

## Fully Demountable Torch Installation Instructions (Axial Version)

### Introduction

This instruction sheet covers the installation of the fully demountable torch for axial ICP-OES instruments (Vista-PRO, Vista-MPX and Liberty). The torch requires a special torch clamp, which replaces the standard clamp fitted to the instrument.

A separate instruction sheet covering torch assembly is included with the torch.

### Applications

Compared to a standard one-piece torch, the demountable torch offers:

- easier cleaning, and
- the ability to replace individual components.

The optional narrow bore injector makes the fully demountable torch especially well suited for the analysis of volatile organics.

The optional ceramic injector allows use of the torch with samples containing hydrofluoric acid (HF).

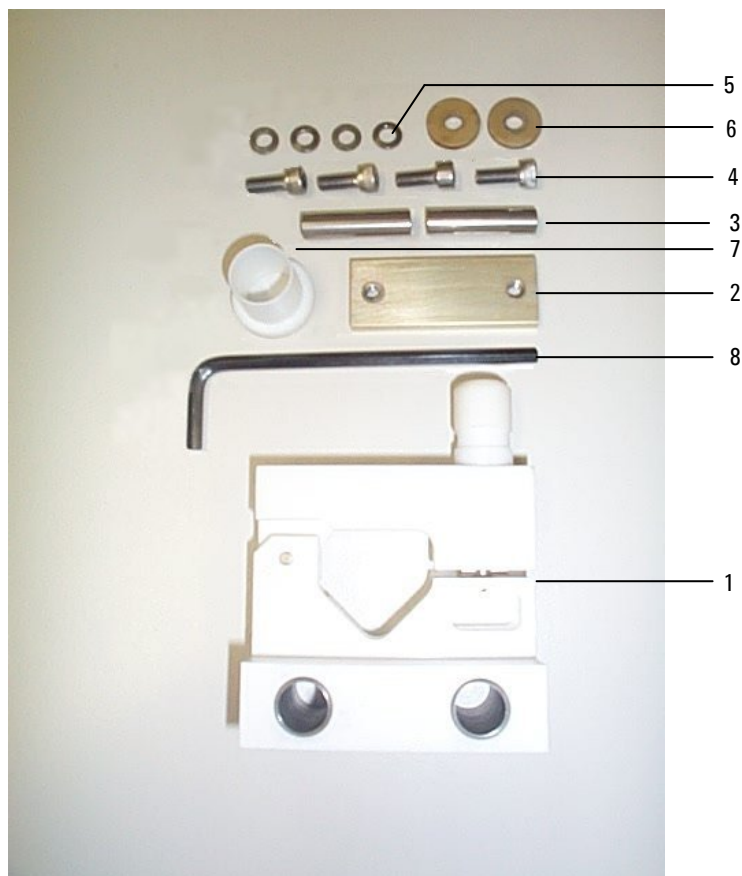
### Installation

Each kit contains the following parts (see Figure 1):

Item	Description	Quantity
1	Axial torch clamp assembly	1
2	Metal plate	1
3	Standoff	2
4	M6 screw	4
5	Spring washer	4
6	Flat washer	2
7	Torch alignment tool	1
8	5 mm Hex key	1



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**Figure 1.** Clamp kit parts

- |                               |                         |
|-------------------------------|-------------------------|
| 1) Axial torch clamp assembly | 5) Spring washer        |
| 2) Metal plate                | 6) Flat washer          |
| 3) Standoff                   | 7) Torch alignment tool |
| 4) M6 screw                   | 8) Hex key              |

### To install the torch clamp:

- 1 Assemble the torch, referring to the instructions included with it. Take care when removing and replacing torch tubes.
- 2 Remove the original torch clamp by removing the two hex-head screws, nuts and washers. Do not remove the metal bracket that supports the torch clamp.

#### NOTE

The procedure for instruments made before September 1999 will be slightly different, as they have different mounting brackets. If your mounting bracket differs from that shown in Figure 4, contact your Agilent field service engineer.

- 3 Screw two M6 screws with spring washers into the metal plate (see Figure 2). Tighten the screws with the hex key (item 8).



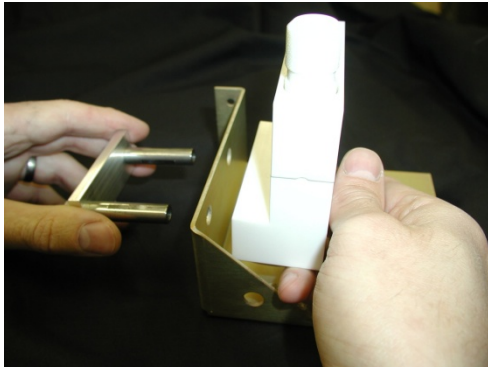
**Figure 2.** Metal plate with two M6 screws and spring washers attached

- 4 Attach the standoffs to the metal plate by screwing them onto the two screws you attached in step 3 (see Figure 3). Each standoff has two flat surfaces so an adjustable wrench can be used to tighten them.



**Figure 3.** Metal plate, M6 screws and spring washers with standoffs attached

- 5 Hold the torch clamp assembly (item 1) in front of the mounting bracket with one hand, and push the standoffs through the holes in the bracket as shown in Figure 4.



**Figure 4.** Attaching the torch clamp assembly to the mounting bracket with standoffs. For clarity, this picture shows the bracket outside of the instrument. You DO NOT need to remove the bracket from the instrument.

