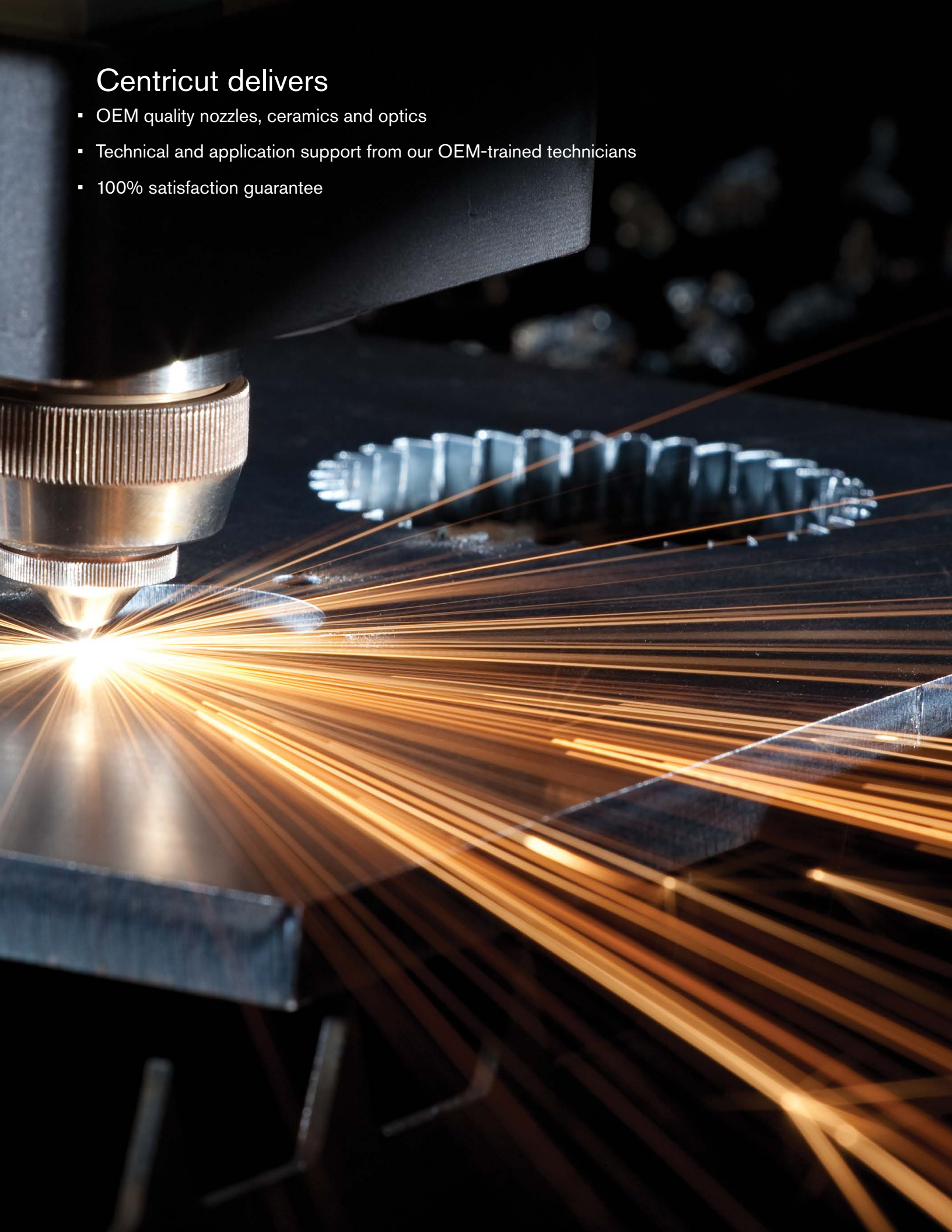
Centricut®

2018 catalog

For CO_2 and fiber laser consumables

Replacement parts suitable for Prima Industrie®



Centricut delivers

- OEM quality nozzles, ceramics and optics
- Technical and application support from our OEM-trained technicians
- 100% satisfaction guarantee

CO_2 and fiber laser nozzles

Nozzle options

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

Copper

Most commonly used nozzle offering good durability and nozzle life. Primary nozzle type for fiber lasers.

Chrome plated

Shiny, mirror-like finish provides increased spatter resistance, improved durability and longer life than copper nozzles. Not recommended for use on fiber lasers.

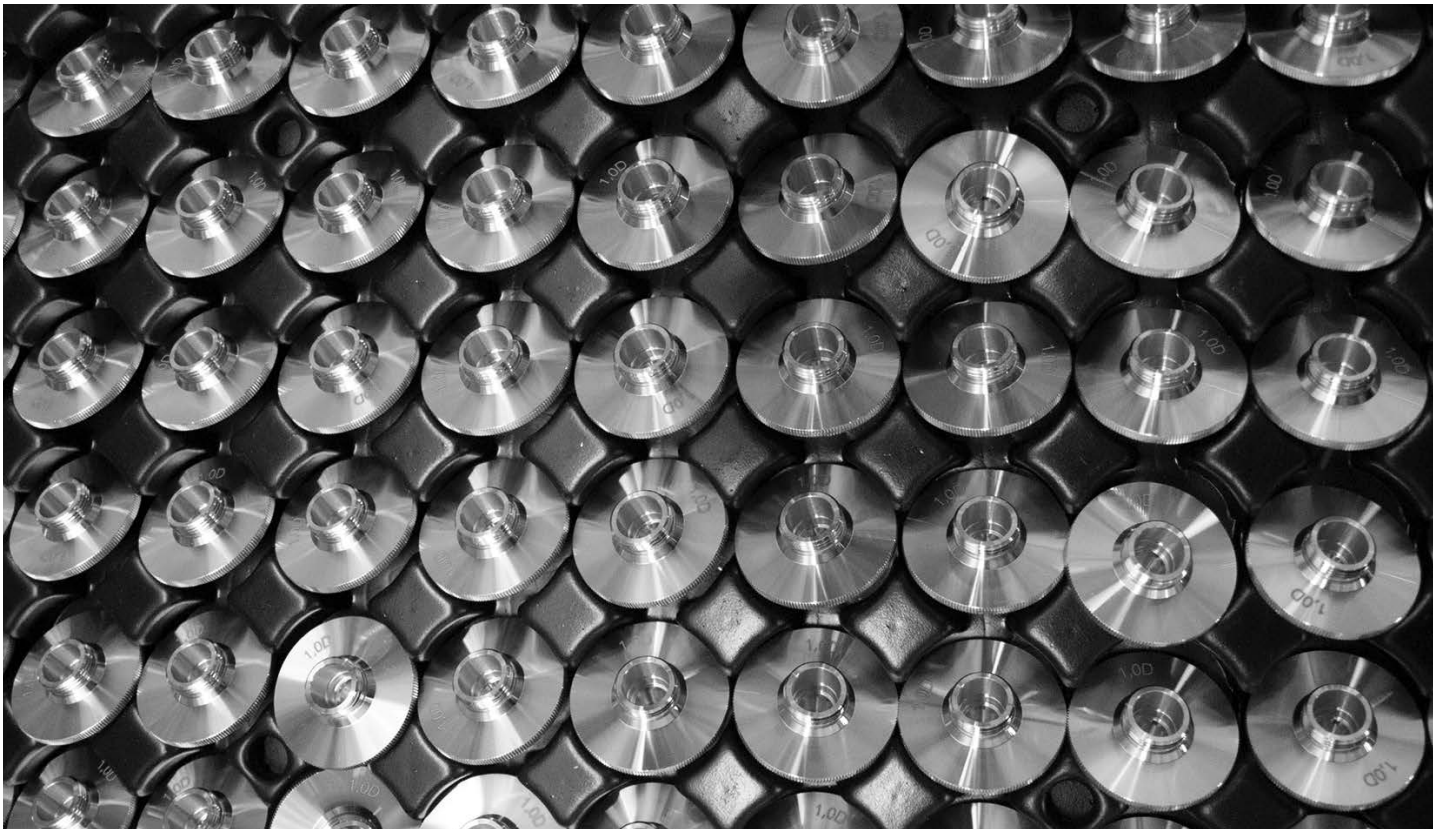
Look for CP in the part number to identify a chrome plated nozzle

Hard chrome plated

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. Not recommended for use on fiber lasers.

