

Installation guide

D-Torch* for iCAP 6000 Radial (Quartz outer tube)

30-808-2877



BEFORE YOU START

Congratulations on the purchase of your D-Torch.

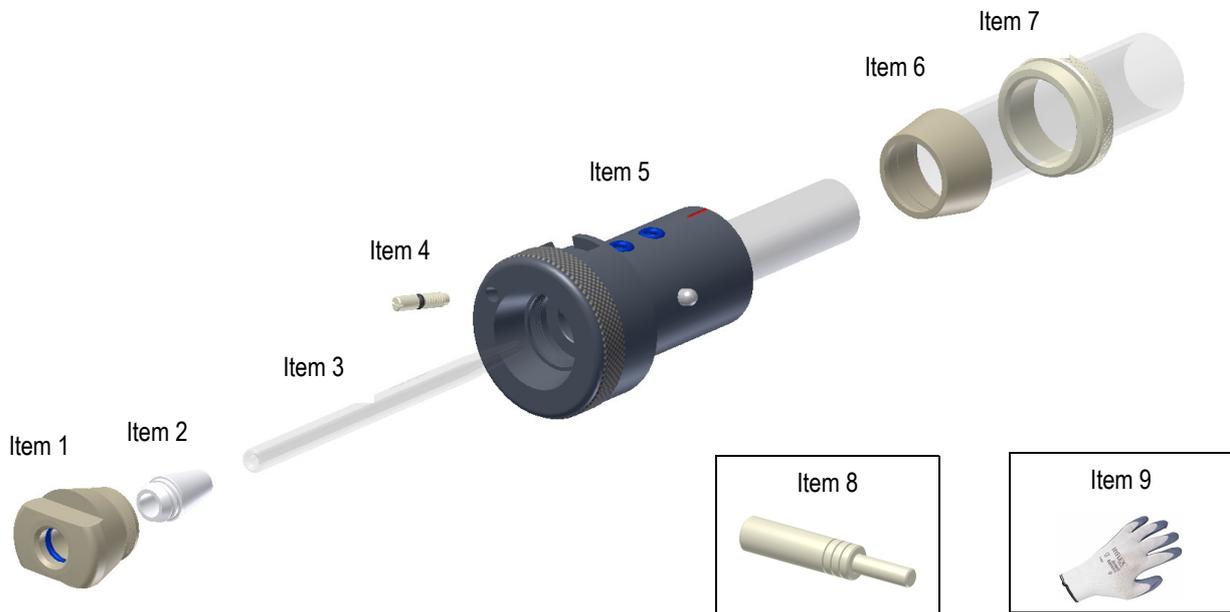
As supplied, the D-Torch is fully assembled. Table 1, lists the D-Torch parts that can be ordered separately.

Item No.	Part Number	Description	Qty
1	31-808-2895	D-TORCH iCAP 6000 INJECTOR ADAPTOR	1
2	31-808-2897	D-TORCH iCAP 6000 INJECTOR FERRULE	1
3	Refer Note	D-TORCH iCAP 6000 INJECTOR	Ref
4	31-808-3083	D-TORCH iCAP 6000 PLUG	1
5	31-808-2932	D-TORCH iCAP 6000 BODY	1
6	31-808-2878	D-TORCH iCAP 6000 RADIAL QUARTZ OUTER TUBE	1
7	31-808-2707	RETAINER	1
8	70-803-0915	INJECTOR FERRULE TOOL	1
9	SAFEGLOVE-MED	SAFETY GLOVES	1

Table 1

Note! Item 3, Torch injector is **not** supplied with standard D-Torch assembly – Shown for reference only.

There is a range of Injectors suitable for iCAP D-Torch – These can be purchased from your D-Torch supplier.



Scope

This document will explain: -

1. General safety
2. Remove D-Torch outer tube
3. Attach D-Torch outer tube
4. Access D-Torch injector
5. Replace injector ferrule

* The D-Torch is covered by US Patent 8,232,500 B2

Installation guide

D-Torch* for iCAP 6000 Radial (Quartz outer tube)

30-808-2877

1. General safety

- Always wear safety gloves (item 9) and safety glasses when handling ICP torches.
- It is recommended you read and understand this procedure before starting.
- The person performing this work must be competent in making basic ICP connections
- The ICP torch is made from high grade engineered materials – Handle with extreme care

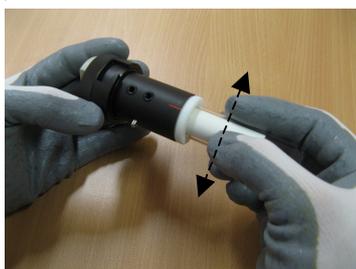
2. Remove D-torch outer tube

The D-Torch's outer tube is accurately located in the D-Torch body with a retainer cap. The outer tube can be removed at any time by completing the following steps: -

- 2.1 If fitted, remove D-Torch assembly from ICP (Not Shown).
- 2.2 Unscrew Retainer ½ turn.
- 2.3 Grip outer tube (lower end, near D-Torch body) then gently wriggle the tube from side to side (figure 2.3). You will hear a “click” as the outer tube releases.
- 2.4 Fully unscrew the retainer then carefully withdraw the outer tube from the D-Torch body.



