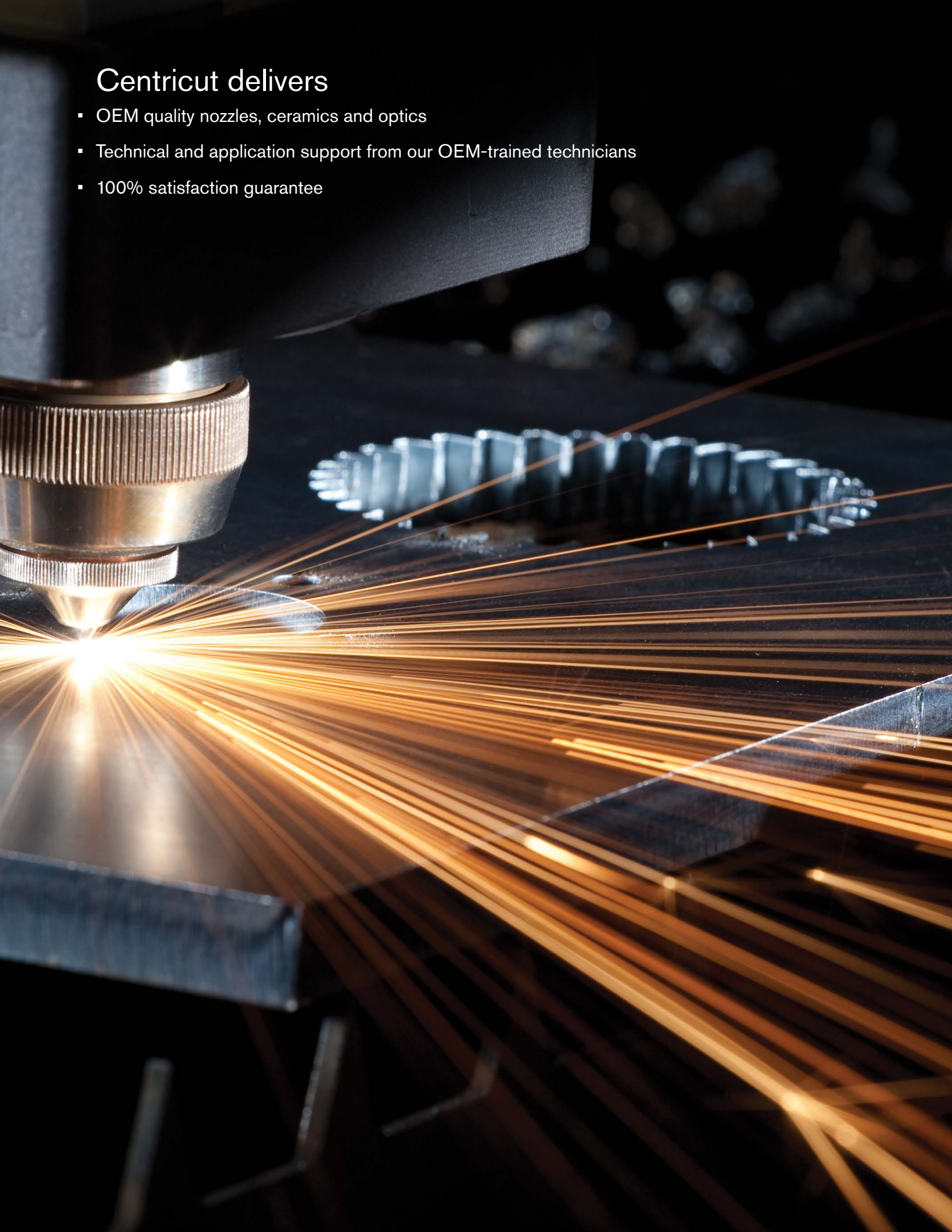
Centricut®

2018 catalog

For CO_2 and fiber laser consumables

Replacement parts suitable for Trumpf®



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.

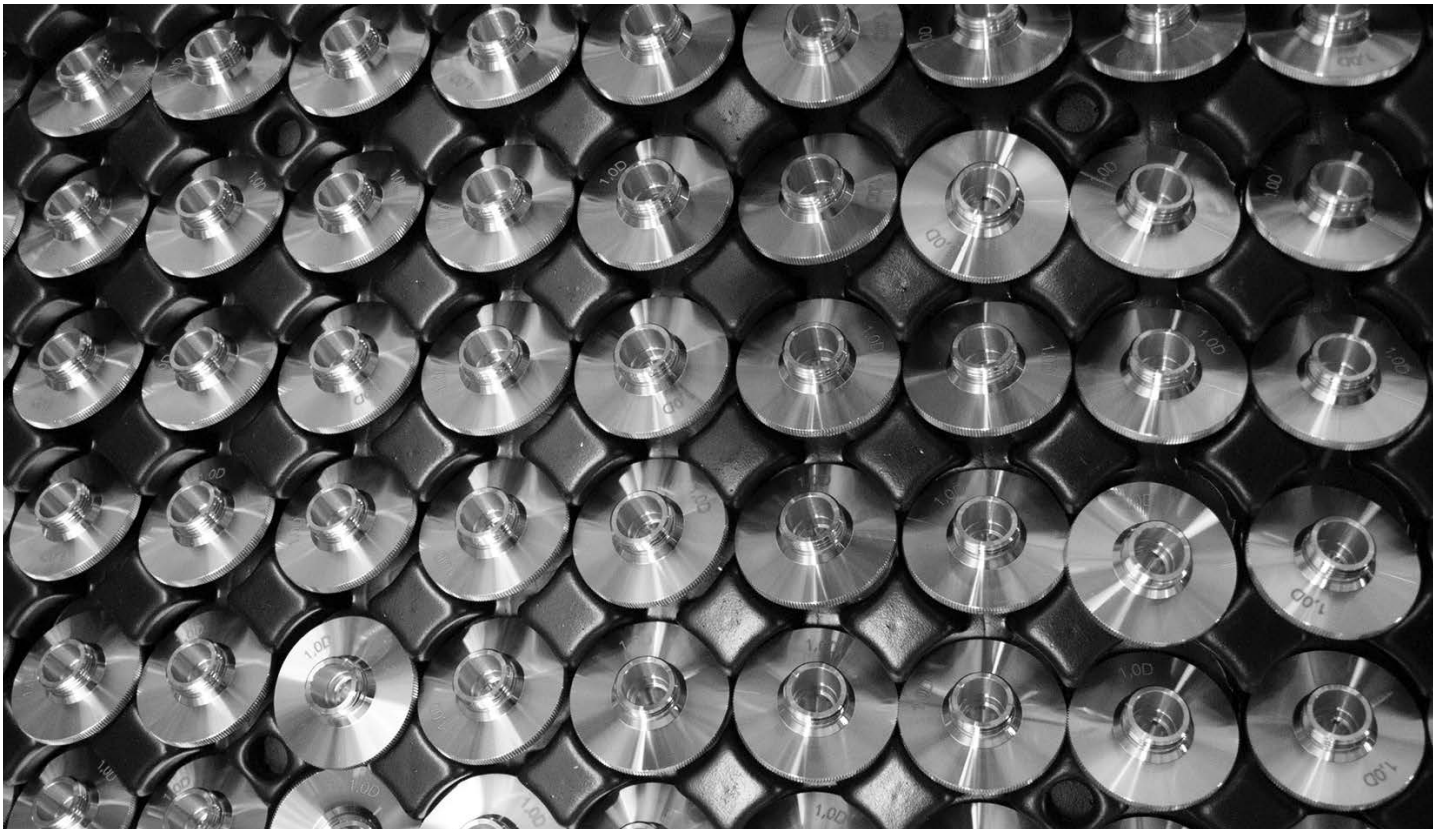
Look for CP in the part number to identify a chrome plated nozzle

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

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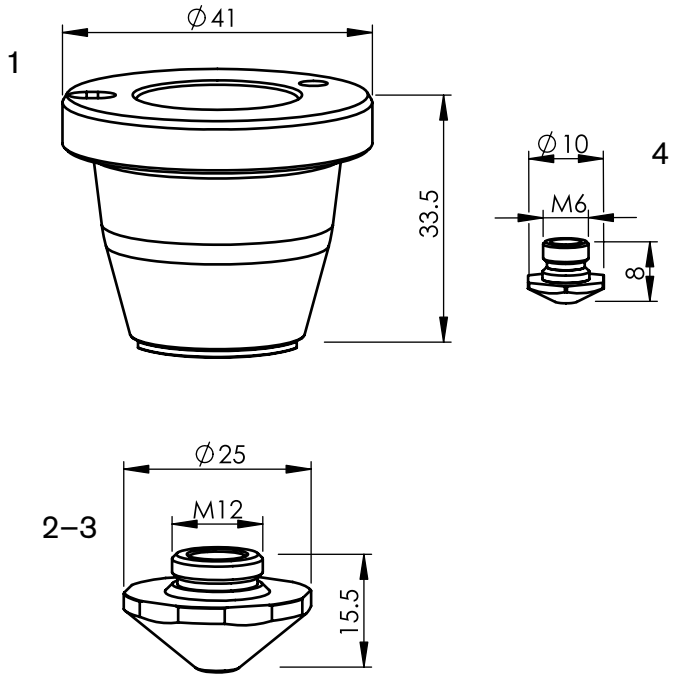

