

2013–2014 CO₂ laser consumables LVD[®]



Our value proposition

- Product breadth with over 2,800 part numbers
- OEM quality/consistency for nozzles, ceramics and optics
- Technical/application support from OEM-trained technicians
- 100% satisfaction guarantee



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CO₂ laser nozzles

Nozzle selection guide

Nozzle options

All Centricut nozzles are engineered and manufactured to the highest standards. Select the OEM quality nozzle best suited for your application needs.

Good

Copper nozzles are the most commonly used nozzle and offer good durability and nozzle life.

Better

Chrome plated nozzles have a shiny, mirror-like finish and provide increased spatter resistance, improved durability and longer life than copper nozzles.

Look for CP in the part number to identify a chrome plated nozzle.

Best

Hard chrome plated nozzles are our premium nozzles offering the highest level of durability and longest nozzle life. These nozzles are not as shiny as chrome plated and have a dull appearance.

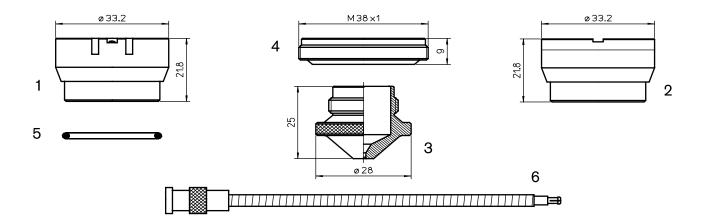
Look for HCP in the part number to identify a hard chrome nozzle.

Type of nozzle	Reasons for selecting
CP (chrome plated)	Nozzles plated with chrome for increased durability. These nozzles are easier to clean, resist damage due to 'tip-ups' and have better spatter resistance over non-plated nozzles. For use in all laser cutting applications.
Conical	Conical internal geometry for high pressure, non-ferrous cutting applications using nitrogen, air or argon.
Cylindrical	Cylindrical internal geometry for low pressure, mild steel cutting applications using oxygen.
Double	Insert pressed into a standard cylindrical nozzle for improved edge quality, laminar gas flow and spatter resistance. Primarily used in mild steel applications.
HCP (hard chrome plated)	Enhanced durability chrome plated nozzles. These nozzles are easier to clean, resist damage due to 'tip-ups' and have better spatter resistance over non-plated nozzles. For use in all laser cutting applications.
HP (high pressure) HD (high density)	Conical style nozzle for high pressure, non-ferrous cutting applications using nitrogen, air or argon.
Inner	Also referred to as a 'nozzle insert'. Works in conjunction with an outer nozzle to create a double nozzle. Primarily used in mild steel applications.
Low pressure	Cylindrical style nozzle for low pressure, mild steel cutting applications using oxygen.
Outer	Works in conjunction with an inner nozzle to create a double nozzle. Primarily used in mild steel applications.
Shower	Nozzles with a center orifice surrounded by smaller jets. The smaller jets focus the assist gas into the kerf, creating improved edge quality and the ability to cut thicker material. Primarily used in mild steel applications.





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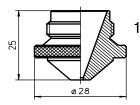


