



35MPa Hydrogen Refueling Nozzle

T63 Series User Guide



Chengdu Andisoon Measure Co., Ltd.

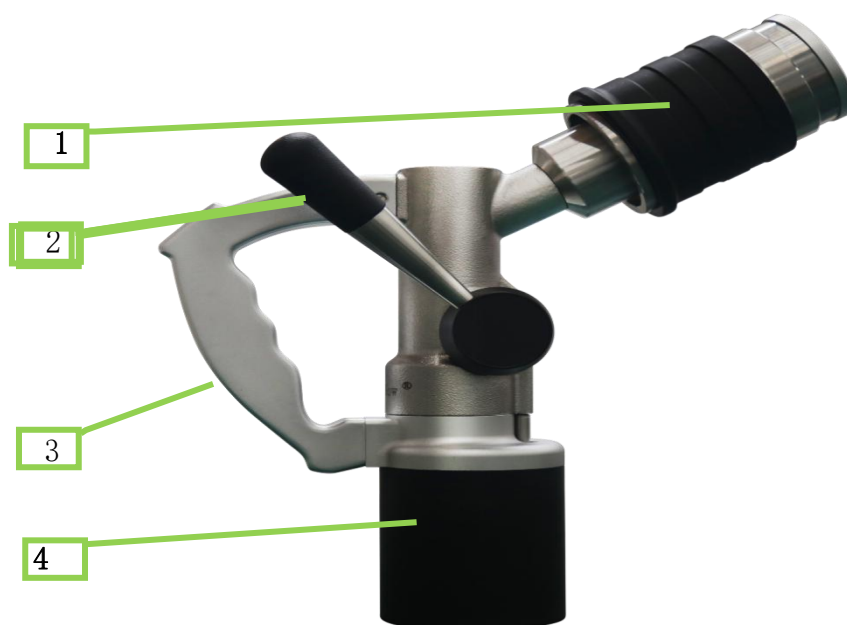
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I. Product Introduction

T63 series 35MPa hydrogen refueling nozzle is developed and designed for the current global hydrogen energy industry. Two types of hydrogen refueling nozzles are researched and developed to meet the demands of vehicles with different fillers: T631 and T633.

T63 series hydrogen refueling nozzle adopts the automatic locking structure, with the spearhead well connected with the hydrogen filler which is clamped and locked automatically by the jaw. Rotate the handle of hydrogen refueling nozzle anticlockwise upward till it is parallel with the air inlet, and open the inside flow channel of hydrogen refueling nozzle completely to refuel hydrogen to vehicles. Rotate the handle of hydrogen refueling nozzle clockwise downward till it is parallel with the air inlet, and shut off the inside flow channel of hydrogen refueling nozzle to release the hydrogen pressure. After the pressure is released, manually slide the head of hydrogen refueling nozzle backward to separate it from the hydrogen filler, thus completing the whole refueling process.



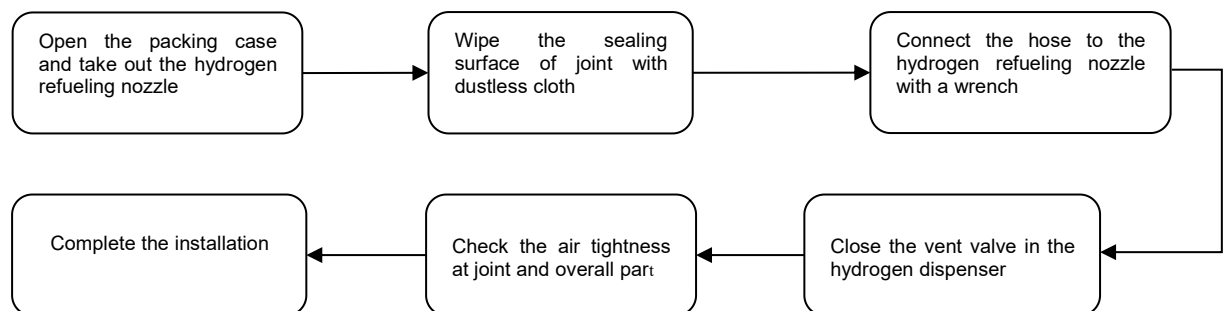
1. Nozzle head; 2. Handle; 3. Handle bar; 4. Rubber tube sheath

