HYPERTHERM®
A Hypertherm Associates Brand

HPR® Cartridge
Instruction Manual



810992 – REVISION 4

ENGLISH



Register your new Hypertherm system

Benefits of registration

- ☑ **Safety:** Registration allows us to contact you in the unlikely event a safety or quality notification is required.
- ☑ **Education:** Registration gives you free access to online product training content via the Hypertherm Cutting Institute.
- ☑ **Confirmation of ownership:** Registration can serve as proof of purchase in case of an insurance loss.

Go to **www.hypertherm.com/registration** for easy and fast registration.

If you experience any problems with the product registration process, please contact registration@hypertherm.com.

For your records

Serial number: _____

Purchase date: _____

Distributor: _____

_____

_____

Maintenance notes: _____

_____

_____

_____

_____

HPR, HPRXD, XD, True Bevel, ProNest, and Hypertherm are trademarks of Hypertherm, Inc. and may be registered in the United States and other countries. All other trademarks are the property of their respective holders.

Environmental stewardship is one of Hypertherm's core values. www.hypertherm.com/environment

© 2024 – 2026 Hypertherm, Inc. 100% Associate-owned.

HPR® Cartridge

Instruction Manual

810992
REVISION 4

ENGLISH
Original instructions

October 2026

Hypertherm, Inc.
Hanover, NH 03755 USA
www.hypertherm.com

Warranty information

You can find warranty information for your product at www.hypertherm.com/warranty.

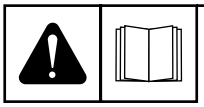
Recycling information

You can find recycling information for your product at www.hypertherm.com/resources/system-support/recycling.

Contact us

hypertherm.com/contactus

Hypertherm, Inc.
21 Great Hollow Road, P.O. Box 5010
Hanover, NH 03755 USA



ENGLISH

WARNING! Before operating any Hypertherm equipment, read the safety instructions in your product's manual, the *Safety and Compliance Manual* (80669C), *Waterjet Safety and Compliance Manual* (80943C), and *Radio Frequency Warning Manual* (80945C). Failure to follow safety instructions can result in personal injury or in damage to equipment.

Copies of the manuals can come with the product in electronic and printed formats. Electronic copies are also on our website. Many manuals are available in multiple languages at www.hypertherm.com/docs.

BG (БЪЛГАРСКИ/BULGARIAN)

ПРЕДУПРЕЖДЕНИЕ! Преди да работите с което и да е оборудване Hypertherm, прочетете инструкциите за безопасност в ръководството на вашия продукт, „Инструкция за безопасност и съответствие“ (80669C), „Инструкция за безопасност и съответствие на Waterjet“ (80943C) и „Инструкция за предупреждение за радиочестота“ (80945C).

Продуктът може да е съпроводен от копия на ръководствата в електронен и в печатен формат. Тези в електронен формат са достъпни също на уебсайта ни. Много ръководства са налице на няколко езика на адрес www.hypertherm.com/docs.

CS (ČESKY/CZECH)

VAROVÁNÍ! Před uvedením jakéhokoli zařízení Hypertherm do provozu si přečtěte bezpečnostní pokyny v příručce k produktu a v *Manuálu pro bezpečnost a dodržování předpisů* (80669C), *Manuálu pro bezpečnost a dodržování předpisů při řezání vodním paprskem* (80943C) a *Manuálu varování ohledně rádiových frekvencí* (80945C).

Kopie příruček mohou být součástí dodávky produktu, a to v elektronické i tištěné formě. Elektronické kopie jsou k dispozici i na našich webových stránkách. Mnoho příruček je k dispozici v různých jazycích na stránce www.hypertherm.com/docs.

DA (DANSK/DANISH)

ADVARSEL! Inden Hypertherm udstyr tages i brug skal sikkerhedsinstruktionerne i produktets manual og i *Manual om sikkerhed og overholdelse af krav* (80669C), *Manual om sikkerhed og overholdelse af krav for vandstråleskæring* (80943C), og *Manual om radiofrekvensadvarsel* (80945C), gennemlæses.

Kopier af manualerne kan leveres med produktet i elektronisk og trykt format. Elektroniske kopier findes også på vores hjemmeside. Mange manualer er tilgængelige på flere sprog på www.hypertherm.com/docs.

DE (DEUTSCH/GERMAN)

WARNUNG! Bevor Sie ein Hypertherm-Gerät in Betrieb nehmen, lesen Sie bitte die Sicherheitsanweisungen in Ihrer Bedienungsanleitung, das *Handbuch für Sicherheit und Übereinstimmung* (80669C), das *Handbuch für Sicherheit und Compliance bei Wasserstrahl-Schneidanlagen* (80943C) und das *Handbuch für Hochfrequenz-Warnung* (80945C).

Bedienungsanleitungen und Handbücher können dem Gerät in elektronischer Form oder als Druckversion beiliegen. In elektronischer Form liegen sie auch auf unserer Website vor. Viele Handbücher stehen in verschiedenen Sprachen auf www.hypertherm.com/docs zur Verfügung.

ES (ESPAÑOL/SPANISH)

¡ADVERTENCIA! Antes de operar cualquier equipo Hypertherm, lea las instrucciones de seguridad del manual de su producto, del *Manual de seguridad y cumplimiento* (80669C), del *Manual de seguridad y cumplimiento en corte con chorro de agua* (80943C) y del *Manual de advertencias de radiofrecuencia* (80945C).

El producto puede incluir copias de los manuales en formato digital e impreso. Las copias digitales también están en nuestra página web. Hay diversos manuales disponibles en varios idiomas en www.hypertherm.com/docs.

ET (EESTI/ESTONIAN)

HOIATUS! Enne Hyperthermi mis tahes seadme kasutamist lugege läbi toote kasutusjuhendis olevad ohutusjuhised ning *Ohutus- ja vastavusjuhend* (80669C), *Veejoa ohutuse ja vastavuse juhend* (80943C) ja *Raadiosageduse hoiatusjuhend* (80945C). Ohutusjuhiste eiramine võib põhjustada vigastusi ja kahjustada seadmeid.

Juhiste koopiad võivad tootega kaasas olla elektrooniliselt või trükituna. Elektroonilised koopiad on saadaval ka meie veebilehel. Paljud kasutusjuhendid on erinevates keeltes saadaval veebilehel www.hypertherm.com/docs.

FI (SUOMI/FINNISH)

VAROITUS! Ennen minkään Hypertherm-laitteen käyttöä lue tuotteen käyttöoppaassa olevat turvallisuusohjeet, *turvallisuuden ja vaatimustenmukaisuuden käsikirja* (80669C), vesileikkauksen *turvallisuuden ja vaatimustenmukaisuuden käsikirja* (80943C) ja *radiotaajuusvaroitusten käsikirja* (80945C).

Käyttöoppaiden kopiot voivat olla tuotteen mukana sähköisessä ja tulostetussa muodossa. Sähköiset kopiot ovat myös verkkosivustollamme. Monet käyttöoppaat ovat myös saatavissa useilla kielillä www.hypertherm.com/docs.

FR (FRANÇAIS/FRENCH)

AVERTISSEMENT! Avant d'utiliser tout équipement Hypertherm, lire les consignes de sécurité du manuel de votre produit, du *Manuel de sécurité et de conformité* (80669C), du *Manuel de sécurité et de conformité du jet d'eau* (80943C) et du *Manuel d'avertissement relatif aux radiofréqunces* (80945C).

Les exemplaires des manuels qui accompagnent le produit peuvent être sous forme électronique ou papier. Les manuels sous forme électronique se trouvent également sur notre site Internet. Plusieurs manuels sont offerts en plusieurs langues à www.hypertherm.com/docs.

GR (ΕΛΛΗΝΙΚΑ/GREEK)

ΠΡΟΕΙΔΟΠΟΙΗΣΗ! Πριν θέσετε σε λειτουργία οποιονδήποτε εξοπλισμό της Hypertherm, διαβάστε τις οδηγίες ασφαλείας στο εγχειρίδιο του προϊόντος και στο *εγχειρίδιο ασφάλειας και συμμόρφωσης* (80669C), στο *εγχειρίδιο ασφάλειας και συμμόρφωσης του waterjet* (80943C) και στο *εγχειρίδιο προειδοποιήσεων για τις ραδιοσυχνότητες* (80945C).

Το προϊόν μπορεί να συνοδεύεται από αντίγραφα των εγχειριδίων σε ηλεκτρονική και έντυπη μορφή. Τα ηλεκτρονικά αντίγραφα υπάρχουν επίσης στον ιστότοπό μας. Πολλά εγχειρίδια είναι διαθέσιμα σε διάφορες γλώσσες στο www.hypertherm.com/docs.

HU (MAGYAR/HUNGARIAN)

VIGYÁZAT! Mielőtt bármilyen Hypertherm berendezést üzemeltetne, olvassa el a biztonsági információkat a termék kézikönyvében, a *Biztonsági és szabálykövetési kézikönyvben* (80669C), a *Vízsugaras biztonsági és szabálykövetési kézikönyvben* (80943C) és a *Rádiófrekvenciás figyelmeztetéseket tartalmazó kézikönyvben* (80945C).

A termékhez a kézikönyv példányai elektronikus és nyomtatott formában is mellékelve lehetnek. Az elektronikus példányok webhelyünkön is megtalálhatók. Számos kézikönyv áll rendelkezésre több nyelven a www.hypertherm.com/docs weboldalon.

ID (BAHASA INDONESIA/INDONESIAN)

PERINGATAN! Sebelum mengoperasikan peralatan Hypertherm, bacalah petunjuk keselamatan dalam manual produk Anda, *Manual Keselamatan dan Kepatuhan* (80669C), *Manual Keselamatan dan Kepatuhan Jet Air* (80943C), dan *Manual Peringatan Frekuensi Radio* (80945C). Kegagalan mengikuti petunjuk keselamatan dapat menyebabkan cedera pribadi atau kerusakan pada peralatan.

Produk mungkin disertai salinan manual atau petunjuk dalam format elektronik maupun cetak. Salinan elektronik juga tersedia di situs web kami. Berbagai manual tersedia dalam beberapa bahasa di www.hypertherm.com/docs.

IT (ITALIANO/ITALIAN)

AVVERTENZA! Prima di usare un'attrezzatura Hypertherm, leggere le istruzioni sulla sicurezza nel manuale del prodotto, nel *Manuale sulla sicurezza e la conformità* (80669C), nel *Manuale sulla sicurezza e la conformità Waterjet* (80943C) e nel *Manuale di avvertenze sulla radiofrequenza* (80945C).

Copie del manuale possono accompagnare il prodotto in formato cartaceo o elettronico. Le copie elettroniche sono disponibili anche sul nostro sito web. Molti manuali sono disponibili in diverse lingue all'indirizzo www.hypertherm.com/docs.