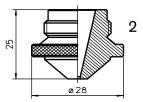
Consumables

	Centricut	Reference	Alternate		Pkg
	part number	number	reference	Description	qty
1	PT311-1146	281146, P0380-211-00001, 29100033	AL130/S	Nozzle holder – ITM 1.5" DZ (aluminum)	1
	PT311-1146 OEM	281146, P0380-211-00001, 29100033	AL130	Nozzle holder – ITM 1.5" DZ (OEM) (aluminum)	1
2	PT311-0565	280565, P0497-605-00001, 29100106	AL40	Nozzle holder - KTM 1.5" DXN (ceramic)	1
	LV332-1993	D5241993	L757	Nozzle – 0.8 mm (cylindrical)	1
	LV332-5470	D7945470	L141	Nozzle – 1.0 mm (cylindrical)	1
	LV332-0001	D5241982	L758	Nozzle – 1.2 mm (cylindrical)	1
	LV332-5434	D7945434	L142	Nozzle – 1.5 mm (cylindrical)	1
	LV332-5452	D7945452	L143	Nozzle – 2.0 mm (cylindrical)	1
	LV332-5517	D7945517	L144	Nozzle – 2.5 mm (cylindrical)	1
3	LV332-0002		L145	Nozzle – 3.0 mm (cylindrical)	1
) 3	LV332-1993CP	D5241993	L757X	Nozzle – 0.8 mm CP (cylindrical)	1
	LV332-5470CP	D7945470	L141X	Nozzle – 1.0 mm CP (cylindrical)	1
	LV332-0001CP	D5241982	L758X	Nozzle – 1.2 mm CP (cylindrical)	1
	LV332-5434CP	D7945434	L142X	Nozzle – 1.5 mm CP (cylindrical)	1
	LV332-5452CP	D7945452	L143X	Nozzle – 2.0 mm CP (cylindrical)	1
	LV332-5517CP	D7945517	L144X	Nozzle – 2.5 mm CP (cylindrical)	1
	LV332-0002CP		L145X	Nozzle – 3.0 mm CP (cylindrical)	1
	PT347-4297	P0492-702-00001, 29100021	AL198	Insulating ring (plastic)	1
4	PT311-0001	P0492-702-00002	AL201	Insulating ring (plastic)	1
5	AM326-6453	71366453	AL94	O-ring for outer nozzle	1
6	PT347-0101	P0360-100-00500, 46713300100	AL204	Sensor cable 500 mm KE (OEM)	1
D	PT347-0450	P0497-002-00450	AL202	Sensor cable 450 mm (OEM)	1

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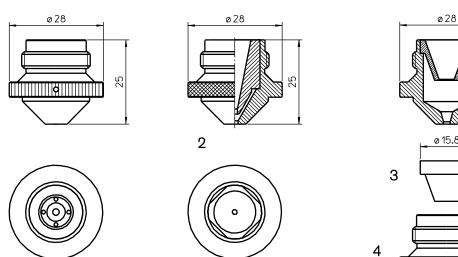
Consumables

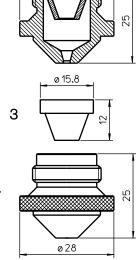
	Centricut	Reference	Alternate		Pkg
	part number	number	reference	Description	qty
	LV332-1863	D5241863	L151	Nozzle – 1.0 mm HD (conical)	1
	LV332-1982		L759	Nozzle – 1.2 mm HD (conical)	1
	LV332-1862	D5241862	L152	Nozzle – 1.5 mm HD (conical)	1
	LV332-2512	D5242512	L748	Nozzle – 1.7 mm HD (conical)	1
	LV332-1855	D5241855	L146	Nozzle – 2.0 mm HD (conical)	1
	LV332-2513	D5242513, Z000000539D	L749	Nozzle – 2.3 mm HD (conical)	1
	LV332-1856	D5241856, Z000000563B	L147	Nozzle – 2.5 mm HD (conical)	1
	LV332-1857	D5241857, Z000000540B	L148	Nozzle – 3.0 mm HD (conical)	1
	LV332-1877	D5241877, Z000000564B	L149	Nozzle - 3.5 mm HD (conical)	1
	LV332-1878	D5241878, Z000000565B	L283	Nozzle – 4.0 mm HD (conical)	1
	LV332-2531	D5242531, Z000000566B	L1303	Nozzle – 4.5 mm HD (conical)	1
1	LV332-2535	D5242535, Z000000567B	L1304	Nozzle – 5.0 mm HD (conical)	1
	LV332-2536	D5242536, Z000000568B	L1305	Nozzle – 6.0 mm HD (conical)	1
	LV332-1863CP	D5241863	L151X	Nozzle – 1.0 mm HD CP (conical)	1
	LV332-1982CP		L759X	Nozzle – 1.2 mm HD CP (conical)	1
	LV332-1862CP	D5241862	L152X	Nozzle – 1.5 mm HD CP (conical)	1
	LV332-2512CP	D5242512	L748X	Nozzle – 1.7 mm HD CP (conical)	1
	LV332-1855CP	D5241855	L146X	Nozzle – 2.0 mm HD CP (conical)	1
	LV332-2513CP	D5242513	L749X	Nozzle – 2.3 mm HD CP (conical)	1
	LV332-1856CP	D5241856	L147X	Nozzle – 2.5 mm HD CP (conical)	1
	LV332-1857CP	D5241857	L148X	Nozzle – 3.0 mm HD CP (conical)	1
	LV332-1877CP	D5241877	L149X	Nozzle - 3.5 mm HD CP (conical)	1
	LV332-1878CP	D5241878	L283X	Nozzle - 4.0 mm HD CP (conical)	1
	LV332-2453	D5242453A	L152-S	Nozzle – 1.5 mm HD	1
0	LV332-2454	D5242454A	L146-S	Nozzle – 2.0 mm HD	1
2	LV332-2416	D5242416A	L147-S	Nozzle – 2.5 mm HD	1
	LV332-2455	D5242455 A	L148-S	Nozzle – 3.0 mm HD	1



