

CO, and Fiber Laser Consumables Catalog













Replacement Parts for TRUMPF® Lasers





Richardson Electronics is a global distributor of RF tubes (power grid tubes) and consumables used in CO_2 industrial lasers. With over 60 years of experience and 45 sales offices and stocking locations around the world, we provide the highest standard of quality and service. Our commitment to providing the best products to meet our customers' needs is second to none.

We stock critical components for laser systems and provide expert assistance in selecting replacement products and alternatives.

Richardson Electronics is a world leading supplier of CO₂ laser consumables. We have an extensive global supply network which helps us maintain a large inventory of replacement parts for CO₂ laser machines from the industry's leading manufacturers.

All of Richardson Electronics' CO_2 laser consumables are manufactured to the highest standards of quality and performance that meet, or exceed the OEM's original specifications. Our replacement parts for TRUMPF®, Bystronic® and other major manufacturer's lasers, deliver the same level of performance as OEM parts, but are a far more cost effective alternative.

Contact Richardson Electronics today for more information, or request a quote for your CO2 laser replacement parts.

| Table of Contents | Page |
|--|------|
| Bellows | 20 |
| Driver stages | 4 |
| Fiber Laser Consumables | 8 |
| Filters – Dust Collection, Air and Water | 31 |
| Hyco Pump | 7 |
| Lenses and cleaning supplies | 18 |
| Miscellaneous Accessories | 5 |
| Mirrors | 19 |
| Nozzles and Accessories | 13 |
| Nozzles, CoolLine & BrightLine | 11 |
| Nozzles, Precitec | 12 |
| RF Tubes | 3 |
| Sika Flow Meters | 7 |
| Water treatment kits | 36 |



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Richardson Electronics is the world's leading supplier of replacement RF power tubes for lasers. We offer the highest quality tubes available including the original Thales made RS3021CJ, RS2048CJC and RS2088CJC. In addition, we offer the anode kits and replacement sockets for both the RS3021CJ and RS2048CJC.

The superior quality of our Thales replacement RF power tubes, our broad selection, and our competitive prices make Richardson Electronics the number one aftermarket RF tube supplier in the world. Contact Richardson Electronics today to learn more, or request a quote for the RF power tube that your laser system needs.

Did you know that pyrolytic graphite grids provide the highest reliability and the longest life?
Did you also know that the Thales RS2048CJC uses this technology? Accept nothing less than the best for your laser, insist on Thales!



RS2048CJC



RS3021CJ







ROEKG321G

Did you know that when you replace a tube, it is a good practice to inspect the fingers of the socket contacts, to ensure they are not bent, burned, corroded or have any type of damage that can cause arching that will result in shorter tube life?

| Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------------|-----------|--|-------|
| 0120730, 1290700, | | | |
| 1347276, 1582540, | | | |
| 1800928 1800961, | RS3021CJ | RF End Stage Tube | |
| 1800985, 1801047, | | | |
| 1803428 | | | |
| 0932468, 1237260, | | | 7 |
| 1237228, 1237398, | | | Call |
| 1296799, 1582457, | RS2048CJC | RF End Stage Tube | J |
| 1800986, 1811787, | | | |
| 1812660 | | | |
| 1390594, 1438766 | RS2088CJC | RF End Stage Tube | |
| 0911332 | ROEKG248K | Socket for End Stage tube type RS2048CJC | |
| 1201187, 1548071 | ROEKG321G | Socket for End Stage tube type RS3021CJ | |

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Drive Stage Repair

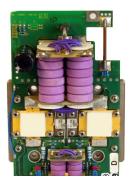


CO₂ Laser Driver Stage

As a division of Richardson Electronics, our experts at Powerlink have the knowledge, experience and test equipment to perform a 38-step process of full diagnostics, repair and 24-hour final operation test, to bring driver stages back to life at original factory specifications. We keep units in stock for swap, so you don't lose any valuable downtime -at a fraction of purchasing a new unit.

Nothing to lose and everything to gain!

Do you have a defective driver stage lying around collecting dust? Why not turn that defective driver stage into a working spare or a core credit you can use towards the purchase of a NEW RF tube or consumables of your choice? CALL US TODAY for details on how you can turn that old driver stage into consumables that you really need!



RF Amplifier Pallet

| Trumpf No. | Power Output | Frequency | Order No. |
|--|-----------------|-----------|--|
| 0087597, 0102687 | 600W | 13.56 Mhz | Discontinued - Alternative type = RDS1KW13-R |
| 0954356, 0990818, 1286829, 1288251, 1544591, 1544595 | 650W | 13.56 Mhz | RDS650W13-R |
| 1313254, 1392849, 1726682, 1760569, 1829407 | 650W Class "E" | 13.56 Mhz | RDS650W13E-R |
| 0131606, 0149214, 1286827, 1288252, 1597793, 1633973 | 1000W | 13.56 Mhz | RDS1KW13-R |
| 1258223, 1368226, 1726681, 1746606 | 1000W Class "E" | 13.56 Mhz | RDS1KW13E-R |
| 0102130, 0102654 | 1200W | 13.56 Mhz | Discontinued - Alternative type = RDS1KW13-R |
| 0139823, 0342740, 1286828, 1288256, 1597794,1633972 | 2000W | 13.56 Mhz | RDS2KW13-R |
| 1303885, 1383930, 1726678, 1746609, 1829431 | 2000W Class "E" | 13.56 Mhz | RDS2KW13E-R |
| 0920105, 0921405, 1293759, 1323934 | 1000W | 27.12 Mhz | RDS1KW27-R |
| 1391564, 1726679 | 1200W Class "E" | 27.12 Mhz | RDS1.2KW27E-R |



Powerlink is a division of Richardson Electronics, Ltd, that specializes in the repair of satellite communication equipment and industrial RF amplifiers.

Visit their web site at www.powerlink-ltd.com

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Do you need help in getting a tube installed? Give us a call and we'll arrange to have it installed for you!

End Stage Tube Accessories



Part No. AX2048CJ-KIT Sacrificial anode water connection kit for the RS2048CJC end stage tube. **Trumpf's part no. 1601003**

Part No. AX3021CJ-KIT Sacrificial anode water connection kit for the RS3021CJ end stage tube.



Part No. TUBE-EXTRACTOR End Stage tube extraction tool, works on the RS2048CJC and RS3021CJ. Direct replacement for Trumpf's part no. 0925091 (includes the guide pins Trumpf's part no. 1520715)

Did you know that accidentally hitting the tubes grid contact(s) into the anode contact of the socket assembly can cause your tube to fail? Using a tube extraction tool minimizes this risk, by safely releasing the tube from the socket and keeping it aligned during the removal and insertion process.



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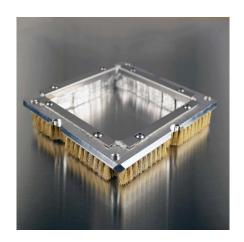
Part No. RST881/FAN/BATT Fan Battery Assembly – Used in the Siemens NCU 840D (control module).

Trumpf's part no. 0146881

Did you know that that it is recommended that this fan battery assembly be replaced every three years? When was the last time you changed yours?

Part No. RST837/FAN/BATT Fan Battery Assembly – Used in the Siemens NCU 7X0 or D445-1 (control modules). Trumpf's part no. 0385837





Part No. RUT202/BRUSH Protection brush for laser/punch combo units. - Trumpf's part no. 0353202

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Hyco Vacuum Pumps



We are now offering replacement Hyco vacuum pumps for $Trumpf^{\otimes}$ CO_2 laser systems. These are direct drop in replacements. We offer both the original hardwire version and the newer plug version.

We understand your uptime requirements, and strive to provide excellent customer service and will offer you the highest quality components that you and your TRUMPF® laser deserve — all at competitive prices.

| Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------------|---------------|---|-------|
| 0149023, 0352561, | RPT203/PUMP | Hyco Vacuum Pump (Hard Wired) | |
| 0941996, 0946052 | KF1203/FOIVIF | nyco vacuum Pump (naru wireu) | |
| 0367905, 0385475, | | | Call |
| 1363752, 1363753, | RPT752/PUMP | Hyco Vacuum Pump (With 4 Pole Recepticle Connector) | |
| 2237816, 2237817 | | | |

SIKA Flow Meters



Richardson Electronics is pleased to offer the original SIKA® replacement flow meters used in Trumpf® CO2 lasers. These are the exact same high quality flow meters as the original flow meters used in the Trumpf® laser systems. Flow meters are an essential component in making sure that the right amount of coolant is flowing to the lasers key components (such as the RF power tubes RS3021CJ & RS2048CJC), keeping them cooled properly so that they provide optimal performance and provide long life.