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR407-5673	AL410	1349171, 1755673	TR-Nozzle holder, ceramic	1
2	TR407-4858X	L501270	1324858	TR-Nozzle EAA, 0.8 mm (10 pk)*	10
	TR407-4860X	L501272	1324860	TR-Nozzle EAA, 1.0 mm (10 pk)*	10
	TR407-4861X	L501273	1324861	TR-Nozzle EAA, 1.2 mm (10 pk)*	10
	TR407-4863X	L501275	1324863	TR-Nozzle EAA, 1.4 mm (10 pk)*	10
	TR407-4864X	L501276	1324864	TR-Nozzle EAA, 1.7 mm (10 pk)*	10
	TR407-4858CPHX	L501270XH	1324858	TR-Nozzle EAA, 0.8 mm HCP (10 pk)*	10
	TR407-4860CPHX	L501272XH	1324860	TR-Nozzle EAA, 1.0 mm HCP (10 pk)*	10
	TR407-4861CPHX	L501273XH	1324861	TR-Nozzle EAA, 1.2 mm HCP (10 pk)*	10
	TR407-4863CPHX	L501275XH	1324863	TR-Nozzle EAA, 1.4 mm HCP (10 pk)*	10
	TR407-4864CPHX	L501276XH	1324864	TR-Nozzle EAA, 1.7 mm HCP (10 pk)*	10
3	TR407-4865X	L501277	1324865	TR-Nozzle EAA, 2.0 mm (10 pk)*	10
	TR407-4866X	L501278	1324866	TR-Nozzle EAA, 2.3 mm (10 pk)*	10
	TR407-4867X	L501279	1324867	TR-Nozzle EAA, 2.7 mm (10 pk)*	10
	TR407-4865CPHX	L501277XH	1324865	TR-Nozzle EAA, 2.0 mm HCP (10 pk)*	10
	TR407-4866CPHX	L501278XH	1324866	TR-Nozzle EAA, 2.3 mm HCP (10 pk)*	10
	TR407-4867CPHX	L501279XH	1324867	TR-Nozzle EAA, 2.7 mm HCP (10 pk)*	10
4	TR407-9610	L1700	1589610	TR-Nozzle Blow off EBM, 2.0 mm	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)

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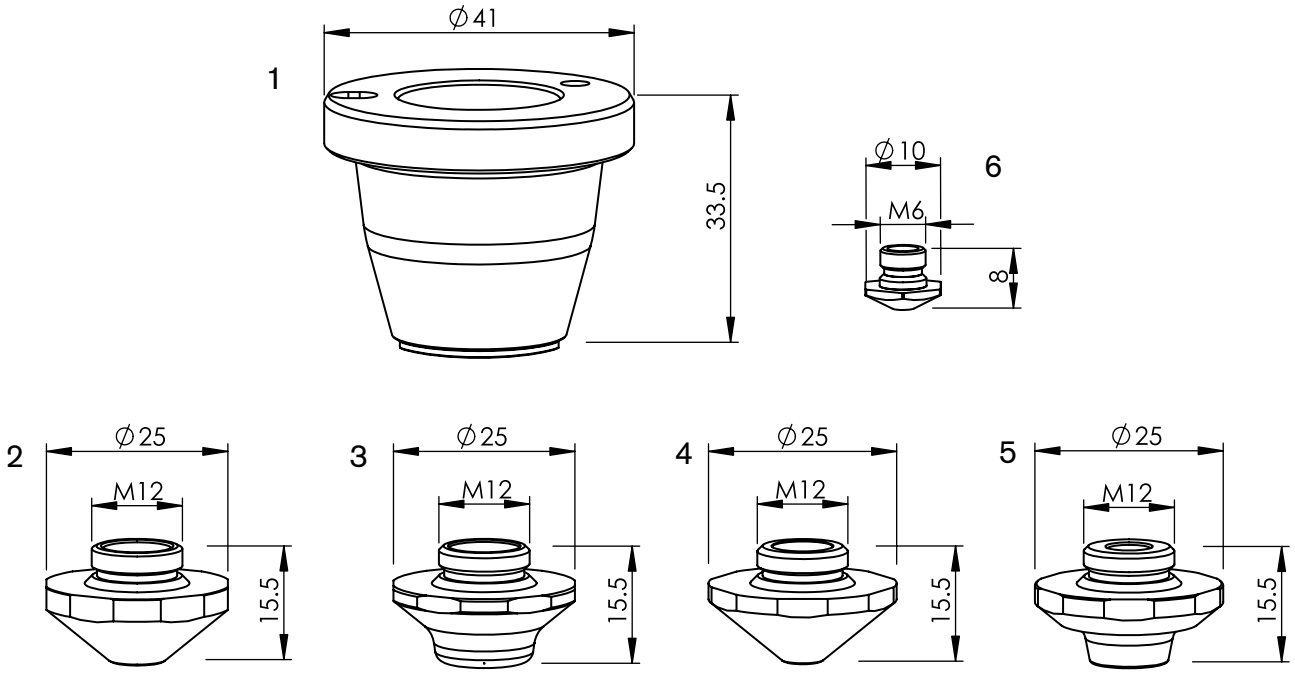

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR407-5673	AL410	1349171, 1755673	TR-Nozzle holder, ceramic	1
2	TR407-7264	L1260		TR-Nozzle focusing ZAA-01	1
3	TR407-9091	L1885	1809091	TR-Nozzle double EAQ, 6.0 mm	1
	TR407-9421	L1886	1809421	TR-Nozzle double EAQ, 7.5 mm	1
	TR407-6199	L1887	1886199	TR-Nozzle double EAQ, 9.5 mm	1
4	TR426-6012X	L501281		TR-Nozzle shower, 1.2 mm (10 pk)*	10
5	TR407-3046 NEW	L1986		TR-Nozzle double EAC, 1.8 mm	1
6	TR407-9610	L1700	1589610	TR-Nozzle blow off EBM, 2.0 mm	1

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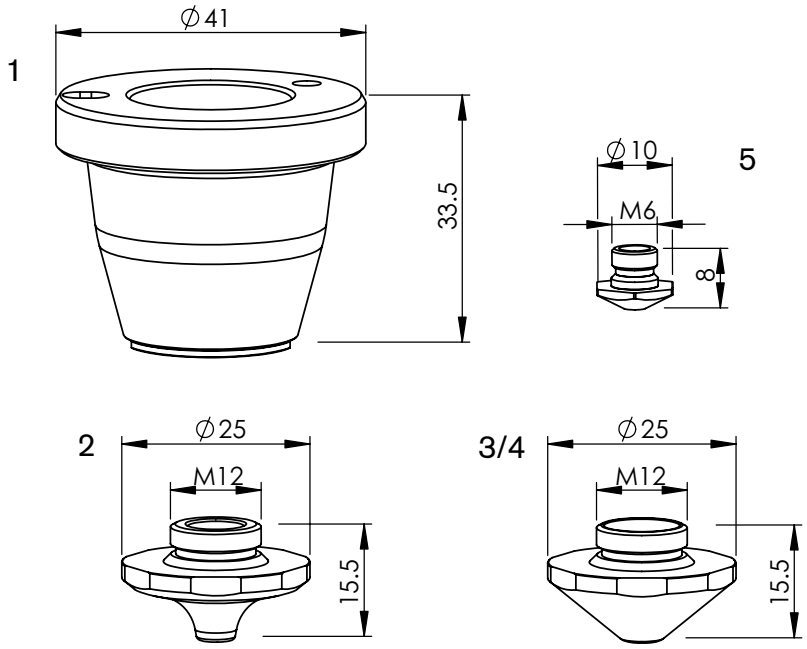

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR407-5673	AL410	1349171, 1755673	TR-Nozzle holder, ceramic	1
2	TR426-3325X	L501501	1373325	TR-Nozzle EAB, 1.0 mm (10 pk)*	10
	TR426-3326X	L501502	1373326	TR-Nozzle EAB, 1.2 mm (10 pk)*	10
	TR426-3327X	L501503	1373327	TR-Nozzle EAB, 1.4 mm (10 pk)*	10
	TR426-3328X	L501504	1373328	TR-Nozzle EAB, 1.7 mm (10 pk)*	10
3	TR426-3324X	L501500	1373324	TR-Nozzle EAB, 0.8 mm (10 pk)*	10
	TR426-3329X	L501505	1373329	TR-Nozzle EAB, 2.0 mm (10 pk)*	10
	TR426-3330X	L501506	1373330	TR-Nozzle EAB, 2.3 mm (10 pk)*	10
	TR426-3331X	L501507	1373331	TR-Nozzle EAB, 2.7 mm (10 pk)*	10
4	TR426-1308X	L501308		TR-Nozzle double, 0.8 mm (10 pk)*	10
	TR426-1309X	L501309		TR-Nozzle double, 1.0 mm (10 pk)*	10
	TR426-1310X	L501310		TR-Nozzle double, 1.2 mm (10 pk)*	10
	TR426-1311X	L501311		TR-Nozzle double, 1.4 mm (10 pk)*	10
	TR426-1312X	L501312		TR-Nozzle double, 1.7 mm (10 pk)*	10
	TR426-1313X	L501313		TR-Nozzle double, 2.0 mm (10 pk)*	10
	TR426-1314X	L501314		TR-Nozzle double, 2.3 mm (10 pk)*	10
	TR426-1315X	L501315		TR-Nozzle double, 2.7 mm (10 pk)*	10
5	TR407-9610	L1700	1589610	TR-Nozzle blow off EBM, 2.0 mm	1