1

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Consumables

	Centricut	Reference	Alternate		Pkg
	part number	number	reference	Description	qty
	LV332-0013	G8040180	L1290	Nozzle – 2.5 mm double w/spring 1.3 mm inner	1
	LV332-0180	G8040135	L1291	Nozzle – 2.5 mm double w/spring 1.5 mm inner	1
	LV332-3013	G8040182	L1293	Nozzle - 3.0 mm double w/spring 1.3 mm inner	1
	LV332-3015		L1294	Nozzle – 3.0 mm double w/spring 1.5 mm inner	1
	LV332-0132	G8040132	L1292	Nozzle – 3.0 mm double w/spring 2.0 mm inner	1
	LV332-0013CP	G8040180	L1290X	Nozzle - 2.5 mm double w/spring 1.3 mm inner CP	1
	LV332-0180CP	G8040135	L1291X	Nozzle – 2.5 mm double w/spring 1.5 mm inner CP	1
	LV332-3013CP	G8040182	L1293X	Nozzle – 3.0 mm double w/spring 1.3 mm inner CP	1
	LV332-3015CP		L1294X	Nozzle – 3.0 mm double w/spring 1.5 mm inner CP	1
	LV332-0132CP	G8040132	L1292X	Nozzle - 3.0 mm double w/spring 2.0 mm inner CP	1
	LV417-0001	Centricut design	L783	Nozzle – 1.0 mm double	1
	LV417-0002	Centricut design	L782	Nozzle – 1.2 mm double	1
	LV417-0003	Centricut design	L784	Nozzle – 1.5 mm double	1
	LV417-0004	Centricut design	L785	Nozzle – 2.0 mm double	1
	LV410-0180	Centricut design	L786	Nozzle – 2.5 mm double	1
	LV417-0006	Centricut design	L787	Nozzle – 3.0 mm double	1
	LV417-0007	Centricut design	L788	Nozzle – 3.5 mm double	1
	LV417-0008	Centricut design	L789	Nozzle – 4.0 mm double	1
2	LV417-0001CP	Centricut design	L783X	Nozzle – 1.0 mm double CP	1
2	LV417-0002CP	Centricut design	L782X	Nozzle – 1.2 mm double CP	1
	LV417-0003CP	Centricut design	L784X	Nozzle – 1.5 mm double CP	1
	LV417-0004CP	Centricut design	L785X	Nozzle – 2.0 mm double CP	1
	LV417-0005CP	Centricut design	L786X	Nozzle – 2.5 mm double CP	1
	LV417-0006CP	Centricut design	L787X	Nozzle – 3.0 mm double CP	1
	LV417-0007CP	Centricut design	L788X	Nozzle – 3.5 mm double CP	1
	LV417-0008CP	Centricut design	L789X	Nozzle – 4.0 mm double CP	1
	LV332-0130	Z00000223A	L791	Nozzle – 3.0 mm double	1
	LV332-0131	G8040131	L790	Nozzle – 3.0 mm double	1
3	LV418-0001	Centricut design	L157	Nozzle, inner	1
	LV418-0010	Centricut design	L158	Nozzle – 1.0 mm (for inner nozzle)	1
	LV418-0003	Centricut design	L934	Nozzle – 1.2 mm (for inner nozzle)	1
	LV418-0004	Centricut design	L159	Nozzle – 1.5 mm (for inner nozzle)	1
4	LV418-0005	Centricut design	L160	Nozzle – 2.0 mm (for inner nozzle)	1
	LV418-0006	Centricut design	L161	Nozzle – 2.5 mm (for inner nozzle)	1
	LV418-0007	Centricut design	L178	Nozzle – 3.0 mm (for inner nozzle)	1
	LV418-0008	Centricut design	L179	Nozzle – 3.5 mm (for inner nozzle)	1