Over time flow meters can get clogged and or malfunction, which can lead to costly repairs. Checking the flow meters should be part of your normal preventive maintenance and replaced as required. An ounce of prevention can be worth thousands of dollars in savings in repairs!

SIKA Flow Meters

| Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------------|----------------|----------------------------|-------|
| 1264721 & 1934478 | VT1541KHUTTI20 | Flow Control VTH15K5-41 | |
| 0362183 | VT25110TRUMP13 | Flow Meter VTH25-180AL | |
| 1362184 | VT1540TRUMP12 | Flow Meter VTH15-41AL | Call |
| 1352460 | VT2511KHUTTI31 | Flow Meter VTH25K6-180NTSP | Call |
| 1270402 & 2043439 | VT1541KHUTTI22 | VTH 15 K5-41, SP-T1870 | |
| 1264725 | VT1541KHUTTI21 | VTH 15 K5-41 NT, SP-T3261 | |

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Consumables for Trumpf® Fiber Lasers

Richardson has been providing products to the CO₂ laser for more than 25 years now and we are pleased to announce the expansion of our laser product offerings with the addition of consumable products for fiber lasers. Below are a list of the most commonly used items. We look forward to being your supplier of choice for all of your fiber laser consumable needs.

Nozzles & Nozzle Holders











| Outline | Trumpf No. | Order No. | DESCRIPTION (Sold in packages of 10) |
|-------------|---------------------|------------------------|--|
| 2 | 1324858 | RNT060/08 | Nozzle EAA ø 0.8 mm |
| 2 | 1324860 | RNT061/10 | Nozzle EAA ø 1.0 mm |
| 2 | 1324861 | RNT062/12 | Nozzle EAA ø 1.2 mm |
| 2 | 1324863 | RNT063/14 | Nozzle EAA ø 1.4 mm |
| 2 | 1324864 | RNT064/17 | Nozzle EAA ø 1.7 mm |
| 2 | 1324865 | RNT065/20 | Nozzle EAA ø 2.0 mm |
| 2 | 1324866 | RNT066/23 | Nozzle EAA ø 2.3 mm |
| 2 | 1324867 | RNT067/27 | Nozzle EAA ø 2.7 mm |
| 4 | 1373324 | RNT070/08 | Nozzle EAB ø 0.8 mm |
| 4 | 1373325 | RNT071/10 | Nozzle EAB ø 1.0 mm |
| 4 | 1373326 | RNT072/12 | Nozzle EAB ø 1.2 mm |
| 4 | 1373327 | RNT073/14 | Nozzle EAB ø 1.4 mm |
| 4 | 1373328 | RNT074/17 | Nozzle EAB ø 1.7 mm |
| 4 | 1373329 | RNT075/20 | Nozzle EAB ø 2.0 mm |
| 4 | 1373330 | RNT076/23 | Nozzle EAB ø 2.3 mm |
| 4 | 1373331 | RNT077/27 | Nozzle EAB ø 2.7 mm |
| | 1349171, | | |
| 6 | 1591594, 1755673 | RHT112/H | Nozzle Holder (Sold individually) |
| Outline | Trumpf No. | Order No. | DESCRIPTION (Sold in packages of 10) |
| 3 | 0124561 | RNT150/08 | Nozzle ECE ø 0.8 mm (0237499) |
| 3 | 0124562 | RNT151/10 | Nozzle ECE Ø 1.0 mm |
| 3 | 0966809 | RNT131/10 RNT148/12 | Nozzle ECE ø 1.0 mm |
| 3 | 0237497 | RNT152/14 | Nozzle ECE ø 1.2 mm |
| 3 | 0237500 | RNT153/15 | Nozzle ECE ø 1.5 mm |
| 3 | 0237501 | RNT154/17 | Nozzle ECE ø 1.7 mm |
| 3 | 1253211 | RNT155/20 | Nozzle ECE ø 2.0 mm (0237502 & 0237503) |
| | 1233211 | 1111133/20 | 10221C EGE \$ 2.0 Hill (0237302 & 0237303) |
| 3 | 0126933 | RNT158/23 | Nozzle ECE ø 2.3 mm |
| 3 | 0942742 | RNT149/27 | Nozzle ECE ø 2.7 mm |
| 7 | 0260432 | RHT109/H | Nozzle HOLDER "Ceramic" (Sold individually) |
| 5 | 0955826 | RTT162/TCB | Teflon Cover DIAS III, Black (Sold individually) |
| Outling dra | wings on following | ากลุสุด | |

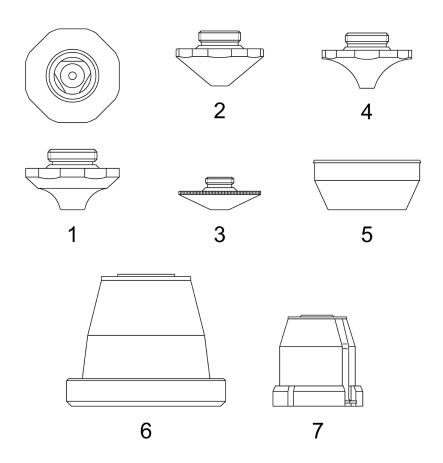
Outline drawings on following page

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Consumables for Trumpf® Fiber Lasers

| Outline | Trumpf No. | Order No. | DESCRIPTION (Sold in packages of 10) |
|---------|------------|------------|--------------------------------------|
| 1 | 2059462 | RNT096/25 | Nozzle EAU ø 2.5 mm |
| 1 | 2060001 | RNT097/30 | Nozzle EAU ø 3.0 mm |
| 1 | 2060004 | RNT098/40 | Nozzle EAU ø 4.0 mm |
| 1 | 2060025 | RNT099/60 | Nozzle EAU ø 6.0 mm |
| 1 | 2253595 | RNT041/100 | Nozzle EAU ø 10.0 mm |



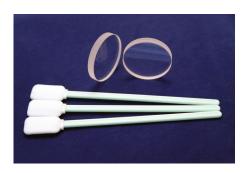
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Consumables for Trumpf® Fiber Lasers

Protective Lens Covers & Cleaning Swabs



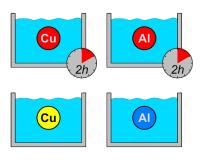
Protective Lens Covers for Fiber Laser

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|-----------------|---|-------|
| 0122024 | RLT024/LNSTICK | Knit Polyester Cleaning Swabs (100/pack) | |
| 0759720 | RLT122/55D1.5T | 55 Dia. x 1.5mm Thick, Fused Silica Protective Window | |
| 0766719 | RLT128/30D5T | 30 Dia. x 5mm Thick, Fused Silica Protective Window | Call |
| 0766719 | RLT130/30D5THP | 30 Dia. x 5mm Thick, Fused Silica Protective Window for +8kW Fiber Lasers | Call |
| 0798142 | RLT122/55D1.5T | 55 Dia. x 1.5mm Thick, Fused Silica Protective Window |] |
| 1614767 | RLT120/PLC-FIBR | 34 Dia. x 5mm Thick, Fused Silica Window | |

NEW items shown in **BOLD** type



Dust Collection Filters - See page 31



Water Treatment Kits - See page 36



Water Cartridge Filters – See page 34



Rail Bellows - CALL us

Chiller Air Intake Filter Material – See page 35

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Trumpf® BrightLine® & CoolLine® Nozzles

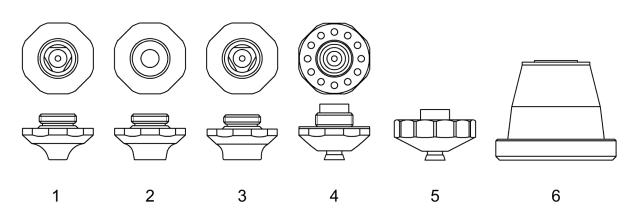


Bright Line Nozzles

| Outline No. | Trumpf No. | Order No. | DESCRIPTION (Sold Individually) |
|-------------|------------------------------|-----------|-----------------------------------|
| | 1664569 | RNT081/17 | Nozzle EAN ø 1.7mm |
| 1 | 1664602 | RNT082/20 | Nozzle EAN ø 2.0mm |
| | 1664625 | RNT083/25 | Nozzle EAN ø 2.5mm |
| 1 | 1835747 | RNT084/40 | Nozzle EAK ø 4.0mm |
| 2 | 1633046 | RNT085/53 | Nozzle EAC ø 5.3mm |
| | 1809091 | RNT086/60 | Nozzle EAQ ø 6.0mm |
| 3 | 1809421 | RNT087/75 | Nozzle EAQ ø 7.5mm |
| | 1886199 | RNT088/95 | Nozzle EAQ ø 9.5mm |
| 6 | 1349171, 1591594, 1755673 | RHT112/H | Nozzle Holder (Sold Individually) |