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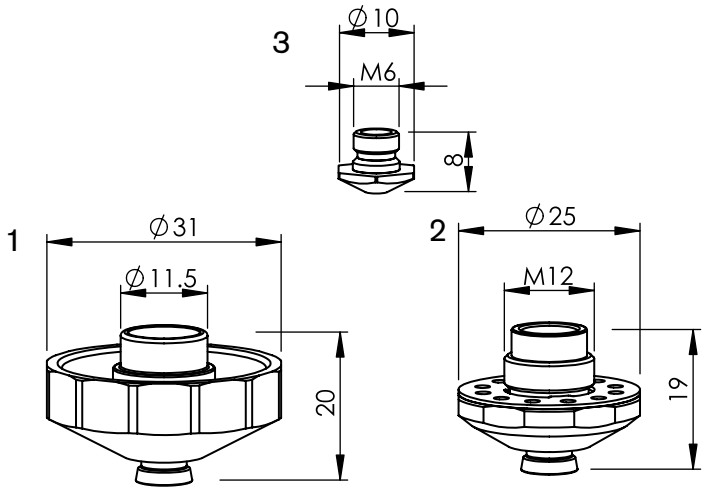

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR407-4018	L1800	1774018	TR-Nozzle EFL, 1.4 mm	1
	TR407-8745	L1801	1838745	TR-Nozzle EFL, 1.7 mm	1
	TR407-4020	L1802	1774020	TR-Nozzle EFL, 2.0 mm	1
	TR407-4092	L1803	1774092	TR-Nozzle EFL, 2.3 mm	1
2	TR407-9940 NEW	L1990		TR-Nozzle EGL, 1.4 mm	1
	TR407-9951 NEW	L1991		TR-Nozzle EGL, 1.7 mm	1
	TR407-9952 NEW	L1992		TR-Nozzle EGL, 2.0 mm	1
	TR407-9953 NEW	L1993		TR-Nozzle EGL, 2.3 mm	1
3	TR407-9610	L1700	1589610	TR-Nozzle blow off EBM, 2.0 mm	1

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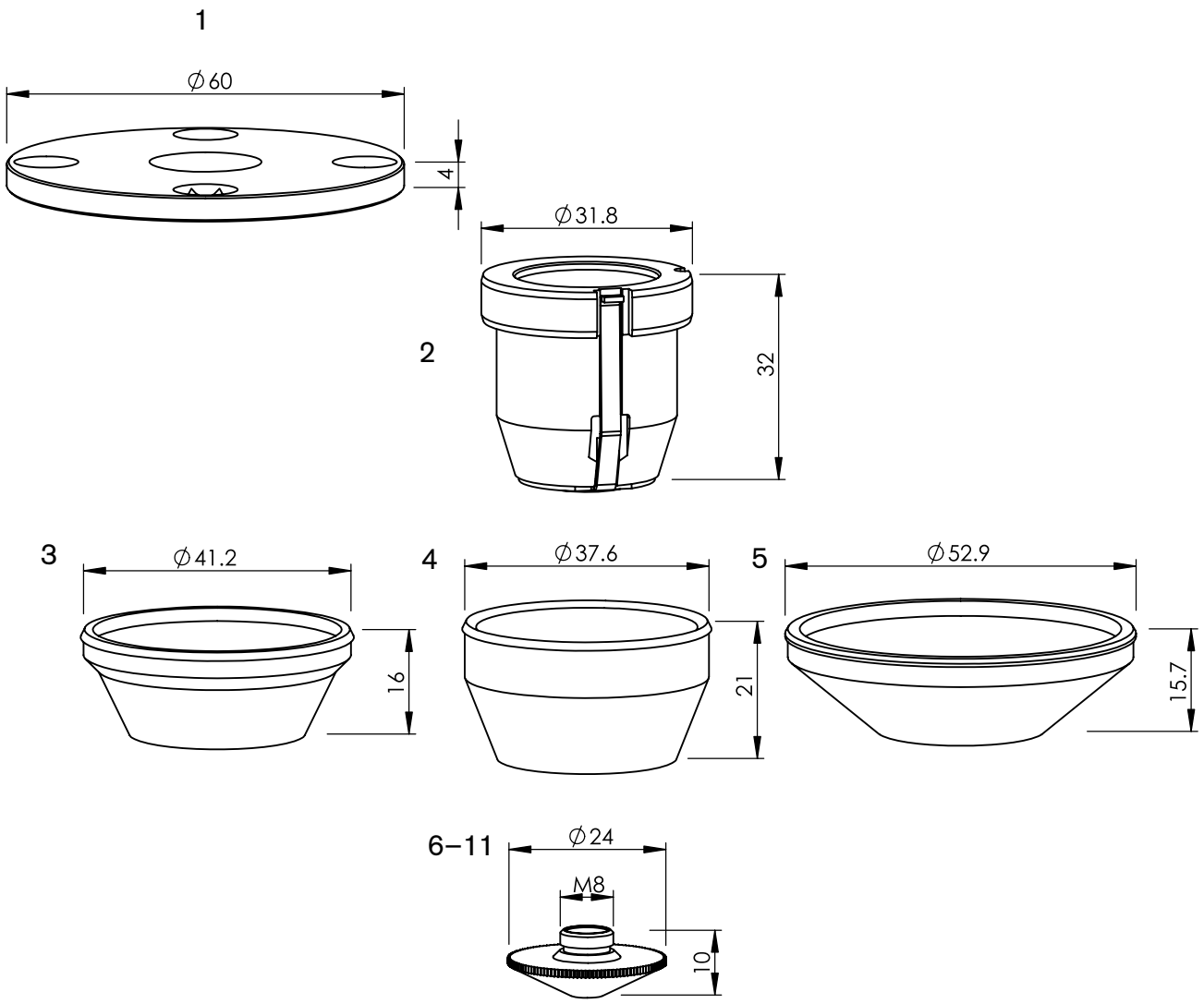

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR301-4485	AL70	234485	TR-Breakaway plate	1
2	TR301-0432	AL108	254493, 260432	TR-Nozzle holder, ceramic	1
3	TR301-4496	AL36	254496	TR-Cover, PTFE**	1
4	TR301-6153	AL47	256153, 955826	TR-Cover, PTFE** (white)	1
	TR301-6153T	AL347	256153, 955826	TR-Cover, PTFE** (black)	1
5	TR301-5286	AL41	225286	TR-Cover, PTFE**	1

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Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
6	TR301-4561X	L3018	124561, 237499	TR-Nozzle, 0.8 mm (10 pk)*	10
	TR301-4562X	L3019	124562, 237498	TR-Nozzle, 1.0 mm (10 pk)*	10
	TR301-6809X	L30361	966809	TR-Nozzle, 1.2 mm (10 pk)*	10
	TR301-0014X	L30795		TR-Nozzle, 1.4 mm (10 pk)*	10
	TR301-7500X	L3026	237500	TR-Nozzle, 1.5 mm (10 pk)*	10
	TR301-0017X	L30796		TR-Nozzle, 1.7 mm (10 pk)*	10
	TR301-7503X	L3024	237503, 1253211	TR-Nozzle, 2.0 mm (10 pk)*	10
	TR301-4564X	L30797	124564	TR-Nozzle, 2.3 mm (10 pk)*	10
	TR301-7504X	L3025	237504	TR-Nozzle, 3.0 mm (10 pk)*	10
	TR301-0561CPX	L3018X	352280	TR-Nozzle, 0.8 mm CP (10 pk)*	10
	TR301-0562CPX	L3019X	352281	TR-Nozzle, 1.0 mm CP (10 pk)*	10
	TR301-0809CPX	L30361X	352282	TR-Nozzle, 1.2 mm CP (10 pk)*	10
	TR301-0014CPX	L30795X		TR-Nozzle, 1.4 mm CP (10 pk)*	10
	TR301-7500CPX	L3026X	352288	TR-Nozzle, 1.5 mm CP (10 pk)*	10
	TR301-0017CPX	L30796X		TR-Nozzle, 1.7 mm CP (10 pk)*	10
	TR301-7503CPX	L3024X		TR-Nozzle, 2.0 mm CP (10 pk)*	10
	TR301-4564CPX	L30797X	124564	TR-Nozzle, 2.3 mm CP (10 pk)*	10
	TR301-7504CPX	L3025X		TR-Nozzle, 3.0 mm CP (10 pk)*	10
7	TR301-7497X	L3020	237497	TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR301-1497CPX	L3020X	352283	TR-Nozzle HD, 1.4 mm CP (10 pk)*	10
8	TR301-7497-S	L258	237497/S	TR-Nozzle HD, 1.4 mm	1
	TR301-0497X	L30258	237497/S	TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR301-7501X	L3021	237501	TR-Nozzle HD, 1.7 mm (10 pk)*	10
	TR301-3211X	L30168	237502, 1253211	TR-Nozzle HD, 2.0 mm (10 pk)*	10
	TR301-6933X	L3076	126933	TR-Nozzle HD, 2.3 mm (10 pk)*	10
	TR301-0003X	L30185		TR-Nozzle HD, 2.5 mm (10 pk)*	10
	TR301-2742X	L30360	942742	TR-Nozzle HD, 2.7 mm (10 pk)*	10
	TR301-0004X	L30396		TR-Nozzle HD, 3.0 mm (10 pk)*	10
	TR301-0497CPX	L30258X		TR-Nozzle HD, 1.4 mm CP (10 pk)*	10
	TR301-0501CPX	L3021X	352284	TR-Nozzle HD, 1.7 mm CP (10 pk)*	10
	TR301-1002CPX	L30168X	237502, 352287	TR-Nozzle HD, 2.0 mm CP (10 pk)*	10
	TR301-0933CPX	L3076X	352285	TR-Nozzle HD, 2.3 mm CP (10 pk)*	10
	TR301-0003CPX	L30185X		TR-Nozzle HD, 2.5 mm CP (10 pk)*	10
	TR301-0742CPX	L30360X	352286	TR-Nozzle HD, 2.7 mm CP (10 pk)*	10
	TR301-1004CPX	L30396X		TR-Nozzle HD, 3.0 mm CP (10 pk)*	10
9	TR301-4561CPX	L3018XH	352280	TR-Nozzle, 0.8 mm HCP (10 pk)*	10
	TR301-4562CPX	L3019XH	352281	TR-Nozzle, 1.0 mm HCP (10 pk)*	10
	TR301-6809CPX	L30361XH	352282	TR-Nozzle, 1.2 mm HCP (10 pk)*	10
10	TR301-7497CPX	L3020XH	352283	TR-Nozzle HD, 1.4 mm HCP (10 pk)*	10
11	TR301-0014HCPX	L30258XH		TR-Nozzle HD, 1.4 mm HCP (10 pk)*	10
	TR301-7501CPX	L3021XH	352284	TR-Nozzle HD, 1.7 mm HCP (10 pk)*	10
	TR301-0002CPX	L30168XH	237502, 1253212	TR-Nozzle HD, 2.0 mm HCP (10 pk)*	10
	TR301-6933CPX	L3076XH	352285	TR-Nozzle HD, 2.3 mm HCP (10 pk)*	10
	TR301-0025HCPX	L30185XH		TR-Nozzle HD, 2.5 mm HCP (10 pk)*	10
	TR301-2742CPX	L30360XH	352286	TR-Nozzle HD, 2.7 mm HCP (10 pk)*	10
	TR301-0004CPX	L30396XH		TR-Nozzle HD, 3.0 mm HCP (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)