Optics

Centricut part number	Reference number	Туре	Diameter	Focal length	Edge thickness
Lenses					
LV333-0023	29100023	MEN	1.5"	5.0"	.290"
LV333-0176	480176	MEN	1.75"	5.0"	.354"
LV333-6326	206326	MEN	2.0"	5.0"	.354"
LV333-1004	458138	MEN	2.0"	5.0"	.380"
LV333-1005	291005-5	MEN	2.0"	7.5"	.380"
LV333-1551	981551	MEN	2.0"	10.0"	.378"
Ultra low absorption lenses					
LV333-0023MP5	29100023	MEN	1.5"	5.0"	.290"
LV333-1005MP5	291005-5	MEN	1.5"	7.5"	.380"

Centricut part number	Reference number	Material	Diameter	Edge thickness	S1/Reflectivity	S2
Output couplers	Dutput couplers					
LV333-7295	897295	ZNSE	1.5"	.315"	30MCC-50%	30MCX
Rear mirrors						
LV333-6659	966659	GE	1.5"	.315"	30MCC-99.5%	
Centricut	Reference				Edge	
part number	number	Туре	Material	Diameter	thickness	S1
Zero phase shift mirrors	Zero phase shift mirrors and total reflectors					
LV333-6858 NEW	126858	TRZ	CU	2.0"	.375"	45DEG

Optics care

Centricut part number		Reference number	Description	Pkg qty
TR300-6452		N/A	Lens cleaning paper, Tiffen – 50 piece	1
AM313-SC50 NE	EW	SC50	Lens cleaning paper, Tresor – 50 piece	1
TR300-1115			Lens cleaning pre-cut cotton – 80 piece	1
TR300-SC20			Cotton swab - 20 piece	1
TR300-1010		AL1010	Dropper, lens cleaning fluid	1
TR300-255		AL255	Loupe, magnifying	1
TR300-271		AL271	Base, lens maintenance	1
TR300-7388		787388	Mirror polish (250 ml)	1
AM313-1260 NE	EW	351260-009	Lens Polarizing Filter – 1.5"	1
AM313-1280 NE	EW	351280-009	Lens Polarizing Filter – 2.0"	1



Centricut also manufactures consumables for most major mechanized plasma systems including ESAB, Kaliburn and Kjellberg

Centricu

To learn more about Centricut's line of plasma consumables, visit: www.hypertherm.com/centricut

Centricut products deliver performance superior to the OEM, along with Hypertherm quality at a competitive price.





Resources



Providing options for sensor cone needs





Purchase new or refurbish your old sensor cone - either way, will save money and give the same quality as the OEM offering

NEW sensor cones

- For Amada, Mazak (Precitec), and Mitsubishi (Precitec) CO₂ laser cutting heads
- Delivering the same OEM performance at a value price
- Engineered and manufactured to Hypertherm's high quality standards

Sensor cone repair*

- For most major OEMs including Precitec, Trumpf, Amada, Mazak, Mitsubishi and Finn-Power laser systems at a fraction of the cost of new
- Fitted with new internal components and restored to factory specifications
- Backed by Centricut's limited one year warranty and 100% satisfaction guarantee

*Sensor cone repairs are not available in all regions

New	sensor	cones
1101	0011001	001100

1	Centricut		Reference	
	part number	OEM	number	Description
	AM343-9107	Amada	ECO cone	Sensor cone – ECO
	AM343-1690	Amada	71341690	Sensor cone – HS98
	PT347-3323	Mazak	567123323A	Nozzle body HNPZ
	PT347-0011	Mitsubishi	P0354-110-00002	Sensor cone HNZ
	PT347-8001	Precitec	280010	Sensor cone 2.5Z/J
	PT347-0522	Precitec	P0599-520-00002	Sensor cone LRC