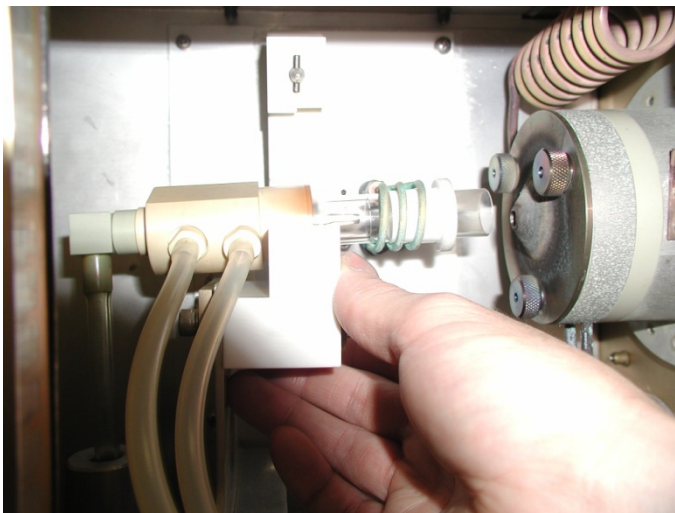
- 6 Insert the remaining two M6 screws with spring washers into the standoffs, with the two flat washers flush against the torch clamp assembly. Tighten the screws lightly. The clamp should be free to move, as you need to locate the torch assembly correctly (steps 7 and 8) before securing the clamp.

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**Figure 5.** Torch clamp assembly secured to mounting bracket using standoffs with M6 screws, spring washers and flat washers. For clarity, this picture shows the bracket outside of the instrument. You DO NOT need to remove the bracket from the instrument.

- 7** Turn the white knob on the clamp 90°, open the clamp and insert the outer tube of the torch into the work coil.
- 8** Slide the alignment tool (item 7) over the end of the torch outer tube, and gently push it into the work coil, while moving the torch clamp around until the torch is aligned centrally in the work coil (see Figure 6).



**Figure 6.** Positioning the clamp so the torch rests in it

- 9** Close the clamp by pressing the white knob down and turning it 90°.
- 10** Tighten the two M6 screws that you inserted in step 6 to secure the clamp in place.
- 11** Ensure that the torch is central—the alignment tool should slide smoothly in and out of the work coil. If it catches at all, the torch is not central and you should loosen the clamp M6 screws that you tightened in step 10 and reposition it.
- 12** Remove the torch assembly from the clamp in order to remove the alignment tool. To remove the torch assembly, open the clamp and then carefully slide the torch out of the work coil.

**CAUTION**

Take care not to move or bend the work coil. If you damage the work coil, contact your Agilent field service engineer.

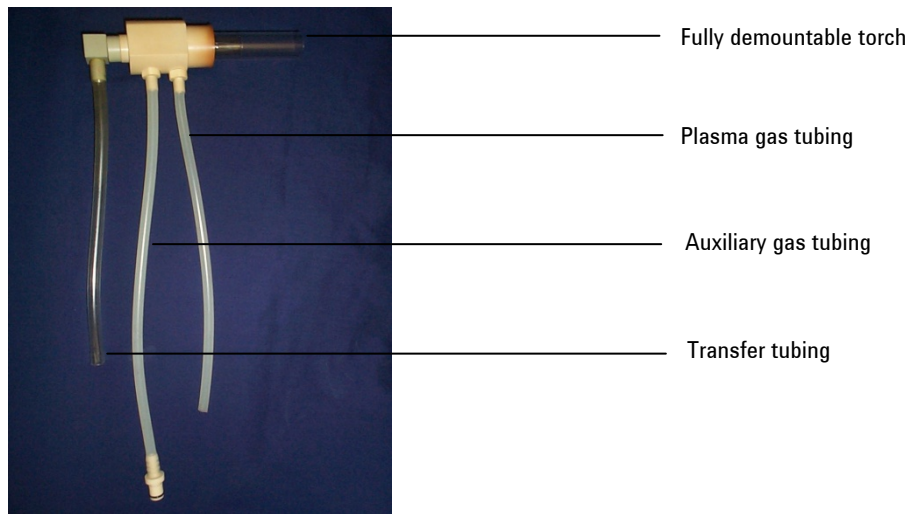
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**CAUTION**

Hot plasma may cause the alignment tool to catch fire or melt. To prevent this from happening, ALWAYS remove the alignment tool from the torch compartment before lighting the plasma.

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- 13** With the alignment tool removed, re-insert the torch assembly into the clamp. As with the standard torch, the end of the intermediate tube should be about 3 mm to the left of the work coil. Attach the sample and gas tubing to the torch in the normal manner (see Figure 7).



**Figure 7.** Torch with sample and gas tubing attached

## Removal

To remove the fully demountable torch clamp, remove the torch, undo the M6 screws you inserted in step 6 and slide the torch clamp assembly off the standoffs while holding the standoff/metal plate assembly.

## Ordering Information

For ordering information, see the Agilent website at [www.agilent.com](http://www.agilent.com).

Two kits are available:

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**Kit**

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Fully demountable torch kit (including torch clamp) for axial instruments

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Torch clamp kit for axial instruments (not including torch)

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The torch can also be ordered separately:

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**Kit**

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Fully demountable torch for axial ICP-OES

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Spare parts for the torch are:

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**Kit**

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Spare outer tube (axial)

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Spare intermediate tube (radial or axial)

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2.4 mm bore injector tube

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Optional parts for specialized applications:

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**Kit**

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Narrow bore injector (1.0 mm bore) for volatile organics

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Ceramic injector (1.8 mm bore) for use with samples containing HF

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There is a different torch and clamp for radial instruments:

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**Kit**

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Fully demountable torch kit (including torch clamp) for radial instruments

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Torch clamp kit for radial instruments (not including torch)

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Fully demountable torch for radial ICP-OES

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This information is subject to change without notice.



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