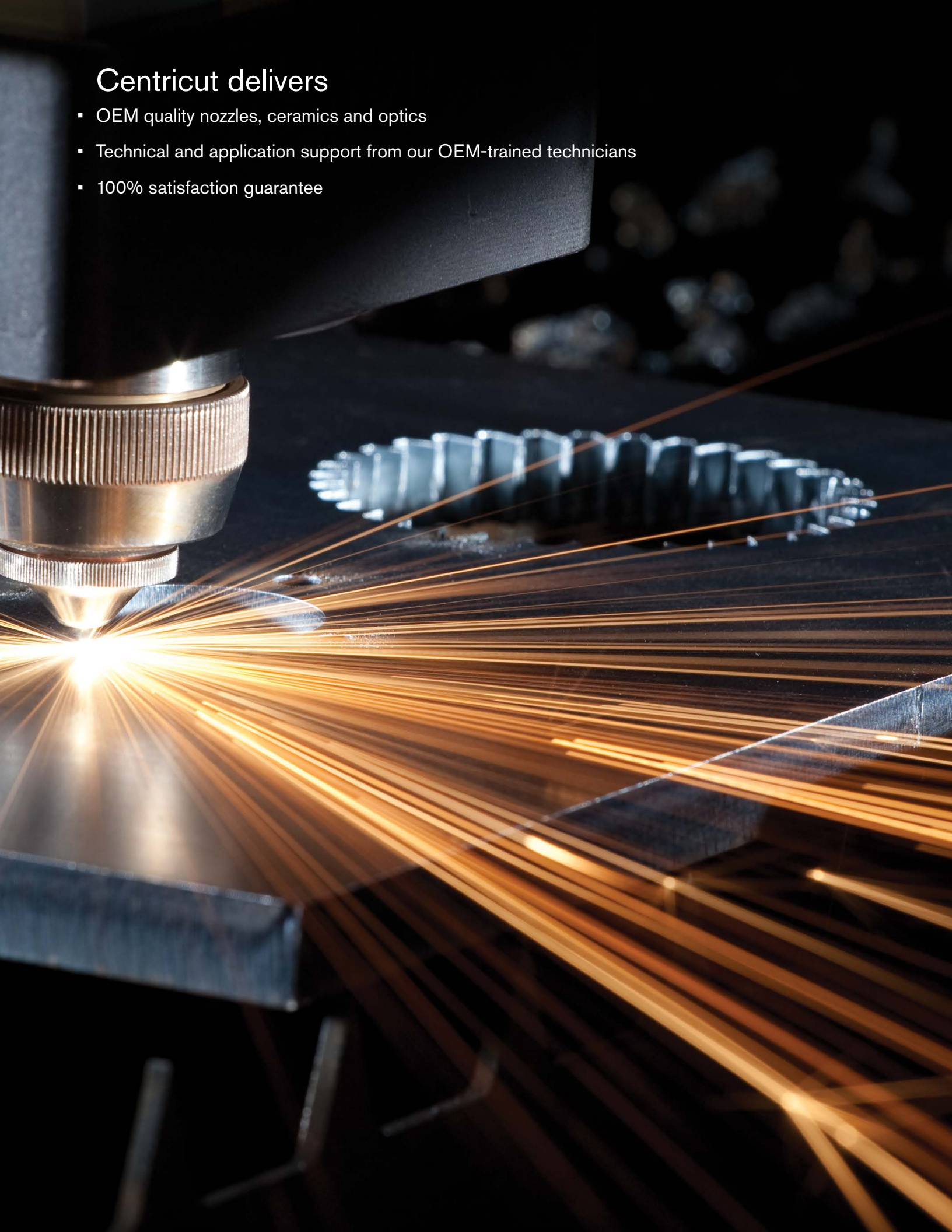
Centricut®

2018 catalog

For CO_2 and fiber laser consumables

Replacement parts suitable for Amada®



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.

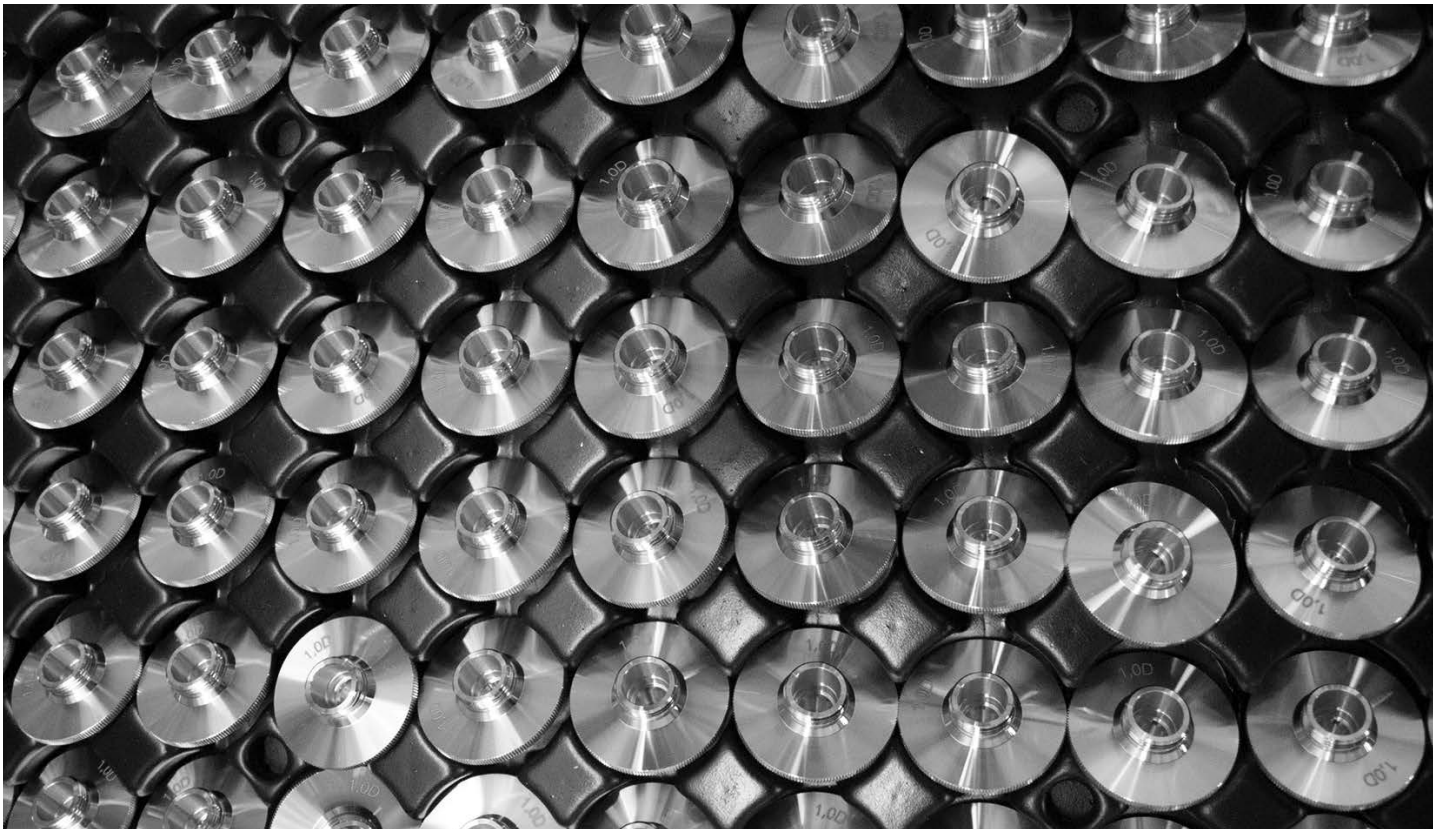
Look for CP in the part number to identify a chrome plated nozzle

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:

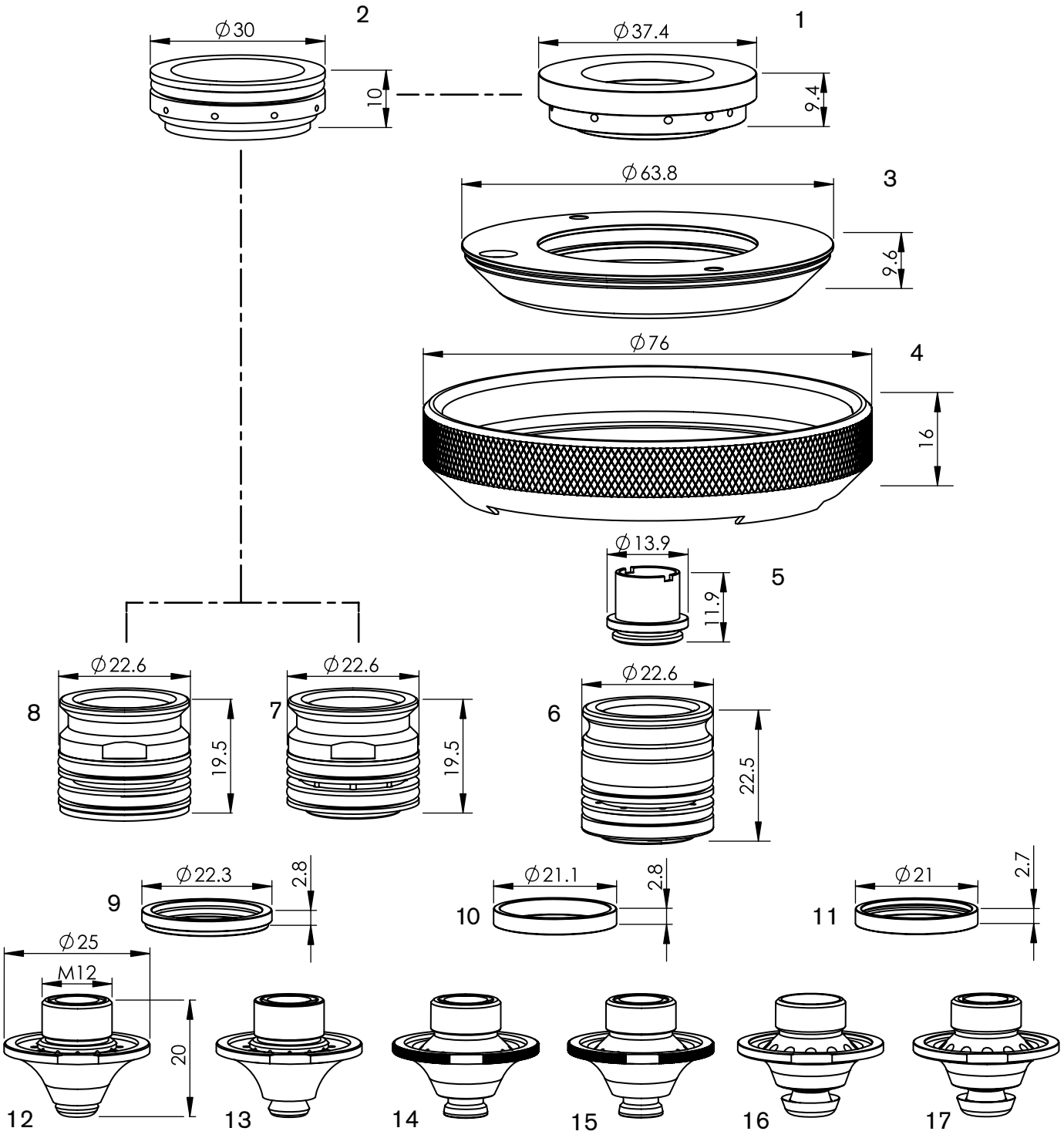
- Include return authorization and invoice numbers
- Be sealed in a plastic bag to minimize any hazards
- Remove excess ZnSe powder prior to sealing