II. Technical Parameters

Table of Technical Parameters of Hydrogen Refueling Nozzle			
S/N	Item	Type T631	Type T633
1	Working medium	H ₂	H ₂
2	Medium temperature	-40℃~+85℃	-40℃~+85℃
3	Rated working pressure	35MPa	35MPa
4	Nominal diameter	DN8	DN12
5	Air inlet size	9/16"-18 UNF	7/8"-14 UNF
6	Air outlet size	7/16"-20 UNF	9/16"-18 UNF

III. Product Installation

Installation Procedure



Installation Method

1. Remove the hydrogen refueling nozzle from the packing case in a dry and safe environment;
2. Rotate the black rubber tube sheath to separate it from the main body of hydrogen refueling nozzle;
3. Thread the inlet and outlet connectors of hydrogen refueling hose into the black hose sheath respectively till going out from the other end;
4. Wipe the sealing surface of the conical sealing surface for inlet and

outlet of the hydrogen refueling nozzle with a dust-free cloth, and wipe the sealing surface of the conical seal connected with the hydrogen refueling hose and the hydrogen refueling nozzle to avoid the sealing failure caused by impurities in the connection process;

5. After the preliminary connection of the hydrogen refueling hose and the hydrogen refueling nozzle by hands, jam the six-way position of the outlet connector with the S=12 explosion-proof open-end wrench, jam the six-way position of the hydrogen refueling hose with the S=19 explosion-proof open-end wrench (different brands of hoses are different in size), keep the S=12 open-end wrench still, and turn the S=19 open-end wrench to make the two connected in place; jam the inlet connector of the hydrogen refueling nozzle with the S=40 wrench, jam the six-way position of the nut on the hydrogen refueling hose with the S=27 wrench (different brands of hoses are different in size); keep the S=40 wrench still, which is used for jamming the six-way position of the inlet connector on the hydrogen refueling nozzle, and turn the S=27 wrench to make the two connected in place;

6. Rotate the rubber tube sheath to connect it with the main body of hydrogen refueling nozzle;

7. After the inlet and outlet ports are connected in place, turn the handle of the hydrogen refueling nozzle to the closed position. Control the main pipeline valve of the hydrogen dispenser to slowly refuel part of hydrogen into the hydrogen refueling nozzle, and use the hydrogen detector to detect whether there is leakage in the connection between the hydrogen refueling nozzle and the hydrogen dispenser. If any, operate the vent valve in the hydrogen dispenser, release the internal pressure of the hydrogen refueling nozzle completely, and then slightly tighten the connection between the hose and the hydrogen refueling nozzle. Repeat the above operation till no leakage is detected at the connection. Repeatedly operate the main pipeline valve and vent valve of the hydrogen dispenser for more than 5 times to complete the gas replacement inside the channel of the hydrogen refueling nozzle;