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

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.



CO_2 and fiber laser optics

Optics key

Lens	
MEN	Meniscus
PLX	Plano-convex
MTD	Mounted
Not MTD	Not mounted
PO	Plano
MP5 or ULA	Ultra low absorption
AR	Anti-reflection
ZNSE	Sinc-selinide
FS	Fused silica
DIA	Diameter
FL	Focal length
ET	Edge thickness
WD	Working distance

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

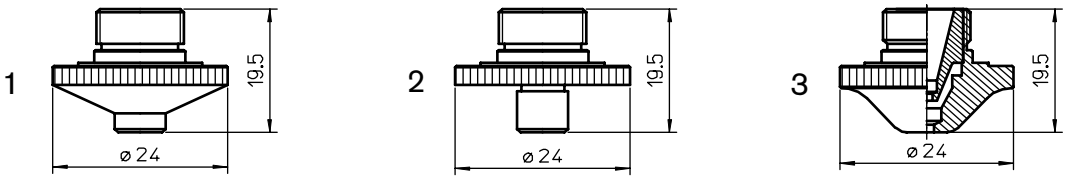
Optics disposal

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:

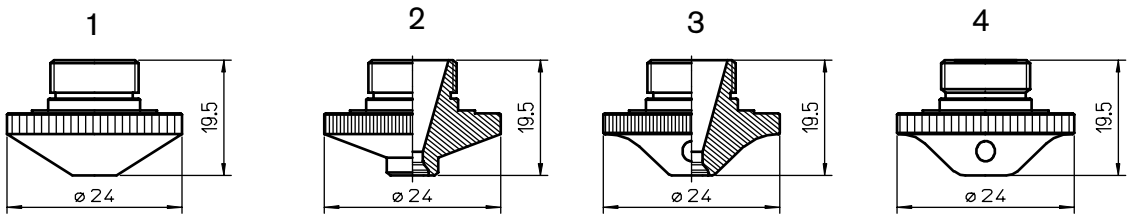
- Include return authorization and invoice numbers
- Be sealed in a plastic bag to minimize any hazards
- Remove excess ZnSe powder prior to sealing

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



Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	PR351-1E109	L532		PR-Nozzle, 0.8 mm	1
	PR351-1E110	L312		PR-Nozzle, 1.0 mm	1
	PR351-1E108	L362		PR-Nozzle, 1.2 mm	1
	PR351-1E111	L207	LW6.1E.111	PR-Nozzle, 1.5 mm	1
	PR351-1E112	L208	LW6.1E.112	PR-Nozzle, 2.0 mm	1
	PR351-1E113	L209	LW6.1E.113	PR-Nozzle, 2.5 mm	1
	PR351-1E114	L210	LW6.1E.114	PR-Nozzle, 3.0 mm	1
	PR351-1E110CP	L312X		PR-Nozzle, 1.0 mm CP	1
	PR351-1E115CP	L362X		PR-Nozzle, 1.2 mm CP	1
	PR351-1E111CP	L207X	LW6.1E.111	PR-Nozzle, 1.5 mm CP	1
	PR351-1E112CP	L208X	LW6.1E.112	PR-Nozzle, 2.0 mm CP	1
	PR351-1E113CP	L209X	LW6.1E.113	PR-Nozzle, 2.5 mm CP	1
	PR351-1E114CP	L210X	LW6.1E.114	PR-Nozzle, 3.0 mm CP	1
2	PR366-1G600	L608	LW6.1G.500, LW6.1G.600	PR-Nozzle, 1.5 mm	1
	PR366-1G601	L609	LW6.1G.501, LW6.1G.601	PR-Nozzle, 2.0 mm	1
	PR366-1G602	L610	LW6.1G.502, LW6.1G.602	PR-Nozzle, 2.5 mm	1
	PR366-1G603	L611	LW6.1G.503, LW6.1G.603	PR-Nozzle, 3.0 mm	1
	PR366-1G601CP	L609X	LW6.1G.501, LW6.1G.601	PR-Nozzle, 2.0 mm CP	1
	PR366-1G602CP	L610X	LW6.1G.502, LW6.1G.602	PR-Nozzle, 2.5 mm CP	1
	PR366-1G603CP	L611X	LW6.1G.503, LW6.1G.603	PR-Nozzle, 3.0 mm CP	1
3	PR362-0008CP	L905X	1059.70000.010	PR-Nozzle double, 0.8 mm CP	1
	PR362-0003CP	L900X	1059.70000.003	PR-Nozzle double, 1.0 mm CP	1
	PR362-0002CP	L907X	1059.70000.008	PR-Nozzle double, 1.25 mm CP	1
	PR362-0005CP	L901X	1059.70000.004	PR-Nozzle double, 1.5 mm CP	1
	PR362-0001CP	L906X	1059.70000.009	PR-Nozzle double, 1.75 mm CP	1
	PR362-0004CP	L902X	1059.70000.005	PR-Nozzle double, 2.0 mm CP	1
	PR362-0006CP	L903X	1059.70000.006	PR-Nozzle double, 2.5 mm CP	1
	PR362-0007CP	L904X	1059.70000.007	PR-Nozzle double, 3.0 mm CP	1