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

Centricut®

Replacement parts suitable for:

Amada®



Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM367-2349	AL372	7973497, 71712349	AM-Holder, PTFE*	1
2	AM367-2026	AL340	71502026	AM-Holder, PTFE*	1
3	AM367-2342 NEW	AL456XH	71712342	AM-Cover kit	1
4	AM367-2341 NEW	AL455XH	71712341	AM-Nut kit	1
5	AM367-6438	AL392	71716438, 71798350	AM-Inner for adapter	1
	AM367-0397 (not shown)	AL397		AM-O-ring kit for adapter	1
6	AM367-0360	AL360	71712350, 7973459	AM-Nozzle adapter w/holes	1
	AM367-0364	AL360/AM	71712350, 7973459	AM-Nozzle adapter w/holes and inner	1
7	AM367-2036	AL248	71502036	AM-Nozzle adapter w/8 holes	1
8	AM367-3036	AL348	71502036	AM-Nozzle adapter w/12 holes	1
9	AM367-0853	AL233		AM-O-ring , PTFE*	1
10	AM367-5853	AL234	71515853	AM-Ring, PTFE*	1
11	AM367-2340	AL361	71712340	AM-Ring w/groove, PTFE*	1
12	AM386-2025CP	L1155X	71461026	AM-Nozzle double WACS w/holes, 2.5 mm CP	1
	AM386-2041CP	L1159X	71502040	AM-Nozzle double WACS w/holes, 4.0 mm CP	1
13	AM367-1014CP	L1041X	71461026	AM-Nozzle double WACS w/holes, 1.4 mm CP	1
	AM367-1017CP	L1043X	71461026	AM-Nozzle double WACS w/holes, 1.7 mm CP	1
	AM367-1020CP	L1044X	71461026	AM-Nozzle double WACS w/holes, 2.0 mm CP	1
	AM367-2039	L1045X	71502039	AM-Nozzle double WACS w/holes, 2.5 mm CP	1
	AM367-2040	L1049X	71502040	AM-Nozzle double WACS w/holes, 4.0 mm CP	1
	AM367-2050CP	L1050X		AM-Nozzle double WACS w/holes, 5.0 mm CP	1
14	AM367-2336	L1568X	71712336, 71461158	AM-Nozzle WACS, S1.2 mm CP	1
15	AM367-1352CP	L1352X	1576260	AM-Nozzle double WACS, D1.4 mm CP	1
	AM367-1160CP	L1352X/TG		AM-Nozzle double WACS w/Collar, D1.4 mm CP	1
	AM367-1353CP	L1353X		AM-Nozzle double WACS, D1.7 mm CP	1
	AM367-1162CP	L1353X/TG		AM-Nozzle double WACS w/Collar, D1.7 mm CP	1
	AM367-1354CP	L1354X		AM-Nozzle double WACS, D2.0 mm CP	1
	AM367-1164CP	L1354X/TG		AM-Nozzle double WACS w/Collar, D2.0 mm CP	1
	AM367-1355CP	L1355X	71712335	AM-Nozzle double WACS, D2.5 mm CP	1
	AM367-1156CP	L1355X/TG	71712335	AM-Nozzle double WACS w/Collar, D2.5 mm CP	1
	AM367-1158CP	L1359X	71712336, 71461158, 1576402D	AM-Nozzle double WACS, D4.0 mm CP	1
	AM367-1157CP	L1359X/TG		AM-Nozzle double WACS w/Collar, D4.0 mm CP	1
	AM367-1159CP	L1360X	71502057	AM-Nozzle double WACS, D5.0 mm CP	1
	AM367-1165CP	L1360X/TG		AM-Nozzle double WACS w/Collar, D5.0 mm CP	1
16	AM367-0019	L1653XH		AM-Nozzle fiber, S0.8 mm Fe HCP	1
	AM367-0019C	L1653XH/TG		AM-Nozzle w/collar fiber, S0.8 mm Fe HCP	1
	AM367-0030	L1654XH	71570030	AM-Nozzle fiber, S1.0 mm Fe HCP	1
	AM367-0030C	L1654XH/TG	71570030	AM-Nozzle w/collar fiber, S1.0 mm Fe HCP	1
	AM367-0023	L1655XH	71570023	AM-Nozzle fiber, S1.2 mm Fe HCP	1
	AM367-0023C	L1655XH/TG	71570023	AM-Nozzle w/collar fiber, S1.2 mm Fe HCP	1
	AM367-0024	L1656XH		AM-Nozzle fiber, S1.4 mm Fe HCP	1
	AM367-0024C	L1656XH/TG		AM-Nozzle w/collar fiber, S1.4 mm Fe HCP	1
	AM367-0027	L1657XH		AM-Nozzle fiber, S1.7 mm Fe HCP	1
	AM367-0026	L1658XH		AM-Nozzle fiber, S2.0 mm Fe HCP	1
	AM367-0026C	L1658XH/TG		AM-Nozzle w/collar fiber, S2.0 mm Fe HCP	1
17	AM367-1900CP	L1900XH		AM-Nozzle double fiber, D1.2 mm Fe HCP	1
	AM367-1901CP	L1901XH		AM-Nozzle double fiber, D1.5 mm Fe HCP	1

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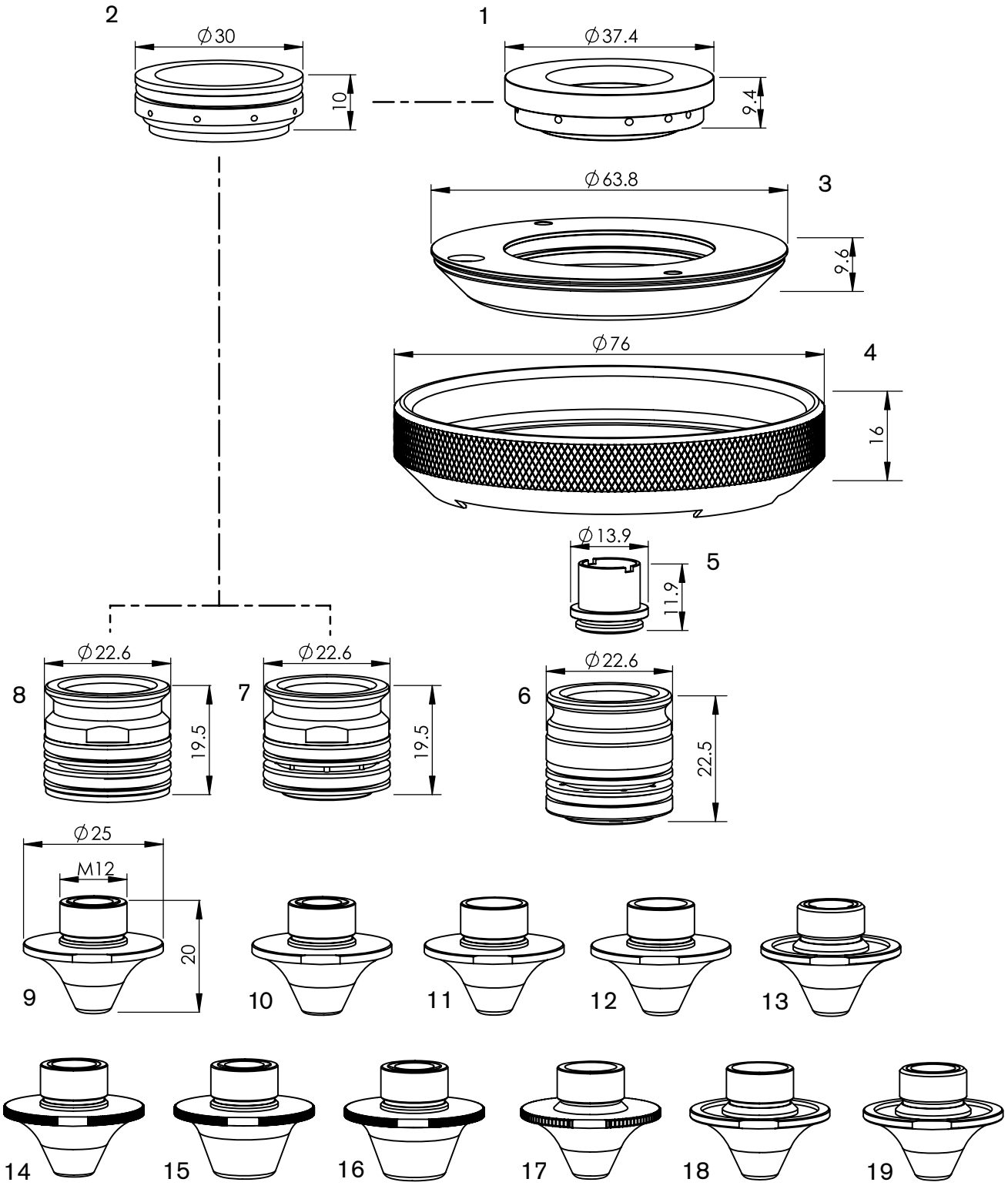