JA (日 本語/JAPANESE)

警告！Hypertherm 機器を操作する前に、この製品説明書にある安全情報、「安全とコンプライアンスマニュアル」(80669C)、「ウォータージェットの安全とコンプライアンス」(80943C)、「高周波警告」(80945C) をお読みください。

説明書のコピーは、電子フォーマット、または印刷物として製品に同梱されています。電子コピーは当社ウェブサイトにも掲載されています。説明書の多くは www.hypertherm.com/docs にて複数の言語でご用意しています。

KO (한국어/KOREAN)

경고! Hypertherm 장비를 사용하기 전에 제품 설명서와 안전 및 규정 준수 설명서(80669C), 워터젯 안전 및 규정 준수 설명서(80943C) 그리고 무선 주파수 경고 설명서(80945C)에 나와 있는 안전 지침을 읽으십시오.

전자 형식과 인쇄된 형식으로 설명서 사본이 제품과 함께 제공될 수 있습니다. 전자 사본도 Hypertherm 웹사이트에서 보실 수 있으며 설명서 사본은 www.hypertherm.com/docs 에서 여러 언어로 제공됩니다.

NE (NEDERLANDS/DUTCH)

WAARSCHUWING! Lees voordat u Hypertherm-apparatuur gebruikt de veiligheidsinstructies in de producthandleiding, in de *Veiligheids- en nalevingshandleiding* (80669C) in de *Veiligheids- en nalevingshandleiding voor waterstralen* (80943C) en in de *Waarschuwingshandleiding radiofrequentie* (80945C).

De handleidingen kunnen in elektronische en gedrukte vorm met het product worden meegeleverd. Elektronische versies zijn ook beschikbaar op onze website. Veel handleidingen zijn in meerdere talen beschikbaar via www.hypertherm.com/docs.

NO (NORSK/NORWEGIAN)

ADVARSEL! Før du bruker noe Hypertherm-utstyr, må du lese sikkerhetsinstruksjonene i produktets håndbok, *håndboken om sikkerhet og samsvar* (80669C), *håndboken om vannjet sikkerhet og samsvar* (80943C), og *håndboken om radiofrekvensadvarsler* (80945C).

Eksemplarer av håndbøkene kan følge med produktet i elektronisk og trykt form. Elektroniske eksemplarer finnes også på nettstedet vårt. Mange håndbøker er tilgjengelig i flere språk på www.hypertherm.com/docs.

PL (POLSKI/POLISH)

OSTRZEŻENIE! Przed rozpoczęciem obsługi jakiegokolwiek systemu firmy Hypertherm należy się zapoznać z instrukcjami bezpieczeństwa zamieszczonymi w podręczniku produktu, w p*odręczniku bezpieczeństwa i zgodności* (80669C), *podręczniku bezpieczeństwa i zgodności systemów strumienia wody* (80943C) oraz *podręczniku z ostrzeżeniem o częstotliwości radiowej* (80945C).

Do produktu mogą być dołączone podręczniki użytkownika w formie elektronicznej i drukowanej. Kopie elektroniczne znajdują się również w naszej witrynie internetowej. Wiele podręczników jest dostępnych w różnych językach pod adresem www.hypertherm.com/docs.

PT (PORTUGUÊS/PORTUGUESE)

ADVERTÊNCIA! Antes de operar qualquer equipamento Hypertherm, leia as instruções de segurança no manual do seu produto, no *Manual de Segurança e de Conformidade* (80669C), no *Manual de Segurança e de Conformidade do Waterjet* (80943C) e no *Manual de Advertência de radiofrequência* (80945C).

Cópias dos manuais podem vir com o produto nos formatos eletrônico e impresso. Cópias eletrônicas também são encontradas em nosso website. Muitos manuais estão disponíveis em vários idiomas em www.hypertherm.com/docs.

RO (ROMÂNĂ/ROMANIAN)

AVERTIZARE! Înainte de utilizarea oricărui echipament Hypertherm, citiți instrucțiunile de siguranță din manualul produsului, *manualul de siguranță și conformitate* (80669C), *manualul de siguranță și conformitate Waterjet* (80943C) și din *manualul de avertizare privind radiofrecvența* (80945C).

Produsul poate fi însoțit de copii ale manualelor în format tipărit și electronic. Exemplarele electronice sunt disponibile și pe site-ul nostru web. Numeroase manuale sunt disponibile în mai mult limbi la adresa: www.hypertherm.com/docs.

RU (РУССКИЙ/RUSSIAN)

БЕРЕГИСЬ! Перед работой с любым оборудованием Hypertherm ознакомьтесь с инструкциями по безопасности, представленными в руководстве, которое поставляется вместе с продуктом, в *Руководстве по безопасности и соответствию* (80669C), в *Руководстве по безопасности и соответствию для водоструйной резки* (80943C) и *Руководстве по предупреждению о радиочастотном излучении* (80945C).

Копии руководств, которые поставляются вместе с продуктом, могут быть представлены в электронном и бумажном виде. Электронные копии также доступны на нашем веб-сайте. Целый ряд руководств доступны на нескольких языках по ссылке www.hypertherm.com/docs.

SK (SLOVENČINA/SLOVAK)

VÝSTRAHA! Pred použitím akéhokoľvek zariadenia od spoločnosti Hypertherm si prečítajte bezpečnostné pokyny v návode na obsluhu vášho zariadenia a v *Manuáli o bezpečnosti a súlade s normami* (80669C), *Manuáli o bezpečnosti a súlade s normami pre systém rezania vodou* (80943C) a v *Manuáli s informáciami o rádiofrekvencii* (80945C).

Návod na obsluhu sa dodáva spolu s produktom v elektronickej a tlačenej podobe. Jeho elektronický formát je dostupný aj na našej webovej stránke. Mnohé z návodov na obsluhu sú dostupné vo viacjazyčnej mutácii na stránke www.hypertherm.com/docs.

SL (SLOVENŠČINA/SLOVENIAN)

OPOZORILO! Pred uporabo katerekoli Hyperthermove opreme preberite varnostna navodila v priročniku vašega izdelka, v *Priročniku za varnost in skladnost* (80669C), v P*riročniku za varnost in skladnost sistemov rezanja z vodnim curkom* (80943C) in v *Priročniku Opozorilo o radijskih frekvencah* (80945C).

Izvodi priročnikov so lahko izdelku priloženi v elektronski in tiskani obliki. Elektronski izvodi so na voljo tudi na našem spletnem mestu. Številni priročniki so na voljo v različnih jezikih na naslovu www.hypertherm.com/docs.

SR (SRPSKI/SERBIAN)

UPOZORENJE! Pre rukovanja bilo kojom Hyperthermovom opremom pročitajte uputstva o bezbednosti u svom priručniku za proizvod, *Priručniku o bezbednosti i usaglašenosti* (80669C), *Priručniku o bezbednosti i usaglašenosti Waterjet tehnologije* (80943C) i *Priručniku sa upozorenjem o radio-frekvenciji* (80945C).

Уз производ се испоручују копије приручника у електронском или штампаном формату. Електронске копије су такође доступне на нашем веб-сајту. Многи приручници су доступни на више језика на адреси www.hypertherm.com/docs.

SV (SVENSKA/SWEDISH)

VARNING! Läs häftet säkerhetsinformationen i din produkts *säkerhets- och efterlevnadsmanual* (80669C), *säkerhets- och efterlevnadsmanualen för Waterjet* (80943C) och *varningsmanualen för radiofrekvenser* (80945C) för viktig säkerhetsinformation innan du använder eller underhåller Hypertherm-utrustning.

Kopior av manualerna kan medfölja produkten i elektroniskt och tryckt format. Elektroniska kopior finns också på vår webbplats. Många manualer finns på flera språk på www.hypertherm.com/docs.

TH (ภาษาไทย/THAI)

คำเตือน! ก่อนการใช้งานอุปกรณ์ของ Hypertherm ทั้งหมด โปรดอ่านคำแนะนำด้านความปลอดภัยในคู่มือการใช้สินค้า คู่มือด้านความปลอดภัยและการปฏิบัติตาม (80669C), คู่มือด้านความปลอดภัยและการปฏิบัติตามสำหรับการใช้หัวตัดระบบวอเตอร์เจ็ต (80943C) และ คู่มือคำเตือนเกี่ยวกับความถี่วิทยุ (80945C) การไม่ปฏิบัติตามคำแนะนำด้านความปลอดภัยอาจส่งผลให้เกิดการบาดเจ็บหรือเกิดความเสียหายต่ออุปกรณ์

สำเนาคู่มือทั้งในรูปแบบอิเล็กทรอนิกส์และแบบสิ่งพิมพ์จะถูกแนบมาพร้อมกับผลิตภัณฑ์ สำเนาคู่มือในรูปแบบอิเล็กทรอนิกส์ของผลิตภัณฑ์และสำเนาคู่มือต่าง ๆ ในหลากหลายภาษานั้นยังมีให้บริการบนเว็บไซต์ www.hypertherm.com/docs ของเราอีกด้วย

TR (TÜRKÇE/TURKISH)

UYARI! Bir Hypertherm ekipmanını çalıştırmadan önce, ürününüzün kullanım kılavuzunda, *Güvenlik ve Uyumluluk Kılavuzu'nda* (80669C), *Su Jeti Güvenlik ve Uyumluluk Kılavuzu'nda* (80943C) ve *Radyo Frekansı Uyarısı Kılavuzu'nda* (80945C) yer alan güvenlik talimatlarını okuyun.

Kılavuzların kopyaları, elektronik ve basılı formatta ürünle birlikte verilebilir. Elektronik kopyalar web sitemizde de yer alır. Kılavuzların birçoğu www.hypertherm.com/docs adresinde birçok dilde mevcuttur.

VI (TIẾNG VIỆT/VIETNAMESE)

CẢNH BÁO! Trước khi vận hành bất kỳ thiết bị Hypertherm nào, hãy đọc các hướng dẫn an toàn trong hướng dẫn sử dụng sản phẩm của bạn, *Sổ tay An toàn và Tuân thủ* (80669C), *Sổ tay An toàn và Tuân thủ Tia nước* (80943C), và *Hướng dẫn Cảnh báo Tần số Vô tuyến* (80945C). Không tuân thủ các hướng dẫn an toàn có thể dẫn đến thương tích cá nhân hoặc hư hỏng thiết bị.

Bản sao của sổ tay có thể đi kèm với sản phẩm ở định dạng điện tử và in. Bản điện tử cũng có trên trang web của chúng tôi. Nhiều sổ tay có sẵn bằng nhiều ngôn ngữ tại www.hypertherm.com/docs .