Step 2.2



Step 2.3



Step 2.4

Note! D-Torch outer tube is permanently fitted with a taper ferrule - **Do not** attempt to remove the ferrule from outer tube.

Inner tube is permanently fixed to the D-Torch body - **Do not** attempt to remove this inner tube from D-Torch body.

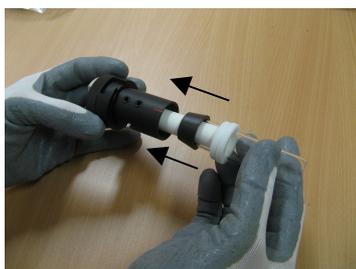
3. Attach D-Torch outer tube

To attach the outer tube to D-Torch body, complete the following steps: -

- 3.1 Check that both locating surfaces (Outer tube and D-Torch body) are clean and free of damage.
- 3.2 Carefully slide the outer tube over the D-torch inner tube – The outer tube will self locate into the D-Torch body.
- 3.3 Tighten the retainer to fix the outer tube in place (Moderate pressure by hand is adequate – Do not over tighten).
- 3.4 If desired, return D-Torch assembly to ICP and connect as normal. (Not Shown)



Step 3.1



Step 3.2



Step 3.3

Installation guide

D-Torch* for iCAP 6000 Radial (Quartz outer tube)
30-808-2877

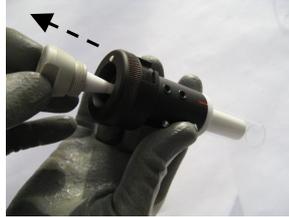
4. Access D-Torch Injector

To remove the injector

4.1 Unscrew the injector adaptor from rear of D-Torch then carefully remove the adaptor (with injector) from D-Torch.



Step 4.1a



Step 4.1b



Step 4.1c

4.2 Pull the injector out from the injector adaptor

Note! Check condition of the ferrule. Replace ferrule if damaged or deteriorated. (Refer section 5.)



Step 4.2a



Step 4.2b



iCAP Plug - Refer note below

iCAP Plug: Do not remove this Plug from the D-Torch body - This Plug must be left in place for all iCAP Radial applications

To reinstall Injector to the D-Torch

Repeat steps 4.1 and 4.2 in reverse order.

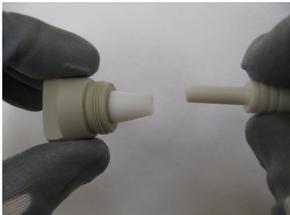
Note! Push injector all the way into the injector ferrule. (End of injector must butt-up against inside of adaptor).

5. Replace injector ferrule

To replace the injector ferrule, complete the following steps: -

5.1 Insert the injector ferrule tool (item 8) into injector ferrule then pivot tool sideways to unseat the ferrule from the injector adaptor - Discard ferrule.

Note! You may need to apply a moderately high amount of force to un-seat the injector ferrule from the adaptor.



Step 5.1a



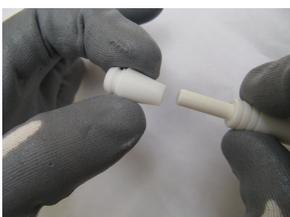
Step 5.1b



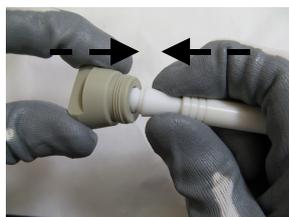
Step 5.1c

5.2 Place a new injector ferrule (from D-Torch injector consumable kit, item 2) onto the stem of injector ferrule tool. Position the ferrule into the adaptor and push together until you feel the ferrule seat with adaptor o-ring.

Hint! It can help if you swivel (pivot, like step 5.1) the injector ferrule tool whilst pushing-in the injector ferrule.



Step 5.2a



Step 5.2b



Step 5.2c

Note! If you have any questions regarding the D-Torch assembly or this document, please contact your supplier.