** 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.

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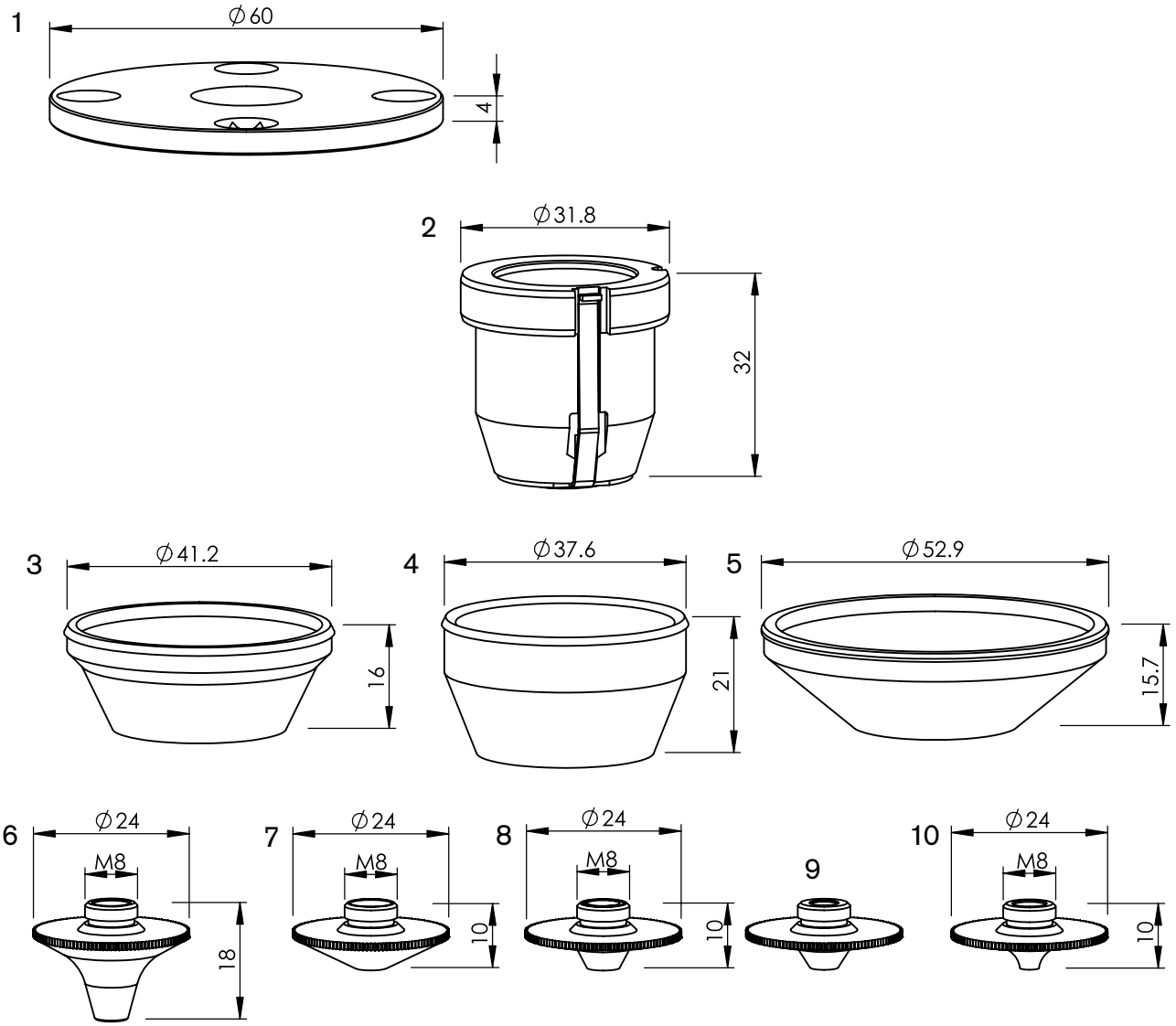

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR301-4485	AL70	234485	TR-Breakaway plate	1
2	TR301-0432	AL108	254493, 260432	TR-Nozzle holder, ceramic	1
3	TR301-4496	AL36	254496	TR-Cover, PTFE**	1
4	TR301-6153	AL47	256153, 955826	TR-Cover, PTFE** (white)	1
	TR301-6153T	AL347	256153, 955826	TR-Cover, PTFE** (black)	1
5	TR301-5286	AL41	225286	TR-Cover, PTFE**	1

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Consumables

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6	TR301-7773	L1550	1277773	TR-Nozzle, 0.8 mm	1
	TR301-7771	L1551	1277771	TR-Nozzle, 1.0 mm	1
	TR301-7774	L1552	1277774	TR-Nozzle, 1.2 mm	1
	TR301-7776	L1553	1277776	TR-Nozzle, 1.4 mm	1
	TR301-7779	L1554	1277779	TR-Nozzle, 1.7 mm	1
	TR301-7780	L1555	1277780	TR-Nozzle, 2.0 mm	1
	TR301-7781	L1556	1277781	TR-Nozzle, 2.3 mm	1
	TR301-7782	L1557	1277782	TR-Nozzle, 2.7 mm	1
	TR301-7773CP	L1550X	1277773 - chrome	TR-Nozzle, 0.8 mm CP	1
	TR301-7771CP	L1551X	1277771 - chrome	TR-Nozzle, 1.0 mm CP	1
	TR301-7774CP	L1552X	1277774 - chrome	TR-Nozzle, 1.2 mm CP	1
	TR301-7776CP	L1553X	1277776 - chrome	TR-Nozzle, 1.4 mm CP	1
7	TR301-7872X	L30495	237872	TR-Nozzle shower, 0.8 mm (10 pk)*	10
8	TR355-0005X	L30640		TR-Nozzle double, 0.8 mm (10 pk)*	10
	TR355-0001X	L30641		TR-Nozzle double, 1.0 mm (10 pk)*	10
	TR355-0006X	L30648		TR-Nozzle double, 1.2 mm (10 pk)*	10
	TR355-0002X	L30642		TR-Nozzle double, 1.4 mm (10 pk)*	10
	TR355-0003X	L30643		TR-Nozzle double, 1.7 mm (10 pk)*	10
	TR355-0007X	L30644		TR-Nozzle double, 2.0 mm (10 pk)*	10
	TR355-0004X	L30645		TR-Nozzle double, 2.3 mm (10 pk)*	10
	TR355-0008X	L30646		TR-Nozzle double, 2.7 mm (10 pk)*	10
	TR355-0009X	L30647		TR-Nozzle double, 3.0 mm (10 pk)*	10
	TR355-0007CPX	L30644X		TR-Nozzle double, 2.0 mm CP (10 pk)*	10
9	TR412-0010X	L30181		TR-Nozzle HD, 1.0 mm (10 pk)*	10
	TR412-0014X	L30182		TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR412-0017X	L30227		TR-Nozzle HD, 1.7 mm (10 pk)*	10
	TR301-0001X	L30313		TR-Nozzle HD, 2.3 mm (10 pk)*	10
10	TR412-0023X	L30720		TR-Nozzle HD, 2.3 mm (10 pk)*	10
	TR412-0027X	L30722		TR-Nozzle HD, 2.7 mm (10 pk)*	10
	TR412-1014CPX	L301034X		TR-Nozzle HD, 1.4 mm CP (10 pk)*	10
	TR412-1017CPX	L301035X		TR-Nozzle HD, 1.7 mm CP (10 pk)*	10
	TR412-1023CPX	L30720X		TR-Nozzle HD, 2.3 mm CP (10 pk)*	10
	TR415-0010	L199		TR-Nozzle extended, 1.0 mm	1