ZH-CN (简 体中文/CHINESE SIMPLIFIED)

警告！ 在操作任何海宝设备之前，请阅读产品手册、《安全和法规遵守手册》(80669C)、《水射流安全和法规遵守手册》 (80943C) 以及 《射频警告手册》(80945C) 中的安全操作说明。

随产品提供的手册可提供电子版和印刷版两种格式。电子版本同时也在我们的网站上提供。很多手册有多种语言版本，详见 www.hypertherm.com/docs.

ZH-TW (繁 體中文/CHINESE TRADITIONAL)

警告！在操作任何 Hypertherm 設備前，請先閱讀您產品手冊內的安全指示，包括 《安全和法規遵從手冊》(80669C) 、《水刀安全和法規遵從手冊》(80943C)，以及 《無線電頻率警示訊號手冊》(80945C)。

電子版和印刷版手冊複本可能隨產品附上。您也可以前往我們的網站下載電子版手冊。我們的網站上還以多種語言形式提供多種手冊，請造訪 www.hypertherm.com/docs 。

Contents

Electromagnetic Compatibility (EMC) 9

1 Specifications 11

Introduction 11
Compatible cutting systems 12
HPR cartridge torch 13
HPR cartridges 14
Weights and dimensions 14
Weights 14
Dimensions 15

2 Installation 17

Before you begin 17
Select and install the cartridge 18
Install the torch 20

3 Operating Instructions 21

Overview 21
Monitor the gas purge during the power-on cycle 22
Use the HPRXD cut charts to select a process 23
True Bevel™ cutting 27
Bevel-head calibration 27
Bevel cutting with cartridges 28

Get the most out of your cartridges 29
Signs that a cartridge is near end of life 30
Cartridge disposal at end of life 31

4 Regular Maintenance Tasks 33

Why regular maintenance is important 33
Recommended maintenance parts and schedule based on plasma arc hours 33
Instruction manuals for preventive maintenance tasks 34
Regular maintenance tasks 34
Lubricate the O-rings on the cartridge shield 34
Lubricate the O-rings on the torch and retaining cap 35
Use the torch-rebuild kit (528106) for regular torch maintenance 36

5 Parts 37

Usual parts 37
Torch starter and O-ring kits 38
Torch starter kit – 528101 38
Torch O-ring kit – 528107 38
Preventive maintenance kits 38
Torch-rebuild kit – 528106 38
Electronics PM kit, HPR130XD cartridge – 528108 38
Electronics PM kit, HPR260XD cartridge (200 V – 240 V) – 528109 39
Electronics PM kit, HPR400XD / HPR800XD cartridge (200 V – 240 V) – 528110 39
Electronics PM kit, HPR260XD / HPR400XD / HPR800XD cartridge (380 V – 600 V) – 528111 39

Electromagnetic Compatibility (EMC)

Introduction

Hypertherm's CE-marked equipment is built in compliance with standard EN60974-10. The equipment should be installed and used in accordance with the information below to achieve electromagnetic compatibility.

The limits required by EN60974-10 may not be adequate to completely eliminate interference when the affected equipment is in close proximity or has a high degree of sensitivity. In such cases it may be necessary to use other measures to further reduce interference.

This cutting equipment is designed for use only in an industrial environment.

Installation and use

The user is responsible for installing and using the plasma equipment according to the manufacturer's instructions.

If electromagnetic disturbances are detected then it shall be the responsibility of the user to resolve the situation with the technical assistance of the manufacturer. In some cases this remedial action may be as simple as earthing the cutting circuit, see *Earthing of the workpiece*. In other cases, it could involve constructing an electromagnetic screen enclosing the power source and the work complete with associated input filters. In all cases, electromagnetic disturbances must be reduced to the point where they are no longer troublesome.

Assessment of area

Before installing the equipment, the user shall make an assessment of potential electromagnetic problems in the surrounding area. The following shall be taken into account:

- **a.** Other supply cables, control cables, signaling and telephone cables; above, below and adjacent to the cutting equipment.
- **b.** Radio and television transmitters and receivers.
- **c.** Computer and other control equipment.
- **d.** Safety critical equipment, for example guarding of industrial equipment.
- **e.** Health of the people around, for example the use of pacemakers and hearing aids.
- **f.** Equipment used for calibration or measurement.
- **g.** Immunity of other equipment in the environment. User shall ensure that other equipment being used in the environment is compatible. This may require additional protection measures.
- **h.** Time of day that cutting or other activities are to be carried out.

The size of the surrounding area to be considered will depend on the structure of the building and other activities that are taking place. The surrounding area may extend beyond the boundaries of the premises.

Methods of reducing emissions

Mains supply

Cutting equipment must be connected to the mains supply according to the manufacturer's recommendations. If interference occurs, it may be necessary to take additional precautions such as filtering of the mains supply.

Consideration should be given to shielding the supply cable of permanently installed cutting equipment, in metallic conduit or equivalent. Shielding should be electrically continuous throughout its length. The shielding should be connected to the cutting mains supply so that good electrical contact is maintained between the conduit and the cutting power source enclosure.

Maintenance of cutting equipment

The cutting equipment must be routinely maintained according to the manufacturer's recommendations. All access and service doors and covers should be closed and properly fastened when the cutting equipment is in operation. The cutting equipment should not be modified in any way, except as set forth in and in accordance with the manufacturer's written instructions. For example, the spark gaps of arc striking and stabilizing devices should be adjusted and maintained according to the manufacturer's recommendations.

Cutting cables

The cutting cables should be kept as short as possible and should be positioned close together, running at or close to the floor level.

Equipotential bonding

Bonding of all metallic components in the cutting installation and adjacent to it should be considered.

However, metallic components bonded to the workpiece will increase the risk that the operator could receive a shock by touching these metallic components and the electrode (nozzle for laser heads) at the same time.

The operator should be insulated from all such bonded metallic components.

Electromagnetic Compatibility (EMC)

Earthing of the workpiece

Where the workpiece is not bonded to earth for electrical safety, nor connected to earth because of its size and position, for example, ship's hull or building steel work, a connection bonding the workpiece to earth may reduce emissions in some, but not all instances. Care should be taken to prevent the earthing of the workpiece increasing the risk of injury to users, or damage to other electrical equipment. Where necessary, the connection of the workpiece to earth should be made by a direct connection to the workpiece, but in some countries where direct connection is not permitted, the bonding should be achieved by suitable capacitances selected according to national regulations.

Note: The cutting circuit may or may not be earthed for safety reasons. Changing the earthing arrangements should only be authorized by a person who is competent to assess whether the changes will increase the risk of injury, for example, by allowing parallel cutting current return paths which may damage the earth circuits of other equipment. Further guidance is provided in IEC 60974-9, Arc Welding Equipment, Part 9: Installation and Use.

Screening and shielding

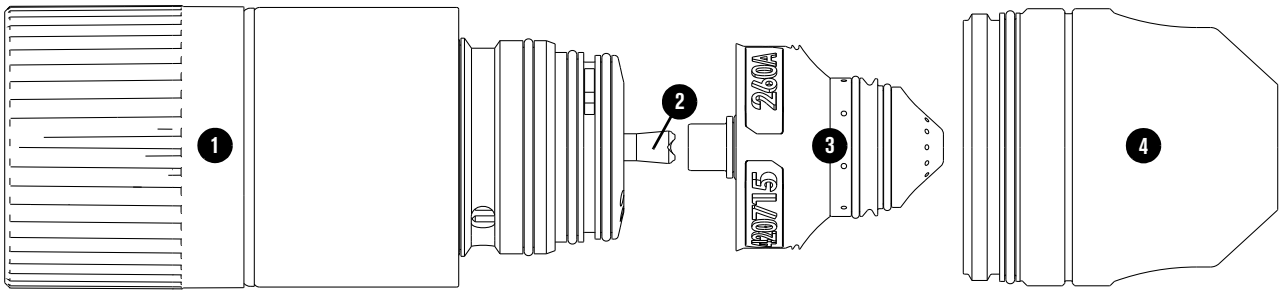
Selective screening and shielding of other cables and equipment in the surrounding area may alleviate problems of interference. Screening of the entire plasma cutting installation may be considered for special applications.

1 Specifications

Introduction

The HPR cartridges are for cutting mild steel with all HPRXD cutting systems. An HPR cartridge is compatible only with an HPR cartridge torch (420729), water tube (420728), and retaining cap (420708).

The HPR cartridge torch installs on the HPRXD receptacle (220705) and is the interface for an HPR cartridge. The cartridge installs on the head of the cartridge torch. The retaining cap, which also installs on the torch head, keeps the cartridge in position.



1 HPR cartridge torch
2 Water tube
3 HPR cartridge
4 Retaining cap

The HPR cartridges are amperage-specific. Refer to HPR cartridges on page 14 for more information.

The HPR cartridge torch uses the standard HPRXD cut chart settings. Adjustments to the CNC or nesting software are not necessary.

Compatible cutting systems

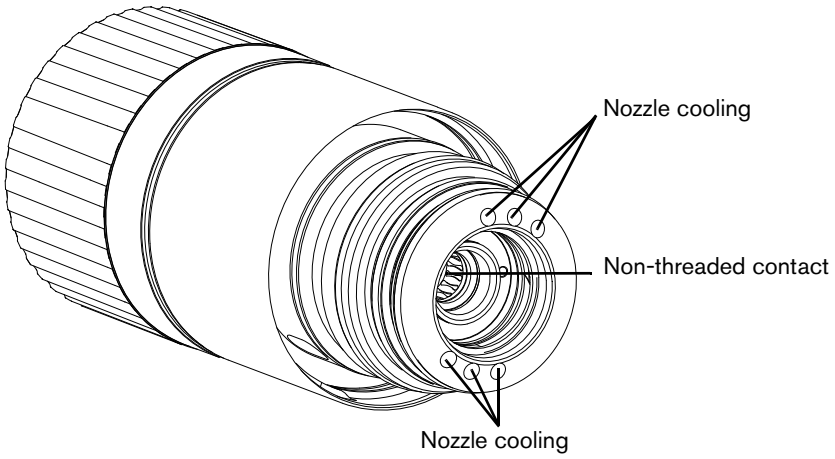
The HPR cartridge torch is compatible with all Hypertherm HPRXD cutting systems. For related information, refer to the following documents:

- *HPR130XD Manual Gas Instruction Manual* (806320)
- *HPR130XD Auto Gas Instruction Manual* (806330)
- *HPR260XD Manual Gas Instruction Manual* (806340)
- *HPR260XD Auto Gas Instruction Manual* (806350)
- *HPR400XD Manual Gas Instruction Manual* (806170)
- *HPR400XD Auto Gas Instruction Manual* (806160)
- *HPR800XD Manual Gas Instruction Manual* (806490)
- *HPR800XD Auto Gas Instruction Manual* (806500)

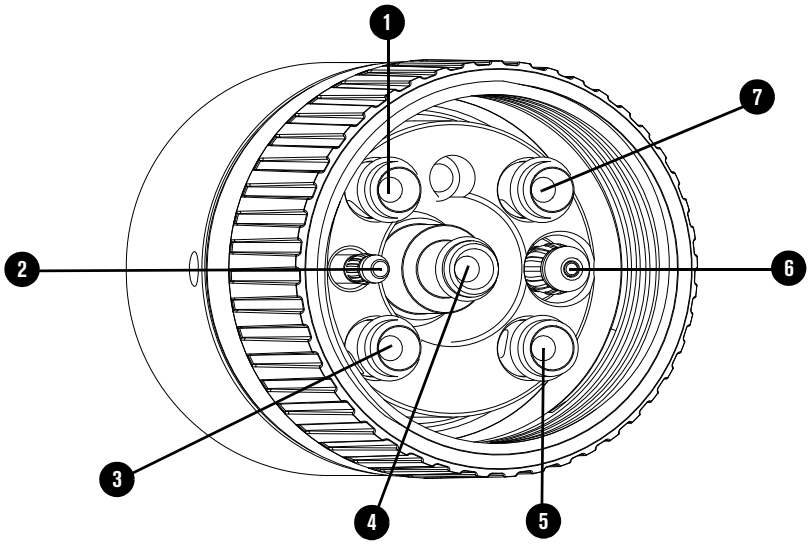
Technical documentation is current as of the date of its release. Subsequent revisions are possible. Refer to www.hypertherm.com/docs for the most recent revisions of released documents.