Cool Line Nozzles

| Outline No. | Trumpf No. | Order No. | DESCRIPTION (Sold Individually) |
|-------------|------------|-----------|---------------------------------|
| | 1774018 | RNT089/14 | Nozzle EFL ø 1.4mm |
| 5 | 1774020 | RNT090/20 | Nozzle EFL ø 2.0mm |
| | 1774092 | RNT091/23 | Nozzle EFL ø 2.3mm |
| 4 | 1879951 | RNT092/17 | Nozzle EGL ø 1.7mm |
| N S NIS | 1879940 | RNT093/14 | Nozzle EGL ø 1.4mm |
| 4 | 1879952 | RNT094/20 | Nozzle EGL ø 2.0mm |
| | 1879953 | RNT095/23 | Nozzle EGL ø 2.3mm |



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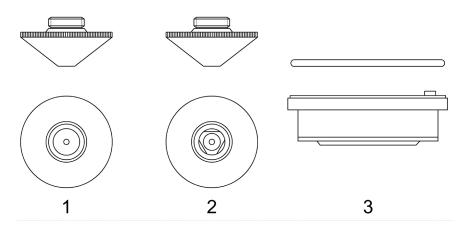


Precitec® Nozzles



Precitec Nozzles

| Outline No. | Precitec No. | Order No. | DESCRIPTION (Sold in packages of 10) |
|-------------|---------------------|------------|--------------------------------------|
| | P0591-571-00010 | RNP130/10 | Nozzle ø 1,0 mm |
| | P0591-572-00012 | RNP131/12 | Nozzle ø 1,2 mm |
| | P0591-573-00015 | RNP132/15 | Nozzle ø 1,5 mm |
| | P0591-574-00018 | RNP133/18 | Nozzle ø 1,8 mm |
| 1 | P0591-575-00020 | RNP134/20 | Nozzle ø 2,0 mm |
| | | RNP135/22 | Nozzle ø 2,2 mm |
| | P0591-576-00025 | RNP136/25 | Nozzle ø 2,5 mm |
| | | RNP137/27 | Nozzle ø 2,7 mm |
| | P0591-577-00030 | RNP138/30 | Nozzle ø 3,0 mm |
| Outline No. | Precitec No. | Order No. | DESCRIPTION (Sold in packages of 10) |
| | P0591-002-00010 | RNP300/10D | Double Nozzle ø 1,0 mm |
| | P0591-002-00012 | RNP301/12D | Double Nozzle ø 1,2 mm |
| | P0591-002-00015 | RNP302/15D | Double Nozzle ø 1,5 mm |
| | P0591-002-00018 | RNP303/18D | Double Nozzle ø 1,8 mm |
| 2 | P0591-002-00020 | RNP304/20D | Double Nozzle ø 2,0 mm |
| | P0591-002-00023 | RNP305/23D | Double Nozzle ø 2,3 mm |
| | P0591-002-00025 | RNP306/25D | Double Nozzle ø 2,5 mm |
| | P0591-002-00030 | RNP307/30D | Double Nozzle ø 3,0 mm |
| | P0591-002-00035 | RNP308/35D | Double Nozzle ø 3,5 mm |
| 3 | 281330 & 6930281330 | RHP100/H | Nozzle Holder (Sold individually) |



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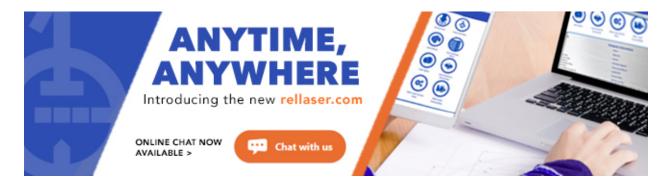




Consumables for Trumpf® TruLaser®, Trumatic®, TCL & TC HSL Lasers 600L, 1030, 2025, 2030, 2503E 2510, 2525, 2530, 3000(K03), 3000L, 3003E, 3020, 3030, 3040, 3050, 3060, 3530, 4002, 4003E, 4030, 4050, 5030, 6000(K01), 6000L, 6030, 6050, 7025, 7025 Fiber, 7040, 7040 Fiber, 8000

| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------------|------------------|-------------------------|---|--------|
| | | | | |
| Standard Co | pper Nozzles (| Sold in packages of 10) | | |
| | 0124561 | RNT150/08 | Nozzle ECE ø 0.8 mm (0237499) | 1 |
| | 0124562 | RNT151/10 | Nozzle ECE ø 1.0 mm | 1 |
| | 0966809 | RNT148/12 | Nozzle ECE ø 1.2 mm | 1 |
| | 0237497 | RNT152/14 | Nozzle ECE ø 1.4 mm With Step | 1 |
| | 0237497-S | RNT159/14 | Nozzle ECE ø 1.4 mm With Straight Taper | |
| 1 | 0237500 | RNT153/15 | Nozzle ECE ø 1.5 mm | - C-II |
| 1 | 0237501 | RNT154/17 | Nozzle ECE ø 1.7 mm | Call |
| | 1253211 | RNT155/20 | Nozzle ECE ø 2.0 mm (0237502 & 0237503) | |
| | 0126933 | RNT158/23 | Nozzle ECE ø 2.3 mm | |
| | | RNT156/25 | Nozzle ECE ø 2.5 mm | |
| | 0942742 | RNT149/27 | Nozzle ECE ø 2.7 mm | 1 |
| | 0237504 | RNT157/30 | Nozzle ECE ø 3.0 mm | |
| Outline drawi | ngs on following | page | | |
| Hard Chrom | ium Plated No | zzles (Sold in packages | of 10) | |
| | 0352280 | RNT150/08C | Nozzle ECE ø 0.8 mm Hard Chromium Plated | |
| | 0352281 | RNT151/10C | Nozzle ECE ø 1.0 mm Hard Chromium Plated | |
| | 0352282 | RNT148/12C | Nozzle ECE ø 1.2 mm Hard Chromium Plated | |
| 1 | 0352283 | RNT152/14C | Nozzle ECE ø 1.4 mm Hard Chromium Plated | Call |
| 1 | 0352284 | RNT154/17C | Nozzle ECE ø 1.7 mm Hard Chromium Plated | Call |
| | 1253212 | RNT155/20C | Nozzle ECE ø 2.0 mm Hard Chromium Plated | |
| | 0352285 | RNT158/23C | Nozzle ECE ø 2.3 mm Hard Chromium Plated | |
| | 0352286 | RNT149/27C | Nozzle ECE ø 2.7 mm Hard Chromium Plated | |
| | ngs on following | | | |
| Long Coppe | r Nozzles (Sold | in packages of 10) | (Chromium nozzles availabel upon request) | |
| | 1277773 | RNT130/08 | Nozzle ø 0.8 mm | |
| | 1277771 | RNT131/10 | Nozzle ø 1.0 mm | |
| | 1277774 | RNT132/12 | Nozzle ø 1.2 mm | |
| 2 | 1277776 | RNT133/14 | Nozzle ø 1.4 mm | Call |
| ' | 1277779 | RNT134/17 | Nozzle ø 1.7 mm | Call |
| | 1277780 | RNT135/20 | Nozzle ø 2.0 mm | |
| | 1277781 | RNT136/23 | Nozzle ø 2.3 mm |] |
| | 1277782 | RNT137/27 | Nozzle ø 2.7 mm | |
| Outling drawi | ngs on following | 2222 | · · · · · · · · · · · · · · · · · · · | • |

Outline drawings on following page



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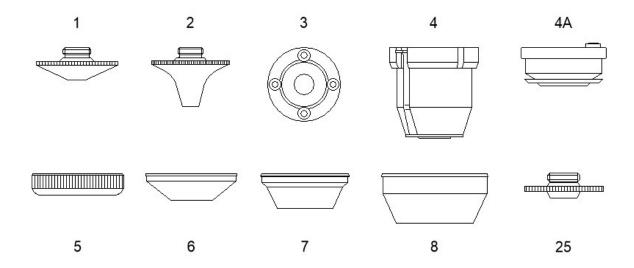