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM367-2349	AL372	7973497, 71712349	AM-Holder, PTFE*	1
2	AM367-2026	AL340	71502026	AM-Holder, PTFE*	1
3	AM367-2342 NEW	AL456XH	71712342	AM-Cover kit	1
4	AM367-2341 NEW	AL455XH	71712341	AM-Nut kit	1
5	AM367-6438	AL392	71716438, 71798350	AM-Inner for adapter	1
	AM367-0397 (not shown)	AL397		AM-O-ring kit for adapter	1
6	AM367-0360	AL360	71712350, 7973459	AM-Nozzle adapter w/holes	1
	AM367-0364	AL360/AM	71712350, 7973459	AM-Nozzle adapter w/holes and inner	1
7	AM367-2036	AL248	71502036	AM-Nozzle adapter w/8 holes	1
8	AM367-3036	AL348	71502036	AM-Nozzle adapter w/12 holes	1
9	AM367-8550	L1401X	71518550, 71461029, 71502038	AM-Nozzle double eco cut, D1.4 mm CP	1
	AM367-6789	L1403X	71516789, 71501059	AM-Nozzle double eco cut, D2.5 mm CP	1
	AM367-6795	L1404X		AM-Nozzle double eco cut, D3.0 mm CP	1
	AM367-6790	L1405X	71516790, 71501060	AM-Nozzle double eco cut, D4.0 mm CP	1
10	AM367-6791CP	L1406X	71501093	AM-Nozzle double, D4.0 mm AL CP	1
11	AM367-1407CP	L1407X	71502037, 71566686	AM-Nozzle eco cut, S1.2 mm CP	1
12	AM367-1410CP	L1410X		AM-Nozzle eco cut, S1.4 mm CP	1
	AM367-1411CP	L1411X	71501056, 71712720	AM-Nozzle eco cut, S1.5 mm CP	1
	AM367-1412CP	L1412X	71501057, 71555124	AM-Nozzle eco cut, S2.0 mm CP	1
	AM367-1413CP	L1413X	71516788, 71501058	AM-Nozzle eco cut, S3.0 mm CP	1
13	AM367-1161CP	L1644XH		AM-Nozzle double, D1.5 mm CP	1
	AM367-1163CP	L1645XH	71570022	AM-Nozzle double, D2.0 mm CP	1
14	AM367-1727CP	L1415XH		AM-Nozzle double clean cut, D2.5 mm HCP	1
	AM367-1728	L1416XH	71341728, 71555121	AM-Nozzle double clean cut, D4.0 mm HCP	1
15	AM367-1717CP	L1417XH		AM-Nozzle double clean cut, D5.0 mm HCP	1
	AM367-1718CP	L1418XH		AM-Nozzle double clean cut, D6.0 mm HCP	1
	AM367-1729CP	L1419XH	71341729, 71712721	AM-Nozzle double clean cut, D7.0 mm HCP	1
	AM367-1092CP	L1425X	71501092	AM-Nozzle double clean cut, 7.0 mm AL CP	1
16	AM367-1770CP	L1420X	71712692	AM-Nozzle double silky cut, 7.0 mm CP	1
17	AM367-1421CP	L1421XH		AM-Nozzle clean cut, S1.5 mm HCP	1
	AM367-1422CP	L1422XH	71502043	AM-Nozzle clean cut, S2.0 mm HCP	1
	AM367-1423CP	L1423XH	71502044	AM-Nozzle clean cut, S3.0 mm HCP	1
	AM367-1424CP	L1424XH		AM-Nozzle clean cut, S2.5 mm HCP	1
18	AM367-1560	L1560X		AM-Nozzle, S0.8 mm Fe CP	1
	AM367-1561	L1561X	71570021, S1.0FE	AM-Nozzle, S1.0 mm Fe CP	1
	AM367-1562	L1562X	71570020, S1.2FE	AM-Nozzle FE, S1.2 mm Fe CP	1
	AM367-1563	L1563X		AM-Nozzle, S1.4 mm Fe CP	1
19	AM367-0020	L1645X	71570022	AM-Nozzle double, D2.0 mm Fe CP	1
	AM367-0025	L1646X		AM-Nozzle double, D2.5 mm Fe CP	1
	AM367-0040 NEW	L1649X		AM-Nozzle double, D4.0 mm Fe CP	1

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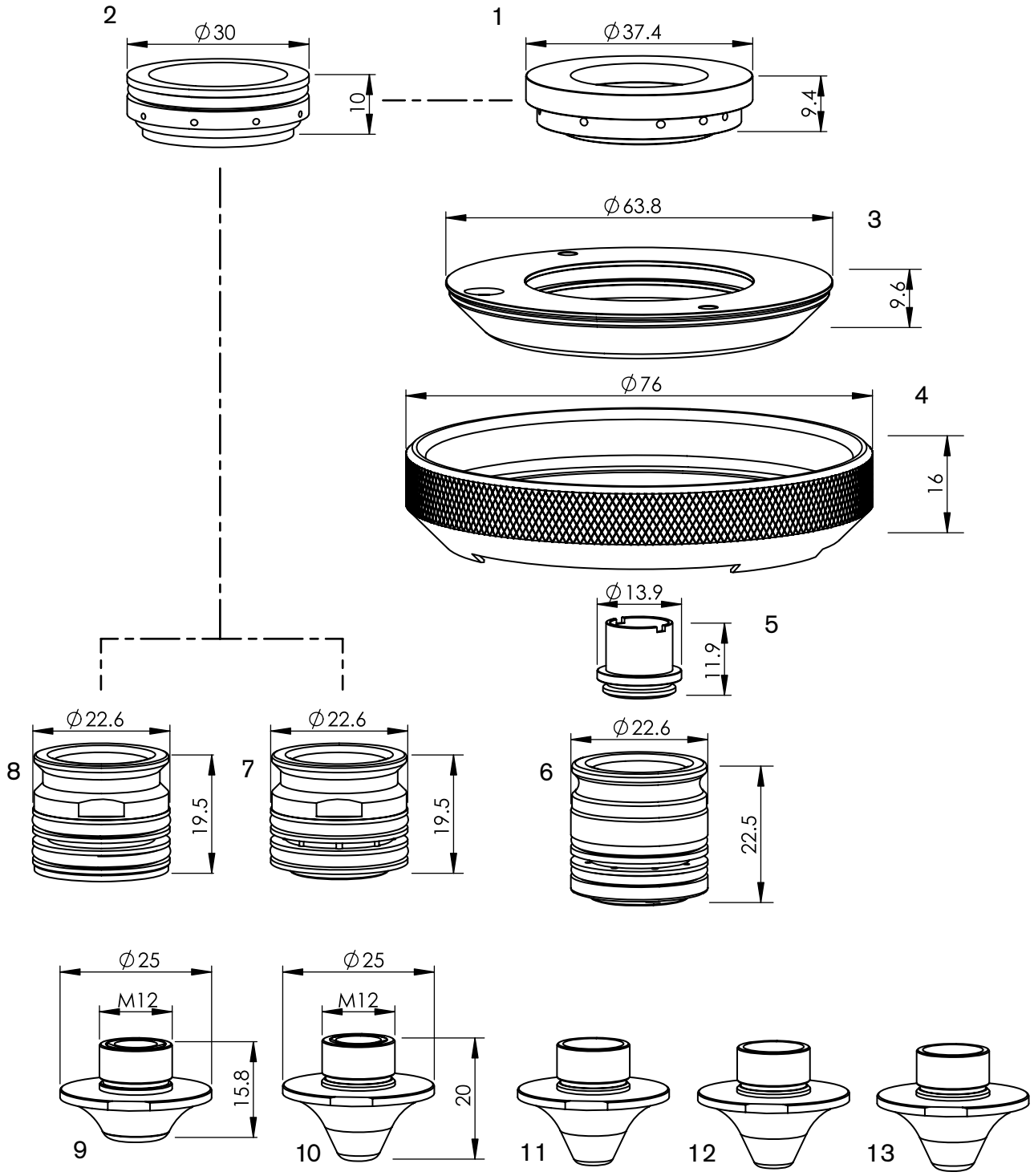

Consumables

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1	AM367-2349	AL372	7973497, 71712349	AM-Holder, PTFE*	1
2	AM367-2026	AL340	71502026	AM-Holder, PTFE*	1
3	AM367-2342 NEW	AL456XH	71712342	AM-Cover kit	1
4	AM367-2341 NEW	AL455XH	71712341	AM-Nut kit	1
5	AM367-6438	AL392	71716438, 71798350	AM-Inner for adapter	1
	AM367-0397 (not shown)	AL397		AM-O-ring kit for adapter	1
6	AM367-0360	AL360	71712350, 7973459	AM-Nozzle adapter w/holes	1
	AM367-0364	AL360/AM	71712350, 7973459	AM-Nozzle adapter w/holes and inner	1
7	AM367-2036	AL248	71502036	AM-Nozzle adapter w/8 holes	1
8	AM367-3036	AL348	71502036	AM-Nozzle adapter w/12 holes	1
9	AM343-2340CPS	L565X		AM-Nozzle double short, 4.0 mm CP	1
	AM343-2350CPS	L567X		AM-Nozzle double short, 5.0 mm CP	1
	AM343-2360CPS	L568X		AM-Nozzle double short, 6.0 mm CP	1
10	AM343-2361-1.2	L585X	1572361	AM-Nozzle double, 1.2 mm CP	1
	AM343-9813	L586X	71369813, 71502038, 71341779, 71518550	AM-Nozzle double, 1.4 mm CP	1
	AM343-2361-1.7	L574X	1572361, 71518548, 1572380	AM-Nozzle double, 1.7 mm CP	1
	AM343-2361-2.0	L587X	1572361	AM-Nozzle double, 2.0 mm CP	1
	AM343-2361-2.5	L584X	71501059, 71515394, 71516789, 1576398	AM-Nozzle double, 2.5 mm CP	1
	AM343-2361-3	L588X	1572361	AM-Nozzle double, 3.0 mm CP	1
	AM343-9817	L589X	71501060, 71515395, 1576399	AM-Nozzle double, 4.0 mm CP	1
	AM367-1037	L1037X		AM-Nozzle double, 4.0 mm /inner 2.0 mm CP	1
	AM343-2350CP	L583X	1572361	AM-Nozzle double, 5.0 mm CP	1
	AM343-0569	L569X		AM-Nozzle double, 6.0 mm CP	1
11	AM343-2362-0.8	L590X	1572362, 71563584	AM-Nozzle, 0.8 mm CP	1
	AM343-2362-1.0	L591X	1572367A, 71563585	AM-Nozzle, 1.0 mm CP	1
	AM343-2362-1.2	L592X	71369812, 71461028, 71341778	AM-Nozzle, 1.2 mm CP	1
	AM343-2362-1.4	L593X	1572362	AM-Nozzle, 1.4 mm CP	1
	AM343-2362-1.5	L597X	1572362, 1572368B	AM-Nozzle, 1.5 mm CP	1
	AM343-9812CPX	L30592X		AM-Nozzle, 1.2 mm CP (10 pk)	10
	AM343-2317CP	L575X	1572362	AM-Nozzle, 1.7 mm CP	1
	AM343-2362-2.0	L594X	71515392, 71369815	AM-Nozzle, 2.0 mm CP	1
	AM343-0025CP	L572X		AM-Nozzle, 2.5 mm CP	1
	AM343-2362-3.0	L595X	71515393, 1576112	AM-Nozzle, 3.0 mm CP	1
	AM343-2362-4.0	L596X	1572362	AM-Nozzle, 4.0 mm CP	1
12	AM343-0004CP	L1027X		AM-Nozzle straight taper, 0.8 mm CP	1
	AM343-0005CP	L1028X		AM-Nozzle straight taper, 1.0 mm CP	1
	AM343-0006CP	L1029X		AM-Nozzle straight taper, 1.2 mm CP	1
	AM343-0007CP	L1030X		AM-Nozzle straight taper, 1.4 mm CP	1
	AM343-0001CP	L599X		AM-Nozzle straight taper, 1.5 mm CP	1
	AM343-0002CP	L598X		AM-Nozzle straight taper, 2.0 mm CP	1
	AM343-0002CPX	L30598X		AM-Nozzle, 2.0 mm (10 pk)	10
	AM343-0009CP	L1033X		AM-Nozzle straight taper, 2.3 mm CP	1
	AM343-0003CP	L571X		AM-Nozzle straight taper, 3.0 mm CP	1
13	AM367-2037	L1026X	71502037	AM-Nozzle w/concave, 1.2 mm CP	1
	AM367-2038	L1031X	71502038	AM-Nozzle double w/concave, 1.4 mm CP	1