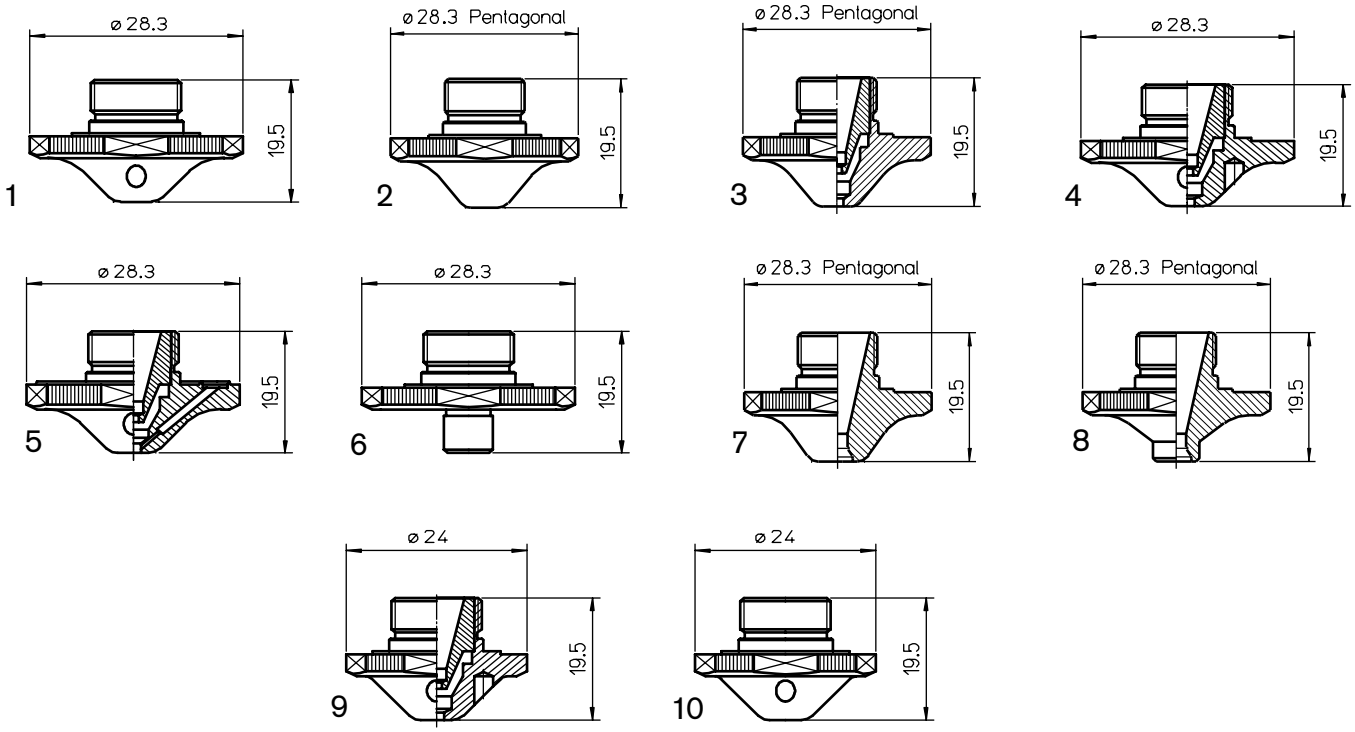


Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
	PR422-0001	L862		PR-Nozzle, 1.0 mm	1
	PR422-0002	L863		PR-Nozzle, 1.5 mm	1
1	PR422-0003	L864		PR-Nozzle, 2.0 mm	1
	PR422-0004	L865		PR-Nozzle, 2.5 mm	1
	PR422-0005	L866		PR-Nozzle, 3.0 mm	1
2	PR422-0650CP	L1165X	LW6.1G.650	PR-Nozzle, 3.0 CP	1
3	PR422-0608CP	L1208X	LW6. 1G. 608	PR-Nozzle DL type, 3.0 mm CP	1
	PR394-604	L1167X	LW6. 1G. 604	PR-Nozzle, 1.5 mm CP	1
	PR394-603	L1166X		PR-Nozzle, 1.75 CP	1
4	PR394-605	L1168X	LW6. 1G. 605	PR-Nozzle, 2.0 mm CP	1
	PR394-606	L1169X	LW6. 1G. 606	PR-Nozzle, 2.5 mm CP	1
	PR394-607	L1170X	LW6. 1G. 607	PR-Nozzle, 3.0 mm CP	1

Consumables

	Centricut part number	Esse A part number	Alternate reference	Description	Pkg qty
	PR361-3150 (not shown)		99MM-150MM	PR-Sensor cable, 150 mm (6")	1

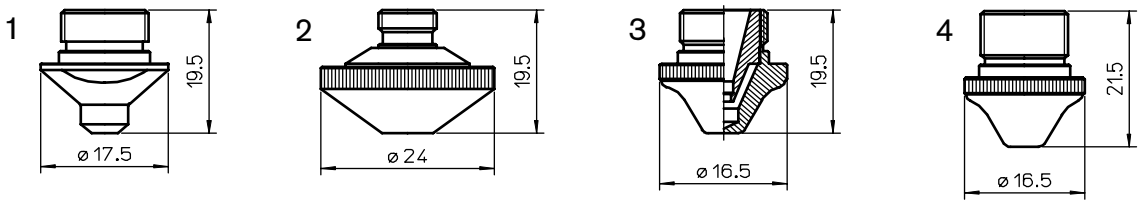


Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	PR422-0661	L1429X	LW6.1G.661	PR-Nozzle pentagonal, 1.0 mm CP	1
	PR422-0662	L1430X	LW6.1G.662	PR-Nozzle pentagonal, 1.25 mm CP	1
	PR422-0663	L1431X	LW6.1G.663	PR-Nozzle pentagonal, 1.5 mm CP	1
	PR422-0664	L1432X	LW6.1G.664	PR-Nozzle pentagonal, 1.75 mm CP	1
	PR422-0665	L1433X	LW6.1G.665	PR-Nozzle pentagonal, 2.0 mm CP	1
	PR422-0667	L1435X	LW6.1G.667	PR-Nozzle pentagonal, 2.5 mm CP	1
	PR422-0669	L1437X	LW6.1G.669	PR-Nozzle pentagonal, 3.0 mm CP	1
	PR422-0670	L1438X	LW6.1G.670	PR-Nozzle pentagonal, 3.5 mm CP	1
2	PR422-0103CP	L1807X	LW6.1G.103	PR-Nozzle pentagonal, 1.5 mm CP	1
	PR422-0105CP	L1808X	LW6.1G.105	PR-Nozzle pentagonal, 2.0 mm CP	1
	PR422-0107CP	L1809X	LW6.1G.107	PR-Nozzle pentagonal, 2.5 mm CP	1
	PR422-0109CP	L1810X	LW6.1G.109	PR-Nozzle pentagonal, 3.0 mm CP	1
3	PR422-1462	L1462	LW6.1G.200	PR-Nozzle double pentagonal, 3.0 mm	1
	PR422-1463	L1463	LW6.1G.201	PR-Nozzle double pentagonal, 3.5 mm	1
	PR422-1464	L1464	LW6.1G.202	PR-Nozzle double pentagonal, 4.0 mm	1
	PR422-1472	L1472	LW6.1G.203	PR-Nozzle double pentagonal, 5.0 mm	1
	PR422-1473	L1473	LW6.1G.204	PR-Nozzle double pentagonal, 7.0 mm	1
	PR422-1783CP	L1783X	LW6.1G.302	PR-Nozzle double pentagonal, 1.25 mm CP	1
	PR422-1784CP	L1784X	LW6.1G.303	PR-Nozzle double pentagonal, 1.5 mm CP	1
	PR422-1785CP	L1785X	LW6.1G.304	PR-Nozzle double pentagonal, 1.75 mm CP	1
	PR422-1786CP	L1786X	LW6.1G.305	PR-Nozzle double pentagonal, 2.0 mm CP	1
	PR422-1787CP	L1787X	LW6.1G.307	PR-Nozzle double pentagonal, 2.5 mm CP	1
	PR422-1788CP	L1788X	LW6.1E.204	PR-Nozzle double pentagonal, 2.5 mm/inner 2.0 mm CP	1
	PR422-1789CP	L1789X	LW6.1G.309	PR-Nozzle double pentagonal, 3.0 mm CP	1
	PR422-1790CP	L1790X	LW6.1E.206	PR-Nozzle double pentagonal, 3.0 mm/inner 2.0 mm CP	1
	PR422-1791CP	L1791X	LW6.1E.207	PR-Nozzle double pentagonal, 3.5 mm/inner 3.0 mm CP	1

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
4	PR422-0680	L1440X	LW6.1G.680	PR-Nozzle double pentagonal, 0.8 mm CP	1
	PR422-0681	L1441X	LW6.1G.681	PR-Nozzle double pentagonal, 1.0 mm CP	1
	PR422-0682	L1442X	LW6.1G.682	PR-Nozzle double pentagonal, 1.25 mm CP	1
	PR422-0683	L1443X	LW6.1G.683	PR-Nozzle double pentagonal, 1.5 mm CP	1
	PR422-0684	L1444X	LW6.1G.684	PR-Nozzle double pentagonal, 1.75 mm CP	1
	PR422-0685	L1445X	LW6.1G.685	PR-Nozzle double pentagonal, 2.0 mm CP	1
	PR422-0686	L1446X	LW6.1G.686	PR-Nozzle double pentagonal, 2.25 mm CP	1
	PR422-0687	L1447X	LW6.1G.687	PR-Nozzle double pentagonal, 2.5 mm CP	1
	PR422-0688	L1448X	LW6.1G.688	PR-Nozzle double pentagonal, 2.75 mm CP	1
	PR422-0689	L1449X	LW6.1G.689	PR-Nozzle double pentagonal, 3.0 mm CP	1
	PR422-0801	L1466	LW6.1G.801	PR-Nozzle double brilliant, 3.5 mm	1
	PR422-0803	L1468	LW6.1G.803	PR-Nozzle double brilliant, 5.0 mm	1
	PR422-0804	L1469	LW6.1G.804	PR-Nozzle double brilliant, 7.0 mm	1
5	PR422-0627	L1453X	LW6.1G.627	PR-Nozzle triple pentagonal, 1.25 mm CP	1
	PR422-0620	L1454X	LW6.1G.620	PR-Nozzle triple pentagonal, 1.5 mm CP	1
	PR422-0621	L1455X	LW6.1G.621	PR-Nozzle triple pentagonal, 1.75 mm CP	1
	PR422-0622	L1456X	LW6.1G.622	PR-Nozzle triple pentagonal, 2.0 mm CP	1
	PR422-0623	L1457X	LW6.1G.623	PR-Nozzle triple pentagonal, 2.25 mm CP	1
	PR422-0624	L1458X	LW6.1G.624	PR-Nozzle triple pentagonal, 2.5 mm CP	1
	PR422-0626	L1460X	LW6.1G.626	PR-Nozzle triple pentagonal, 3.0 mm CP	1
6	PR422-0700	L1478X	LW6.1G.700	PR-Nozzle pentagonal cyl, 2.0 mm CP	1
	PR422-0701	L1479X	LW6.1G.701	PR-Nozzle pentagonal cyl, 2.5 mm CP	1
	PR422-0702	L1480X	LW6.1G.702	PR-Nozzle pentagonal cyl, 3.0 mm CP	1
7	PR422-0522CP	L1837X	LW6.1G.522a	PR-Nozzle pentagonal DL, 3 mm inner/Ø 4.5 mm CP	1
8	PR422-0524CP	L1838X	LW6.1G.524	PR-Nozzle pentagonal, 3.0 mm DL CP	1
9	PR422-0643	L1540X	LW6.1G.643	PR-Nozzle double pentagonal, 1.5 mm CP	1
	PR422-0645	L1541X	LW6.1G.645	PR-Nozzle double pentagonal, 2.0 mm CP	1
	PR422-0647	L1542X	LW6.1G.647	PR-Nozzle double pentagonal, 2.5 mm CP	1
10	PR422-0633	L1533X	LW6.1G.633	PR-Nozzle pentagonal, 1.5 mm CP	1
	PR422-0635	L1534X	LW6.1G.635	PR-Nozzle pentagonal, 2.0 mm CP	1
	PR422-0637	L1535X	LW6.1G.637	PR-Nozzle pentagonal, 2.5 mm CP	1