Consumables for Trumpf® TruLaser®, Trumatic®, TCL & TC HSL Lasers 600L, 1030, 2025, 2030, 2503E 2510, 2525, 2530, 3000(K03), 3000L, 3003E, 3020, 3030, 3040, 3050, 3060, 3530, 4002, 4003E, 4030, 4050, 5030, 6000(K01), 6000L, 6030, 6050, 7025, 7025 Fiber, 7040, 7040 Fiber, 8000



| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------|------------|------------------------------|---|-------|
| 3 | 0234485 | RMT163/BAB | Break Away Bar | |
| 4 | 0260432 | RHT109/H | Nozzle HOLDER "Ceramic" | |
| 4A | 0258809 | RHT111/H | Nozzle HOLDER "Ceramic" (0243839 & 0247894) | |
| 5 | 0216066 | RMT165/NUT | Locking Nut | |
| 6 | 0225286 | RTT160/TC | Teflon Cover, White (Lasermatic) | Call |
| 7 | 0254496 | RTT161/TC | Teflon Cover, White | Call |
| 8 | 0256153 | RTT162/TC | Teflon Cover DIAS III, White | |
| 8 | 0955826 | RTT162/TCB | Teflon Cover DIAS III, Black | |
| 25 | | DA 474 20 /N 0771 F A D A DT | Adapter for Precitec KTB2 Heads to M8 thread, allowing the use of | |
| 25 | - | RMT139/NOZZLE-ADAPT | the nozzles listed on the previous page. | |



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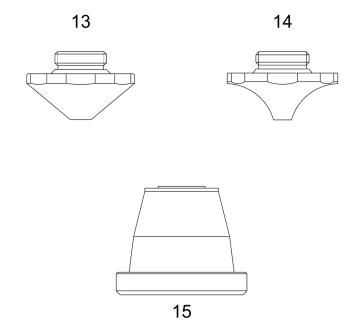




Consumables for Trumpf® TruLaser® TruMatic® Lasers 1030 Fiber, 3030 Fiber, 3030(L20), 3040 Fiber, 3040(L32),

5030(L16), 5030(L52), 5030 Fiber, 5040(L18), 5040(L53), 5040 Fiber, 5060(L19), 5060(L54), 6000(K05), 7000(K02), 7040, & 8000

| Outline No. | Trumpf No. | Order No. | DESCRIPTION (Sold in packages of 10) | Price |
|-------------|------------|-----------|--|-------|
| | 1324858 | RNT060/08 | Nozzle EAA ø 0.8 mm | |
| | 1324860 | RNT061/10 | Nozzle EAA ø 1.0 mm | |
| | 1324861 | RNT062/12 | Nozzle EAA ø 1.2 mm | |
| 13 | 1324863 | RNT063/14 | Nozzle EAA ø 1.4 mm | |
| 15 | 1324864 | RNT064/17 | Nozzle EAA ø 1.7 mm | |
| | 1324865 | RNT065/20 | Nozzle EAA ø 2.0 mm | |
| | 1324866 | RNT066/23 | Nozzle EAA ø 2.3 mm | |
| | 1324867 | RNT067/27 | Nozzle EAA ø 2.7 mm | |
| | 1373324 | RNT070/08 | Nozzle EAB ø 0.8 mm | Call |
| | 1373325 | RNT071/10 | Nozzle EAB ø 1.0 mm | |
| | 1373326 | RNT072/12 | Nozzle EAB ø 1.2 mm | |
| 14 | 1373327 | RNT073/14 | Nozzle EAB ø 1.4 mm | |
| 14 | 1373328 | RNT074/17 | Nozzle EAB ø 1.7 mm | |
| | 1373329 | RNT075/20 | Nozzle EAB ø 2.0 mm | |
| | 1373330 | RNT076/23 | Nozzle EAB ø 2.3 mm | |
| | 1373331 | RNT077/27 | Nozzle EAB ø 2.7 mm | |
| 15 | 1349171, | | | |
| | 15911594, | RHT112/H | Nozzle Holder M12 Thread (Sold individually) | |
| | 1755673 | | | |



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Consumables for Trumpf® TruLaser® Tube, Tubematic® & Tubematic® RC Lasers TCL105, 3000, 5000(T01), 5000(T05) & 7000

| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------|------------|------------|-------------|-------|
| 16 | 913965 | RMT007/NUT | Locking Nut | Call |

| Standard Co | pper Nozzles | (Sold in packages of 10) | (Chromium nozzles availabel upon request) | |
|--------------------|--------------|--------------------------|--|------|
| | 0212334 | RNT010/10 | Nozzle EBD ø 1.0 mm | |
| | | RNT025/10 | Nozzle ø 1.0 mm (Designed for high pressure cutting) | |
| | 1479581 | RNT037/12 | Nozzle EBD ø 1.2 mm | |
| 17 | 0216199 | RNT011/14 | Nozzle EBD ø 1.4 mm | |
| | 0225213 | RNT012/17 | Nozzle EBD ø 1.7 mm | |
| | 1487036 | RNT034/20 | Nozzle EBF ø 2.0 mm | |
| | 0126156 | RNT028/23 | Nozzle EBD ø 2.3 mm | |
| 20 | 0237364 | RNT019/10 | Shower Nozzle ø 1.0 mm | |
| | 0226939 | RNT013/10 | Nozzle ø 1.0 mm | Call |
| | | RNT026/10 | Nozzle ø 1.0 mm | |
| 18 | 0226940 | RNT014/14 | Nozzle ø 1.4 mm | |
| | 0227144 | RNT015/17 | Nozzle ø 1.7 mm | |
| | | RNT029/23 | Nozzle ø 2.3 mm | |
| | | RNT016/10 | Nozzle ø 1.0 mm | |
| 19 | | RNT017/14 | Nozzle ø 1.4 mm | |
| 19 | | RNT018/17 | Nozzle ø 1.7 mm | |
| | | RNT030/23 | Nozzle ø 2.3 mm | |
| | 0135320 | RNT225/10 | Nozzle ø 1.0 mm Rough Edged | |
| 21 | | RNT226/12 | Nozzle ø 1.2 mm Rough Edged | |
| | 0135318 | RNT220/14 | Nozzle ø 1.4 mm Rough Edged | |
| | 0126157 | RNT221/17 | Nozzle ø 1.7 mm Rough Edged | |

Outline drawings on following page



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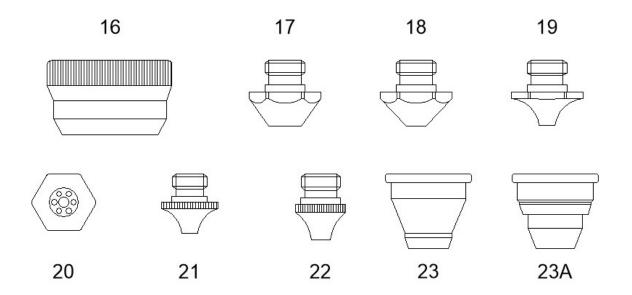


Consumables for Trumpf® TruLaser® Tube, Tubematic® & Tubematic® RC Lasers TCL105, 3000, 5000(T01), 5000(T05) & 7000



| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
|-------------|------------|------------|---|-------|
| 16 | 0913965 | RMT007/NUT | Locking Nut | |
| 23 | 0936678 | RHT110/H | Nozzle Holder "Ceramic" (Replacement for original design) | Call |
| 23A | 0936678 | RHT115/H | Nozzle Holder "Ceramic" (Half metal & half ceramic) | Call |
| - | 0092405 | RHT113/H | Nozzle Holder for Precitec cutting heads only. | |

| Standard | Copper Nozzles | (Sold in packages of 10) | (Chromium nozzles availabel upon request) | |
|----------|----------------|--------------------------|---|------|
| | 0958206 | RNT006/025 | "Teach" Nozzle ø 0.25 mm | |
| | 0913799 | RNT020/08 | Nozzle ø 0.8 mm | |
| 22 | 0913800 | RNT021/10 | Nozzle ø 1.0 mm | Call |
| | 0913801 | RNT022/14 | Nozzle ø 1.4 mm | Call |
| | 0937988 | RNT023/17 | Nozzle ø 1.7 mm | |
| | 0937989 | RNT024/23 | Nozzle ø 2.3 mm | |



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Optics

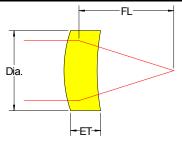


Richardson Electronics lenses and mirrors are manufactured using the highest quality materials and tightest process controls available in the industry. Every optic undergoes thorough quality controls to ensure you will get the best performance in your laser. Our standard lenses meet or exceed OEM specifications. Our low absorption lenses are the best choice for laser powers of 4 KW and up.

Our optics can help you reduce the total cost of operation of your laser.

