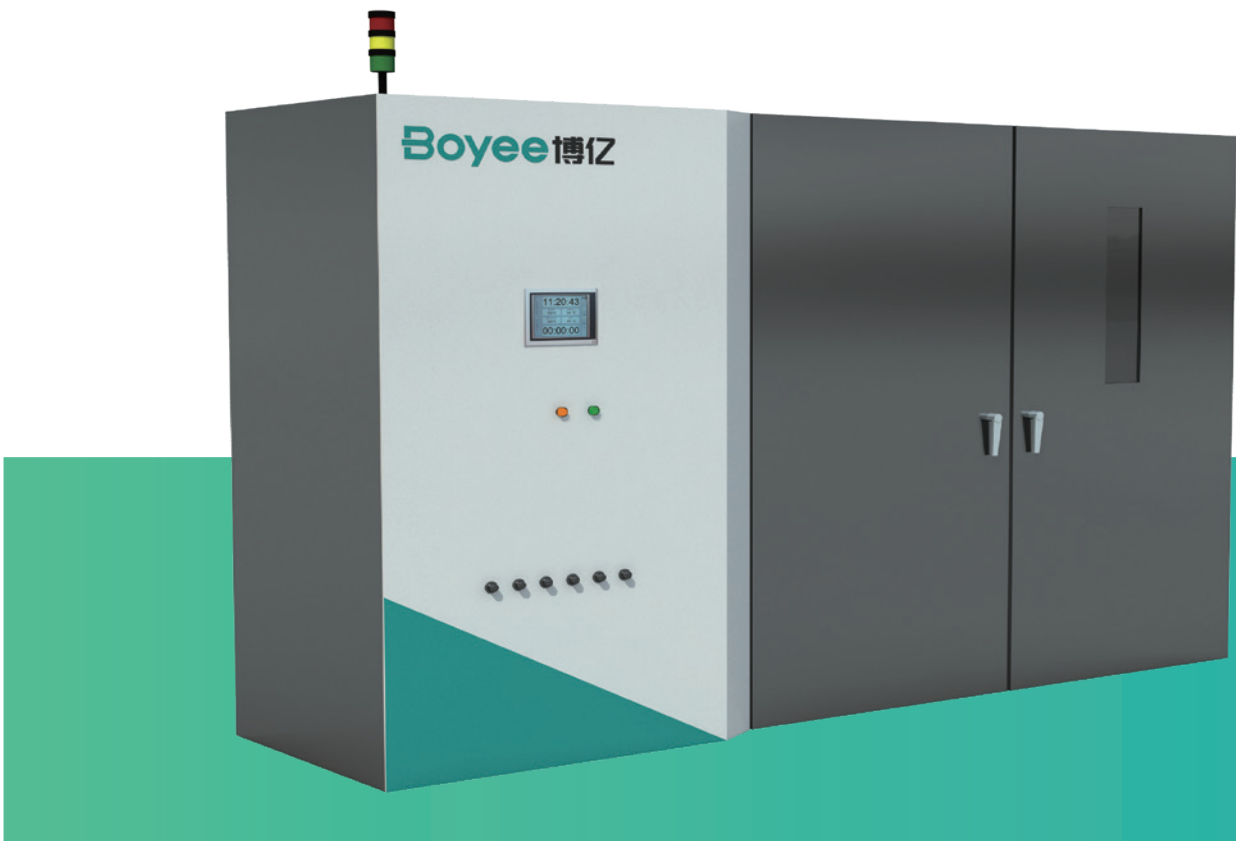
Synthesis of Carbon Nanotubes
by Vapor Deposition (CVD)



Technical Specifications

Category	Small diameter (single tube)	Large diameter (single tube)	Large diameter (double tube)
Tube material	Alundum tube	Carborundum tube	Carborundum tube
Furnace tube size (mm)	φ80*1800	φ220*2200	φ220*2200×2
Heating power (kw)	30	60	80
Temperature zone	5 section. Heating section is 1600mm	5 section. Heating section is 1800mm	5 section. Heating section is 1815mm
Maximum temperature (°C)	1650	1350	1350
Heating system	Resistance heating	Resistance heating	Resistance heating
Temperature control mode	Type-B thermocouple	Type-S platinum rhodium thermocouple	Type-S platinum rhodium thermocouple
Temperature control accuracy(°C)	±1	±1	±1
Temperature uniformity(°C)	±5	±5	±5
Growth efficiency(g/h)	~6	~30	~60
Overall dimension L*W*H(m)	2.3*0.8*1.5	3*1*1.8	3.5*1.2*2.1

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