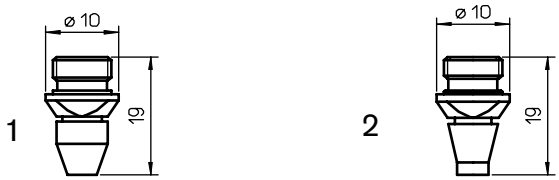
Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	PR398-498	L922	750.42.559	PR-Nozzle, 0.3 mm	1
	PR398-0001	L891		PR-Nozzle, 1.0 mm	1
	PR398-550	L892	750.42.550	PR-Nozzle, 1.5 mm	1
	PR398-551	L893	750.42.551	PR-Nozzle, 2.0 mm	1
	PR398-552	L894	750.42.552	PR-Nozzle, 2.5 mm	1
	PR398-0004	L895	750.42.553	PR-Nozzle, 3.0 mm	1
2	PR421-111CP	L1239X	520.17.111	PR-Nozzle double, 1.5 mm CP	1
	PR421-114CP	L1240X	520.17.114	PR-Nozzle double, 2.0 mm CP	1
	PR421-560CP	L1241X	750.43.560	PR-Nozzle double, 2.5 mm CP	1
	PR421-561CP	L1242X	750.43.561	PR-Nozzle double, 3.0 mm CP	1
3	PR409-4515	L1211X	787.04.515	PR-Nozzle, 1.25 mm CP	1
	PR409-4516	L1217X	787.04.516	PR-Nozzle, 1.75 CP	1
	PR409-4513	L1213X	787.04.513	PR-Nozzle, 2.0 mm CP	1
4	PR421-720	AL259	1058.36520.720	PR-Lens gasket	1

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
	PR331-4102X	L3070	490.76.102	PR-Nozzle cylindrical, 0.3 mm brass (10 pk)*	10
	PR331-0001X	L30418		PR-Nozzle cylindrical, 1.0 mm copper (10 pk)*	10
	PR331-0002X	L30416		PR-Nozzle cylindrical, 1.2 mm copper (10 pk)*	10
	PR331-3321BX	L3054	485.73.321	PR-Nozzle cylindrical, 1.5 mm brass (10 pk)*	10
	PR331-3321CX	L30419		PR-Nozzle cylindrical, 1.5 mm copper (10 pk)*	10
	PR331-0003X	L30417		PR-Nozzle cylindrical, 1.7 mm copper (10 pk)*	10
	PR331-3322BX	L3055	485.73.322	PR-Nozzle cylindrical, 2.0 mm brass (10 pk)*	10
	PR331-322CX	L30420		PR-Nozzle cylindrical, 2.0 mm copper (10 pk)*	10
	PR331-3323BX	L30204	485.73.323	PR-Nozzle cylindrical, 2.5 mm brass (10 pk)*	10
1	PR331-3323CX	L30421		PR-Nozzle cylindrical, 2.5 mm copper (10 pk)*	10
	PR331-3324BX	L30205	485.73.324	PR-Nozzle cylindrical, 3.0 mm brass (10 pk)*	10
	PR331-3324X	L30422		PR-Nozzle cylindrical, 3.0 mm copper (10 pk)*	10
	PR331-0001CPX	L30418X		PR-Nozzle, 1.0 mm CP (10 pk)*	10
	PR331-0002CPX	L30416X		PR-Nozzle, 1.2 mm CP (10 pk)*	10
	PR331-0321CCPX	L30419X	485.73.421	PR-Nozzle, 1.5 mm CP (10 pk)*	10
	PR331-0003CPX	L30417X		PR-Nozzle, 1.7 mm CP (10 pk)*	10
	PR331-322CCPX	L30420X	485.73.422	PR-Nozzle, 2.0 mm CP (10 pk)*	10
	PR331-3323CCPX	L30421X	485.73.423	PR-Nozzle, 2.5 mm CP (10 pk)*	10
	PR331-3324CPX	L30422X	485.73.424	PR-Nozzle, 3.0 mm CP (10 pk)*	10
2	PR331-0302X	L301246	490.1N.302	PR-Nozzle short, 2.5 mm brass (10 pk)*	10

*Available in single packs. To order single packs, remove the 'X' at the end of the part number (e.g. AM123-4567X would be AM123-4567)



Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	PR393-0006X	L30634		PR-Nozzle, 2.0 mm (10 pk)*	10
	PR393-0007X	L30635		PR-Nozzle, 2.5 mm (10 pk)*	10
2	PR393-3455CPX	L301231X	485.73.455	PR-Nozzle con-cyl, 0.3 mm CP (10 pk)*	10
	PR393-3451CPX	L301235X	485.73.451	PR-Nozzle con-cyl, 1.5 mm CP (10 pk)*	10
	PR393-3452X	L301236		PR-Nozzle con-cyl, 2.0 mm (10 pk)*	10
	PR393-3452CPX	L301236X	485.73.452	PR-Nozzle con-cyl, 2.0 mm CP (10 pk)*	10
	PR393-3453CPX	L301237X	485.73.453	PR-Nozzle con-cyl, 2.5 mm CP (10 pk)*	10

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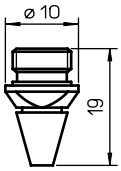
1



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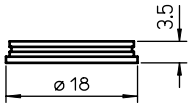


Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	PR357-0001X	L3062	490.76.103	PR-Nozzle conical, 0.3 mm brass (10 pk)*	10
	PR357-0003X	L30451		PR-Nozzle conical, 1.2 mm copper (10 pk)	10
	PR357-331BX	L30206	485.73.331	PR-Nozzle conical, 1.5 mm brass (10 pk)	10
	PR357-331CX	L30424		PR-Nozzle conical, 1.5 mm copper (10 pk)*	10
	PR357-0004X	L30426		PR-Nozzle conical, 1.7 mm copper (10 pk)*	10
	PR357-333BX	L3057	485.73.333	PR-Nozzle conical, 2.0 mm brass (10 pk)*	10
	PR357-333CX	L30425		PR-Nozzle conical, 2.0 mm copper (10 pk)*	10
	PR357-0005X	L30449	485.73.334	PR-Nozzle conical, 2.5 mm brass (10 pk)	10
	PR357-0006X	L30427		PR-Nozzle conical, 2.5 mm copper (10 pk)	10
	PR357-0007X	L30630		PR-Nozzle conical, 3.0 mm copper (10 pk)	10
	PR357-0002CPX	L30450X	485.73.114A	PR-Nozzle, 1.0 mm CP (10 pk)	10
	PR357-0003CPX	L30451X		PR-Nozzle, 1.2 mm CP (10 pk)	10
	PR357-331CCPX	L30424X	485.73.431	PR-Nozzle, 1.5 mm CP (10 pk)*	10
	PR357-322CCPX	L30425X	485.73.433	PR-Nozzle, 2.0 mm CP (10 pk)	10
	PR357-0006CPX	L30427X		PR-Nozzle, 2.5 mm CP (10 pk)	10
	PR357-0007CPX	L30630X	485.73.43X	PR-Nozzle, 3.0 mm CP (10 pk)*	10
2	PR395-0001	AL136	480.73.107	PR-Insulating Ring 5" Plastic	1
	PR395-0002	AL163		PR-Insulating Ring 7.5" Plastic	1