Lenses for CO₂ Lasers

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------------|-----------------|--|-------|
| 088114 | RLT100/50S | 5" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.20% | |
| 088114 | RLT200/50LA | 5" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.15% (Low Absorption) | |
| 097517 | RLT101/75S | 7.5" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.20% | |
| 097517 | RLT201/75LA | 7.5" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.15% (Low Absorption) | |
| 0141972 | RLT103/90S | 9" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.20% | |
| 0240568 | RLT568/TOPOL80 | Topol Lens Cleaner (80ml Bottle) | |
| 0346104 | RLT102/375S | 3.75" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.20% | |
| 0350163 | RLT104/100S | 10" F/L, 1.5" Dia., 0.291 ET, AR ≤ 0.20% | |
| 0380117 | RLT106/50S | 130mm F/L, D40, 7.5mm ET, Cut Lens (Without RFID Chip) | |
| 1330414 | RLT109/45S | 115mm F/L, D50, 8.9mm ET, Cut Lens (Without RFID Chip) | Call |
| 1330448 | RLT108/70S | 175mm F/L, D50, 8.9mm ET, Cut Lens (Without RFID Chip) | Call |
| 1383925 | RLT125/60S | 155mm F/L, D40, 7.5mm ET, AR/AR | |
| 1383925 | RLT205/60LA | 155mm F/L, D40, 7.5mm ET, AR/AR (Low Absorption) | |
| 1383926 | RLT126/90S | 240mm F/L, D40, 7.5mm ET, AR/AR | |
| 1383926 | RLT206/90LA | 240mm F/L, D40, 7.5mm ET, AR/AR (Low Absorption) | |
| 1525872 | RLT112/70S | 170mm F/L, D50, 8.9mm ET, Cut Lens (Without RFID Chip) | |
| 1687226 | RLT226/LRGPAPER | Large Lens Cleaning Paper - 50 Pack - Sheet size 4 x 7.75" (102 x 197mm) | |
| 086452, 13082010 | EK1546027T | Lens Cleaning Paper - 50 Pack - Sheet size 2.75 x 4.75" (70 x 121mm) | |
| | EK1463728T | Lens Cleaning Solution - 16 oz. | |
| | EZ-TEST | Used to test lenses for stress that can lead to failure. | |





Protective Lens Covers for Fiber Laser

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|-----------------|---|-------|
| 0122024 | RLT024/LNSTICK | Knit Polyester Cleaning Swabs (100/pack) | |
| 0759720 | RLT122/55D1.5T | 55 Dia. x 1.5mm Thick, Fused Silica Protective Window | |
| 0766719 | RLT128/30D5T | 30 Dia. x 5mm Thick, Fused Silica Protective Window | Call |
| 0766719 | RLT130/30D5THP | 30 Dia. x 5mm Thick, Fused Silica Protective Window for +8kW Fiber Lasers | Call |
| 0798142 | RLT122/55D1.5T | 55 Dia. x 1.5mm Thick, Fused Silica Protective Window | |
| 1614767 | RLT120/PLC-FIBR | 34 Dia. x 5mm Thick, Fused Silica Window | |

NEW items shown in **BOLD** type

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Optics

Mirrors

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|-----------------|--|-------|
| 0129880 | RRT103/90PS | Si 90 Phase Shift 68mm x 20mm | |
| 0129881 | RRT102/0PS | Si 0 Phase Shift 68mm x 20mm | 1 |
| 0365640 | RRT114/90PS | Cu 90 Phase Shift 68mm x 20.32mm | |
| 0920689 | RRT104/CUWC | Cu W/C Mirror 68mm x 34mm | 1 |
| 0077240 | RRT219/U | U Mirror set, includes seven MMR mirrors, one PLM mirror and | Call |
| 0977219 | KK1219/U | mounting o-rings | |
| 1331867 | RRT867/PLM | Polarize Lock Mirror, includes mounting o-rings | |
| 1492304 | RRT304/MMR | MMR Mirror includes mounting o-rings | |
| | MIRR-POL/390050 | Mirror Polishing Compound | |



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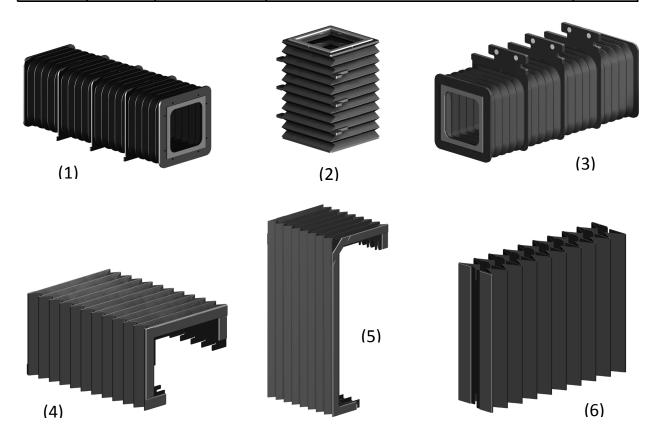


Richardson Electronics is a worldwide distributor of laser bellows for machines from most major manufacturers.

We offer laser bellows made specifically for your laser machine. Designed and manufactured in Europe, our laser bellows are made with heat resistant, flame retardant materials and are able to withstand high operating temperatures while providing years of service.

In addition, tight fitting laser bellows keep unwanted particles out of the laser beam and protect machine rails, racks and bearings, to keep your laser machine running smoothly.

| L1005 (3 Met | L1005 (3 Meter Bed) | | | | |
|--------------|---------------------|----------------|---|-------|--|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price | |
| 1 | 0139850 | RBT181/10BX3M | X Axis Beam Bellow (Left) | | |
| 1 | 0139851 | RBT180/10BPX3M | X Axis Beam Path Bellow (Right) | | |
| 3 | 0139852 | RBT182/10BPY | Y Axis Beam & Beam Path Bellow (Front & Rear) | | |
| 6 | 0139853 | RBT184/10URX3M | U Axis Rail Bellow (Left & Right) | Call | |
| 4 | 0139854 | RBT185/10RX3M | X Axis Rail Bellow (Left) | Call | |
| - | 0139855 | RBT186/10RX3M | X Axis Rail Bellow (Right) - Available soon | | |
| 5 | 0140160 | RBT187/10RY | Y Axis Rail Bellow (Front & Rear) | | |
| 2 | 0140805 | RBT183/10BPZ | Z Axis Beam Path Bellow | | |



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0939014

0980133

2334585

2334809

3

11

11

RBT165/25BPY

RBT168/25RY **

RBT331/2525BY

RBT330/2525BPY

Bellows

| L2530 & Trul | L2530 & Trulaser 2525 Bellows | | | | |
|--------------------|-------------------------------|----------------|---|--|--|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price | |
| 5 | 0135399 | RBT162/25RY | Y Axis Rail Bellow (Right & Left) | | |
| 4 | 0135401 | RBT161/25RX | X Axis Rail Bellow (Rear) | | |
| - | 0135402 | RBT160/25RX | X Axis Rail Bellow (Front) | | |
| 11 | 0352335 | RBT331/2525BY | Y Axis Beam Bellow for the Trulaser 2525 | | |
| 11 | 0352336 | RBT330/2525BPY | Y Axis Beam Path Bellow for the Trulaser 2525 | | |
| 3 | 0354501 | RBT165/25BPY | Y Axis Beam Path Bellow (Rear) | | |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | | |
| 3 | 0925802 | RBT166/25BY | Y Beam Bellow (Front) | Call | |
| 3 | 0925803 | RBT163/25BX | X Axis Beam Bellow (Right) | ······································ | |
| 6 | 0939012 | RBT167/25BPY | Y Axis Beam Path Bellow (Middle) | u know that delaying | |
| 3 | 0939013 | RBT164/25BPX | X Axis Beam Path Bellow (Left) replace | ement of your worr | |

Y Axis Beam Path Bellow (Rear)

Y Axis Rail Bellow (Right & Left)

Y Axis Beam Bellow for the Trulaser 2525

Y Axis Beam Path Bellow for the Trulaser 2525

Did you know that delaying the replacement of your worn, hole filled, beam & beam path bellows can increase your monthly usage (and cost) of the nitrogen used in the beam purge? It pays to replace your worn bellows!