HPR cartridge torch

The front of the torch supplies cooling to the nozzle and has a non-threaded contact that supplies current to the cartridge.



The rear of the torch is the same as the HPRXD torch (220706) and has the same connectors.



1 Plasma vent*
2 Ohmic contact pin
3 Plasma gas
4 Coolant supply
5 Coolant return
6 Pilot arc
7 Shield gas

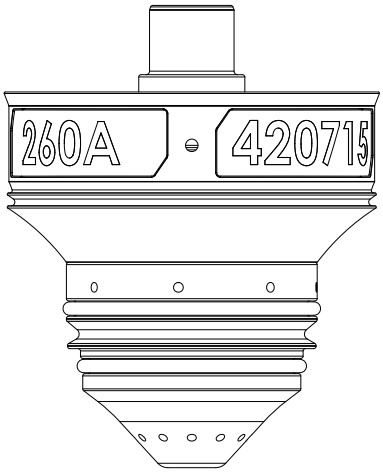
* The cartridge and torch do **not** contain plasma-vent channels. The bullet connector for the plasma vent keeps contamination out of the HPRXD receptacle.

HPR cartridges

The HPR cartridges are compatible with the following mild steel processes:

- 80 A standard cutting / 80 A bevel cutting
- 130 A standard cutting / 130 A bevel cutting
- 260 A standard cutting / 260 A bevel cutting
- 400 A standard cutting / 400 A bevel cutting

> The 80 A and 130 A cartridges will cause a small edge-angle if used with bevel processes. In most production situations, this angle difference is acceptable. Refer to Bevel cutting with cartridges on page 28.



The HPR cartridges are amperage-specific. For example, a 260 A cartridge is for use only with 260 A processes. To make identification easier, the amperage and part number are on each cartridge.

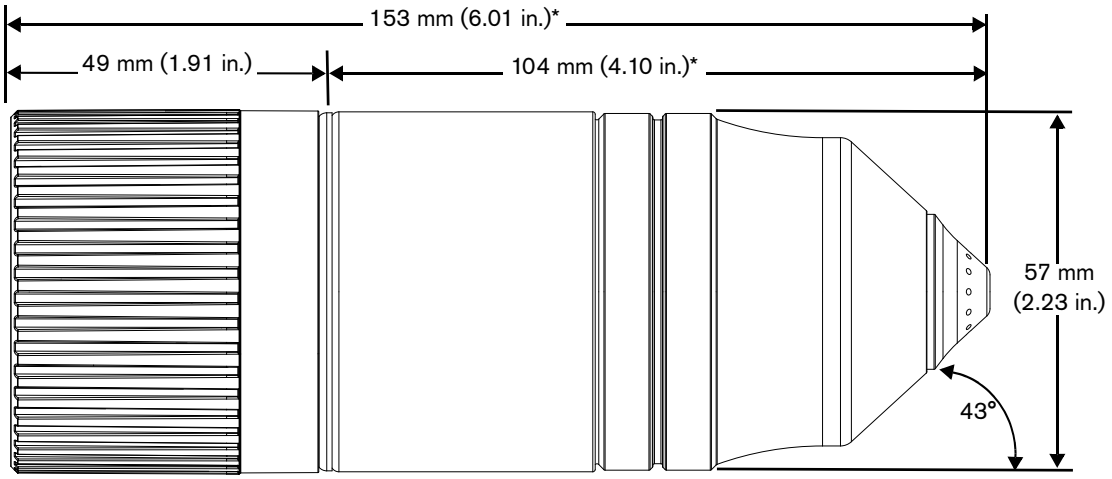
Do not try to disassemble a cartridge. The single-piece cartridge cannot be disassembled and has no replaceable parts. It must be replaced as a unit.

Weights and dimensions

Weights

Component	Weight
Torch with water tube	0.63 kg (1.39 lb)
Cartridge	0.08 kg (0.18 lb)
Retaining cap	0.20 kg (0.44 lb)
HPR cartridge torch assembly: torch, water tube, cartridge, and retaining cap	0.91 kg (2.01 lb)

Dimensions



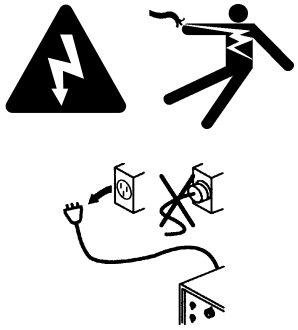
* This dimension can be different based on cartridge type. This example shows a 260 A cartridge.

THIS PAGE IS BLANK.

2 Installation

Before you begin

⚠ WARNING



ELECTRIC SHOCK CAN KILL

Disconnect electric power before doing installation or maintenance.

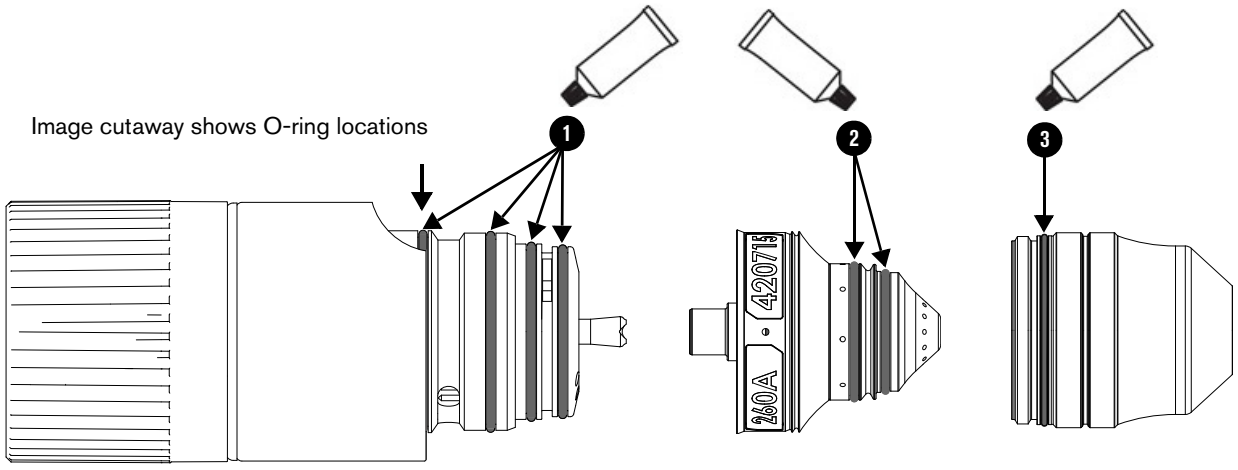
The line-disconnect switch must REMAIN in the OFF position until all of the installation or maintenance steps are complete.

Refer to the *Safety and Compliance Manual* (80669C) for more safety information.

Select and install the cartridge

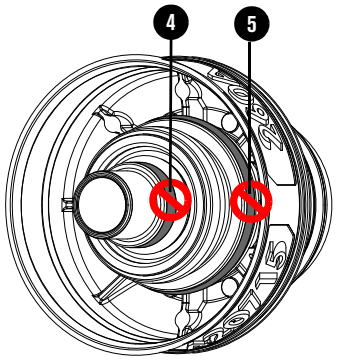
Before cartridge installation, make sure that the O-rings on the torch, cartridge, and retaining cap are lubricated. This prevents coolant and gas leaks.

1. Lubricate the O-rings as shown below. Apply a thin layer of silicone lubricant to each O-ring. Make sure that the O-rings look shiny, but that there is not too much lubricant.
   - Four O-rings on the torch ❶
   - Two O-rings on the cartridge shield ❷
   - One O-ring on the retaining cap ❸

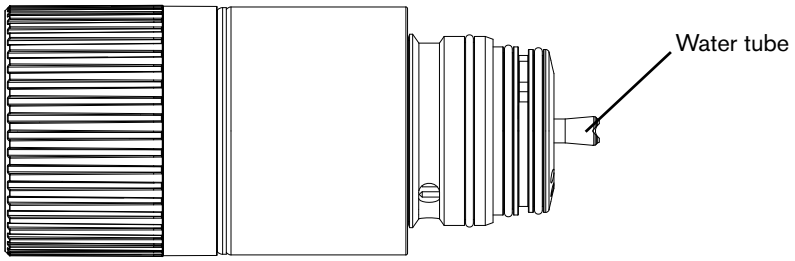


The torch, water tube, and retaining cap that come with the HPR cartridge torch starter kit (528101) have pre-lubricated O-rings.

The electrode O-ring ❹ and the nozzle O-ring ❺ on the cartridge interior do **not** require silicone lubricant.

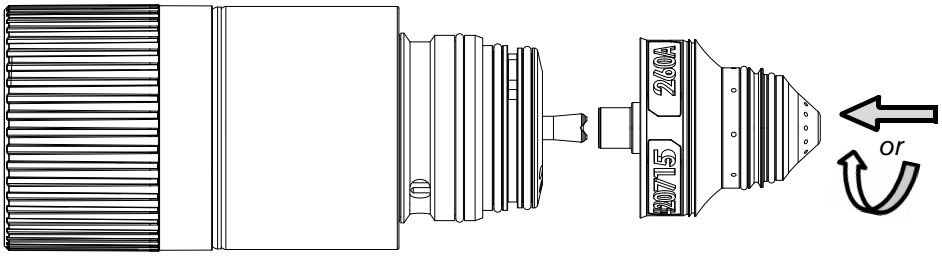


2. Make sure that the water tube (420728) is in the torch before installing the cartridge. Install a water tube if necessary.