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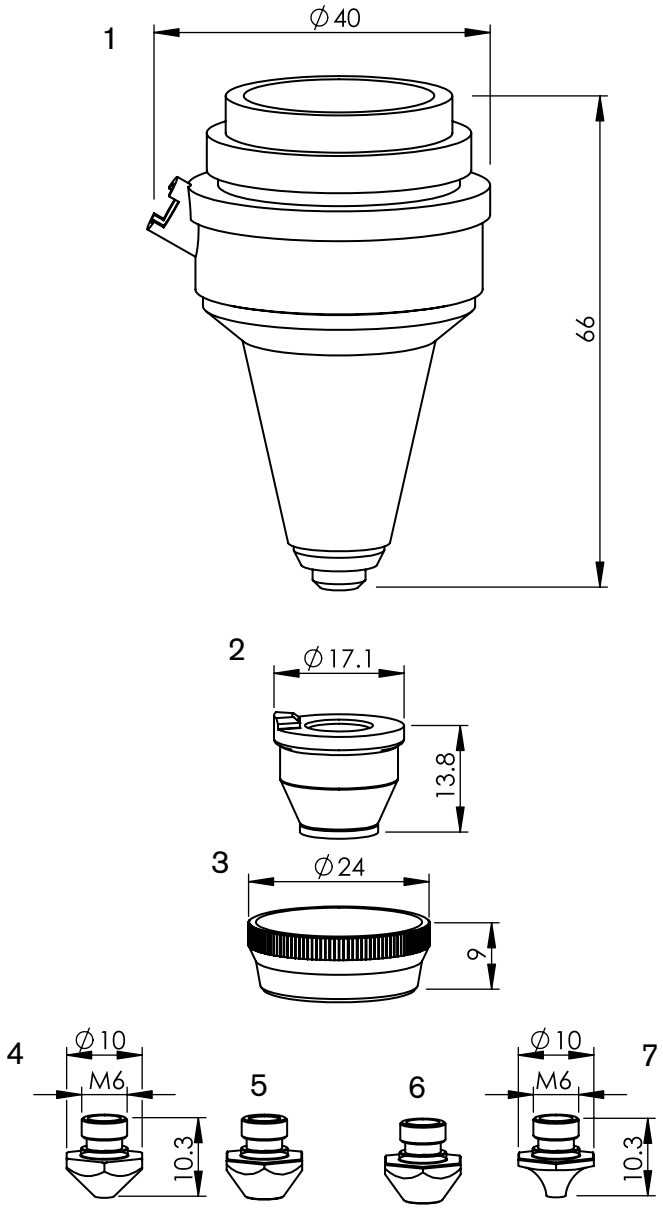

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	PT344-KN		280549	PT-Sensor cone, KN	1
2	TR302-2405	AL53	280408, 092405	TR-Nozzle holder KT M1.5" KN OEM	1
3	TR352-0001	AL177	280550, P0494-940-00001	TR-Nut OEM	1
4	TR302-6939X	L40211	226939	TR-Nozzle, 1.0 mm (10 pk)*	10
	TR302-0002X	L40212		TR-Nozzle, 1.4 mm (10 pk)*	10
	TR302-6933CPX	L40211X	226939	TR-Nozzle, 1.0 mm CP (10 pk)*	10
	TR302-6940X	L40215	226940	TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR302-7144X	L40216	227144	TR-Nozzle HD, 1.7 mm (10 pk)*	10
5	TR302-7364X	L40395	237364	TR-Nozzle shower, 1.0 mm (10 pk)*	10

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Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
6	TR302-4230X	L401150	135420, 1354230	TR-Nozzle EBD, 0.8 mm (10 pk)*	10
	TR302-2334X	L40255	212334	TR-Nozzle EDB, 1.0 mm (10 pk)*	10
	TR302-0008CPX	L401150X	135420, 1354230	TR-Nozzle EBD, 0.8 mm CP (10 pk)*	10
	TR302-2334CPX	L40255X	212334	TR-Nozzle EDB, 1.0 mm CP (10 pk)*	10
	TR302-0009X	L401151		TR-Nozzle EBD HD, 0.8 mm (10 pk)*	10
	TR302-0004X	L40270		TR-Nozzle EBD HD, 1.0 mm (10 pk)*	10
	TR302-6199X	L40256	216199	TR-Nozzle EBD HD, 1.4 mm (10 pk)*	10
	TR302-5213X	L40257	225213	TR-Nozzle EBD HD, 1.7 mm (10 pk)*	10
	TR302-7009X	L401147	1487009	TR-Nozzle EBD HD, 2.0 mm (10 pk)*	10
	TR302-6156X	L40277	126156	TR-Nozzle EBD HD, 2.3 mm (10 pk)*	10
	TR302-6125X	L401149		TR-Nozzle EBD HD, 2.5 mm (10 pk)*	10
	TR302-0027X	L401152		TR-Nozzle EBD HD, 2.7 mm (10 pk)*	10
	TR302-0009CPX	L401151X		TR-Nozzle EBD HD, 0.8 mm CP (10 pk)*	10
	TR302-0004CPX	L40270X		TR-Nozzle EBD HD, 1.0 mm CP (10 pk)*	10
	TR302-6198X	L401154	1479581	TR-Nozzle EBD HD, 1.2 mm (10 pk)*	10
	TR302-6199CPX	L40256X	216199	TR-Nozzle EBD HD, 1.4 mm CP (10 pk)*	10
	TR302-5213CPX	L40257X	225213	TR-Nozzle EBD HD, 1.7 mm CP (10 pk)*	10
	TR302-6156CPX	L40277X	126156	TR-Nozzle EBD HD, 2.3 mm CP (10 pk)*	10
	TR302-0027CPX	L401152X		TR-Nozzle EBD HD, 2.7 mm CP (10 pk)*	10
7	TR302-5320X	L40625		TR-Nozzle, 1.0 mm (10 pk)*	10
	TR302-0007X	L40627		TR-Nozzle HD, 1.0 mm (10 pk)*	10
	TR302-5318X	L40628		TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR302-0017X	L40629		TR-Nozzle HD, 1.7 mm (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)

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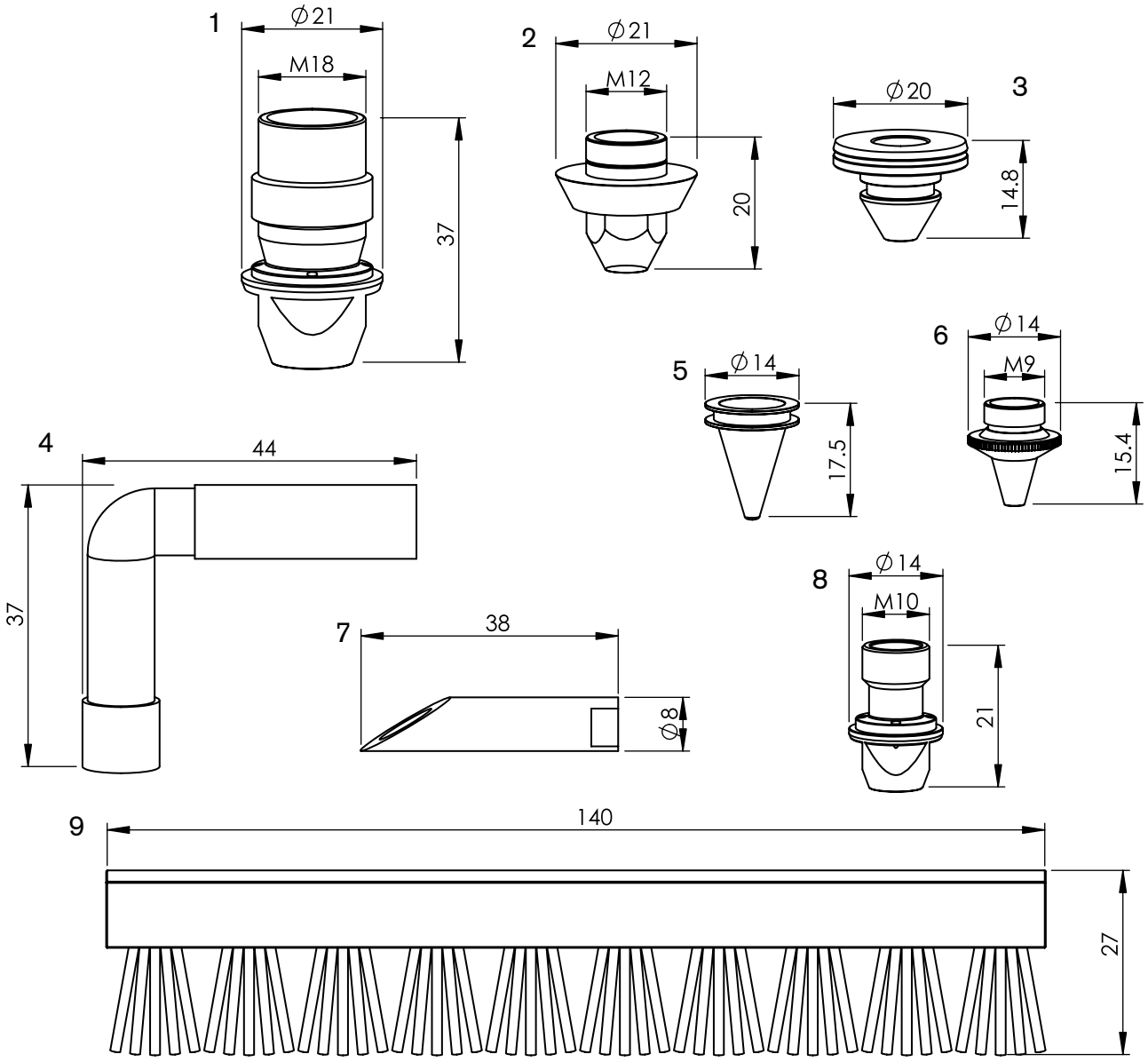

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR352-0783	L1186	220783	TR-Nozzle welding M18	1
2	TR352-2530CP	L1010X	932530	TR-Nozzle, 4.5 mm CP	1
3	TR303-2952	L5	202952	TR-Nozzle, 0.8 mm	1
	TR303-0969	L34	218969	TR-Nozzle, 1.0 mm	1
	TR303-9402	L35	209402	TR-Nozzle HD, 1.4 mm	1
	TR303-7953	L36	217953	TR-Nozzle HD, 1.7 mm	1
4	TR301-8557		88557	TR-Nozzle, 90 degrees	
5	TR414-0008	L507	12-11-16-00	TR-Nozzle YAG w/o-ring, 0.8 mm	1
	TR414-0010	L506		TR-Nozzle YAG w/o-ring, 1.0 mm	1
	TR414-0012	L505	12-11-09-17/00	TR-Nozzle YAG w/o-ring, 1.2 mm	1