| L3030 & Tru | L3030 & Trulaser 3030 Bellows | | | | |
|-------------|-------------------------------|-----------------|--|-------|--|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price | |
| 9 | 0124393 | RBT105L/30BX | X Axis Beam Bellow (Front) - IMPROVED DESIGN | | |
| 10 | 0124394 | RBT106L/30BY | Y Axis Beam Bellow (Right) - IMPROVED DESIGN | | |
| 8 | 0141394 | RBT101/30RX | Y Axis Rail Bellow (each) | | |
| 9 | 0908032 | RBT105L/30BX | X Axis Beam Bellow (Front) - IMPROVED DESIGN | | |
| 10 | 0908033 | RBT106L/30BY | Y Axis Beam Bellow (Right) - IMPROVED DESIGN | | |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | | |
| 9 | 0920715 | RBT105L/30BX | X Axis Beam Bellow (Front) - IMPROVED DESIGN | | |
| 10 | 0920716 | RBT106L/30BY | Y Axis Beam Bellow (Right) - IMPROVED DESIGN | | |
| 7 | 0921742 | RBT100/30RX | X Axis Rail Bellow (each) | | |
| 9 | 0939015 | RBT103L/30BPX* | X Axis Beam Path Bellow (Rear) - IMPROVED DESIGN | Call | |
| 10 | 0939016 | RBT104L/30BPY* | Y Axis Beam Path Bellow (Left) - IMPROVED DESIGN | | |
| 10 | 1306466 | RBT104L/30BPY*# | Y Axis Beam Path Bellow (Left) - IMPROVED DESIGN | | |
| 10 | 1306467 | RBT106L/30BY # | Y Axis Beam Bellow (Right) - IMPROVED DESIGN | | |
| 9 | 1306468 | RBT103L/30BPX*# | X Axis Beam Path Bellow (Rear) - IMPROVED DESIGN | | |
| 9 | 1306469 | RBT105L/30BX # | X Axis Beam Bellow (Front) - IMPROVED DESIGN | | |
| 9 | 1667790 | RBT105L/30BX | X Axis Beam Bellow (Front) - IMPROVED DESIGN | | |
| 10 | 1667801 | RBT106L/30BY | Y Axis Beam Bellow (Right) - IMPROVED DESIGN | | |
| 9 | 1667803 | RBT103L/30BPX* | X Axis Beam Path Bellow (Rear) - IMPROVED DESIGN | | |
| 10 | 1667805 | RBT104L/30BPY* | Y Axis Beam Path Bellow (Left) - IMPROVED DESIGN | | |

See page 23 & 24 for outline identification. Please check our website @ www.rellaser.com/trumpf-bellows for bellows datasheets

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^{*}If your laser has the long beam clipper (typically found on machines built prior to 2000) it will need to be changed to the newer shorter version before using this replacement bellow.

^{**} Used on older L2530's, while newer lasers use the RBT162/25RY – double check your machines manual, or product ID label on your worn bellow before ordering.

[#] The following bellows are used in older model 3030 machines (not L3030 (L20)'s) that originally had square beam bellows and have either been retrofitted to disk bellows or have been built with disk bellows in newer models. Our square bellows have the same attachment to the frame as both the square and disk bellows and being made of polyurethane with rounded corners, share the benefits of the disk bellows.



| L4030 & Trul | L4030 & Trulaser 3040 Bellows | | | |
|--------------|-------------------------------|-------------------|---|-------|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
| 8 | 0144949 | RBT108/40RY | Y Axis Rail Bellow (each) | |
| 1 | 0342573 | RBT110/40BPX* | X Axis Beam Path Bellow (Rear) | |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | |
| 1 | 0920718 | RBT112/40BX* | X Axis Beam Bellow (Front) | |
| 3 | 0920719 | RBT113/40BY | Y Axis Beam Bellow (Right) | |
| 7 | 0921870 | RBT107/40RX | X Axis Rail Bellow (each) | |
| 3 | 0938000 | RBT111/40BPY | Y Axis Beam Path Bellow (Left) | |
| 1 | 0939017 | RBT110/40BPX* | X Axis Beam Path Bellow (Rear) | |
| 1 | 0975011 | RBT112/40BX* | X Axis Beam Bellow (Front) | |
| 1 | 0976624 | RBT112/40BX* | X Axis Beam Bellow (Front) | |
| - | 1504308 | RBT280/34RBPY | Y Axis Beam Path/Rail Combo Round Bellow (Left) | Call |
| - | 1559318 | RBT280/34RBPY | Y Axis Beam Path/Rail Combo Round Bellow (Left) | Call |
| - | 1559392 | RBT342/4030L32RBY | Y Axis Beam/Rail Combo Round Bellow (Right) | |
| - | 1570975 | RBT340/4030L32RRX | X Axis Rail Bellow (Right) | |
| - | 1570976 | RBT341/4030L32LRB | X Axis Rail Bellow (Left) | |
| - | 1865321 | RBT340/4030L32RRX | X Axis Rail Bellow (Right) | |
| - | 2012183 | RBT341/4030L32LRB | X Axis Rail Bellow (Left) | |
| 3 | 2335130 | RBT113/40BY | Y Axis Beam Bellow (Right) | |
| 1 | 2335182 | RBT110/40BPX* | X Axis Beam Path Bellow (Rear) | |
| 3 | 2335183 | RBT111/40BPY | Y Axis Beam Path Bellow (Left) | |
| 1 | 2335292 | RBT112/40BX* | X Axis Beam Bellow (Front) | |
| 7 | 1883139 | RBT107/40RX | X Axis Rail Bellow (each) | |

 $\textbf{See the following pages for outline identification. Please check our website @ \underline{\textbf{www.rellaser.com/trumpf-bellows}} \ \textbf{for bellows datasheets}$

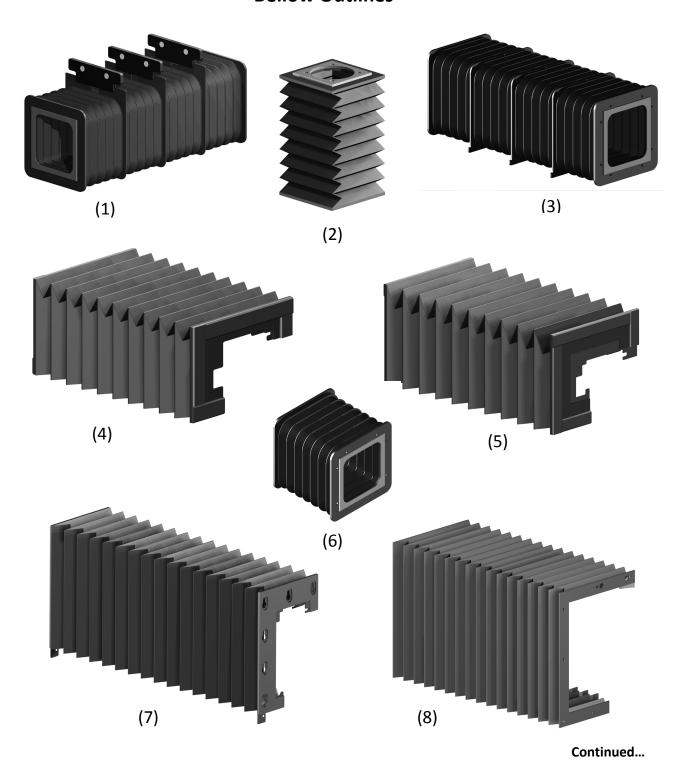
*If your laser has the long beam clipper (typically found on machines built prior to 2000) it will need to be changed to the newer shorter version before using this replacement bellow.



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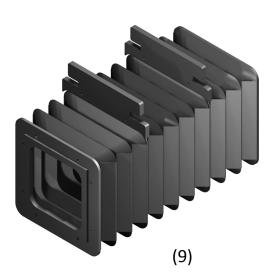


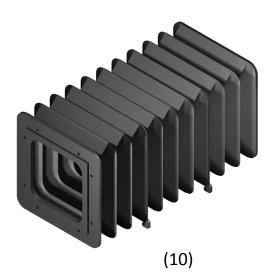
L2530, L3030, L4030, Trulaser 2525, Trulaser 3030 & Trulaser 3040 Bellow Outlines

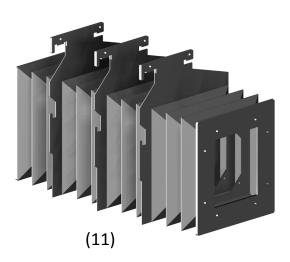


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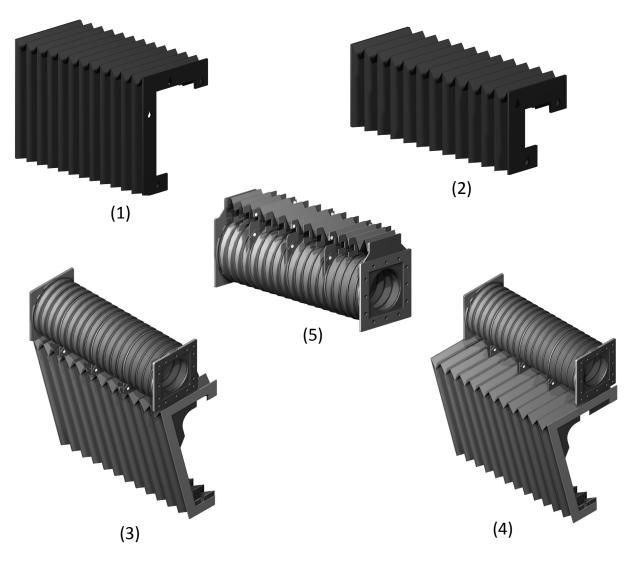