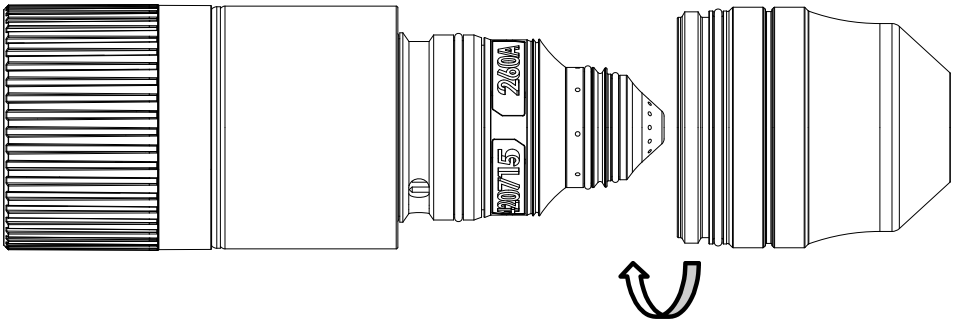


Put the water tube in the torch until it stops. The water tube will move slightly to align with the electrode in the cartridge.

3. Install the cartridge by pushing it onto the torch.

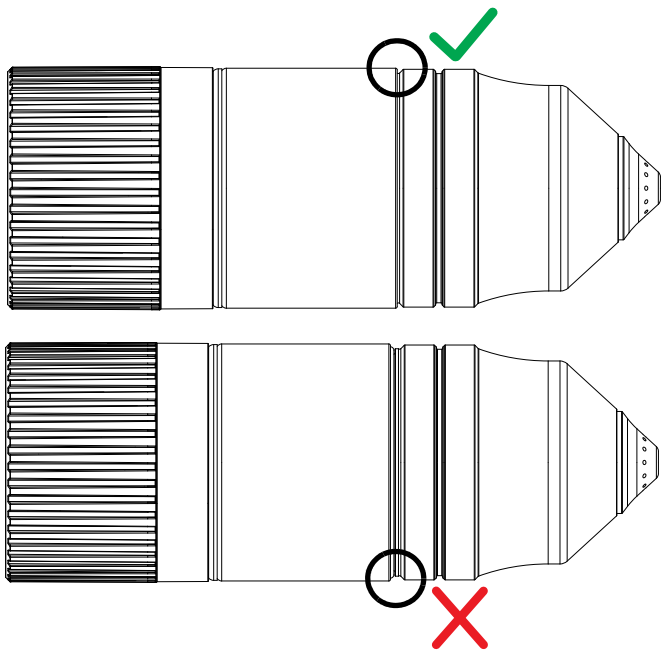


4. Install the retaining cap (420708) on the torch. Turn the retaining cap until it stops.



The retaining cap moves the cartridge into the correct position on the torch to seal the O-rings. The retaining cap turns approximately 1/2 of a rotation before it stops.

5. Make sure that the retaining cap is fully installed. A coolant leak at the torch electrode can occur if the retaining cap is not fully installed.



Install the torch

1. Before installing the torch on the HPRXD receptacle (220705), do these steps to disconnect the electrical power from the cutting system:
   a. Set the line-disconnect switch to the OFF position.
   b. Make sure that the power-indicator LED is **not** illuminated on the plasma power supply.
2. Install the torch on the HPRXD receptacle. The cartridge torch has the same installation steps as the standard HPRXD torch.

3 Operating Instructions

Overview

The cartridge torch uses the standard HPRXD cut chart settings. Adjustments to the CNC or nesting software are not necessary.

Because the HPRXD cut chart settings for 260 A mild steel and 400 A mild steel are the **same** for both standard and bevel processes, the 260 A cartridge and 400 A cartridge are compatible with both standard and bevel processes.

Because the HPRXD cut chart settings for 80 A and 130 A mild steel are **different** for standard and bevel processes, the 80 A and 130 A cartridges will cause a small edge-angle if used with bevel processes.

Amperage (A)	Standard process	Underwater	Bevel process
80 A	Compatible	*	-3° angle**
130 A	Compatible	Compatible	+2° angle**
260 A	Compatible	Compatible	Compatible
400 A	Compatible	Compatible	Compatible

* It can be a problem for the 80 A cartridge to consistently transfer an arc under water for cutting systems that have a long torch lead assembly or long pilot arc lead. If the 80 A cartridge does not transfer the arc consistently, use the 80 A standard consumables.

** Refer to page 25 and page 26 that show how to adjust shield-gas settings to get a 0° angle for 130 A and 80 A processes.

The figures on page 23 through page 26 show example cut charts for 400 A, 260 A, 130 A, and 80 A standard and bevel processes on a Hypertherm CNC.

Monitor the gas purge during the power-on cycle

A gas-purge cycle occurs automatically when electrical power is supplied to the cutting system. This automatic gas purge usually removes all coolant from the plasma-gas and shield-gas lines. It is extremely important to keep the gas clean and dry.

1. During the gas purge, look for coolant mist from the cartridge. If no mist is seen, the torch is ready for cutting.
2. If mist is seen, use the CNC to select **Test Cutflow** and do a gas purge for approximately 15 seconds. If no mist is seen, the cartridge is ready for cutting.
3. If mist continues to be seen, do the following steps:
   a. Disconnect the electrical power from the cutting system.
   b. Remove the retaining cap and cartridge. Gently shake them to remove coolant.
   c. Examine the electrode O-ring in the cartridge. If the electrode O-ring is dirty, rinse or wipe it to remove contamination that can prevent good sealing to the torch.
   d. Lubricate the O-rings on the torch, cartridge, and retaining cap, as described in step 1 of Select and install the cartridge on page 18.
   e. Install the cartridge on the torch and then turn the cartridge approximately 1/8 of a rotation. This helps the O-rings to seal onto the torch.
   f. Install the retaining cap on the torch. Turn the retaining cap until it stops. Make sure that the retaining cap is fully installed. A coolant leak at the torch electrode can occur if the retaining cap is not fully installed.

      The retaining cap moves the cartridge into the correct position on the torch to seal the O-rings. The retaining cap turns approximately 1/2 of a rotation before it stops.

   g. Supply electrical power to the cutting system. Power restoration starts an automatic gas-purge cycle.
   h. If no mist is seen, the cartridge is ready for cutting. If mist is seen, repeat step 2.
4. If mist continues to be seen, repeat step 3 using a new cartridge or a new retaining cap.