*Available in single packs. To order single packs, remove the 'X' at the end of the part number (e.g. AM123-4567X would be AM123-4567)

Centricut®

Replacement parts suitable for:

Prima Industrie®

Optics

Centricut part number	Reference number	Type	Diameter	Focal length	Edge thickness
Lenses					
PR361-0004	120216	MEN	1.5"	5.0"	.354"
PR361-0005	570721	MEN	1.5"	7.5"	.354"
PR361-9002	834-319-002	PLX	1.5"	5.0"	.236"
PR361-0773	970773	PLX	1.5"	5.0"	.275"
PR361-8988NM		PLX	1.5"	5.0"	.275"
PR361-9011	834-319-011	PLX	1.5"	5.0"	.300"
PR361-0003	834-319-003	PLX	1.5"	7.5"	.236"
PR361-9012	834-319-012	PLX	1.5"	7.5"	.300"
PR361-0001	741363	PLX	2.0"	5.0"	.380"
PR361-0002	232771	PLX	2.0"	7.5"	.380"

Centricut part number	Reference number	Type	Material	Diameter	Focal length	Edge thickness
One micron optics						
PR361-2284	632284-17	PLX	FS	38.10 mm	190 mm	7.10 mm
PR361-4001	ESTFLO2066-1	MEN	FS	25 mm	8.6 mm	3.30 mm
PR361-4002	ESTFLO2066-2	BCX	FS	25 mm	267 mm	2.60 mm
PR361-8988	LH968988pvl	PLX	FS	38.1 mm	127 mm	1.92 mm

Centricut part number	Reference number	Type	Diameter	Edge thickness
One micron windows				
PR361-0474	970474	FS	37.0 mm	4.00 mm

Optics care

Centricut part number	Reference number	Description	Pkg qty
TR300-6452		Lens cleaning Tiffen paper (50 pcs)	1
TR300-1115		Lens cleaning pre-cut cotton (100 pcs)	1
TR300-1010	AL1010	Dropper, lens cleaning fluid	1
TR300-1112		Optical cleaning fluid	1
TR300-0699	70675699 REVA	Lens cleaning swabs (25 pcs)	1
TR300-7991	27991	Polyester wipes 4" x 4" (100 pcs)	1
TR301-0282		Injector	1
TR300-LSA		Lens stress analyzer	1
TR300-255	AL255	Magnifying loop	1
TR300-271	AL271	Base, mirror maintenance	1
TR300-7388	787388	Mirror polish .1UM 250ML	1

Centricut®

Resources

Sensor cones

Centricut sensor cones provide substantial cost savings without sacrificing performance or quality

- Available for Amada, Mazak, Mitsubishi and Precitec
- Delivers the same OEM performance at a lower cost
- Unmatched performance and reliability
- Engineered and manufactured to Hypertherm's precise quality standards
- Backed by our one-year warranty and 100% satisfaction guarantee

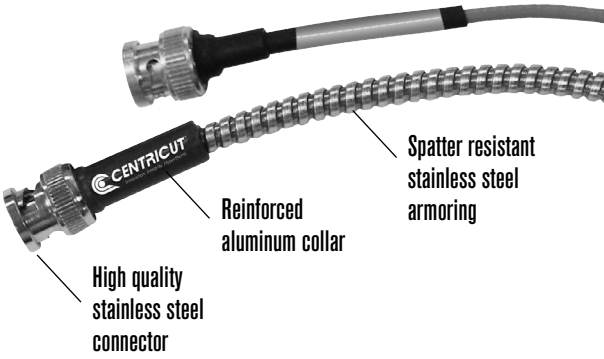
Centricut part number	OEM	Reference number	Description
AM343-0091	Amada	71360091	AM-Sensor cone, HS95 mini
AM343-1621	Amada	71341621	AM-Sensor cone, HS95
AM343-9107	Amada	ECO cone	AM-Sensor cone, ECO
AM343-1690	Amada	71341690	AM-Sensor cone, HS98
AM343-L3015C	Amada	71374509	AM-Sensor cone, LC3015
PT347-3323	Mazak	HNP	PT-Sensor cone, HNP
MZ335-HNPS	Mazak	HNPS	MZ-Sensor cone, HNP short version
PT347-0007	Mazak	56743300500	PT-Sensor cone, HNZ (Mazak)
PT347-0011	Mitsubishi	P0354-110-00002	PT-Sensor cone, HNZ (Mitsubishi)
MB334-W429A	Mitsubishi	P0461-270-00001	MB-Sensor cone, W429A
PT347-0238	Precitec	BQ930D238G01	PT-Sensor cone, HNZ SMA
PT347-8001	Precitec	P0361-203-00001	PT-Sensor cone, 2.5/J
PT347-0522	Precitec	P0599-520-00002	PT-Sensor cone, LRC
PT347-1145	Precitec	P0380-140-0002, P0380-130-00001, 281145	PT-Sensor cone, DZ

*Sensor cone repair service is available for most sensor cones in North America and select international regions. For more information contact Ctlaser@Hypertherm.com.

Armored sensor cables

Centricut armored sensor cables outlast standard OEM cables

- Available for all major brands
- Robust design with extreme temperature rating (900–1200°)
- Longer life reduces downtime and production loss
- Spatter resistant stainless steel armoring
- Reinforced collars and high-quality connector



Armored sensor cables

Centricut part number	OEM	Reference number	Description
AM308-8965	Amada	71398965	AM-Sensor cable, 305 mm (12")
AM308-8965A	Amada	71398965	AM-Sensor cable, 305 mm (12") premium, armored
AM313-1901	Amada		AM-Sensor cable, 305 mm (12")
AM313-1901A	Amada	71341630	AM-Sensor cable HS-5, 305 mm (12") premium, armored
AM313-8292	Amada	71398292	AM-Sensor cable dual shield, 7 meters
AM313-9851A	Amada	71369851	AM-Sensor cable, 230 mm (8") premium
CN306-0654A	Cincinnati	909654, 922686	CN-Sensor cable, 114 mm (4.5") armored
CN306-0951A	Cincinnati	842951	CN-Sensor cable, 140 mm (5.5") armored
CN306-2951	Cincinnati	842951, PLTTW0015	CN-Sensor cable, 140 mm (5.5")
CN306-9654	Cincinnati	909654, 922686, PLTTW0002	CN-Sensor cable, 114 mm (4.5") armored
MZ335-0111A	Mazak	4674330111	MZ-Sensor cable, 280 mm (11") armored
MZ335-0181A	Mazak	46743300181	MZ-Sensor cable, 317.5 mm (12.5") armored
MZ335-1330A	Mazak	46683301330	MZ-Sensor cable, 305 mm (12") armored
MZ335-1980A	Mazak	46683301980	MZ-Sensor cable, 280 mm (11") armored
MZ335-5320	Mazak	6143355320	MZ-Sensor cable, 70 mm (2.8") armored
MZ335-630A	Mazak	00BSBA630MNC	MZ-Sensor cable, 630 mm (25") armored
MZ335-8290	Mazak	46143308290	MZ-Sensor cable, 75 mm (3")
NT426-1682	NTC	4R029911-001, J482D	NT-Sensor cable, 216 mm (8.5")
NT426-4991	NTC	3-0104991	NT-Sensor cable 0-0BNC/MCX, 482 mm (19")
NT426-7492	NTC	3-0117492	NT-Sensor cable 90BNC/90BNC, 482 mm (19")
NT426-8677	NTC	4R028677-001	NT-Sensor cable, 508 mm (20") armored
PR361-3150	Prima	820.63.150	PR-Sensor cable, 150 mm (6")
PT347-0014	Precitec	P36015000300, KE 300 gw Z MM	PT-Sensor cable OEM
PT347-0015A	Precitec	00B-15	PT-Sensor cable, 380 mm (15")
PT347-0040	Precitec	00BB-A-17i, BEC004-000.4	PT-Sensor cable, 431 mm (17") armored
PT347-0101A	Precitec	P0360-100-00500	PT-Sensor cable, 500 mm (20") armored
PT347-0181	Precitec	46743300181	PT-Sensor cable
PT347-0250	Precitec	342475	PT-Sensor cable, 250 mm (10") armored
PT347-0300A	Precitec	P0492-014-00300	PT-Sensor cable KE, 300 mm (12") armored
PT347-0450	Precitec	P0497-002-00450	PT-Sensor cable, 450 mm (17.7")
PT347-KS13	Precitec/Gunkyo	00BMTKA-A-HS500mm	PT-Sensor cable, 390 mm (15.5") armored
PT347-06000EM	Precitec	P0360-210-00600	PT-Sensor cable, 600 ZWW OEM
PT347-1250	Precitec	D5001-040-00250	PT-Sensor cable, 250 mm (10") armored
PT348-0390	Precitec		PT-Sensor cable, 390 mm (15.5")
TR301-0930	Trumpf	280930	TR-Sensor cable, 152 mm (6") armored
TR301-1086	Trumpf	351086, S0492-001-00000	TR-Sensor cable
TR301-7833	Trumpf	227833	TR-Sensor cable, 432 mm (17")
TR301-9983	Trumpf	359983, 342474	TR-Sensor cable, 190 mm (7.5") armored