| L3030 (L20) | L3030 (L20) | | | | |
|-------------|-------------|------------------|--|-------|--|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price | |
| 5 | 1458860 | RBT119/30L20BX | X Axis Beam Bellow (Round) (Front) | | |
| 5 | 1458861 | RBT118/30L20BPX | X Axis Beam Path Bellow (Round) (Rear) | | |
| 1 | 1458866 | RBT116/30RRX | X Axis Rail Bellow (Right) | | |
| 2 | 1458867 | RBT117/30LRX | X Axis Rail Bellow (Left) | | |
| 4 | 1496435 | RBT121/30L20RBY | Y Beam/Rail Combo Bellow (Round) (Right) | | |
| 3 | 1496436 | RBT120/30L20RBPY | Y Beam Path/Rail Combo Bellow (Round) (Left) | Call | |
| * | 1561554 | RBT122/30L20CZ | Z Axis Chest Bellow | | |
| 4 | 1802766 | RBT121/30L20RBY | Y Beam/Rail Combo Bellow (Round) (Right) | | |
| 5 | 1854032 | RBT118/30L20BPX | X Axis Beam Path Bellow (Round) (Rear) | | |
| 1 | 1865268 | RBT116/30RRX | X Axis Rail Bellow (Right) |] | |
| 2 | 1865269 | RBT117/30LRX | X Axis Rail Bellow (Left) | | |

^{*} Under development



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| L3050 Bellow | s (Prior to Mi | d-2005) | | |
|--------------|----------------|-----------------------|--|-------|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | |
| 5 | 0978079 | RBT138/50UXBP | U & X Axis Beam Path Bellow | |
| 10 | 0981710 | RBT136/50RX | X Axis Rail Bellow (Right/Front & Rear) | |
| 7 | 0981753 | RBT133/50RU | U Axis Rail Bellow (Front & Rear) | |
| 9 | 0981756 | RBT135/50RX | X Axis Rail Bellow (Left/Rear) | |
| 9 | 0981757 | RBT131/50RX | X Axis Rail Bellow (Left/Front & Middle) | |
| 3 | 0986703 | RBT132/50RBY | Y Axis Beam/Rail Combo Bellow (Left) | |
| 6 | 0993338 | RBT137/50RY | Y Axis Rail Bellow (Right) | Call |
| 3 | 1226192 | RBT132/50RBY | Y Axis Beam/Rail Combo Bellow (Left) | Call |
| 6 | 1226193 | RBT137/50RY | Y Axis Rail Bellow (Right) | |
| 9 | 1302018 | RBT135/50RX | X Axis Rail Bellow (Left/Rear) | |
| 9 | 1302020 | RBT131/50RX | X Axis Rail Bellow (Left/Front & Middle) | 7 |
| 7 | 1302386 | RBT133/50RU | U Axis Rail Bellow (Front & Rear) | |
| 9 | 1596087 | RBT131/50RX | X Axis Rail Bellow (Left/Front & Middle) | |
| 9 | 1596088 | RBT135/50RX | X Axis Rail Bellow (Left/Rear) | |
| 9 | 1873857 | RBT135/50RX | X Axis Rail Bellow (Left/Rear) | |
| L3050 Bellow | vs (Mid-2005 8 | & After) & Trulaser 5 | 5030 | |
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | |
| 6 | 1226193 | RBT137/50RY | Y Axis Rail Bellow (Right) | |
| 4 | 1271514 | RBT134/50UXBP | U & X Axis Round Beam Path Bellow | |
| 9 | 1302018 | RBT135/50RX | X Axis Rail Bellow (Left/Rear) | |
| 9 | 1302020 | RBT131/50RX | X Axis Rail Bellow (Left/Front & Middle) | |
| 7 | 1302386 | RBT133/50RU | U Axis Rail Bellow (Front & Rear) | |
| 8 | 1307207 | RBT130/50RX | X Axis Rail Bellow (Right/Front & Rear) | Call |
| 1 | 1353514 | RBT139/50RBY | Y Axis Round Beam/Rail Combo Bellow (Left) | |
| - | 1353515 | RBT239/50RBY | Y Axis Round Beam/Rail Combo Bellow (Left) | |
| 8 | 1596086 | RBT130/50RX | X Axis Rail Bellow (Right) | |
| 9 | 1596087 | RBT131/50RX | X Axis Rail Bellow (Left/Front & Middle) | |
| 9 | 1596088 | RBT135/50RX | X Axis Rail Bellow (Left/Rear) | |
| 8 | 1873855 | RBT130/50RX | X Axis Rail Bellow (Right/Front & Rear) | |

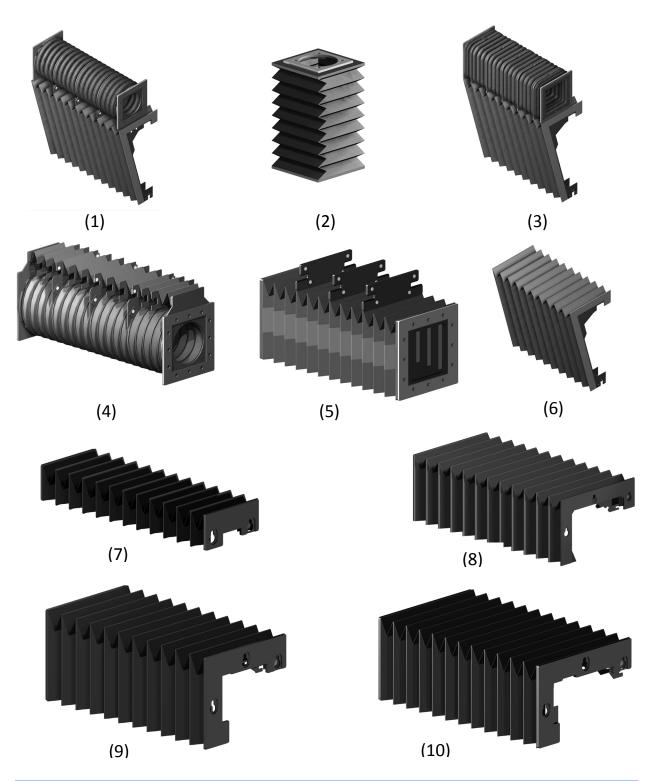
See the following page for outline identification. Please check our website @ www.rellaser.com/trumpf-bellows for bellows datasheets



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L3050 Bellow Outlines



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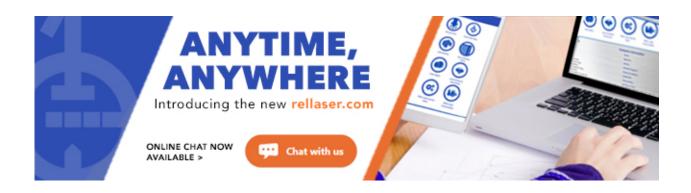
| L3530 Bellow | L3530 Bellows | | | | |
|--------------|---------------|----------------|--|-------|--|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price | |
| 1 | 1667790 | RBT105L/30BX | X Axis Beam Bellow (Front) - IMPROVED DESIGN | | |
| 1 | 1667803 | RBT103L/30BPX | X Axis Beam Path Bellow (Rear) - IMPROVED DESIGN | | |
| 4 | 0362270 | RBT250/353BPY | Y Axis Beam Path Bellow (Left) | | |
| 10 | 0362271 | RBT251/353BY | Y Axis Beam Bellow (Right) | Call | |
| 9 | 0362272 | RBT252/353BPX2 | X Axis Beam Bellow (Front) | | |
| 8 | 0362273 | RBT253/353BX2 | X Axis Beam Path Bellow (Rear) | | |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | | |

See the following page for outline identification. Please check our website @ <u>www.rellaser.com/trumpf-bellows</u> for bellows datasheets

| L4050 Bellov | L4050 Bellows & Trulaser 5040 | | | |
|--------------|-------------------------------|-----------------|---|-------|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | |
| 3 | 1222110 | RBT200/45RBPY | Y Axis Beam Path/Rail Combo Bellow | |
| 6 | 1222111 | RBT201/45RY | Y Axis Rail Bellow | |
| 5 | 1222528 | RBT207/45RU | U Axis Rail Bellow | |
| 7 | 1222529 | RBT205/45RXLF * | X Axis Rail Bellow (Left Middle & Front) | Call |
| 7 | 1222571 | RBT206/45RXLB * | X Axis Rail Bellow (Left/Rear) | |
| 7 | 1222573 | RBT204/45RXR | X Axis Rail Bellow (Right Front & Rear) | |
| 11 | 1222575 | RBT203L/45BPU | U Axis Beam Path Bellow - IMPROVED DESIGN | |
| 1 | 1222576 | RBT202L/45BPX | X Axis Beam Path Bellow - IMPROVED DESIGN | |