Use the HPRXD cut charts to select a process

Figure 1 – Example 400 A standard cut chart settings

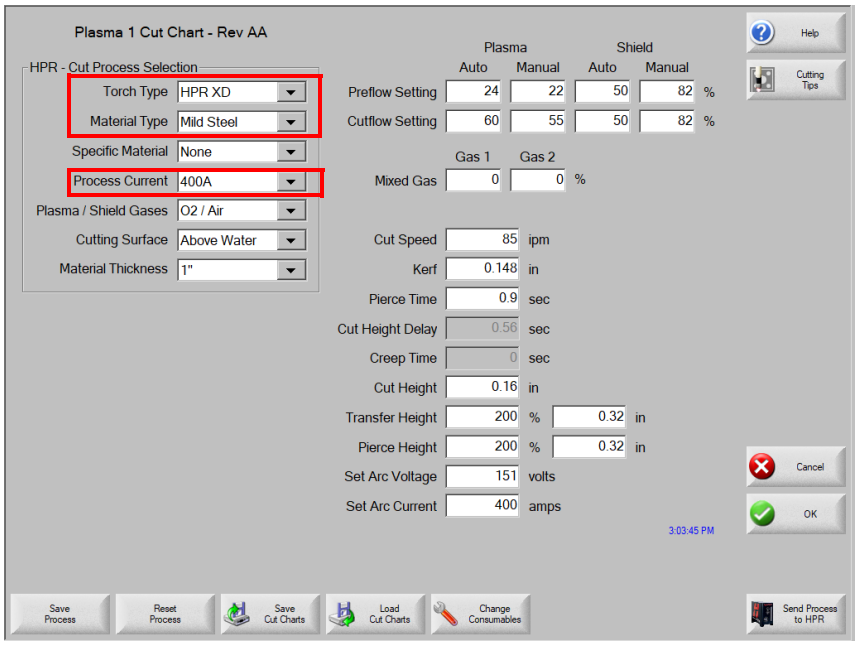


Figure 2 – Example 400 A bevel cut chart settings

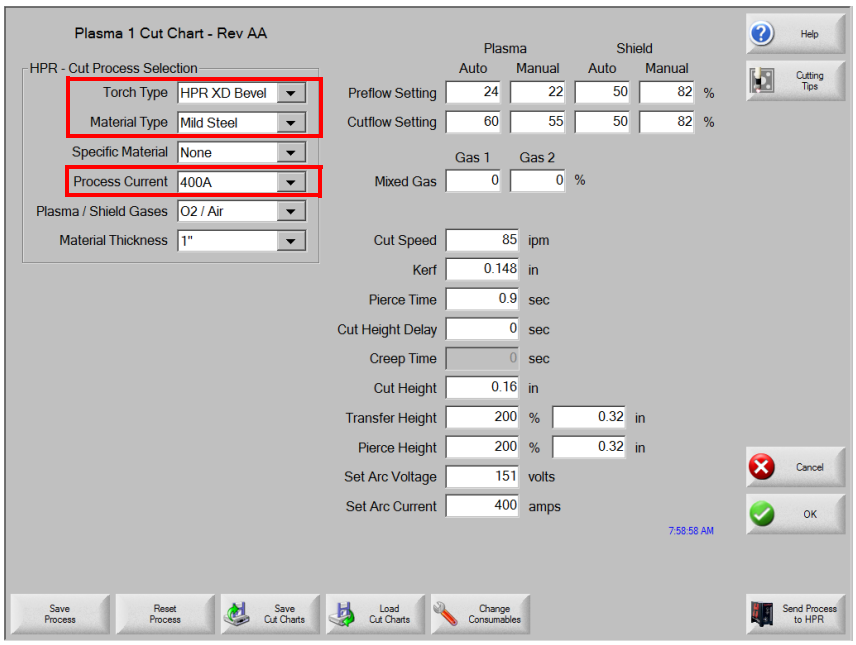


Figure 3 – Example 260 A standard cut chart settings

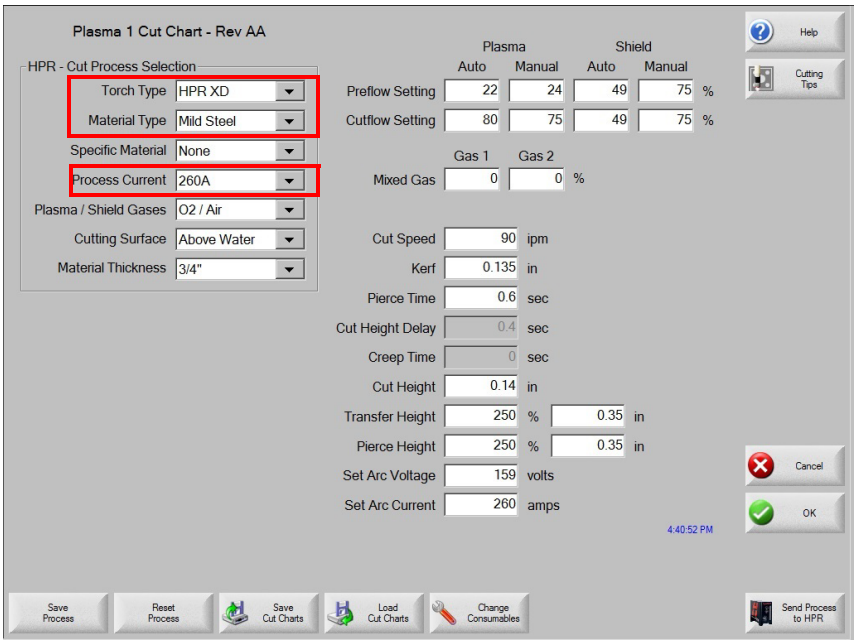


Figure 4 – Example 260 A bevel cut chart settings

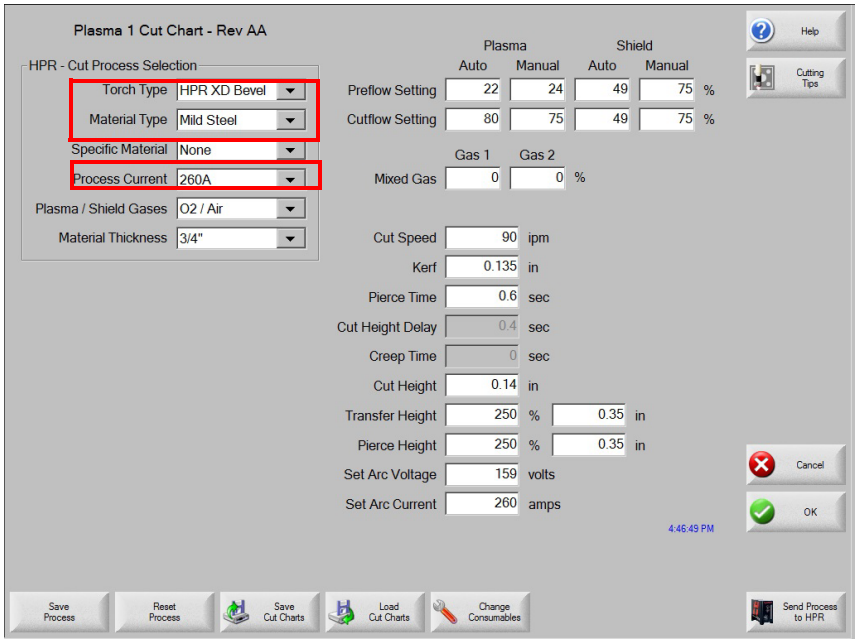


Figure 5 – Example 130 A standard cut chart settings

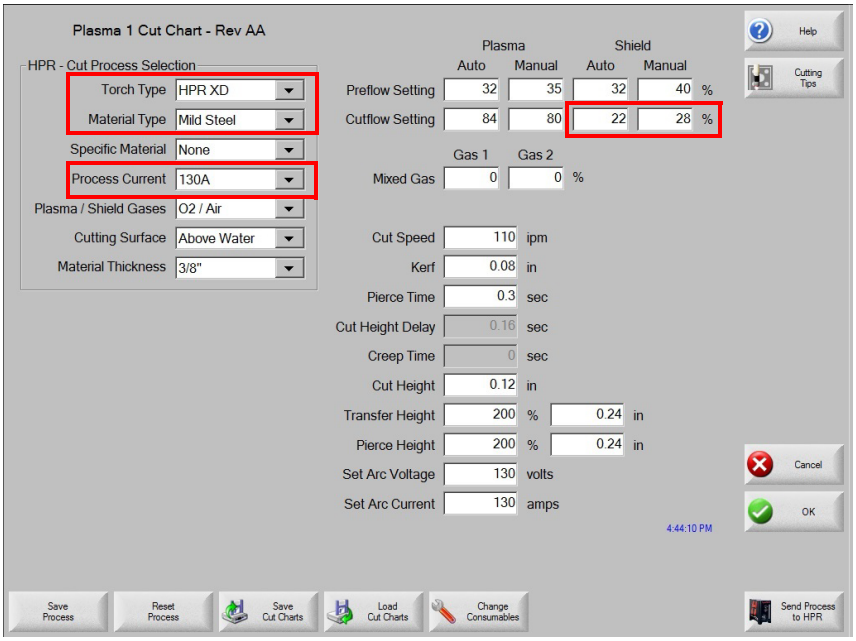
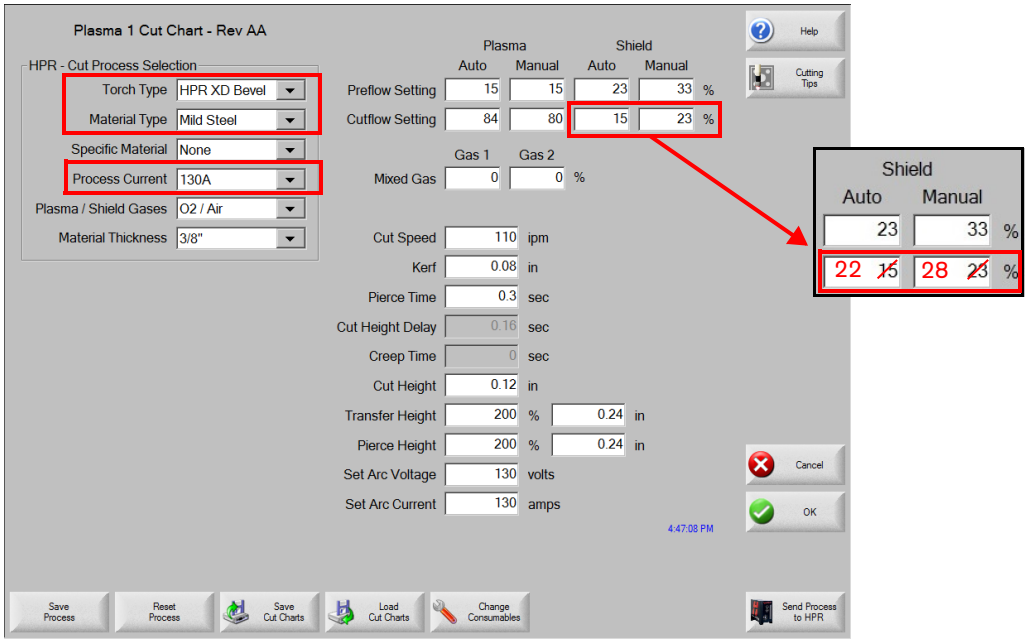


Figure 6 – Example 130 A bevel cut chart settings*



* When a 130 A cartridge is used with bevel cut chart settings, the Auto shield-gas value (15) gives a +2° edge-angle. In most production situations, this angle difference is acceptable. To get a 0° angle, adjust the Auto shield-gas setting from 15 to 22, which is the same as the setting in the standard cut charts in Figure 5.

Adjustments to shield-gas settings must be saved for each cut thickness. Some settings can revert to their original condition during cutting system firmware or software updates. Make sure to do a check of shield-gas settings before cutting, especially after firmware or software changes.

Hypertherm recommends doing test cuts before making adjustments to settings.

Figure 7 – Example 80 A standard cut chart settings

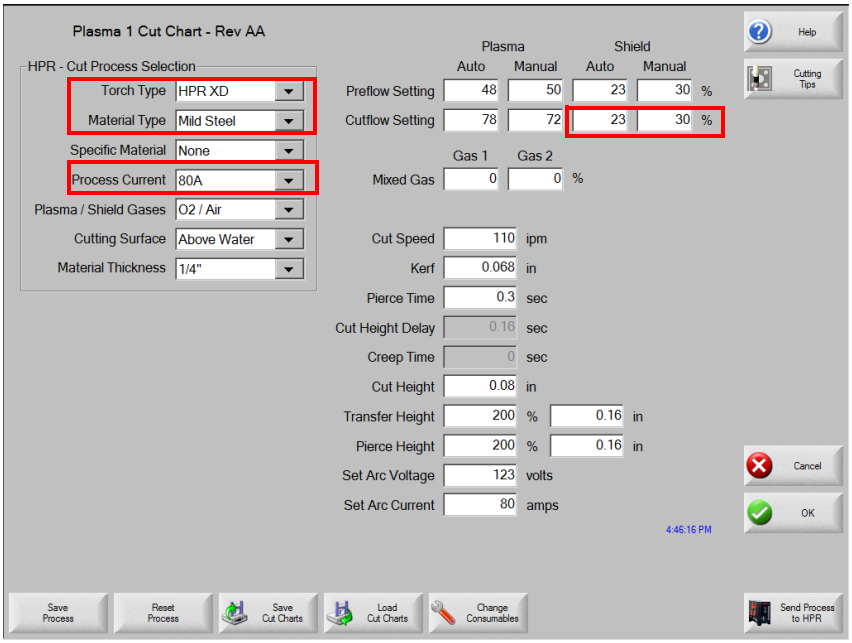
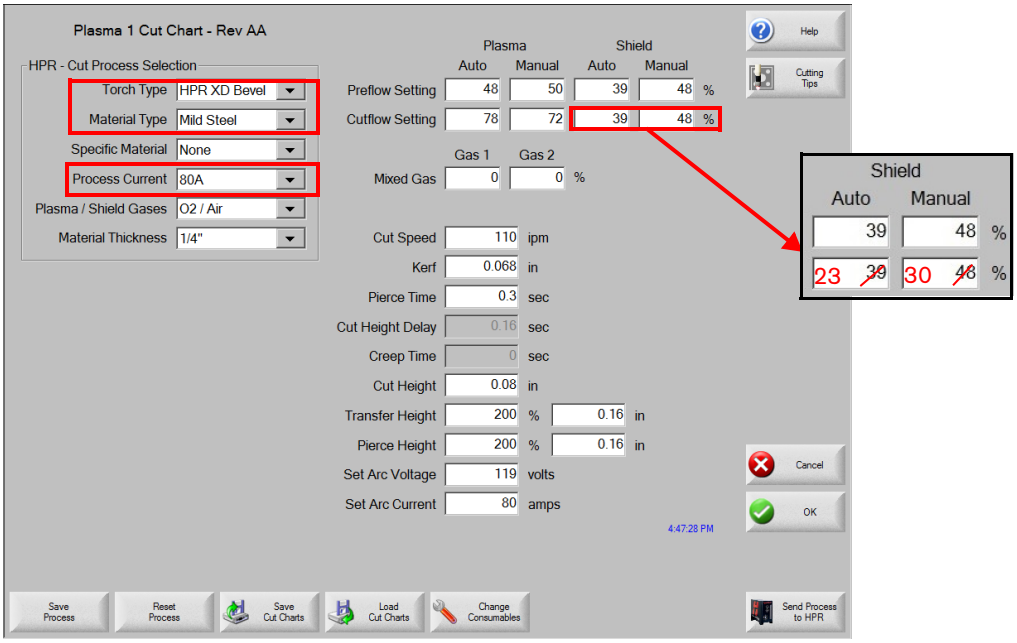


Figure 8 – Example 80 A bevel cut chart settings**



** When an 80 A cartridge is used with bevel cut chart settings, the Auto shield-gas value (39) gives a -3° edge-angle. In most production situations, this angle difference is acceptable. To get a 0° angle, adjust the Auto shield-gas setting from 39 to 23, which is the same as the setting in the standard cut charts in Figure 7.