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Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
6	PT344-1813X	L30405	281813, P0589-424-00008	PT-Nozzle, 0.8 mm (10 pk)*	10
	PT344-1789X	L30406	281789, P0589-426-00010	PT-Nozzle, 1.0 mm (10 pk)*	10
	PT344-1561X	L30404	281561, 778550	PT-Nozzle, 1.2 mm (10 pk)*	10
	PT344-1499X	L30407	281814, 149957	PT-Nozzle, 1.5 mm (10 pk)*	10
	PT344-0020X	L30408	P0589-428-00020	PT-Nozzle, 2.0 mm (10 pk)*	10
	PT344-0020CPX	L30408X	P0589-428-00020	PT-Nozzle, 2.0 mm CP (10 pk)*	10
7	TR301-6184		256184	TR-Blow tube	1
8	TR352-4947	L1185	924947	TR-Nozzle welding M10	1
9	TR301-3202	AL272	0353202, 900594	TR-Brush	1

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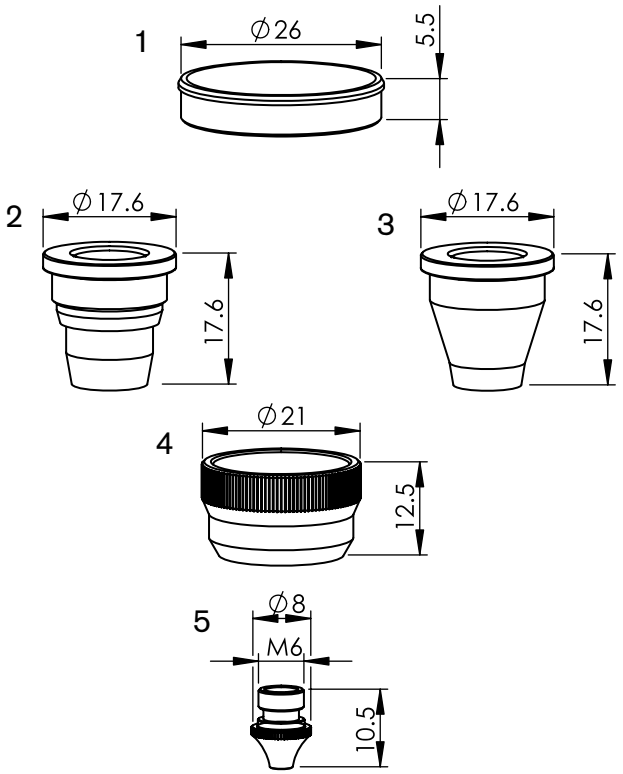
Centricut®

Replacement parts suitable for:

Trumpf®



Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR302-0354	AL389	960354	TR-Insulating, PTFE**	1
2	TR302-6678C	AL412	936678, 913966/00-WO	TR-Nozzle holder 3D, ceramic	1
3	TR302-6678 Recommended	AL212		TR-Nozzle holder, ceramic	1
	TR302-6678OEM			TR-Nozzle holder, ceramic OEM	1
4	TR352-3965	AL254	913965	TR-Retainer nut	1
	TR302-8206X	L40745	958206	TR-Nozzle, 0.25 mm (10 pk)*	10
	TR352-3799X	L40500	913799	TR-Nozzle EBG HD, 0.8 mm (10 pk)*	10
	TR352-3800X	L40501	913800	TR-Nozzle EBG HD, 1.0 mm (10 pk)*	10
	TR352-7034X	L40498	1487034	TR-Nozzle EBG HD, 1.2 mm (10 pk)*	10
	TR352-3801X	L40502	913801	TR-Nozzle EBG HD, 1.4 mm (10 pk)*	10
	TR352-7988X	L40503	937988	TR-Nozzle HD, 1.7 mm (10 pk)*	10
	TR352-7991X	L40499		TR-Nozzle HD, 1.75 mm (10 pk)*	10
	TR352-7990X	L40508	1487036	TR-Nozzle HD, 2.0 mm (10 pk)*	10
	TR352-7989X	L40504	937989	TR-Nozzle EBF HD, 2.3 mm (10 pk)*	10
	TR352-3800CPX	L40501X	913800	TR-Nozzle EBG HD, 1.0 mm CP (10 pk)*	10
	TR352-7034CPX	L40498X	1487034	TR-Nozzle EBG HD, 1.2 mm CP (10 pk)*	10
	TR352-3801CPX	L40502X	913801	TR-Nozzle EBG HD, 1.4 mm CP (10 pk)*	10
	TR352-7988CPX	L40503X	937988	TR-Nozzle HD, 1.7 mm CP (10 pk)*	10
	TR352-7990CPX	L40508X		TR-Nozzle HD, 2.0 mm CP (10 pk)*	10
	TR352-7989CPX	L40504X	937989	TR-Nozzle EBF HD, 2.3 mm CP (10 pk)*	10

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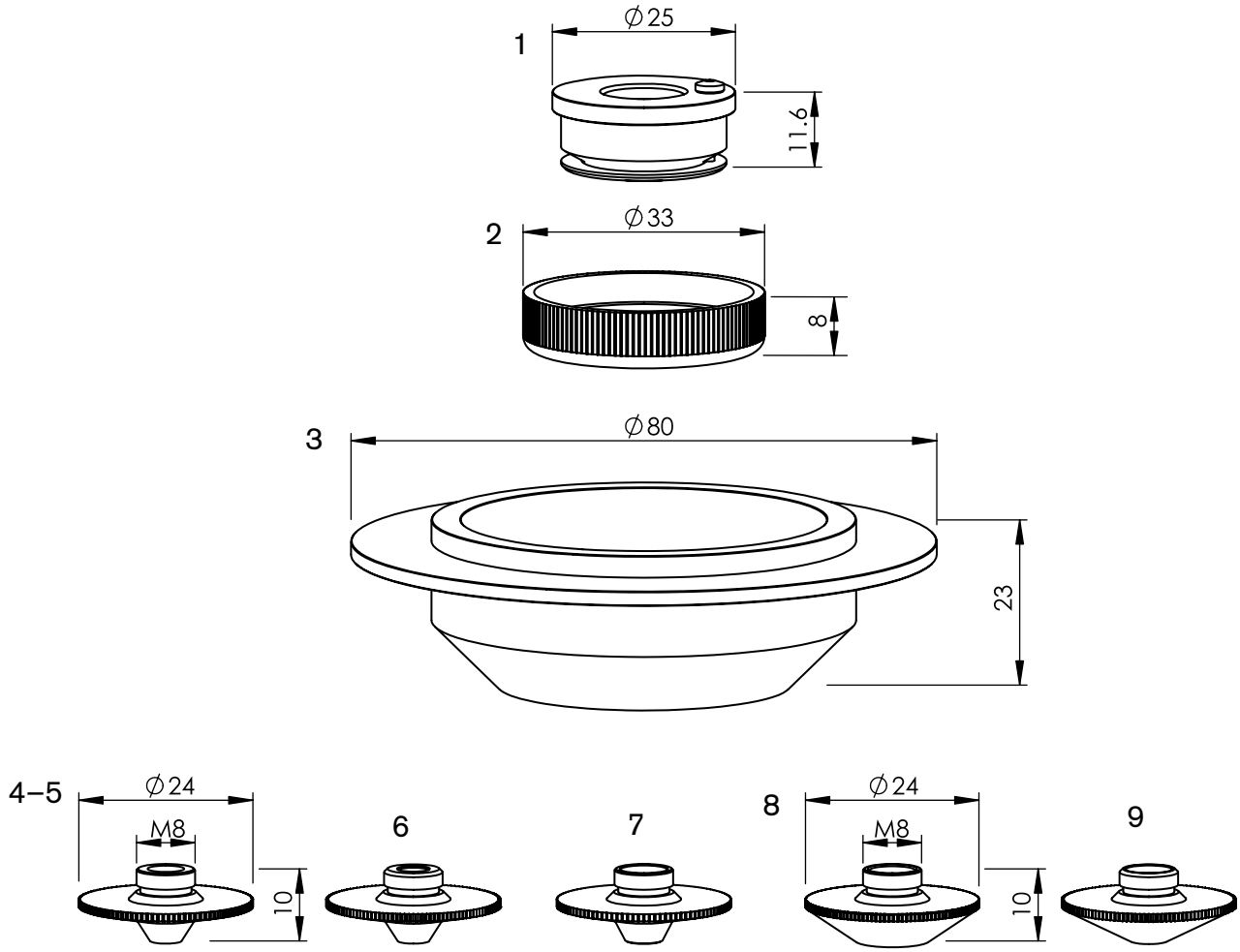