Lens cleaning tips

Centricut supplies suitable for all OEM CO_2 and fiber laser lenses

- Lens maintenance base is designed to secure a wide range of optics sizes for the cleaning process
- Centricut optical cleaning fluid is a safe, economical alternative to traditional high-purity and reagent-grade solvents
- Cleaning materials suited for all lens cleaning needs; lens paper, polyester swabs and polyester wipes

Lens paper

Recommended for the routine maintenance cleaning of flat lenses.

Polyester swabs

Recommended for cleaning curved lenses and where a more aggressive cleaning is required (interchangeable with polyester wipes).

Polyester wipes

Recommended for cleaning CO_2 and fiber lenses and windows (interchangeable with polyester swabs and lens paper).

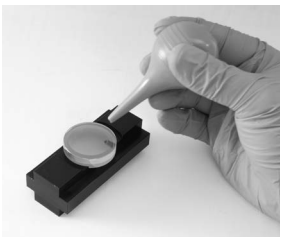
Product description	Part number	Quantity per order
Optical cleaning fluid (3 oz.)	TR300-1112	1
Lens cleaning swab	TR300-0699	25
Lens cleaning paper, Tiffen	TR300-6452	50
Polyester wipes 4" x 4"	TR300-7991	100
Base, lens maintenance	TR300-271	1

Lens paper

Recommended for the routine maintenance cleaning of flat lenses.

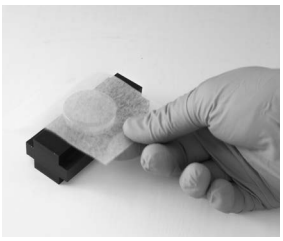
You will need:

- Lens maintenance base (lens holder)
- Optical cleaning fluid
- Air bulb
- Lint-free lens paper
- Latex or rubber gloves



To get started

Using rubber gloves, place the lens in the lens holder and remove all loose contaminants with an air bulb. When contaminants are no longer visible, begin the cleaning process.

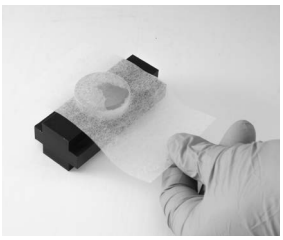


Step 1

Place lens paper over the optic, covering it completely.

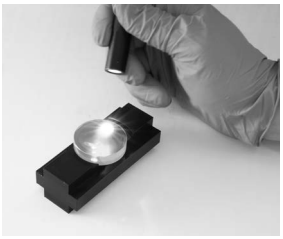
Step 2

Apply a couple drops of lens cleaning fluid to the lens paper (far side of the lens).



Step 3

Slowly pull the lens paper across the lens so the cleaning fluid comes in contact with the entire lens surface. Finish pulling the paper across so all of the fluid has dried from the lens.



Step 4

Inspect the surface of the lens for dust and cleaning residue using a flashlight. Examine the lens from different angles. Repeat the process on the other side of the lens.

Final step:

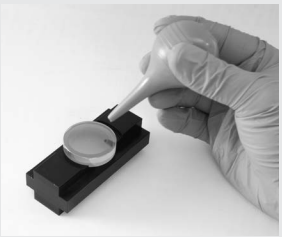
Place the cleaned lens in the machine quickly to avoid contamination from airborne particles. If spots, pits, or scratches are still noticeable, the lens may need to be replaced.

Polyester swabs

Recommended for cleaning curved lenses and where more aggressive cleaning is required. Interchangeable with polyester wipes.

You will need:

- Lens maintenance base (lens holder)
- Optical cleaning fluid
- Air bulb
- Polyester swabs
- Latex or rubber gloves

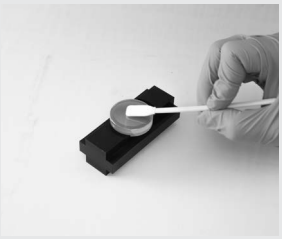


To get started

Using rubber gloves, place the lens in the lens holder and remove all loose contaminants with an air bulb. When contaminants are no longer visible, begin the cleaning process.

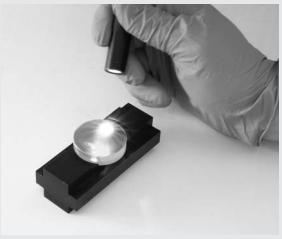
Step 1

Place a few drops of the optical cleaning fluid onto the swab.



Step 2

Move the larger dirt particles and then finer contaminants to the edge of the lens using the swab. Do not rest the swab on the lens or on the work table. Do not reuse swabs.



Step 3

Inspect the surface of the lens for dust and cleaning residue using a flashlight. Examine the lens from different angles. Repeat the process on the other side of the lens.

Final step:

Place the cleaned lens in the machine quickly to avoid contamination from airborne particles. If spots, pits, or scratches are still noticeable, the lens may need to be replaced.

Polyester wipes

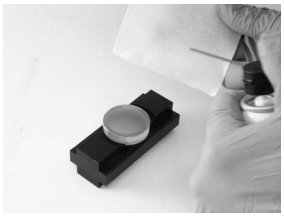
Recommended for cleaning CO_2 and fiber lenses and windows. Interchangeable with polyester swabs and lens paper.

You will need:

- Lens maintenance base (lens holder)
- Optical cleaning fluid
- Air bulb
- Polyester wipes
- Latex or rubber gloves

To get started

Using rubber gloves, place the lens in the lens holder and remove all loose contaminants with an air bulb. When contaminants are no longer visible, begin the cleaning process.

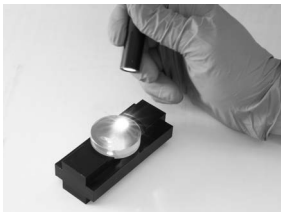


Step 1

Place a few drops of the optical cleaning fluid onto the polyester wipe

Step 2

Place the wipe with the wet side down on the lens and slide it across the lens, applying light pressure to the top of the wipe. Avoid contamination to the wipe and do not reuse wipes.



Step 3

Inspect the surface of the lens for dust and cleaning residue using a flashlight. Examine the lens from different angles. Repeat the process on the other side of the lens.

Final step:

Place the cleaned lens in the machine quickly to avoid contamination from airborne particles. If spots, pits, or scratches are still noticeable, the lens may need to be replaced.

Steps to help optimize cut quality.

Striation marks, angularity and dross tell the story.

Optimizing CO_2 and fiber lasers to achieve maximum cut quality is a very important step in the overall cutting process. The critical points that produce good cuts are the width of the kerf (the material that is lost during the cut), oxidation and roughness of the cut surface, the geometry of the cut parts and the allowable tolerances. Some factors to be considered are the cut speed or 'feed rate', beam focus, gas pressure, standoff and nozzle size/type.