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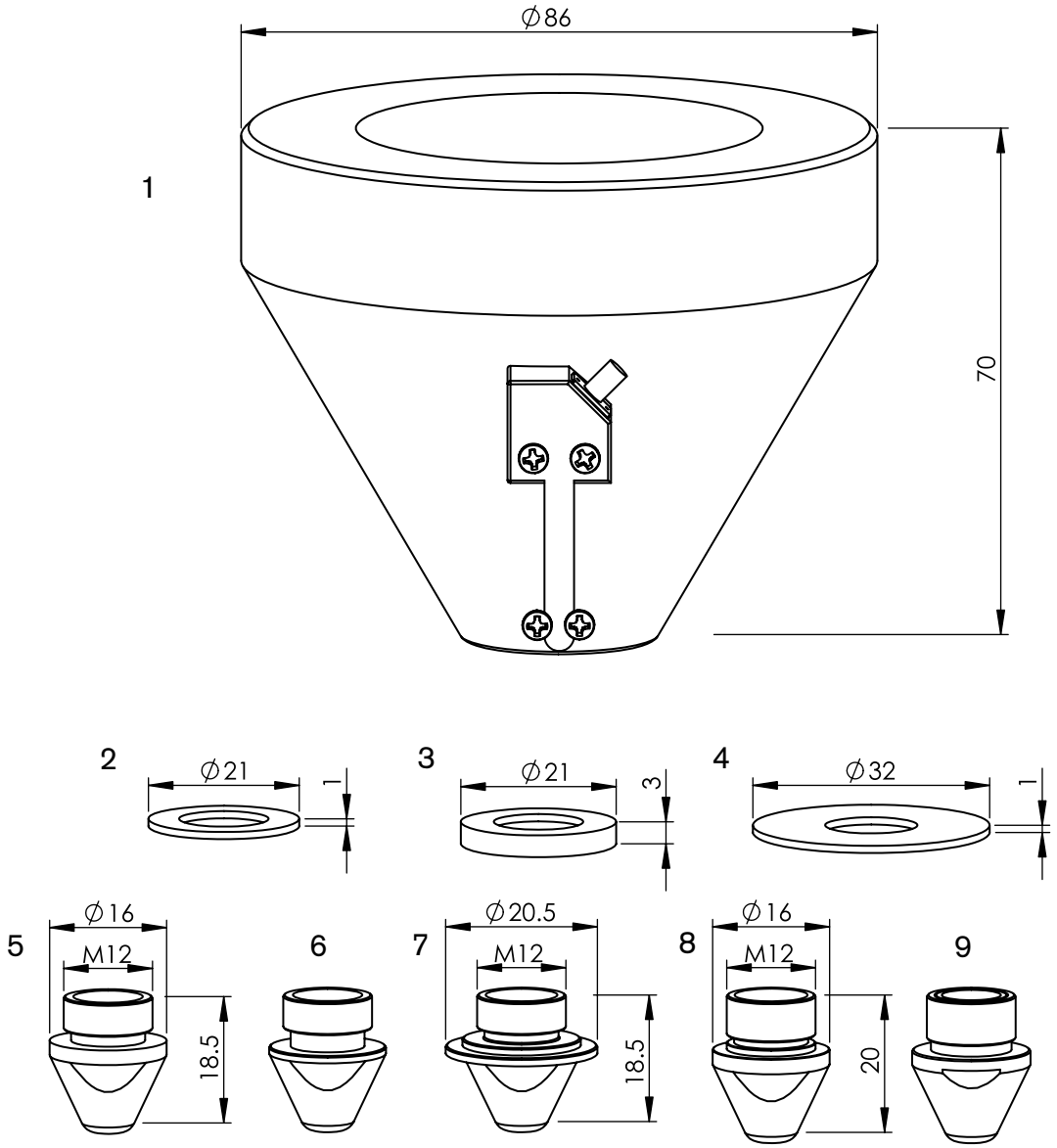


Consumables

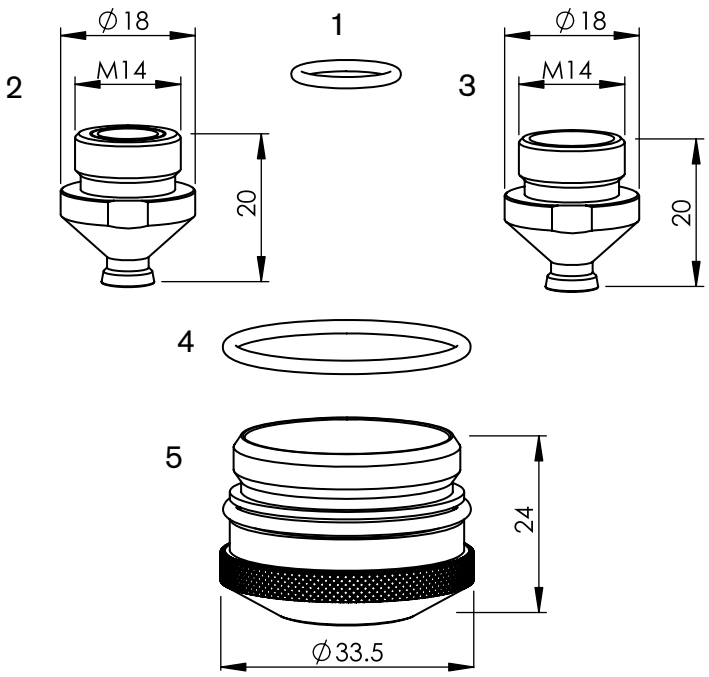
	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM343-0091		71360091	AM-Sensor cone, HS95 mini	1
2	AM325-325-1	AL1005	71341614	AM-Head protection disc, 21 mm plastic	1
	AM325-1614	AL122	71341614, 71369818	AM-Head protection disc, 21 mm Vespel	1
3	AM325-325-2	AL123	71341614	AM-Head protection disc, 21 mm ceramic	1
4	AM325-9819	AL42	71639819	AM-Head protection disc, 32 mm	1
5	AM325-545U-1.0	L134X	1664545U	AM-Nozzle, 1.0 mm CP	1
	AM325-0010CPX	L30134X	1664545U	AM-Nozzle, 1.0 mm CP (10 pk)	10
	AM325-545U-1.25	L135X	1664545U	AM-Nozzle, 1.25 mm CP	1
	AM325-0125CPX	L30135X	1664545U	AM-Nozzle, 1.25 mm CP (10 pk)	10
	AM325-545U-1.5	L86X	1664545U, 71341619, M90115	AM-Nozzle, 1.5 mm CP	1
	AM325-0015CPX	L3086X	1664545U	AM-Nozzle, 1.5 mm CP (10 pk)	10
	AM325-545U-1.75	L136X	1664545U	AM-Nozzle, 1.75 mm CP	1
	AM325-0175CPX	L30136X	1664545U	AM-Nozzle, 1.75 mm CP (10 pk)	10
	AM325-545U-2.0	L137X	1664545U, 71341610, M90114	AM-Nozzle, 2.0 mm CP	1
	AM325-0020CPX	L30137X	1664545U, 71341610	AM-Nozzle, 2.0 mm CP (10 pk)	10
	AM325-545U-2.5	L203X	1664545U	AM-Nozzle, 2.5 mm CP	1
	AM325-0025CPX	L30203X	1664545U	AM-Nozzle, 2.5 mm CP (10 pk)	10
	AM325-4544UX	L30138X	1664545U, 71360142	AM-Nozzle, 3.0 mm CP (10 pk)*	10
	AM325-0400CPX	L30339X		AM-Nozzle, 4.0 mm CP (10 pk)*	10
	AM325-0050CPX	L30763X		AM-Nozzle, 5.0 mm CP (10 pk)*	10
6	AM325-0002CPX	L30193X		AM-Nozzle, 1.25 mm CP (10 pk)*	10
	AM325-0003CPX	L30194X		AM-Nozzle, 1.5 mm CP (10 pk)*	10
	AM325-0005CPX	L30196X		AM-Nozzle, 2.0 mm CP (10 pk)*	10
	AM325-0006CPX	L30197X		AM-Nozzle, 2.5 mm CP (10 pk)*	10
	AM325-0007CPX	L30198X		AM-Nozzle, 3.0 mm CP (10 pk)*	10
7	AM325-1500CP	L1067X		AM-Nozzle large flange, 1.5 mm CP	1
	AM325-2000CP	L1066X		AM-Nozzle large flange, 2.0 mm CP	1
	AM325-3000CP	L1068X		AM-Nozzle large flange, 3.0 mm CP	1
8	AM325-1770	L1285X	71341770, 1667110	AM-Nozzle, 2.0 mm CP	1
	AM325-1730	L1287X		AM-Nozzle, 3.0 mm CP	1
9	AM326-9864-1.0	L390X	1669864, 7134162	AM-Nozzle double, 1.0 mm CP	1
	AM326-9864-1.2	L392X	1669864, 7134162	AM-Nozzle double, 1.2 mm CP	1
	AM326-9864-1.4	L393X	1669864, 7134162	AM-Nozzle double, 1.4 mm CP	1
	AM326-9864-1.5	L391X	1669864, 7134162	AM-Nozzle double, 1.5 mm CP	1
	AM326-9864-2.0	L315X	1669864, 7134162	AM-Nozzle double, 2.0 mm CP	1
	AM326-9864-2.5	L316X	1669864, 7134162, 41341680, 71341772	AM-Nozzle double, 2.5 mm CP	1
	AM326-9864-3.0	L317X	1669864, 7134163	AM-Nozzle double, 3.0 mm CP	1
	AM326-4135CP	L768X	1669864, 7134162	AM-Nozzle double, 3.5 mm CP	1
	AM326-9864-4.0	L318X	1669795, 71341681	AM-Nozzle double, 4.0 mm CP	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®