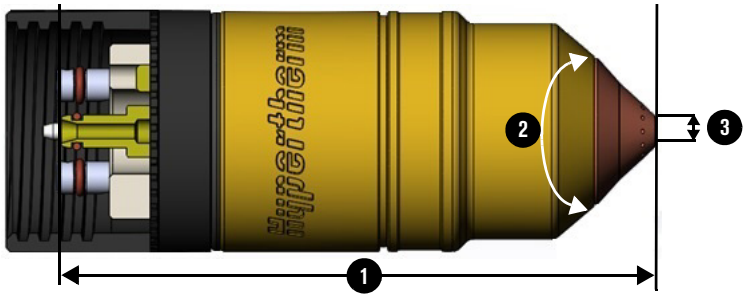
Adjustments to shield-gas settings must be saved for each cut thickness. Some settings can revert to their original condition during cutting system firmware or software updates. Make sure to do a check of shield-gas settings before cutting, especially after firmware or software changes.

Hypertherm recommends doing test cuts before making adjustments to settings.

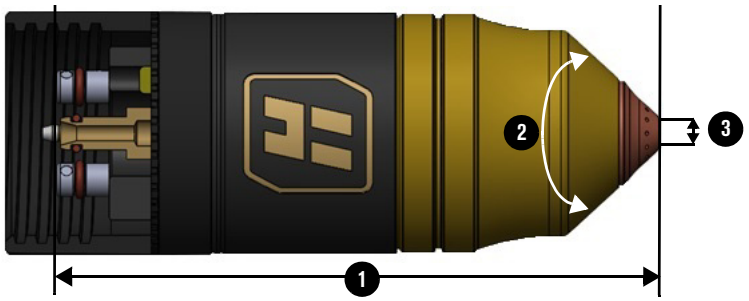
True Bevel™ cutting

An HPR cartridge can be used for True Bevel cutting because it has the same torch length ❶, cone angle ❷, and shield-face diameter ❸ as a standard HPRXD torch with HPRXD bevel consumables.

Standard HPRXD torch with a set of 260 A bevel consumables



Cartridge torch with a 260 A cartridge



Bevel-head calibration

Before using a cartridge for bevel cutting, it is necessary to complete bevel-head calibration with the standard HPRXD torch. After the bevel-head calibration, remove the standard HPRXD torch and replace it with the HPR cartridge torch.

For information about True Bevel theory and how to do bevel-head calibration, refer to the *True Bevel Technology – HPRXD Compensation Cut Charts White Paper* (807830).

Bevel cutting with cartridges

An HPR cartridge can do the same True Bevel cutting as a set of HPRXD bevel consumables.

The cut chart settings for the 260 A bevel process and the 400 A bevel process are the same as the cut chart settings for the 260 A standard process and the 400 A standard process.

The cut chart settings for the 80 A and 130 A bevel processes are different from the cut chart settings for standard processes because of the conical shape of the bevel shield. The 80 A and 130 A cartridges are optimized for use with the standard HPRXD cut chart settings. If used with True Bevel settings, the 80 A and 130 A cartridges will make edge-angles of -3° and +2°, respectively. In most production situations, these angle differences are acceptable.

Torch with 80 A or 130 A HPR cartridge



Torch with 80 A or 130 A HPRXD bevel consumables



Torch with 80 A or 130 A HPRXD standard consumables



Cartridge amperage (part number)	Operator action	Result
80 A (420803)	**None** (use the bevel cut chart setting)	**-3° angle difference** from the bevel cut chart
	Change the shield gas from the bevel to the standard cut chart setting*	**Same angle** as the bevel consumables
130 A (420705)	**None** (use the bevel cut chart setting)	**+2° angle difference** from the bevel cut chart
	Change the shield gas from the bevel to the standard cut chart setting*	**Same angle** as the bevel consumables
260 A (420715)	**None** (use the bevel cut chart setting)	**Same angle** as the bevel consumables
400 A (420727)	**None** (use the bevel cut chart setting)	**Same angle** as the standard/bevel consumables

* Refer to page 25 and page 26 that show how to adjust shield-gas settings to get a 0° angle for 130 A and 80 A processes.

Hypertherm recommends doing test cuts before making adjustments to settings.

Get the most out of your cartridges

How often you need to replace the cartridge is related to these conditions:

- **Gas supply pressures**
  - It is extremely important that the cutting system is in good condition with no gas leaks and no incorrect inlet gas pressures. If consumables wear out quickly because of gas leaks or incorrect inlet gas pressures, a cartridge will also get to end of life quickly. Do a test for gas leaks to make sure that the gas supply lines are in good condition and that the settings for inlet gas pressures agree with Hypertherm recommendations.
- **Gas supply quality**
  - It is extremely important to keep the gas supply lines clean and dry. Oil, water, vapor, and other contamination in the gas supply line can have a bad effect on cut quality and decrease cartridge life.
- **Cutting technique**
  - Whenever possible, stop cutting when the plasma arc is on the workpiece. Stopping a cut when the plasma arc is not on the workpiece can cause wear on the cartridge.
- **Shield maintenance**
  - Carefully remove molten metal that can cause blockages that prevent airflow through the holes in the cartridge shield. These holes are necessary for airflow. Do **not** push the unwanted metal into the nozzle and shield in the cartridge.

Signs that a cartridge is near end of life

NOTICE

USE OF THE HPR 400 A CARTRIDGE DOES NOT ELIMINATE THE RISK OF DAMAGE FROM ELECTRODE BLOWOUTS

Similar to standard consumable parts, if you use the HPR 400 A cartridge for more than its life, an electrode blowout can occur and cause damage to the torch head, water tube, and cap.

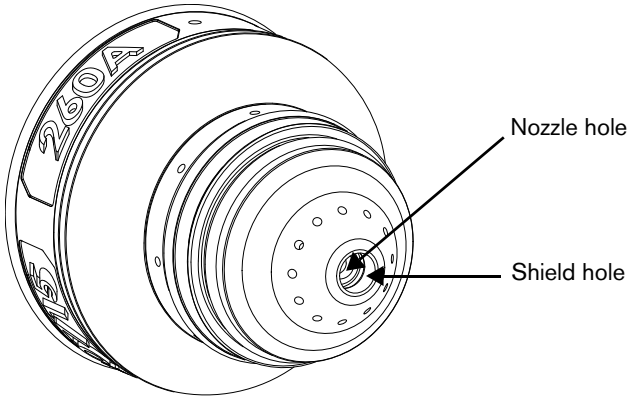
The HPR cartridges can make quality cuts over a long period of time on a well-maintained cutting system that uses the recommended cut chart settings. Usually, the best indication about when to install a new 80 A, 130 A, or 260 A cartridge is when the cut quality is no longer satisfactory.

For 400 A cartridges, a decrease in cut quality is **not** a usual sign that end of life is near. A 400 A cartridge will give consistently good cut quality throughout its life.

A change in **audible pitch** during cutting often indicates that an electrode blowout is about to happen.

These can be signs that a cartridge is near or at the end of life:

- **Examine the nozzle hole**. A nozzle hole in good condition is circular. If the nozzle hole is not circular, replace the cartridge or use it for severing cuts only.
- **Examine the shield hole**. A shield hole in good condition is circular. If the shield hole is not circular, replace the cartridge or use it for severing cuts only.
- **Look for higher rates of 020 or 021 error codes**. As the cartridge wears, the electrode pit gets larger. This makes it difficult to start the pilot arc or to transfer the plasma arc to the workpiece. A typical error for a cartridge at end of life is a failure to start rather than an electrode blowout.



Do not try to disassemble a cartridge. The single-piece cartridge cannot be disassembled and has no replaceable parts. It must be replaced as a unit.

Cartridge disposal at end of life

If possible, use recycling and other alternatives to landfill waste when a cartridge or other system component is at end of life. Environmental stewardship is one of Hypertherm's core values. For more information, go to www.hypertherm.com/environment.

THIS PAGE IS BLANK.

4 Regular Maintenance Tasks

Why regular maintenance is important

Regular maintenance is an important part of cutting system ownership. Regular maintenance extends the life of the cutting system and consumables, optimizes cutting system performance, and keeps operating costs to a minimum.

Recommended maintenance parts and schedule based on plasma arc hours

Part number	Description	Frequency in plasma arc hours
528106	Kit: Torch-rebuild	500
028872	Coolant solution 70/30 PG 3.79 liters (1 US gallon)	500
011110	Air filter element	500
027664	Coolant filter	500
528108	Preventive maintenance (PM) kit: Electronics, HPR130XD cartridge	1,000
528109	PM kit: Electronics, HPR260XD cartridge (200 V – 240 V)	
528110	PM kit: Electronics, HPR400XD / HPR800XD cartridge (200 V – 240 V)	
528111	PM kit: Electronics, HPR260XD / HPR400XD / HPR800XD cartridge (380 V – 600 V)	
220705	HPRXD receptacle	2,000

Instruction manuals for preventive maintenance tasks

For additional information about preventive maintenance (PM) tasks, refer to the *Preventive Maintenance Program (PMP) Instruction Manual* for your cutting system.