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR301-8809 Recommended	AL38	258809	TR-Nozzle holder, ceramic	1
	TR301-8809OEM	AL400	258809	TR-Nozzle holder, ceramic OEM	1
2	TR301-6066	AL250	216066	TR-Cap nut	1
3	TR301-6065	AL19	216065	TR-Cover, PTFE**	1
4	TR301-5780X	L3002	215780	TR-Nozzle, 0.8 mm (10 pack)*	10
5	TR301-8894X	L3001	88894	TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR301-7867X	L3012	217867	TR-Nozzle HD, 1.7 mm (10 pk)*	10
6	TR412-0010X	L30181		TR-Nozzle HD, 1.0 mm (10 pk)*	10
	TR412-0014X	L30182		TR-Nozzle HD, 1.4 mm (10 pk)*	10
	TR412-0017X	L30227		TR-Nozzle HD, 1.7 mm (10 pk)*	10
7	TR301-7976X	L50496	217976	TR-Nozzle shower, 0.8 mm	10
8	TR301-1010X	L30798		TR-Nozzle, 1.0 mm (10 pk)*	10
	TR301-8893X	L3013	88893	TR-Nozzle, 1.5 mm (10 pk)*	10
	TR301-1781X	L3068	221781	TR-Nozzle, 2.0 mm (10 pk)*	10
	TR301-4565X	L30230	235592	TR-Nozzle, 3.0 mm (10 pk)*	10
9	TR301-7872X	L30495	237872	TR-Nozzle shower, 0.8 mm (10 pk)*	10

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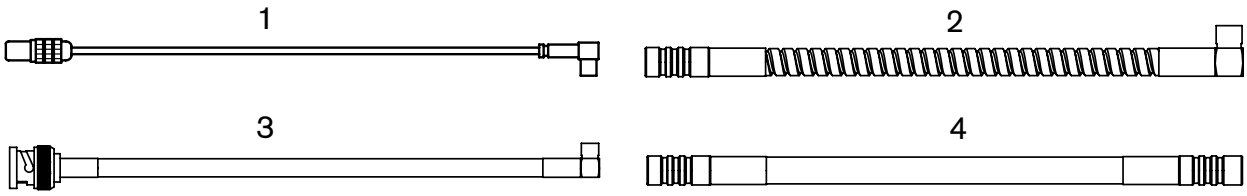

Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
1	TR301-1086		0351086, P0492-001-00000	TR-Sensor cable	1
2	TR301-9983		359983	TR-Sensor cable, 190 mm (7.5") armored	1
3	TR301-7833		227833	TR-Sensor cable, 432 mm (17")	1
4	TR301-0930		280930	TR-Sensor cable, 152 mm (6") armored	1

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Consumables

	Centricut part number	Esse A part number	Reference number	Description	Pkg qty
	Filters – not shown				
	TR301-2380	92380	FT1	TR-Filter, DX	1
	TR301-2381	92381	FT2	TR-Filter, BX	1
	TR301-2379	92379	FT3	TR-Filter, CI	1
	TR301-3676	123676 – U0310 VF	FT4	TR-Filter	1
	TR301-3675	123675 – U0310 SMA	FT5	TR-Filter	1
	TR301-3674	123674 – U0310 CA	FT6	TR-Filter	1
	TR301-6152	146152	CP10	TR-Water filter	1
	TR301-5942	115942		TR-Air filter	1

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Centricut®

Replacement parts suitable for:

Trumpf®

Optics

Centricut part number	Reference number	Type	Diameter	Focal length	Edge thickness
Lenses					
TR300-6104	346104	MEN	1.5"	3.75"	.290"
TR300-8114	88114	MEN	1.5"	5.0"	.290"
TR300-0002	706491	MEN	1.5"	5.0"	.157"
TR300-7517	97517	MEN	1.5"	7.5"	.290"
TR300-8123	581123	MEN	1.575" (40 mm)	6.102" (155 mm)	.295" (7.5 mm)
TR300-1972	141972	MEN	1.5"	9.0"	.290"
TR300-0163	350163	MEN	1.5"	10.0"	.290"
TR300-6477	726477	MEN	1.5"	10.0"	.354"
Low absorption lenses					
TR300-8114MP5	88114	MEN	1.5"	5.0"	.290"
TR300-7517MP5	97517	MEN	1.5"	7.5"	.290"

Centricut part number	Reference number	Type	Material	Diameter	Focal length	Edge thickness
Fiber laser lenses						
TR300-3107	1603107	PLX	FS	40 mm	150 mm	5.30 mm
TR300-9799 NEW	1869799	PLX	FS	30 mm	146 mm	8.0 mm

Centricut part number	Reference number	Material	Diameter	Edge thickness
Fiber laser windows				
TR300-4767	1614767	FS	34 mm	5 mm
TR300-6719	766719	FS	30 mm	5 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

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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.

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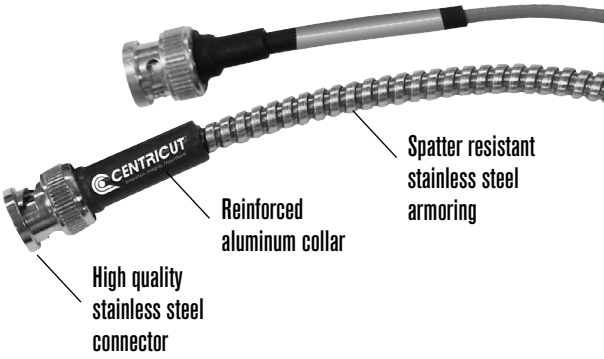
Armored sensor cables

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

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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).

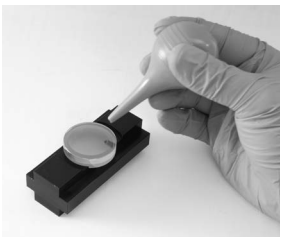
Product description	Part number	Quantity per order
Optical cleaning fluid (3 oz.)	TR300-1112	1
Lens cleaning swab	TR300-0699	25
Lens cleaning paper, Tiffen	TR300-6452	50
Polyester wipes 4" x 4"	TR300-7991	100
Base, lens maintenance	TR300-271	1

Lens paper

Recommended for the routine maintenance cleaning of flat lenses.

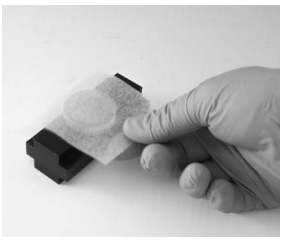
You will need:

- 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.

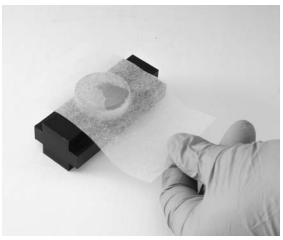


Step 1

Place lens paper over the optic, covering it completely.

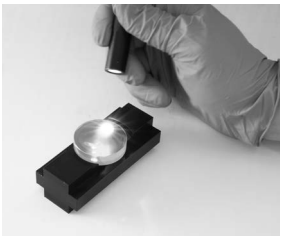
Step 2

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.

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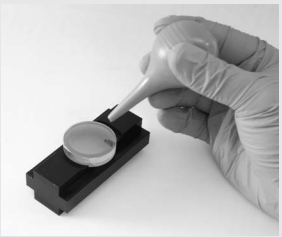
Polyester swabs

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

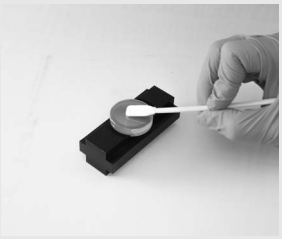


To get started

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.

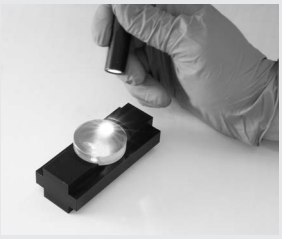
Step 1

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

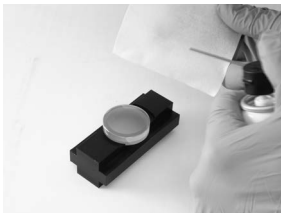
Recommended for cleaning CO_2 and fiber lenses and windows. Interchangeable with polyester swabs and lens paper.

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.

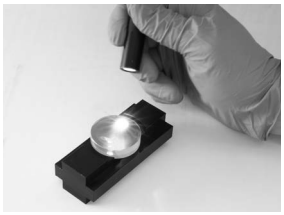


Step 1

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.

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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.

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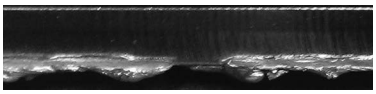
3.2 mm (10 ga.) mild steel cut resulting in too narrow kerf

Factory cut chart settings

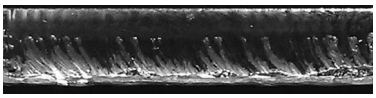
Focus is too low

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



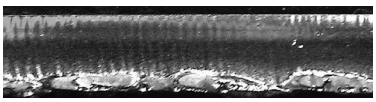
Feed rate is too fast

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



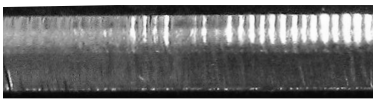
Gas pressure is too low

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



Stand off is too low

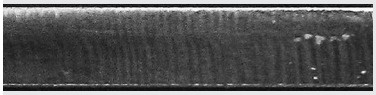
The focus spot is in the wrong location, causing the rough edge.



Cut direction

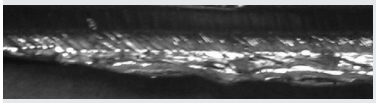
3.2 mm (10 ga.) mild steel cut resulting in too wide kerf

Factory cut chart settings



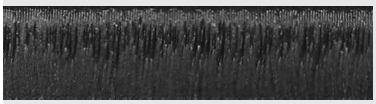
Focus is too high

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.

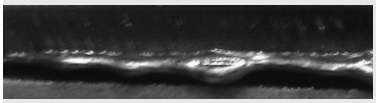


Gas pressure is too high

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

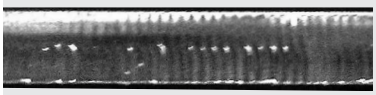
Stand off is too high

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.