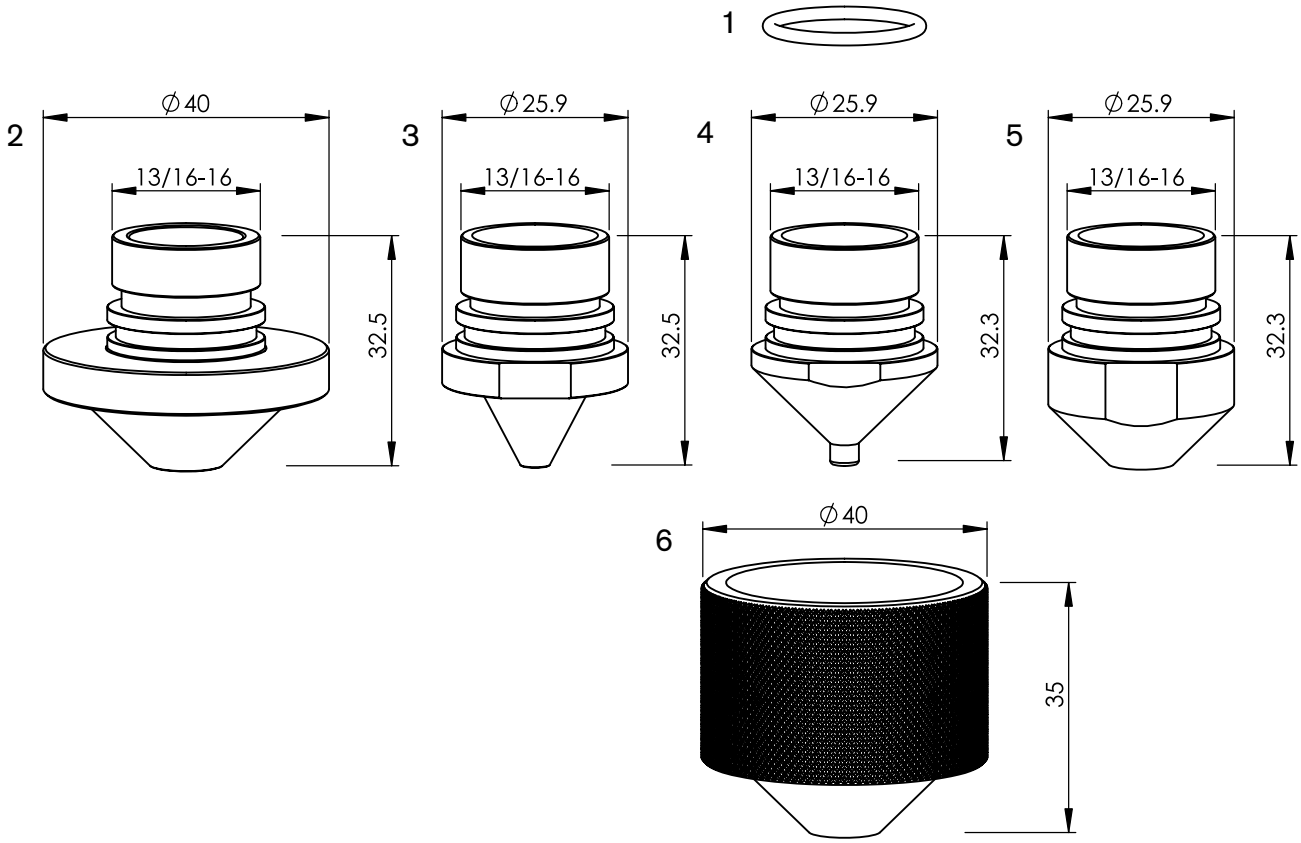
Replacement parts suitable for:

Amada®



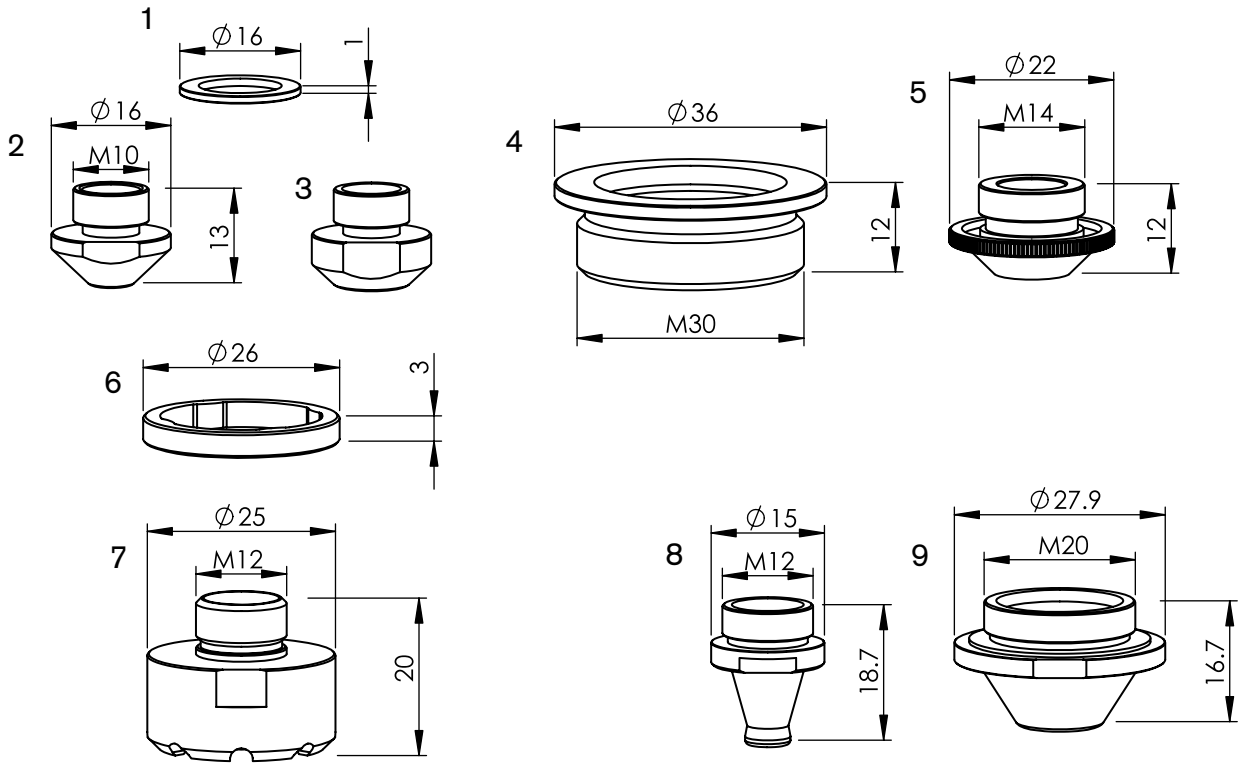
Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM326-S-14	AL93	S-14	AM-O-ring for nozzle (10 pcs)	10
2	AM326-1210CP	L387X	6551218, 71341682	AM-Nozzle double, 1.0 mm CP	1
	AM326-1214CP	L389X	6551218, 71341682	AM-Nozzle double, 1.4 mm CP	1
	AM326-1218-2.0	L320X	6551218, 71341682	AM-Nozzle double, 2.0 mm CP	1
	AM326-1218-2.5	L321X	6551218, 71341682, 71341680	AM-Nozzle double, 2.5 mm CP	1
	AM326-1218-3.0	L322X	6551218, 71341682	AM-Nozzle double, 3.0 mm CP	1
	AM326-1218-3.8	L323X	6551218, 71341682	AM-Nozzle double, 3.8 mm CP	1
	AM326-4140CP	L330X	6551218, 71341682	AM-Nozzle double, 4.0 mm CP	1
3	AM326-6025CP	L325X	71366090	AM-Nozzle, 2.5 mm CP	1
	AM326-6030CP	L326X	71366090	AM-Nozzle, 3.0 mm CP	1
4	AM326-6453	AL94	71366453	AM-O-ring for outer nozzle (10 pcs)	10
5	AM326-6452	AL115X	71366452, 71341684, 6551148A	AM-Nozzle outer, CP	1



Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM308-S-20	AL90	S-20	AM-O-ring (10 pk)	10
2	AM425-1999	L898X	71101999	AM-Nozzle clean cut, 2.0 mm CP	1
3	AM324-6815CP	L92X	6506892	AM-Nozzle, 1.5 mm CP	1
	AM324-0092CP	L93X	6506892	AM-Nozzle, 1.8 mm CP	1
	AM324-6892-2.0	L39X	74712001, 6506892	AM-Nozzle, 2.0 mm CP	1
4	AM308-1913CP	L63X	71101901	AM-Nozzle, 1.3 mm CP	1
	AM308-1902	L91X	71101902	AM-Nozzle, 1.5 mm CP	1
	AM308-1918CP	L75X	71101901	AM-Nozzle, 1.8 mm CP	1
	AM308-1901-2.0	L29X	71101901, 845735	AM-Nozzle, 2.0 mm CP	1
	AM308-1925CP	L809X		AM-Nozzle, 2.5 mm CP	1
5	AM308-2013CP	L297X		AM-Nozzle, 1.3 mm CP	1
	AM308-2015CP	L298X	62094001, 71102001	AM-Nozzle, 1.5 mm CP	1
	AM308-2030CP	L301X	62094002, 71102005	AM-Nozzle, 3.0 mm CP	1
6	AM308-1905	L30X	71101905, 841143B	AM-Nozzle outer, CP	1