Factory cut chart settings

The following samples show 12 mm, 6 mm and 3.2 mm (1/2", 1/4" and 10 ga.) mild steel, cut with O_2 on a 2 kW fiber laser with one variable changed to show how cut quality is affected. The adjustments will be similar for all CO_2 and fiber laser, cutting mild steel with O_2.

Is the kerf too narrow?

When the kerf is too narrow the cut will have a very smooth edge on the top, a lack of oxidation on the bottom and/or heavy dross.

Probable causes:

- Focus is too low
- Feed rate is too fast
- Gas pressure is too low
- Nozzle size is too small
- Standoff is too low

Is the kerf too wide?

When the kerf is too wide the cut will have a rougher edge, more self burning in the corners of the part, more angularity on the cut edge and occasionally, dross.

Probable causes:

- Focus is too high
- Feed rate is too slow
- Gas pressure is too high
- Nozzle size is too big
- Standoff is too high
- Incorrect nozzle type

Follow these steps to optimize cut quality:

1. Use the closest known settings for the material being cut.
2. Use a test part that has both interior and exterior features.
3. Verify that the lens and/or window is clean and in good condition.
4. Verify that the nozzle is centered properly and is in good condition.
5. Adjust the focus up and down until the cut quality starts to get bad and then set to the middle of that range.
6. Adjust the gas pressure up and down until the cut starts to get bad and then set to the middle of that range.
7. Adjust the federate up by 5% increments. When the cut starts to get bad, set the feed rate 10% slower.

Strike a balance between heat levels and gas flow

Cutting mild steel with a laser is a balance of how much material is heated by the laser beam and how much assist gas flows through the cut.

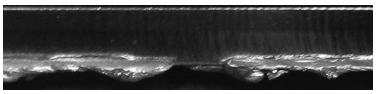
- Heating up too small of an area, or not having enough assist gas flow through the cut will result with the kerf (width of the cut) being too narrow.
- Heating up too large of an area or having too much assist gas flow through the cut will result in the kerf being too wide.

3.2 mm (10 ga.) mild steel cut resulting in too narrow kerf

Factory cut chart settings

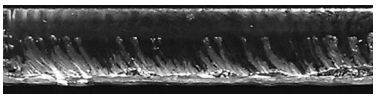
Focus is too low

The kerf is too narrow and doesn't allow enough O_2 into the cut to remove all the molten material.



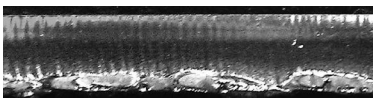
Feed rate is too fast

The cut striations are trailing the direction of cutting and there is not enough time to remove all the molten material.



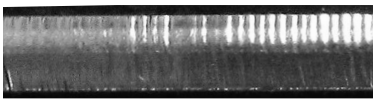
Gas pressure is too low

There is not enough O_2 to remove all the molten material.



Stand off is too low

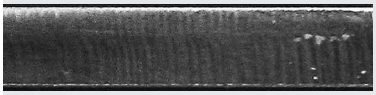
The focus spot is in the wrong location, causing the rough edge.



Cut direction

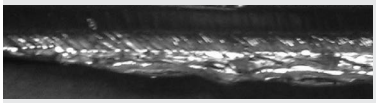
3.2 mm (10 ga.) mild steel cut resulting in too wide kerf

Factory cut chart settings



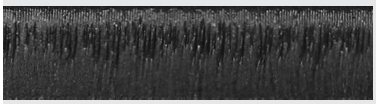
Focus is too high

The laser is melting more material than can be removed from the cut.



Feed rate is too slow

The cut surface is too rough and productivity is decreased.

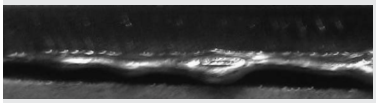


Gas pressure is too high

Too much O_2 results in overheating of the cut and causes intermittent gouges.

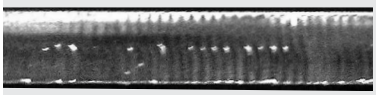
Stand off is too high

The laser is melting more material than can be removed from the cut.



Nozzle size is too big

Too much O_2 results in overheating of the cut and causes intermittent gouges.

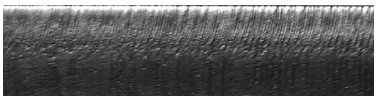


Cut direction

*Above samples have been cut with O_2 on 2 kW fiber laser. Results will be similar for CO_2 laser cutting mild steel with O_2.

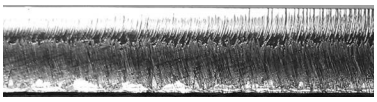
6 mm (1/4") mild steel cut resulting in too narrow kerf

Factory cut chart settings



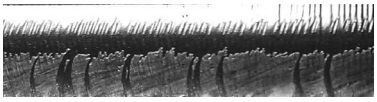
Focus is too low

The kerf is too narrow and doesn't allow enough O_2 into the cut to remove all the molten material.



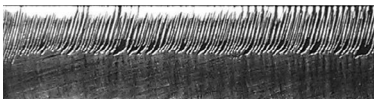
Feed rate is too fast

The cut striations are trailing the direction of cutting and there is not enough time to remove all the molten material.



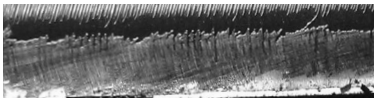
Gas pressure is too low

There is not enough O_2 to remove all the molten material.



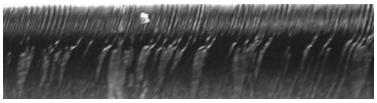
Stand off is too low

The focus spot is in the wrong location, causing the rough edge.



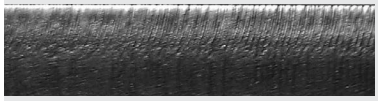
Nozzle size is too small

There is not enough O_2 to cut uniformly

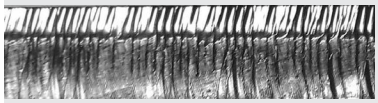


Cut direction

6 mm (1/4") mild steel cut resulting in too wide kerf

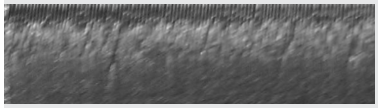


Factory cut chart settings



Focus is too high

The wider focus spot is letting too much O_2 into the cut and burning the material.

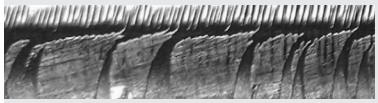


Feed rate is too slow

The cut surface is too rough and productivity is decreased.

Gas pressure is too high

Too much O_2 is entering the cut, causing a rougher edge and inconsistent cutting.

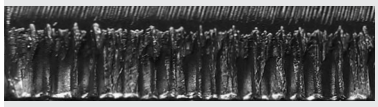


Stand off is too high

Too much O_2 is entering the cut, causing a rougher edge and inconsistent cutting.

Nozzle size is too big

Too much O_2 results in overheating of the cut and causes intermittent gouges.



Nozzle type is incorrect

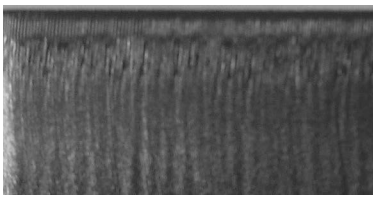
The shape of the gas flow is incorrect, causing a rougher edge.

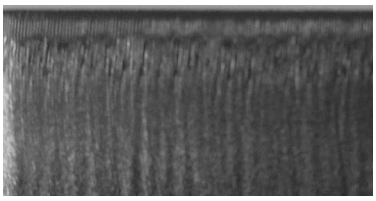
Cut direction

*Above samples have been cut with O_2 on 2 kW fiber laser. Results will be similar for CO_2 laser cutting mild steel with O_2.