8. At this point, the connection between the hydrogen refueling nozzle and the hydrogen dispenser is completed.



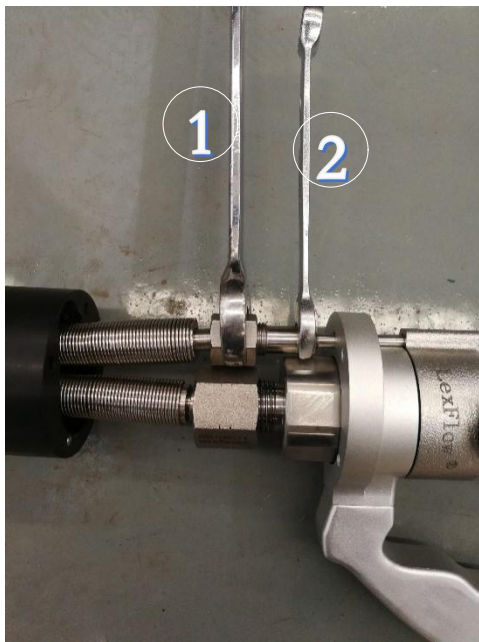
Unscrew the rubber tube sheath



Thread the two hoses into position correctly

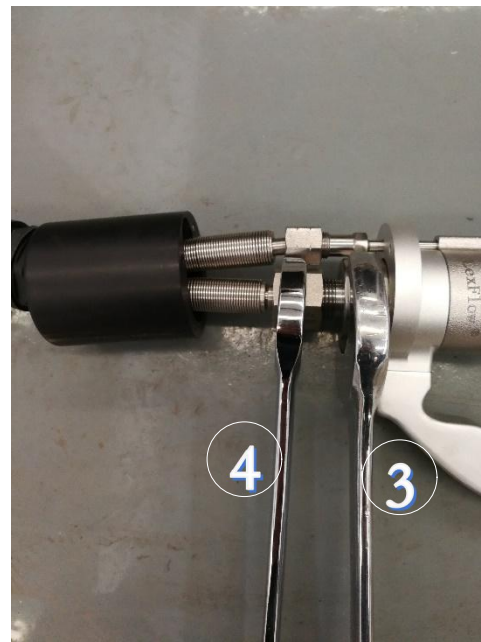


Diagram of complete pass-through



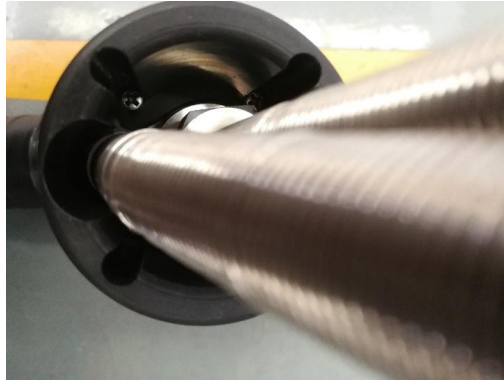
Installation of outlet pipe

Jam the wrench ① still, and rotate the wrench ②

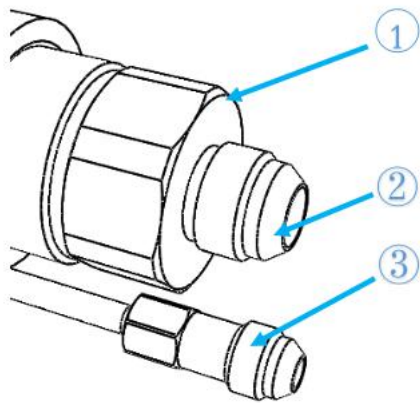


Installation of inlet pipe

Jam the wrench ③ still, and rotate the wrench ④



Install the rubber tube sheath to the main body

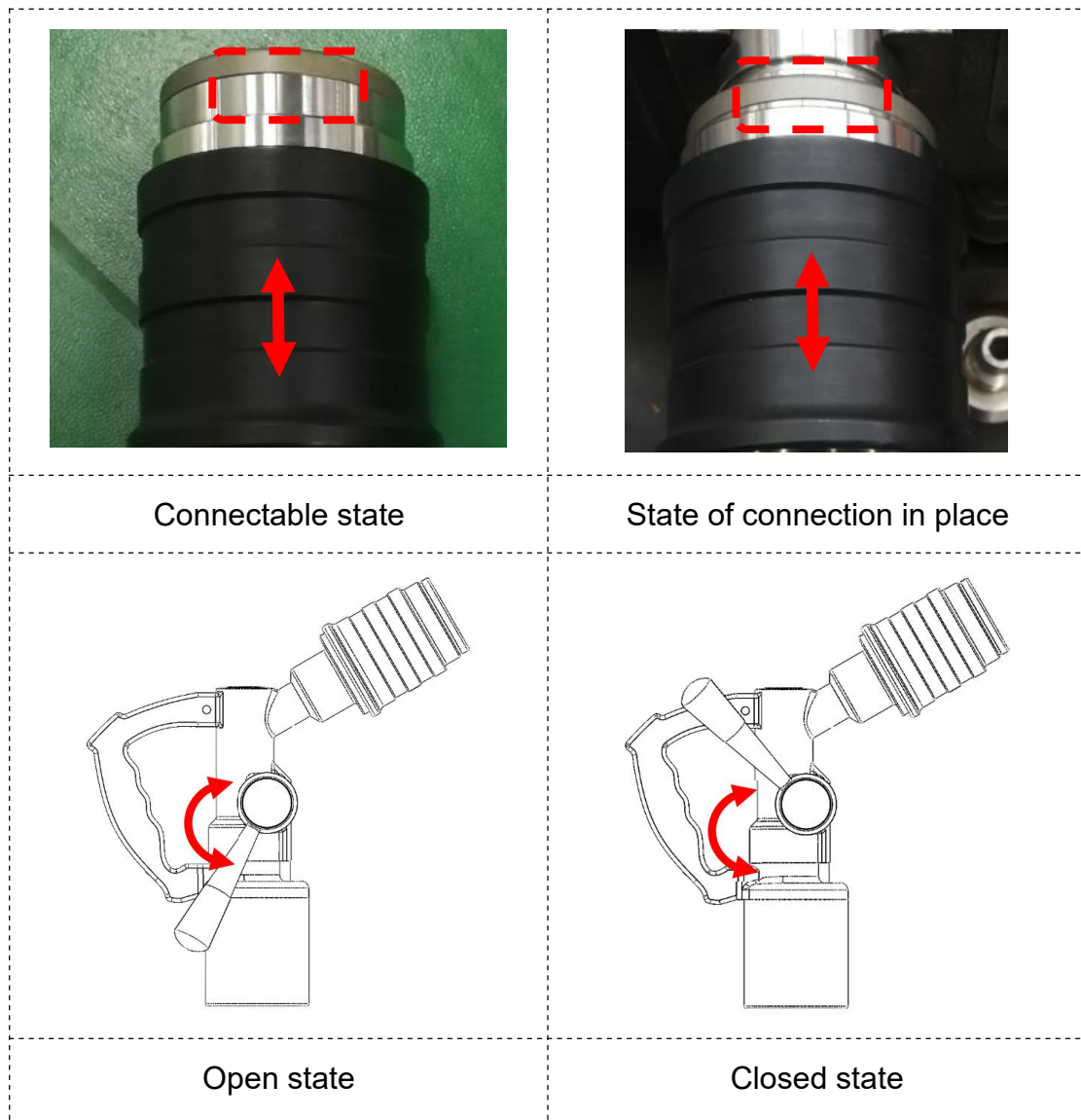


- ① Inlet connector
- ② Sealed conical surface
- ③ Outlet connector

IV. Application Method

1. Hold the silver-white handle bar of hydrogen refueling nozzle in the right hand and the black nozzle head sheath in the left hand. Slide the sheath to draw it back in the left hand, so that the hydrogen refueling nozzle is in a connectable state (at this moment, the hydrogen refueling nozzle can maintain a connectable state by its own structure, and the left hand does not need to exert a setback force continuously);
2. The head of the hydrogen refueling nozzle is concentric with the hydrogen filler and inserted axially. Hold the silver-white handle bar of hydrogen refueling nozzle in the right hand and push it in with axial force. When it is connected in place, the black nozzle head sheath will spring back automatically under the action of spring force, giving out a clear sound of metal impact. At this point, the hydrogen refueling nozzle and the hydrogen filler have been reliably connected;

3. Turn the handle anticlockwise to the open position, and the hydrogen refueling nozzle is in the open state. Press the refueling button on the operation panel of the hydrogen dispenser to realize the hydrogen refueling;
4. The hydrogen dispenser shall be stopped after hydrogen refueling. Turn the handle clockwise to the closed position. At this time, the hydrogen refueling nozzle is closed and pressure relief is completed.