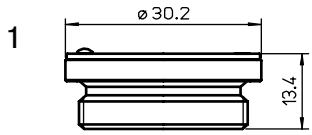


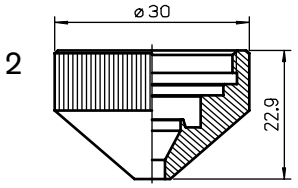
Consumables

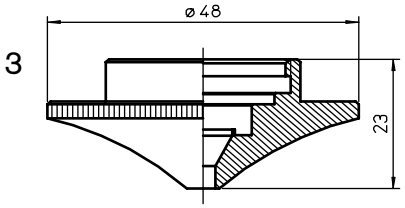
	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM325-4006-R	AL107	62094006	AM-Head protection disc, 16 mm	1
2	AM325-4006-1.3	L172X	62094006	AM-Nozzle, 1.25 mm CP	1
	AM325-4125CPX	L30172X	62094006	AM-Nozzle, 1.25 mm CP (10 pk)	10
	AM325-4006-1.5	L173X	62094006, 1507610	AM-Nozzle, 1.5 mm CP	1
	AM325-4015CPX	L30173X	62094006, 1507610	AM-Nozzle, 1.5 mm CP (10 pk)	10
	AM325-4175CPX	L30174X	62094006	AM-Nozzle, 1.75 mm CP (10 pk)*	10
	AM325-4006-2.0	L27X	62094006, 1507611	AM-Nozzle, 2.0 mm CP	1
	AM325-4020CPX	L3027X	62094006, 1507611	AM-Nozzle, 2.0 mm CP (10 pk)	10
	AM325-4025CPX	L30175X	62094006	AM-Nozzle, 2.5 mm CP (10 pk)*	10
	AM325-4006-3.0	L28X	62094008, 71102007	AM-Nozzle, 3.0 mm CP	1
	AM325-4030CPX	L3028X	62094008, 71102007	AM-Nozzle, 3.0 mm CP (10 pk)	10
3	AM325-1090CPX	L30750X	62094005	AM-Nozzle, 1.0 mm CP (10 pk)*	10
	AM325-4005-1.5	L752X	62094005, 71341515	AM-Nozzle, 1.5 mm CP	1
	AM325-4005-2.0	L754X	62094005, 71102006	AM-Nozzle, 2.0 mm CP	1
	AM325-1520CPX	L30754X	62094005, 71102006	AM-Nozzle, 2.0 mm CP (10 pk)	10
	AM325-1530CPX	L30756X	62094005, 71341515-3.0	AM-Nozzle, 3.0 mm CP (10 pk)*	10
4	AM325-0387	AL387		AM-Spacer, 36x12 ceramic	1
5	AM308-8815CP	L95X		AM-Nozzle, 1.5 mm CP	1
	AM308-8820CP	L38X	74718816, 8249301	AM-Nozzle, 2.0 mm CP	1
6	AM367-3028	AL403		AM-Collar, PTFE**	1
7	AM367-1333	L1333		AM-Nozzle, 2.0 mm	1
8	AM369-0002	L927X		AM-Nozzle HP-X, 1.0 mm CP	1
	AM369-0004	L929X		AM-Nozzle HP-X, 1.5 mm CP	1
	AM369-0005	L930X		AM-Nozzle HP-X, 2.0 mm CP	1
	AM369-0006	L931X		AM-Nozzle HP-X, 2.5 mm CP	1
	AM369-0007	L932X	71362733	AM-Nozzle HP-X, 3.0 mm CP	1
9	AM369-0008	AL220X		AM-Nozzle outer, HP-X CP	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)

** PolyTetraFluoroEthylene is a fluorocarbon-based polymer and is commonly abbreviated PTFE. The Teflon® brand of PTFE is manufactured only by DuPont and is not sold by Hypertherm. Hypertherm purchases other brands of PTFE from various high quality manufacturers.

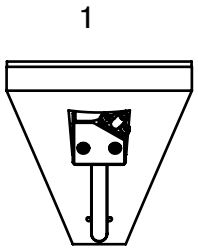


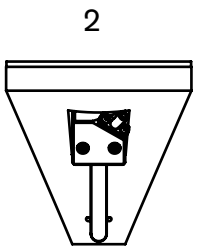


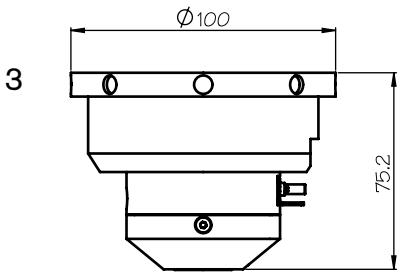


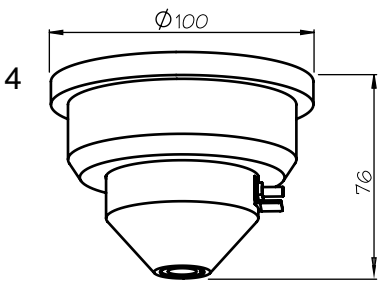
Consumables

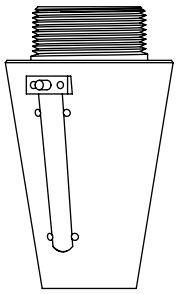
	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	MB334-0001	AL267	P0594-860-00001	MB-Nozzle holder	1
2	MB316-269S	AL238	71800027, BQ933D221H04, P0593-860-00001	MB-Shield cap, short	1
	MB316-269SCP	AL238X		MB-Shield cap, short CP	1
3	MB316-0440	AL266	BQ933D044H01, 71800101, W18Q93304401	MB-Nozzle outer, high speed pierce	1











Consumables

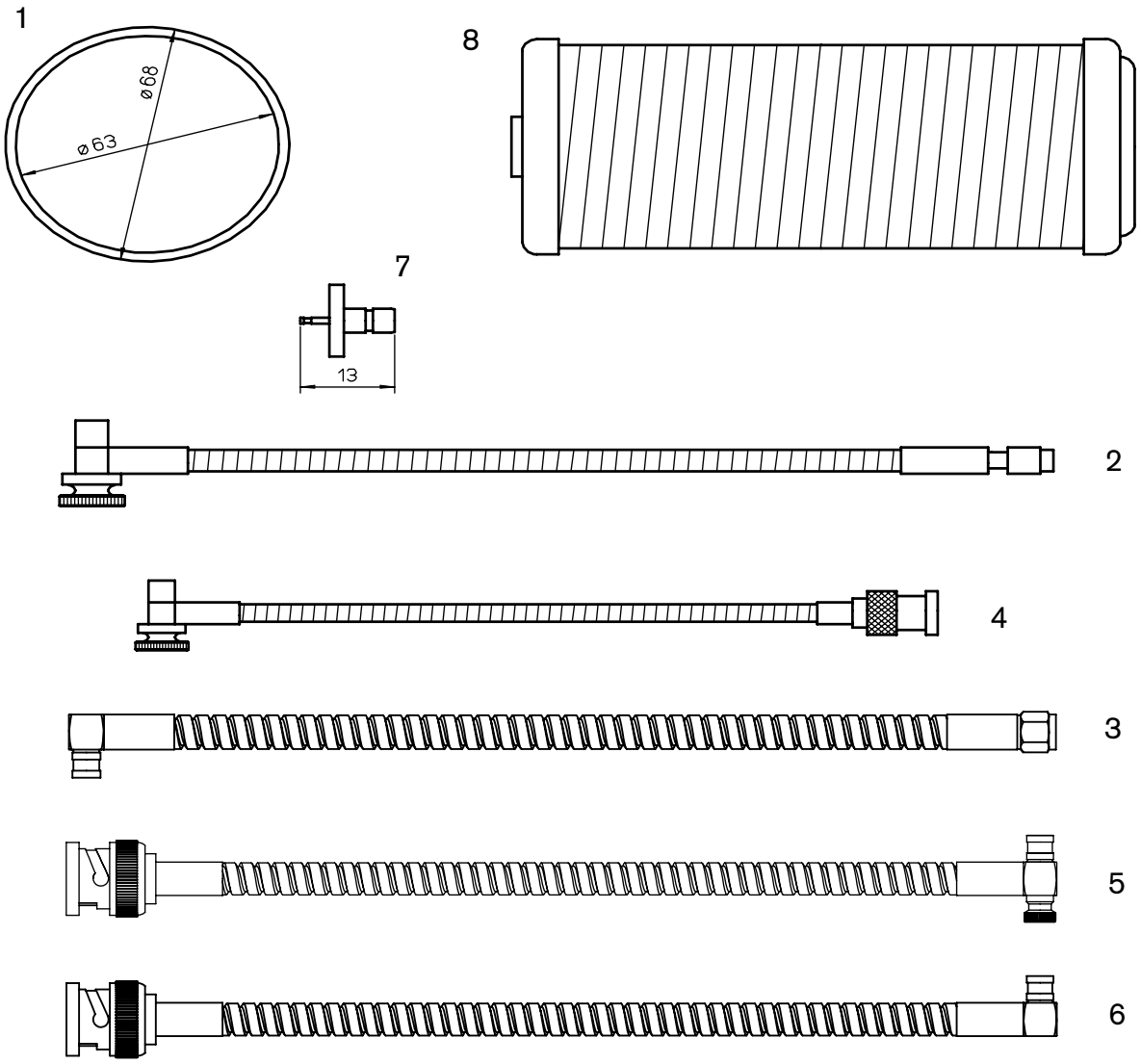
	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
	New Sensor Cones				
1	AM343-0091		71360091	AM-Sensor cone, HS95 mini	1
2	AM343-1621		71341621	AM-Sensor cone, HS95	1
3	AM343-9107			AM-Sensor cone, ECO	1
4	AM343-1690		71341690	AM-Sensor cone, HS98	1
5	AM343-L3015C NEW		P0380-140-0002	AM-Sensor cone, LC3015	1

*Repair is available in N. America for many sensor cones

Centricut®

Replacement parts suitable for:

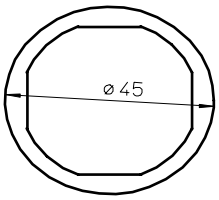
Amada®



Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	AM313-0004	AL56		AM-Gasket, sensor head, PTFE*	1
2	AM313-1901	AL200	71341630	AM-Sensor cable, 305 mm (12")	1
3	AM313-1901A		71341630	AM-Sensor cable HS-5, 305 mm (12") premium, armored	1
4	AM308-8965	AL260	71398965	AM-Sensor cable, 305 mm (12")	1
5	AM308-8965A			AM-Sensor cable, 305 mm (12") premium, armored	1
6	AM313-9851A		71369851	AM-Sensor cable, 230 mm (8") premium	1
7	AM308-0001	AL263		AM-Sensor cable connector	1
8	AM313-2023		71232023	AM-Vacuum pump filter	1
	AM313-1526 (not shown)		71341526	AM-Sensor cable ZS6, 530 mm	1
	AM313-8292 (not shown)		71398292	AM-Sensor cable dual shield, 7 meters	1

*PolyTetraFluoroEthylene is a fluorocarbon-based polymer and is commonly abbreviated PTFE. The Teflon® brand of PTFE is manufactured only by DuPont and is not sold by Hypertherm. Hypertherm purchases other brands of PTFE from various high quality manufacturers.



