

## Hypertherm HPRXD® Short torch with integrated lead

### Frequently asked questions

#### Why did Hypertherm develop a new short torch?

Hypertherm has seen significant growth in the 3D market. We have been refining our torch/equipment offerings over the years to better position ourselves to penetrate this market. Examples of this are our enhanced bevel consumable offerings and torch assembly with improved strain relief and infinite rotational sleeve. A significant segment of the 3D market relates to pipe cutting which can require smaller torches with greater flexibility to work within tighter areas. In addition, a shorter torch can benefit certain robotic applications, as it may provide the robot with greater reach and control. In order to address these unique requirements we developed the short torch.

#### What are the main differences between the standard HPRXD torches and the new short torch?

The main differences between the torches are:

- The HPRXD Short torch is 194 mm in length (see fig. C) will vary a little based on consumable stack up). The standard HPRXD quick disconnect torch assembly with sleeve is 345 mm in length (see fig. B)
- A straight torch design that utilizes the front end of an HPRXD torch assembly and is integrated directly with the lead set replaces the quick disconnect feature in the short torch
- Elimination of ohmic contact sensing on the short torch due to packaging constraints (internal on the standard HPRXD torches)
- Reduction in tin braid coverage from lead wrap at the torch end, allowing for greater lead flexibility while still providing adequate EMI shielding
- A new silicone jacketed fiberglass sleeve over high flex portion of leads protect hoses from extreme heat and molten splash
- A change in the coolant path supply line which now contains the conductor (for standard HPR, the coolant return line contains the conductor) adding a slight increase in coolant temperature entering the torch
- Insertion of a pass-through connection box to facilitate installation and repair of the higher-flex/wear portion of the torch and lead (see fig. D)
- Plasma and shield gas hose lengths of 2.5 m rather than standard 1.8 m

#### How was the shorter length achieved?

We removed the quick disconnect feature and replaced it with a straight torch design that utilizes the front end of an HPRXD torch assembly, essentially potting the leads directly into the back of it.

#### Can I remove the torch from the lead set?

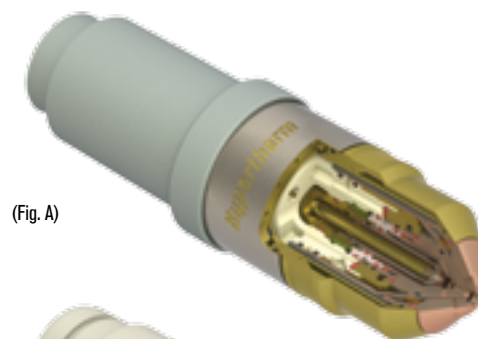
No. The torch assembly and the lead set are permanently attached and not sold separately.

#### Due to the coolant path change, is there concern of reducing piercing capability?

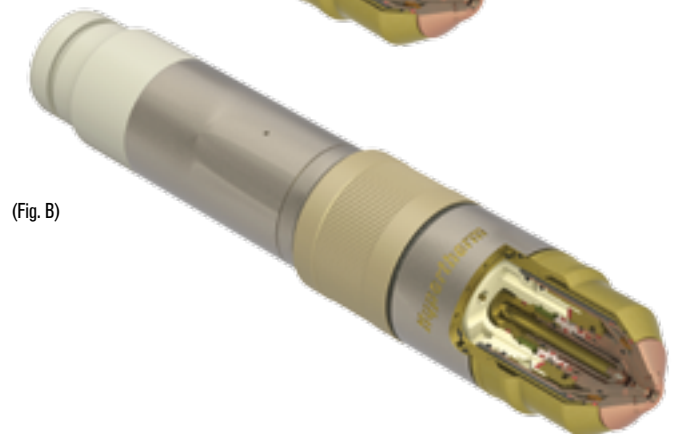
Coolant temperature entering the torch is slightly warmer than a standard HPRXD torch. During our lab tests the short torch successfully passed our 300 pierce test.

#### Does the short torch require special consumables?

No. The short torch head is fundamentally the same as a standard HPR torch and uses all the same consumables as our full HPRXD range.



(Fig. A)



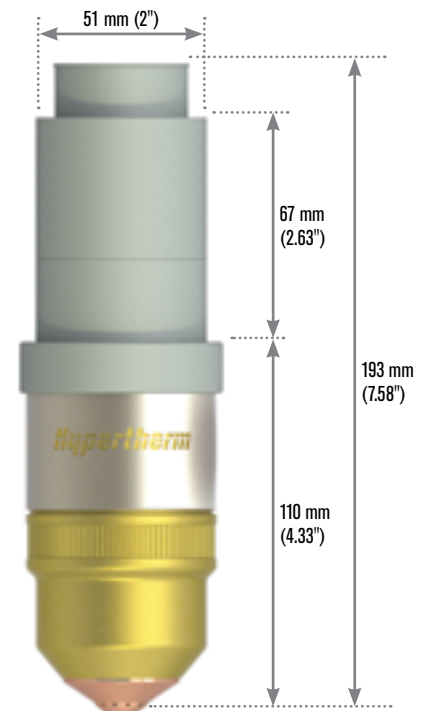
(Fig. B)

### What is the purpose of the added junction box?

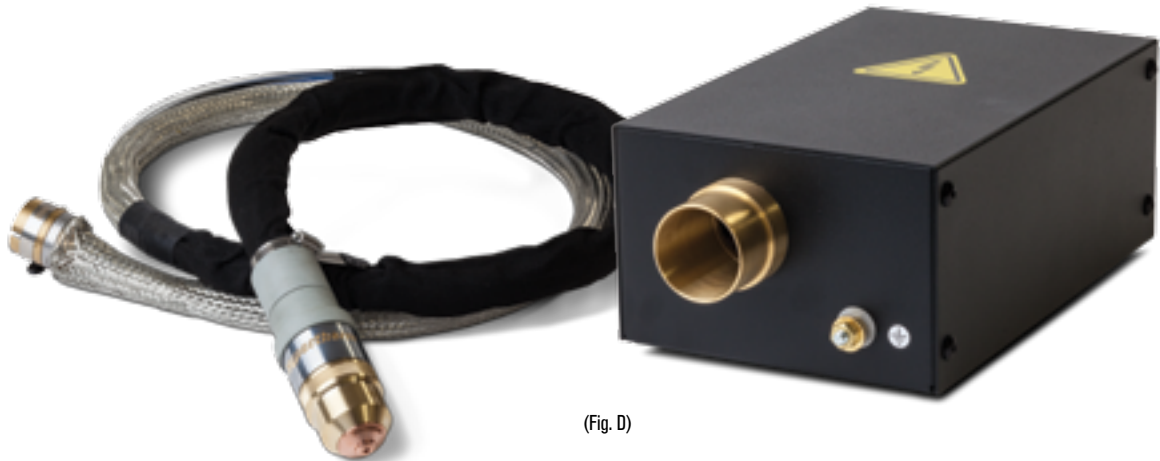
The junction box serves as a way to minimize repair costs. Any replacement of the torch and/or lead set requires replacement of the full assembly. The junction box eliminates the need to replace the entire length of the lead from the ignition console. The junction box may also facilitate installation.

### Who is the short torch designed for?

Manufacturers and end users who are looking for a smaller torch with greater lead flexibility and a tighter bend radius for use in 3D applications.



(Fig. C)  
Showing 260 A consumables



(Fig. D)

Contact Hypertherm to locate a distributor near you.

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One of Hypertherm's long-standing core values is a focus on minimizing our impact on the environment. Doing so is critical to our, and our customers' success. We are always striving to become better environmental stewards; it is a process we care deeply about.

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