Refurbished sensor cones

Toruna				
	Centricut		Reference	
	part number	OEM	number	Description
	AM999-HS95	Amada	71341621	Sensor repair HS95 (86 mm x 69 mm)
	AM999-HS95M	Amada	71360091	Sensor repair HS95 mini (70 mm x 69 mm)
	AM999-ECO	Amada	71399107	Sensor repair ECO
	AM999-HS98	Amada	71341690	Sensor repair HS98
	AM999-L3015C	Amada	71374509	Sensor repair L3015C
	AM999-HPX	Amada		Sensor repair HPX
	AM999-HPL	Amada	74810277	Sensor repair HP-L (red)
	AM999-WACS	Amada	71502035	Sensor repair HP-X WACS
	MZ999-HNPZ (HNP)	Mazak	567123323A1	Sensor repair HNP
	PT999-HNZ	Mazak	56743300500	Sensor repair HNZ
	MB999-429A	Mitsubishi	W429A	Sensor repair W429A
	PT999-25ZJ	Mitsubishi	P0361-203-00001	Sensor repair 25ZJ
	MB999-239	Mitsubishi	W239	Sensor repair W239
	MB999-SE	Mitsubishi	P0594-820-00001	Sensor repair SE
	PT999-DXN	Precitec	P0589-800-00001	Sensor repair DXN
	PT999-YH27	Precitec	P0589-800-00001	Sensor repair YH27
	PT999-YR30	Precitec	YR-30	Sensor repair YR-30
	PT999-DZ	Precitec	281145	Sensor repair DZ
	PT999-KN	Precitec	280549	Sensor repair KN
	PT420-0125	Precitec		Sensor repair 25ZJ
	PT999-HP2	Precitec	281672	Sensor repair HP/HP2Z

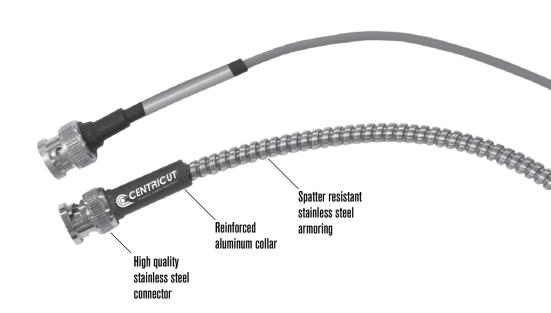
* Not available in all regions. Sensor cone repair is available for most sensor cones. Only a representation is listed above. For more information contact us at CTlaser@hypertherm.com

Armored sensor cables

Centricut armored sensor cables

Get the rugged toughness you need with Centricut armored sensor cables. Weaker designed cables require frequent changes, downtime and loss of production.

- Robust design
- Reinforced collar for longer life
- Extreme temperature rating (900°-1200° F)
- Guaranteed to outlast standard OEM cables



Armored sensor cables

Centricut		Reference	
part number	OEM	number	Description
AM308-8965A	Amada	71398965	Sensor cable – armored 305 mm (premium)
AM313-1901A	Amada	71341630	Sensor cable - HS-5 305 mm (premium)
AM313-9851A	Amada	71369851	Sensor cable – armored 203 mm (premium)
CN306-0654A	Cincinnati	909654, 922686	Sensor cable – armored 114 mm (4.5")
CN306-0951A	Cincinnati	842951	Sensor cable – armored 140 mm (5.5")
MZ335-630A	Mazak		Sensor cable – armored 630 mm (25")
MZ335-1980A	Mazak	46683301980	Sensor cable – armored 280 mm (11")
MZ335-0111A	Mazak	4674330111	Sensor cable – armored 280 mm (11")
MZ335-1980	Mazak	46683301980	Sensor cable – armored 280 mm (11")
MZ335-0181A	Mazak	46743300181	Sensor cable - armored 317.5 mm (12.5")
MZ335-1330A	Mazak	46683301330	Sensor cable - armored 305 mm (12")
NT426-8677	NTC	4R028677-001	Sensor cable - armored 508 mm (20")
PT347-0101A	Precitec	P0360-100-00500	Sensor cable - armored 500 mm (20")
PT347-0181	Precitec	46743300181	Sensor cable 305 mm – armored (12")
PT347-1386	Precitec	281386, P0360-155-00500	Sensor cable - armored
TR301-7833	Trumpf	0227833	Sensor cable – armored 432 mm (17")
TR301-9983	Trumpf	359983, 342474	Sensor cable – armored 190 mm (7.5")
TR301-0930	Trumpf	280930	Sensor cable - armored 152 mm (6")
PT347-0250	Trumpf	342475	Sensor cable – armored 250 mm (9.85")

Lens cleaning tips

You will need:

- Scientific-grade acetone
- Air bulb
- Lens tissue
- Plastic lens holder
- Cotton swabs
- Eye dropper
- Rubber gloves

Step #1

Using rubber gloves, place lens in lens holder. Use air bulb to remove all loose contaminants from the optic. If the contaminants are still visible please proceed to step #2.