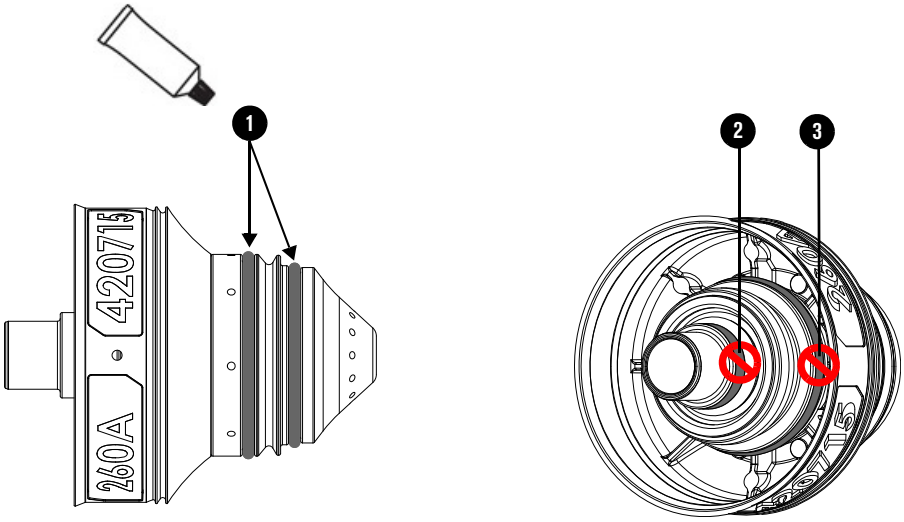
Cutting system	PMP Instruction Manual part number	Cutting system	PMP Instruction Manual part number
HPR130XD auto gas	808620	HPR400XD auto gas	808660
HPR130XD manual gas	808630	HPR400XD manual gas	808650
HPR260XD auto gas	808250	HPR800XD auto gas	808680
HPR260XD manual gas	808640	HPR800XD manual gas	808670

Technical documentation is available at www.hypertherm.com/docs.

Regular maintenance tasks

Lubricate the O-rings on the cartridge shield

It is necessary to lubricate the two O-rings on the cartridge shield ❶ before using a cartridge for the first time and when these two O-rings are dry. Make sure the O-rings look shiny, but that there is not too much lubricant.



The electrode O-ring ❷ and the nozzle O-ring ❸ on the cartridge interior do **not** require silicone lubricant. These O-rings are not easy to access. If the electrode O-ring is dirty, rinse or wipe it to remove contamination that can prevent good sealing to the torch.

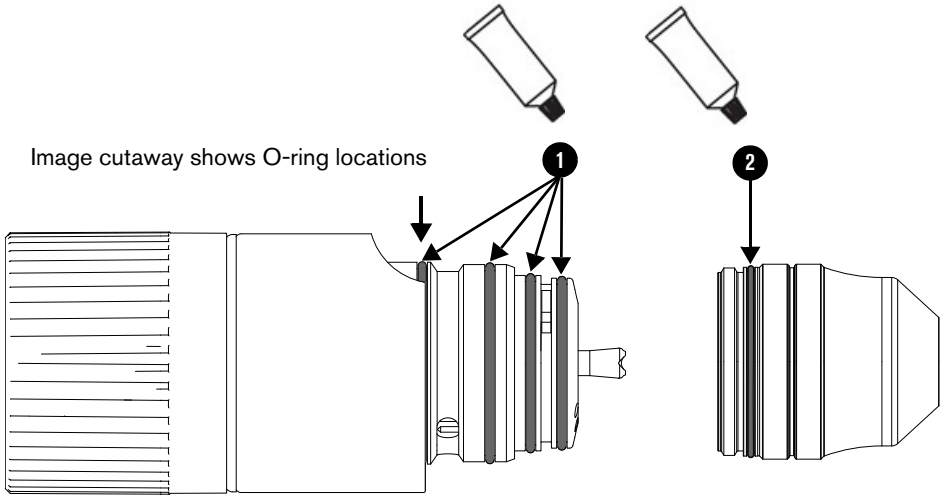
Lubricate the O-rings on the torch and retaining cap

The four O-rings on the front of the torch ❶ require frequent lubrication. The O-ring on the retaining cap ❷ also requires frequent lubrication. This helps cartridge O-rings to seal to the torch.

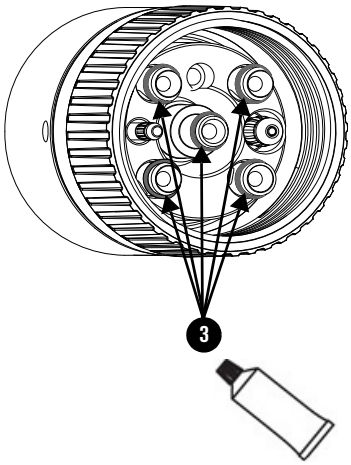
Make sure that the O-rings look shiny, but that there is not too much lubricant.

The five O-rings on the rear of the torch ❸ require less frequent lubrication. Lubricate these O-rings when they are dry or as necessary to keep good sealing to the HPRXD receptacle.

Lubricate frequently

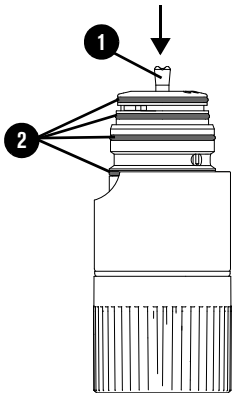


Lubricate as necessary

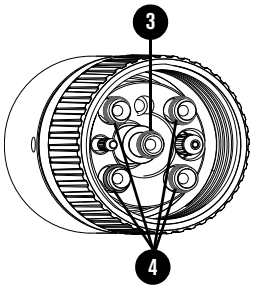


Use the torch-rebuild kit (528106) for regular torch maintenance

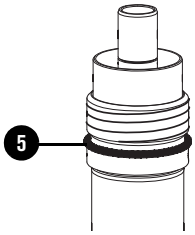
1. Before using the torch-rebuild kit (528106) for torch maintenance, do these steps to disconnect the electrical power from the cutting system:
   a. Set the line-disconnect switch to the OFF position.
   b. Make sure that the power-indicator LED is **not** illuminated on the plasma power supply.
2. Remove the torch from the HPRXD receptacle and remove the retaining cap and cartridge from the torch.
3. Replace the following parts:



   - Water tube ❶
     - Put the water tube into the torch until it stops. The water tube will move slightly to align with the electrode in the cartridge.
   - Four O-rings ❷ on the front of the torch
     - Apply a thin layer of silicone lubricant to each O-ring before installation. Make sure that the O-rings look shiny, but that there is not too much lubricant.
   - One O-ring on the coolant-in connector ❸ and four bullet connectors with their corresponding O-rings ❹ on the rear of the torch
     - Use pliers to pull the old bullet connectors straight out.
     - Apply a thin layer of silicone lubricant to each O-ring before installation. Make sure that the O-rings look shiny, but that there is not too much lubricant.
     - Install the new O-ring on the coolant-in connector.
     - Install the new bullet connectors. Make sure that each bullet connector is fully installed. Do not use tools to push the bullet connectors into the slots. Tools can cause damage to the bullet connectors.



   - Large O-ring ❺ on the HPRXD receptacle
     - Do **not** lubricate this O-ring.



4. Examine the cartridge and retaining cap and remove contamination.
5. Install the cartridge by pushing it onto the torch and then install the retaining cap. Turn the retaining cap until it stops.
6. Assemble the torch and HPRXD receptacle.
   - To prevent damage, make sure to correctly align the torch and HPRXD receptacle.
   - Make sure that there is no space between the torch and the O-ring on the HPRXD receptacle.

5 Parts

Usual parts

Part number	Description
420729	Torch head: HPRXD cartridge
420728	Water tube: HPRXD cartridge
420803	Cartridge: HPRXD 80 A mild steel (standard cutting / bevel cutting)
420705	Cartridge: HPRXD 130 A mild steel (standard cutting / bevel cutting)
420715	Cartridge: HPRXD 260 A mild steel (standard cutting / bevel cutting)
420727	Cartridge: HPRXD 400 A mild steel (standard cutting / bevel cutting)
420708	Retaining cap: HPRXD cartridge
528101	Torch starter kit: HPRXD cartridge
528107	Kit: Torch O-ring, HPRXD cartridge
528106	PM kit: Torch-rebuild
528108	PM kit: Electronics, HPR130XD cartridge
528109	PM kit: Electronics, HPR260XD cartridge (200 V – 240 V)
528110	PM kit: Electronics, HPR400XD / HPR800XD cartridge (200 V – 240 V)
528111	PM kit: Electronics, HPR260XD / HPR400XD / HPR800XD cartridge (380 V – 600 V)
026934	O-ring: HPRXD cartridge, lower shield, silicone 70 duro .945 in. X .059 in.
026919	O-ring: HPRXD cartridge, upper shield, silicone .846 in. X .059 in.

Torch starter and O-ring kits

Torch starter kit – 528101

Part number	Description	Quantity
420729	Torch head: HPRXD cartridge	1
420728	Water tube: HPRXD cartridge	1
420708	Retaining cap: HPRXD cartridge	1
528107	Kit: Torch O-ring, HPRXD cartridge	1

Torch O-ring kit – 528107

Part number	Description	Quantity
026029	O-ring: silicone 1.489 in. X .070 in.	2
044027	O-ring: buna-N 70 duro 1.301 in. X .070 in.	2

Preventive maintenance kits

For information about how to use the parts in the preventive maintenance (PM) kits, refer to the *Preventive Maintenance Program (PMP) Instruction Manual* for your cutting system. A list of PMP instruction manuals is shown on page 34.

Torch-rebuild kit – 528106

Part number	Description	Quantity
220161	Bullet connector	4
026009	O-ring: bullet connector	10
420728	Water tube: HPRXD cartridge	1
058224	O-ring: HPRXD receptacle VITON 75 duro 1.734 in. X .139 in.	1
528107	Kit: Torch O-ring, HPRXD cartridge	1
027055	Silicone lubricant: tube, 1/4 ounce	1

Electronics PM kit, HPR130XD cartridge – 528108

Part number	Description	Quantity
003149	Relay: 120 VAC DPDT AG CDO NO/NC	1
003249	Contactor: 90 A 3P 120 VAC W/2 AUX CONT	1
420729	Torch head: HPRXD cartridge	1

Electronics PM kit, HPR260XD cartridge (200 V – 240 V) – 528109

Part number	Description	Quantity
003149	Relay: 120 VAC DPDT AG CDO NO/NC	1
003217	Contactor: 185 A IEC AC-3 120 VAC coil	1
420729	Torch head: HPRXD cartridge	1

Electronics PM kit, HPR400XD / HPR800XD cartridge (200 V – 240 V) – 528110

Part number	Description	Quantity
003149	Relay: 120 VAC DPDT AG CDO NO/NC	1
003218	Contactor: 265 A IEC AC-3 120 VAC coil	1
420729	Torch head: HPRXD cartridge	1

Electronics PM kit, HPR260XD / HPR400XD / HPR800XD cartridge (380 V – 600 V) – 528111

Part number	Description	Quantity
003149	Relay: 120 VAC DPDT AG CDO NO/NC	1
003233	Contactor: 150 A AC-3 120 VAC coil	1
420729	Torch head: HPRXD cartridge	1

THIS PAGE IS BLANK.