12 mm (1/2") mild steel cut resulting in too narrow kerf

Factory cut chart settings

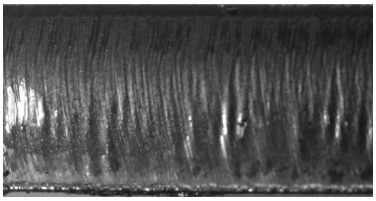


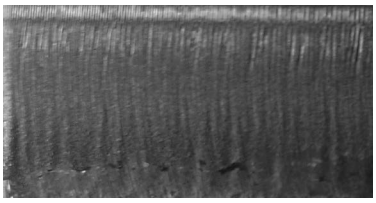


Factory cut chart settings

Focus is too low

The kerf is too narrow and doesn't allow enough O_2 into the cut to remove all the molten material.



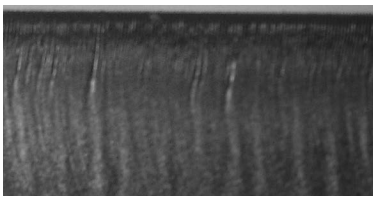


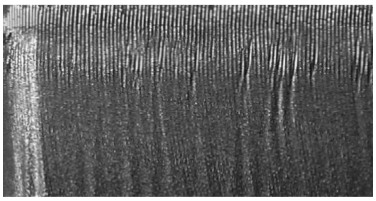
Stand off is too low

The kerf is too narrow to allow enough O_2 into the cut. The oxidation is not covering the entire surface and cutting will be inconsistent.

Feed rate is too fast

The machine is moving too fast to allow enough O_2 into the cut for consistent cutting.



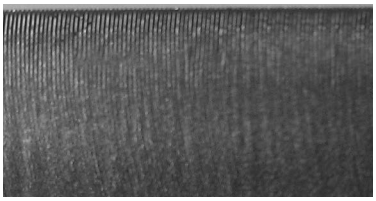


Nozzle size is too small

There is not enough O_2 to cut uniformly

Gas pressure is too low

The pressure is too low to allow enough O_2 into the cut. The oxidation is not covering the entire surface and cutting will be inconsistent.



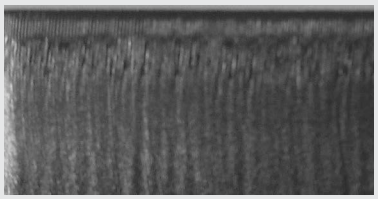
Cut direction

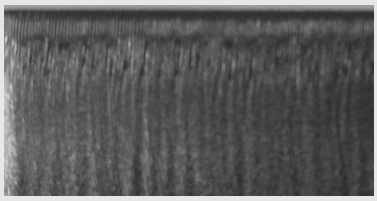
Cut direction

*Above samples have been cut with O_2 on 2 kW fiber laser. Results will be similar for CO_2 laser cutting mild steel with O_2.

12 mm (1/2") mild steel cut resulting in too wide kerf

Factory cut chart settings

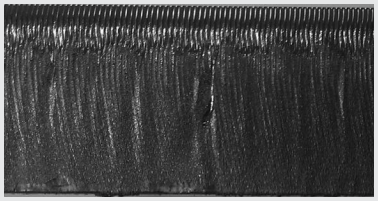


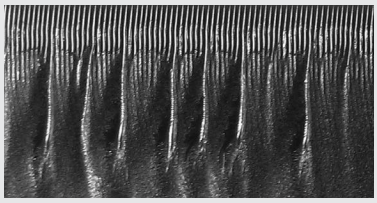


Factory cut chart settings

Focus is too high

Too much O_2 is entering the cut causing intermittent over burning.



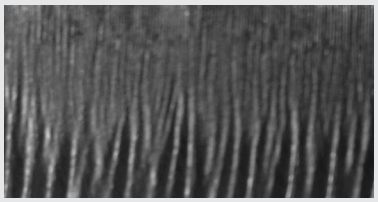


Stand off is too high

Too much O_2 is entering the cut resulting in intermittent over burning.

Feed rate is too slow

The machine is moving too slow resulting in the over burning of the bottom half of the cut. The slower feed rate also reduces productivity.

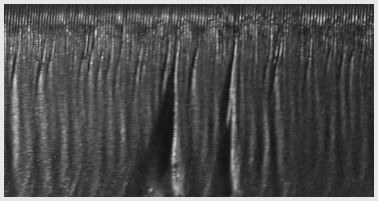


Incorrect nozzle type

The gas flow shape is not correct resulting in inconsistent cutting.

Gas pressure is too high

Too much O_2 is entering the cut resulting in intermittent over burning.



Cut direction

Cut direction

*Above samples have been cut with O_2 on 2 kW fiber laser. Results will be similar for CO_2 laser cutting mild steel with O_2.

Technical support and customer service

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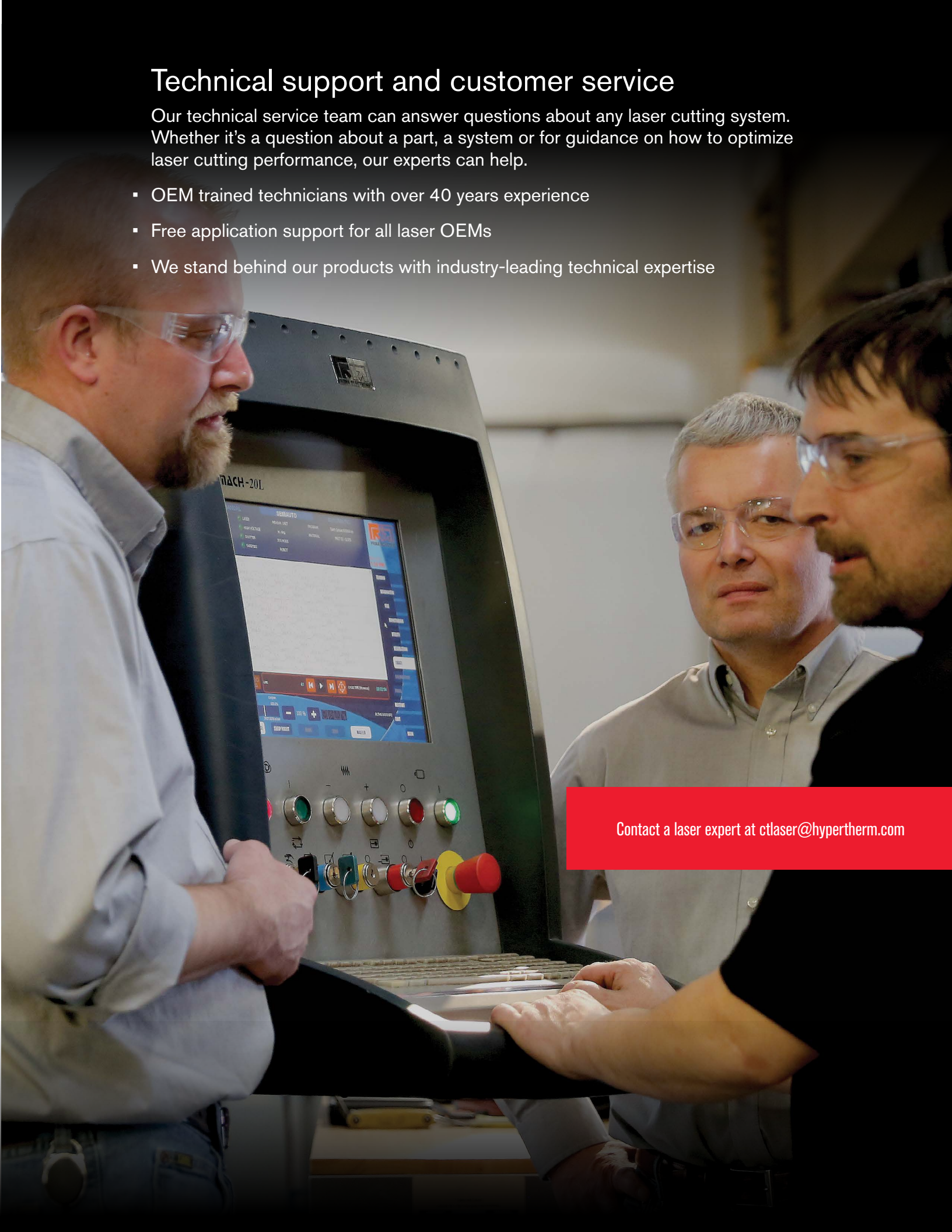
- We stand behind our products with industry-leading technical expertise



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