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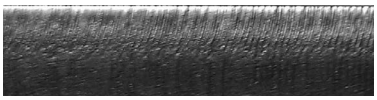
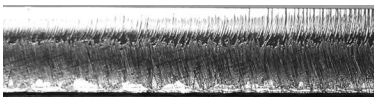
6 mm (1/4") mild steel cut resulting in too narrow kerf

Factory cut chart settings



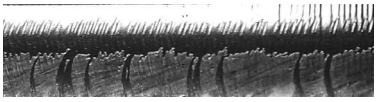
Focus is too low

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



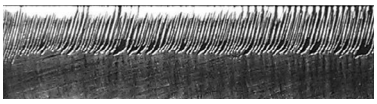
Feed rate is too fast

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



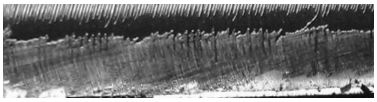
Gas pressure is too low

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



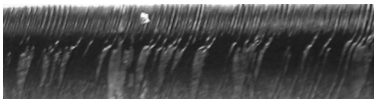
Stand off is too low

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



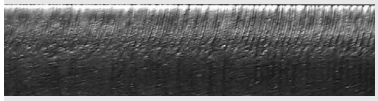
Nozzle size is too small

There is not enough O_2 to cut uniformly

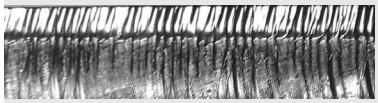


Cut direction

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

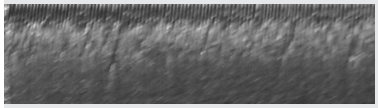


Factory cut chart settings



Focus is too high

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

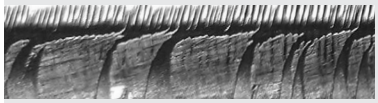


Feed rate is too slow

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.

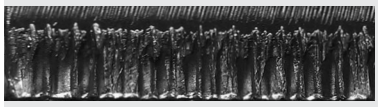


Stand off is too high

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.

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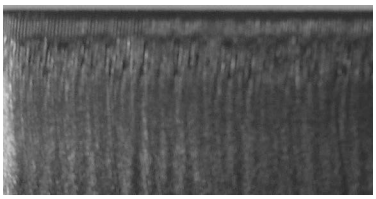
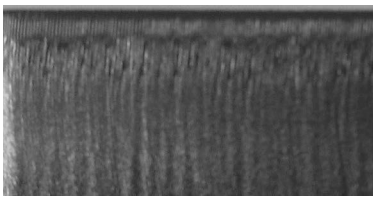
12 mm (1/2") mild steel cut resulting in too narrow kerf

Factory cut chart settings

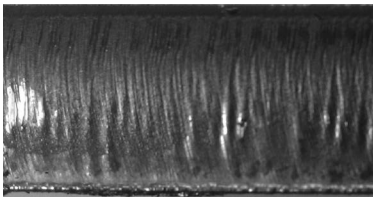


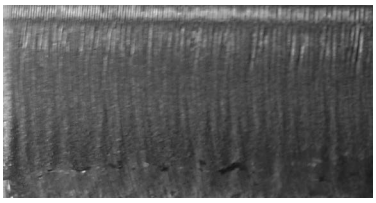


Factory cut chart settings

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.



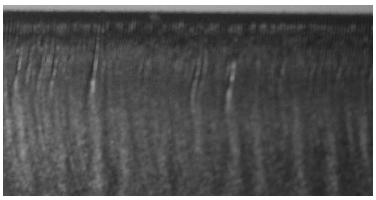


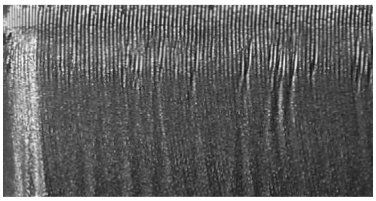
Stand off is too low

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.



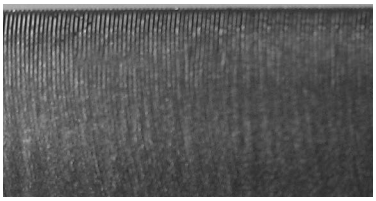


Nozzle size is too small

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.

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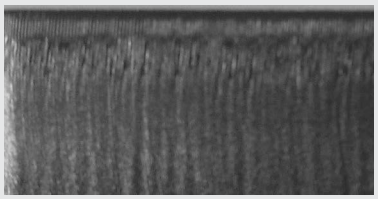
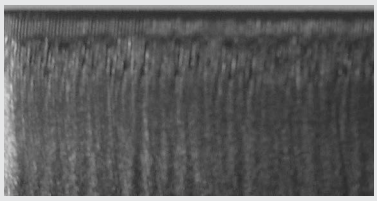
12 mm (1/2") mild steel cut resulting in too wide kerf

Factory cut chart settings

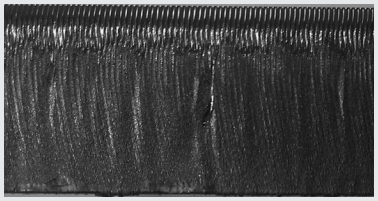


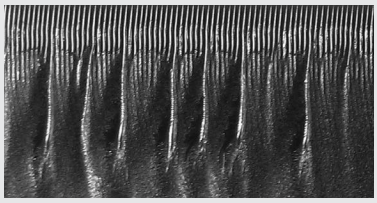


Factory cut chart settings

Focus is too high

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



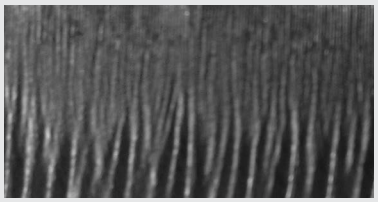


Stand off is too high

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.

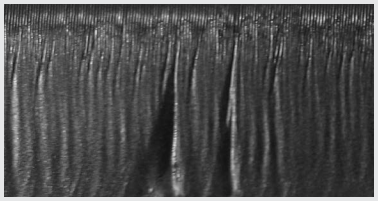


Incorrect nozzle type

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

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- Free application support for all laser OEMs
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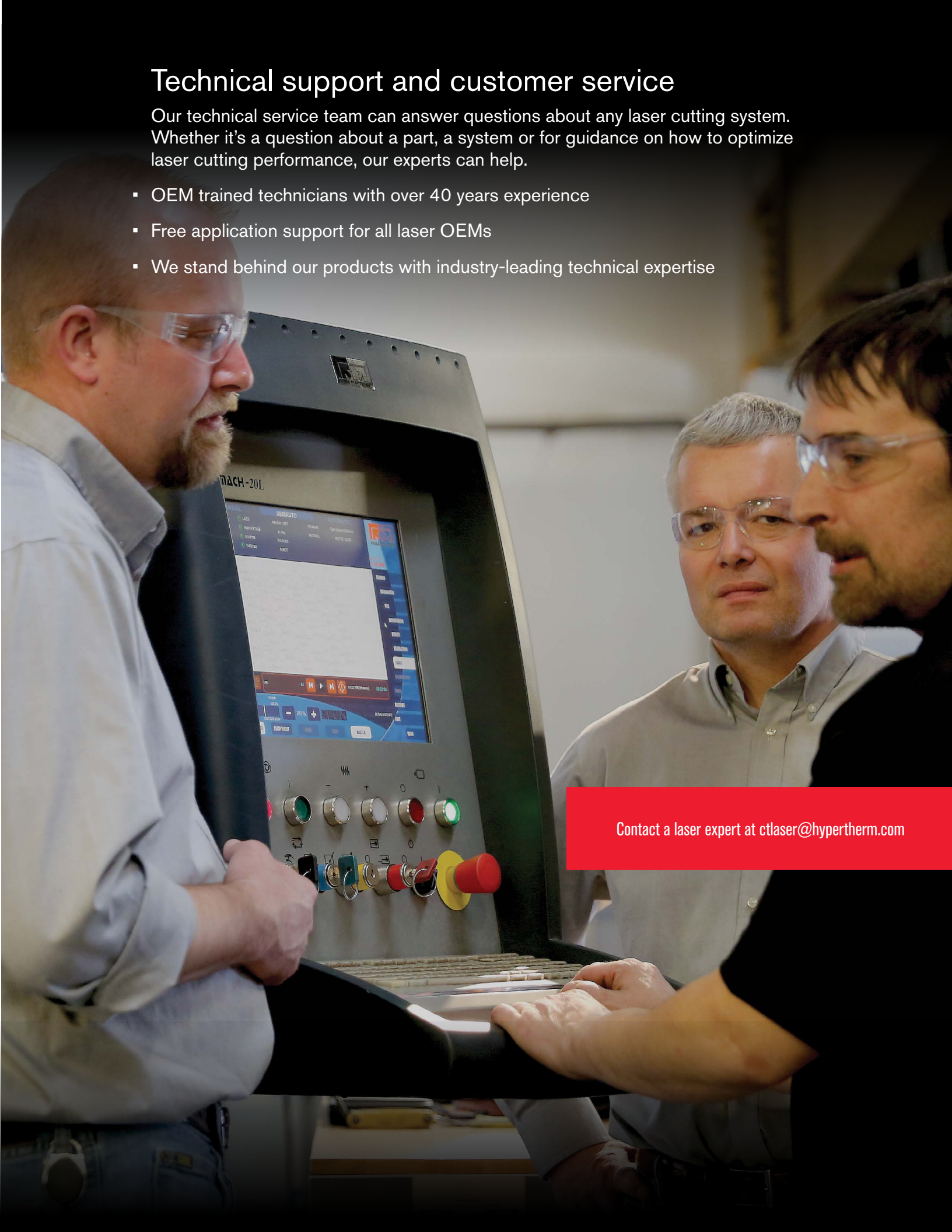

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