5. Hold the black nozzle head sheath in the left hand and axially slide it backward. At this moment, the hydrogen refueling nozzle is in the separable state. Hold the silver-white handle bar in the right hand, draw it back under the cooperation of the left and right hands to complete the operation of removing the hydrogen refueling nozzle.





Direction of inserting the nozzle



Direction of removing the nozzle

V. Precautions

Disassembly process (replacing the existing hydrogen refueling nozzle):

Make sure that the hydrogen dispenser is shut down and the main pipeline valve is closed;

Make sure that the gas in the hydrogen refueling hose is drained before removing the hydrogen refueling nozzle from the hose;

Installation process:

Make sure to turn the handle of the new hydrogen refueling nozzle to the closed position.

VI. Exception Handling

1. **Phenomenon:** after the refueling, the left hand cannot slide the outer slide sheath to make the hydrogen refueling nozzle in a detachable state;

Handling method: turn the handle of the hydrogen refueling nozzle to again open and close the nozzle for twice.

2. **Phenomenon:** after refueling, the pressure relief is not completed within five seconds after the hydrogen refueling nozzle is closed, or the gas in the hose is emptied;

Handling method: stop the hydrogen dispenser immediately; turn the handle of the hydrogen refueling nozzle to the closed state; after the pipeline pressure relief, remove the hydrogen refueling nozzle and install a new sealing ring.

3. **Phenomenon:** during the refueling, there is continuous gas ejecting from the outlet pipe;

Handling method: stop the hydrogen dispenser immediately; turn the handle of the hydrogen refueling nozzle to the open state; after the pipeline pressure relief, remove the hydrogen refueling nozzle and install a new sealing ring.

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