1

3

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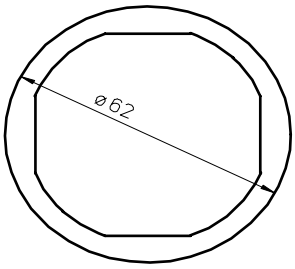

Optics

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
	Centricut lens housings and assemblies				
1	AM313-0005	AL52	71360261, 74721907	AM-Gasket, 1.5" lens housing, PTFE*	1
2	AM313-9513	AL149	71361393	AM-Gasket 2.0" lens housing, PTFE*	1
3	AM313-1071	AL249	71501071	AM-Gasket	1

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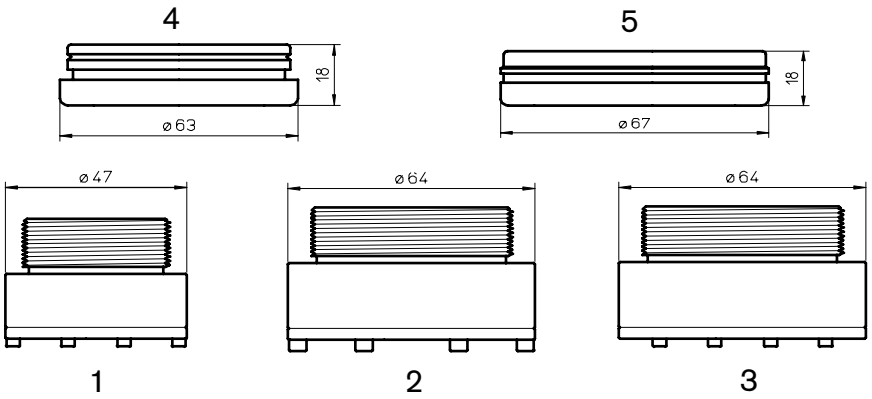


Optics

	Centricut part number	Reference number	Type	Diameter	Focal length	Edge thickness
	Mounted lenses					
1	AM313-0306	81140306	PLX	1.5"	5.00"	.300"
	AM313-0400	81140400	PLX	1.5"	7.50"	.300"
2	AM313-9830	71369830	PLX	1.5"	5.00"	.300"
	AM313-9831	71369831	PLX	1.5"	7.50"	.300"
3	AM313-0307	81140307	PLX	2.0"	5.00"	.380"
	AM313-0186	81140186	PLX	2.0"	7.50"	.380"
4	AM313-8662	578662	PLX	1.5"	5.00"	.300"
	AM313-1215	71501070	PLX	1.5"	7.50"	.300"
	AM313-3110		PLX	1.5"	7.50"	.300"
5	AM313-50F1	71710059	PLX	2.0"	5.00"	.380"
	AM313-75F1	71710030	PLX	2.0"	7.50"	.380"
	AM313-10F1		PLX	2.0"	10.00"	.380"
	AM313-0221 (not shown)	81140221	PLX	1.5"	3.75"	.300"
	AM313-7931 (not shown)	6017931	PLX	2.0"	7.50"	.380"
	Low absorption – mounted lenses					
1	AM313-0306MP5	81140306	PLX	1.5"	5.00"	.300"
	AM313-0400MP5	81140400	PLX	1.5"	7.50"	.300"
2	AM313-9830MP5	71369830	PLX	1.5"	5.00"	.300"
	AM313-9831MP5	71369831	PLX	1.5"	7.50"	.300"
3	AM313-0307MP5	81140307	PLX	2.0"	5.00"	.380"
	AM313-0186MP5	81140186	PLX	2.0"	7.50"	.380"
4	AM313-1216MP5	901216A	PLX	1.5"	5.00"	.300"
	AM313-1215MP5	901215A	PLX	1.5"	7.50"	.300"
	Non-mounted lenses					
	AM313-0305	81140305	PLX	1.1"	5.00"	.160"
	AM313-6602	726602	PLX	1.1"	7.50"	.160"
	AM313-0306NM	81140306	PLX	1.5"	5.00"	.300"
	AM313-1072	71501072	PLX	1.5"	5.00"	.300"
	AM313-0400NM	81140400	PLX	1.5"	7.50"	.300"
	AM313-1019NM	306068	PLX	1.5"	7.50"	.300"
	AM313-7070	71501070	PLX	1.5"	7.50"	.300"
	AM313-0307NM	81140307	PLX	2.0"	5.00"	.380"
	AM313-0186NM	81140186	PLX	2.0"	7.50"	.380"
	AM313-0186NM	81140186	PLX	2.0"	7.50"	.380"
	Low absorption – non-mounted lenses					
	AM313-0306NMP5	81140306	PLX	1.5"	5.00"	.300"
	AM313-0400NMP5	81140400	PLX	1.5"	7.50"	.300"
	AM313-1072NMP5	71501072	PLX	1.5"	5.00"	.300"
	AM313-7070NMP5	71501070	PLX	1.5"	7.50"	.300"
	AM313-0307NMP5	81140307	PLX	2.0"	5.00"	.380"
	AM313-0186NMP5	81140186	PLX	2.0"	7.50"	.380"

Optics

Centricut part number	Reference number	Type	Material	Diameter	Focal length	Edge thickness
Fiber laser lens						
AM313-0238	7710238	PLX	FS	50.8 mm	190 mm	11.4 mm
Fiber laser window						
AM313-0026 NEW	71570026	PLX	FS	33.23 mm Octaganol		2.3 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
MZ335-115	ALI115/M	MZ-Wire, Indium .8 mm x 125 mm 1.5" Lens	1
MZ335-120	ALI120/M	MZ-Wire, Indium .8 mm x 160 mm 2.0" Lens	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

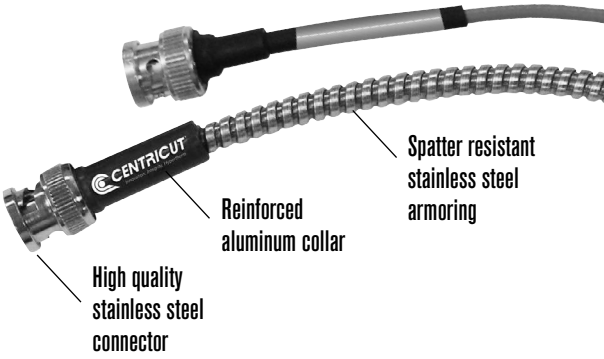
Centricut part number	OEM	Reference number	Description
AM343-0091	Amada	71360091	AM-Sensor cone, HS95 mini
AM343-1621	Amada	71341621	AM-Sensor cone, HS95
AM343-9107	Amada	ECO cone	AM-Sensor cone, ECO
AM343-1690	Amada	71341690	AM-Sensor cone, HS98
AM343-L3015C	Amada	71374509	AM-Sensor cone, LC3015
PT347-3323	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).

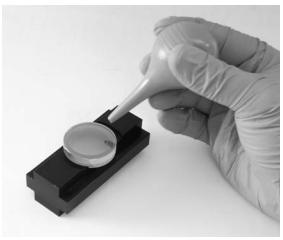
Product description	Part number	Quantity per order
Optical cleaning fluid (3 oz.)	TR300-1112	1
Lens cleaning swab	TR300-0699	25
Lens cleaning paper, Tiffen	TR300-6452	50
Polyester wipes 4" x 4"	TR300-7991	100
Base, lens maintenance	TR300-271	1

Lens paper

Recommended for the routine maintenance cleaning of flat lenses.

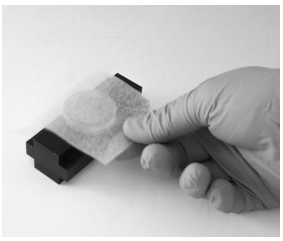
You will need:

- 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.

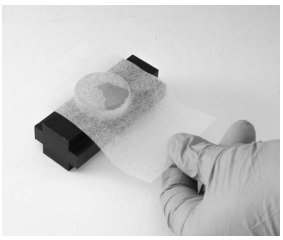


Step 1

Place lens paper over the optic, covering it completely.

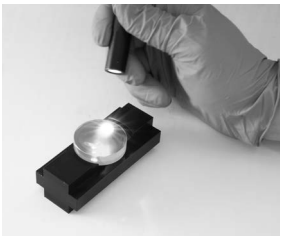
Step 2

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:

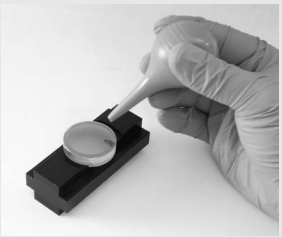
Place the cleaned lens in the machine quickly to avoid contamination from airborne particles. If spots, pits, or scratches are still noticeable, the lens may need to be replaced.

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

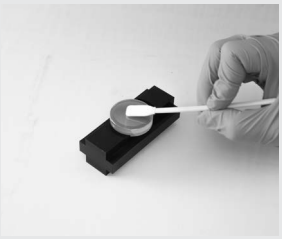


To get started

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.

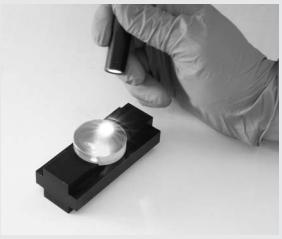
Step 1

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

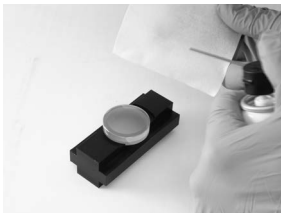
Recommended for cleaning CO_2 and fiber lenses and windows. Interchangeable with polyester swabs and lens paper.

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.

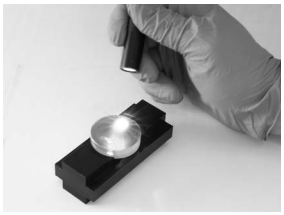


Step 1

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.

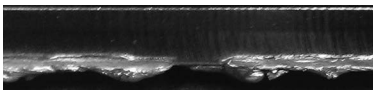
- Heating up too small of an area, or not having enough assist gas flow through the cut will result with the kerf (width of the cut) being too narrow.
- Heating up too large of an area or having too much assist gas flow through the cut will result in the kerf being too wide.

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

Factory cut chart settings

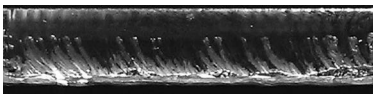
Focus is too low

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



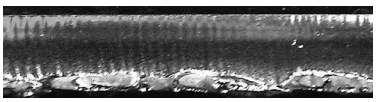
Feed rate is too fast

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



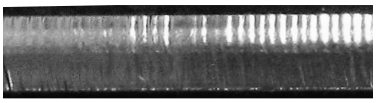
Gas pressure is too low

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



Stand off is too low

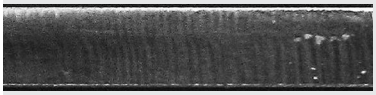
The focus spot is in the wrong location, causing the rough edge.