Step #2

Place a new piece of lens tissue over the optic, completely covering the optic

Step #3

Fill eye dropper $\frac{1}{2}$ full with acetone.

Step #4

Drip acetone on the center of the optic until it is saturated to the outside diameter.

Step #5

Pull the lens tissue slowly across the optic. Going too fast will leave acetone residue behind. Acetone will evaporate when the tissue is dragged across the lens at the correct speed.

Step #6

If top side of lens is contaminated, repeat steps 1-5.













Step #7

Place clean optic in the machine quickly to avoid getting airborne particles on the clean optic.

If spots, pits, or scratches are still noticeable, the optic may need to be replaced

CO₂ laser optics

Optics key

Lens	
PFL	Pre-focus
MEN	Meniscus
PLX	Plano-convex
MTD	Mounted
Not MTD	Not mounted
LA	Low absorption
PO	Plano
ULA	Ultra low absorption

Mirrors	
CU	Copper
GAAS	Gallium arsenide
SI	Silicon
GE	Germainum
ZNSE	Zinc-selinide
PS	Phase shift
MMR	Maximum metal reflector
ATFR	Absorbing thin film reflector
TRZ	Total reflector - zero phase shift
ZPS	Zero phase shift
OC	Output coupler
RM	Rear mirror
COL-I	Collimator input
COL-O	Collimator output
AO	Adaptive optic
МО	Molybdenum
UC	Uncoated
MCX	Convex
МСС	Concave

Measurements	
DIA	Diameter
FL	Focal length
ET	Edge thickness

How to handle optics

Follow these easy steps, when cleaning or changing your optic, to help maximize the life and performance of your lens

- Avoid touching coated surfaces of the lens and hold the optic by its sides
- Wear powder-free finger cots or latex gloves when handling
- Do not use any tools or sharp objects when handling the optic or when removing it from its packaging
- Ensure the work surface is clean and free of oils, grease and dirt
- Do not place the optic on hard surfaces as they scratch easily
- Once the optic has been unpacked, carefully place it on the lens tissue in which it was originally wrapped

Optics disposal

It is important to dispose of used laser optics at a licensed industrial waste facility which is in compliance with all local, state, and federal regulations. If you don't have access to a licensed industrial waste facility, and purchased your laser optics through Centricut, you may return them to Centricut for proper disposal. This service is only available to Centricut customers.

All optics returned to Centricut must:

- Include return authorization and invoice numbers
- Be sealed in a plastic bag to minimize any hazards
- Remove excess ZnSe powder prior to sealing

*Acceptance of goods will be refused if not packaged correctly or if the return authorization number isn't included



Technical support

Our technical service team can answer questions about any laser cutting system. Whether it's a question about a part, a system, or for guidance on how to optimize performance, our experts can help.

PRIMACH - TUL

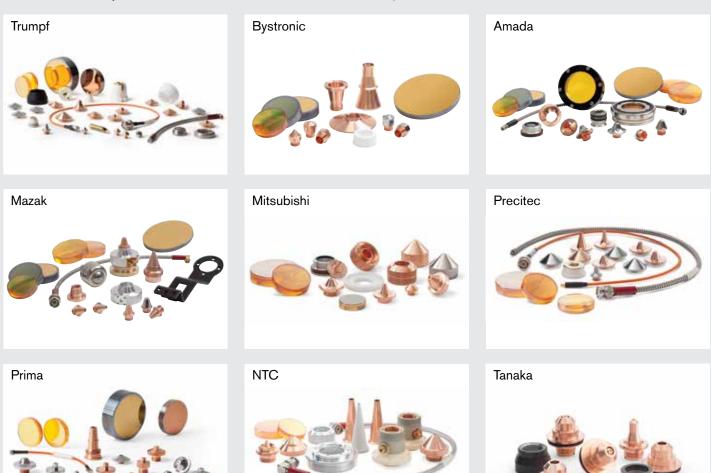
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- · We stand behind our products with industry-leading technical expertise
- OEM trained technicians on staff with over 25 years experience
- Free application support for all laser OEMs

Contact us at: CTlaser@hypertherm.com

Broadest product line in the industry



For more information on Centricut laser products, visit www.hypertherm.com/centricut/laser

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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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