Cut direction

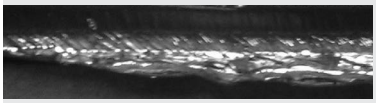
3.2 mm (10 ga.) mild steel cut resulting in too wide kerf

Factory cut chart settings



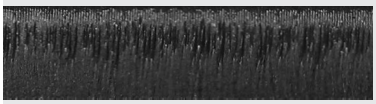
Focus is too high

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.

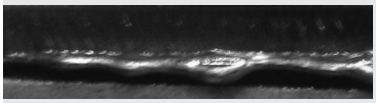


Gas pressure is too high

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

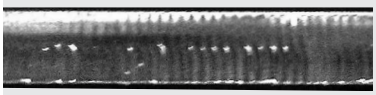
Stand off is too high

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.

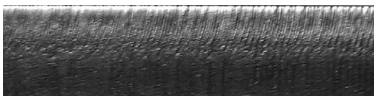


Cut direction

*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.

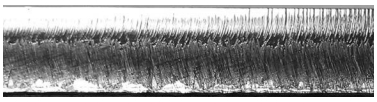
6 mm (1/4") mild steel cut resulting in too narrow kerf

Factory cut chart settings



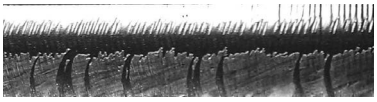
Focus is too low

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



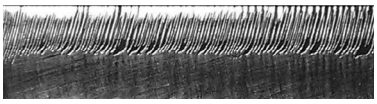
Feed rate is too fast

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



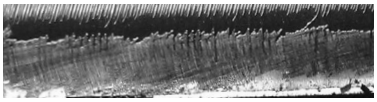
Gas pressure is too low

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



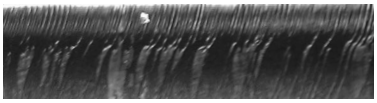
Stand off is too low

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



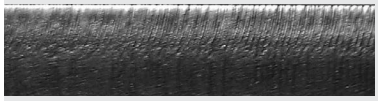
Nozzle size is too small

There is not enough O_2 to cut uniformly

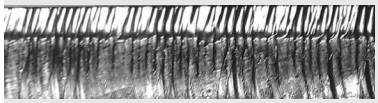


Cut direction

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

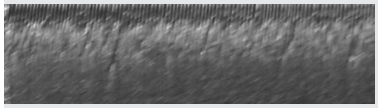


Factory cut chart settings



Focus is too high

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

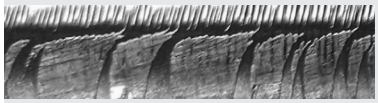


Feed rate is too slow

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.

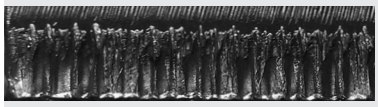


Stand off is too high

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

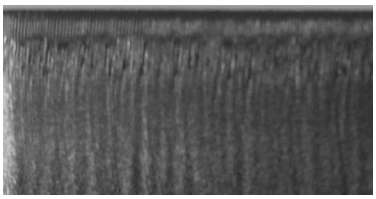
The shape of the gas flow is incorrect, causing a rougher edge.

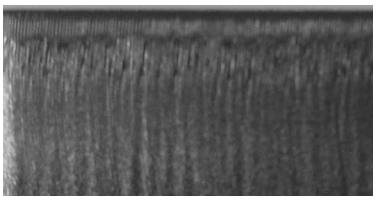
Cut direction

*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

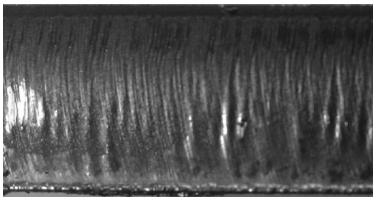


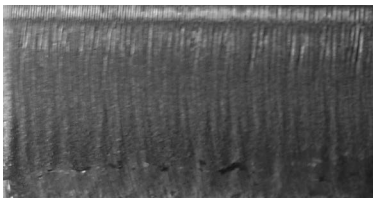


Factory cut chart settings

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.



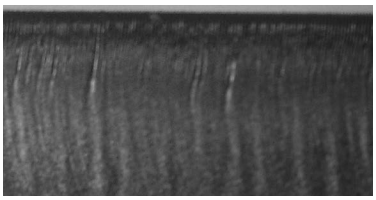


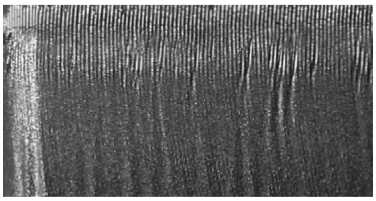
Stand off is too low

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.



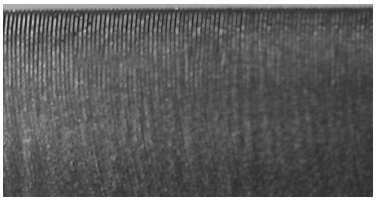


Nozzle size is too small

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.



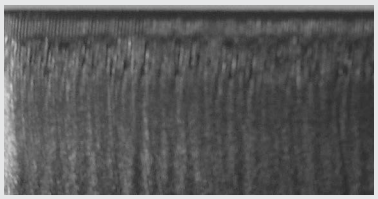
Cut direction

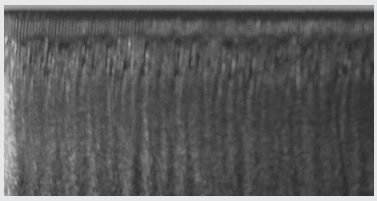
Cut direction

*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

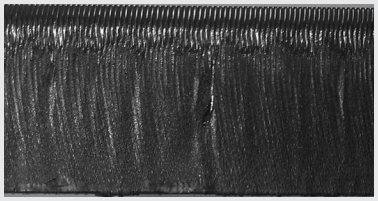


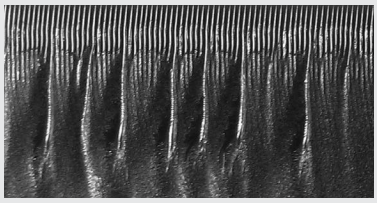


Factory cut chart settings

Focus is too high

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



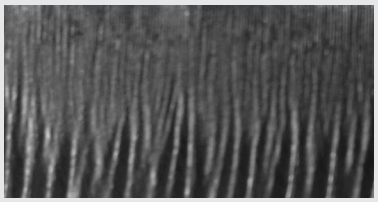


Stand off is too high

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.

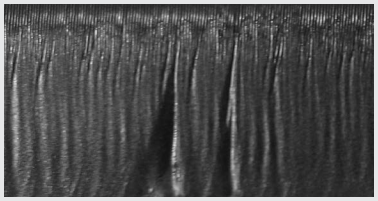


Incorrect nozzle type

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

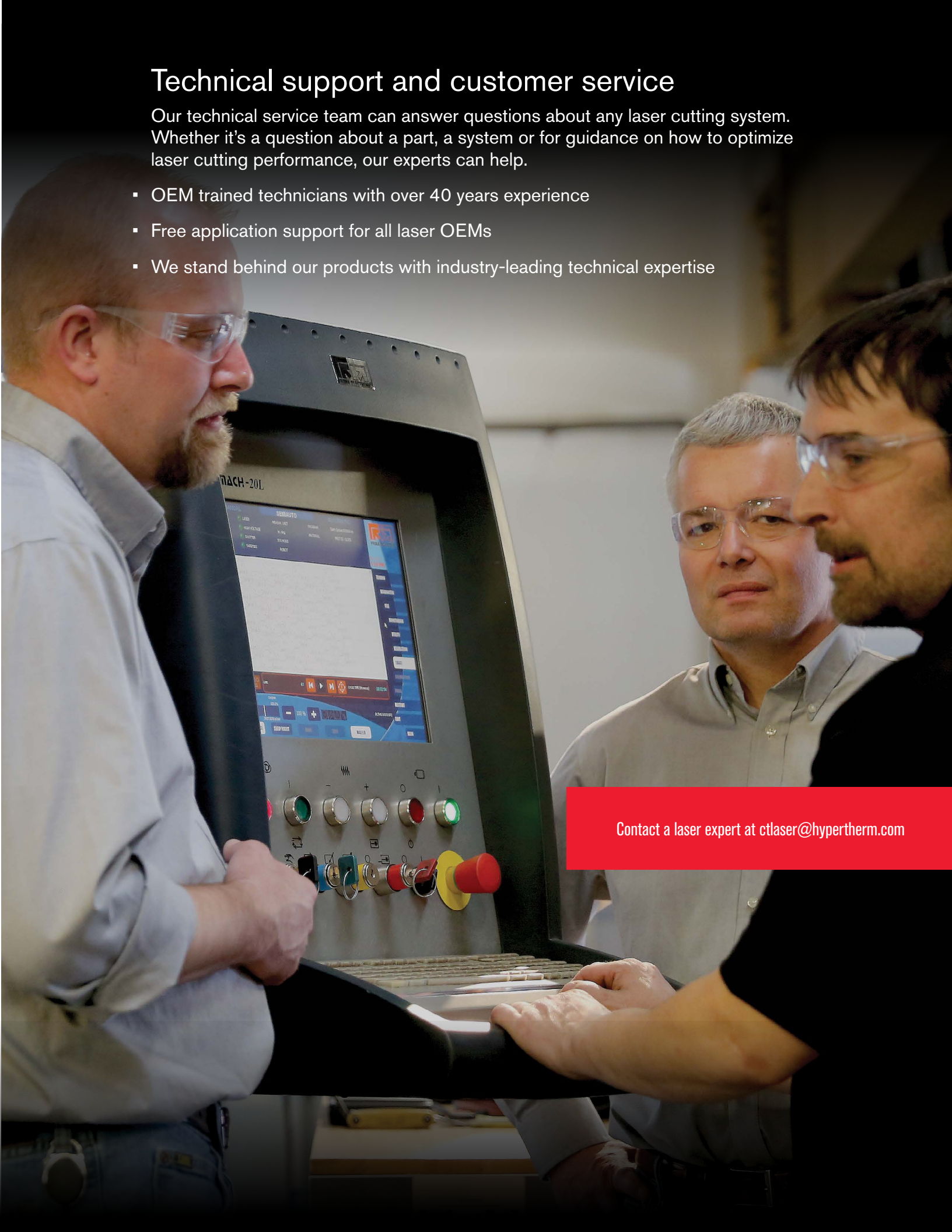
Cut direction

*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

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 laser cutting performance, our experts can help.

- OEM trained technicians with over 40 years experience
- Free application support for all laser OEMs
- We stand behind our products with industry-leading technical expertise



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