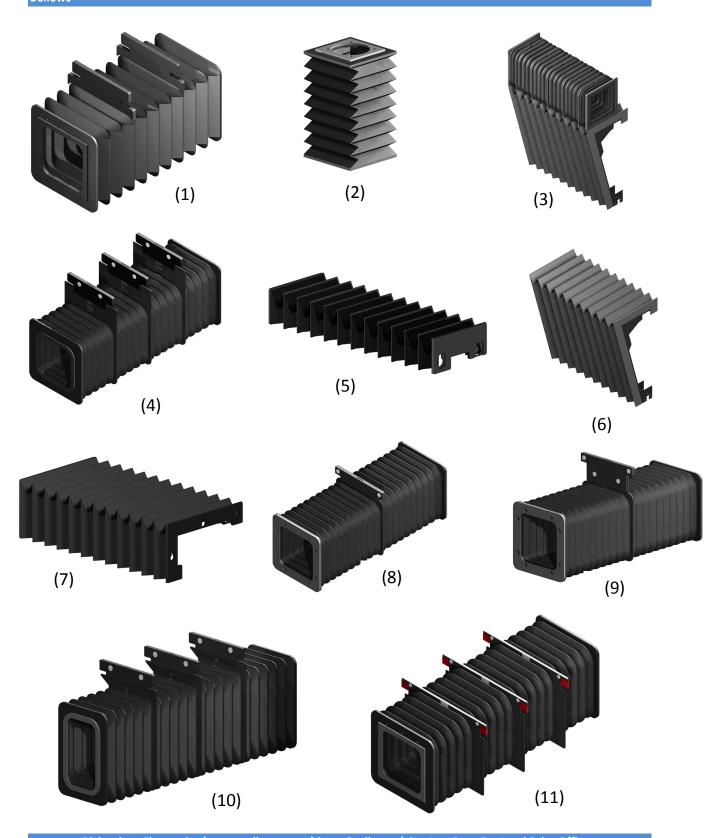
^{*}Please confirm the open & closed lengths of your machine, as some Trumpf manuals call out the bellows incorrectly.

See the following page for outline identification. Please check our website @ www.rellaser.com/trumpf-bellows for bellows datasheets



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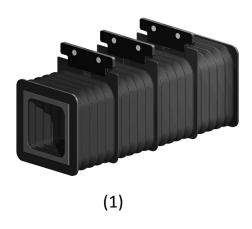




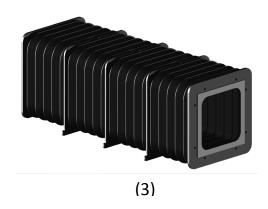
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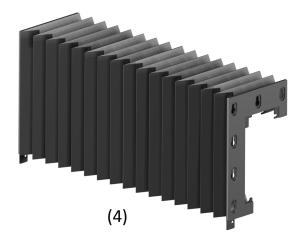


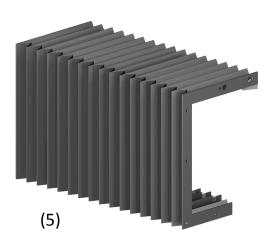
| L6030 Bellow | L6030 Bellows | | | | |
|--------------|---------------|--------------|--------------------------------|-------|--|
| Outline No. | Trumpf No. | Order No. | DESCRIPTION | Price | |
| 5 | 0144949 | RBT108/40RY | Y Axis Rail Bellow | | |
| 2 | 0910354 | RBT102/30BPZ | Z Axis Beam Path Bellow | | |
| 3 | 0920719 | RBT113/40BY | Y Axis Beam Bellow (Right) | | |
| 1 | 0920730 | RBT141/60BX | X Axis Beam Bellow (Front) | Call | |
| 4 | 0921871 | RBT140/60RX | X Axis Rail Bellow | | |
| 1 | 0937999 | RBT142/60BPX | X Axis Beam Path Bellow (Rear) | | |
| 3 | 0938000 | RBT111/40BPY | Y Axis Beam Path Bellow (Left) | | |











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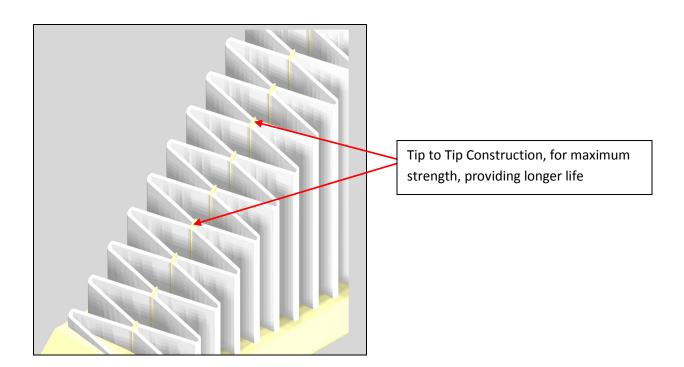
Dust Collection Filters



Richardson Electronics is one of the largest aftermarket suppliers of highest quality German-made filters. High quality filtration is directly related to the health and safety of your technicians and staff, it is important that they be replaced as needed to ensure maximum efficiency and a healthy work environment.

Key features and benefits of Richardson Electronics Dusto Collection Filters:

- ✓ Designed to fit most Handte®, Camfil®, Keller® and Herding® dust extractors, found on most Trumpf CO₂ & Fiber lasers
- ✓ Constructed using tip-to-tip gluing, providing longer life
- ✓ Filtration rating of up to 99.995% suitable to filter the finest laser grade dust
- ✓ Meet OEM quality standards
- ✓ Made in Germany by experts with more than 30 years' of experience in filtration technology
- ✓ Competitively priced



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| Dust Collection Filters | | | |
|-------------------------|--------------|---|-------|
| Trumpf No. | Order No. | DESCRIPTION | Price |
| 0139809 | RFT809/600 | For Handte systems MF-B-17/8/1 | |
| 0141759 | RFT759/10 | For Keller Vario T1.0 systems (L2530) | |
| 0146122 | RFT122/10A* | For KellerVario T1.5 (L2530, L3030, L4030, L6030 & TLC1005) | |
| 0148491 | RFT809/600 | For Handte systems MF-B-17/8/1 | |
| 0340484 | RFT484/125 | For Keller Vario T2.5 & T3.0 systems | |
| 0342682 | RFT122/10A* | For KellerVario T1.5 (L2530, L3030, L4030, L6030 & TLC1005) | |
| 0342812 | RFT122/10A* | For KellerVario T1.5 (L2530, L3030, L4030, L6030 & TLC1005) | |
| 0344014 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0345064 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0346113 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0346118 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0346118 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0359584 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0359585 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0359586 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 0380757 | RFT757/10 | For Handte systems MF-L-2000, MF-L-2500 & MF-L-3000 | Call |
| 0384514 | RFT275/600 | For Handte MF17/8/1-L20/20 (L1030) | |
| 0386275 | RFT275/600 | For Handte MF17/8/1-L20/20 (L1030) | |
| 1533834 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 1577250 | RFT757/10 | For Handte systems MF-L-2000, MF-L-2500 & MF-L-3000 | |
| 1938301 | RFT757/10 | For Handte systems MF-L-2000, MF-L-2500 & MF-L-3000 | |
| 2019123 | RFT600/1200 | For use in Herding Delta 1200 systems and TRUMPF 7040 Lasers | |
| 2042139 | RFT757/10 | For Handte systems MF-L-2000, MF-L-2500 & MF-L-3000 | |
| 2050706 | RFT691/1100 | For Camfil systems MF-8.4, MF-8.5 & MF-8.6 (Europe Only) | |
| 2050706 | RFT691/1100A | For Camfil systems MF-8.4, MF-8.5 & MF-8.6 (North America Only) | |
| 2061618 | RFT691/1100 | For Camfil systems MF-8.4, MF-8.5 & MF-8.6 (Europe Only) | |
| 2061618 | RFT691/1100A | For Camfil systems MF-8.4, MF-8.5 & MF-8.6 (North America Only) | |
| 2260691 | RFT691/1100 | For Camfil systems MF-8.4, MF-8.5 & MF-8.6 (Europe Only) | |
| 2260691 | RFT691/1100A | For Camfil systems MF-8.4, MF-8.5 & MF-8.6 (North America Only) | |
| 2625632 | RFT064/10 | For Handte systems MF-L-30/6/1, MF-L-40/8/1 & MF-L-50/10/1 | |
| 59113119 | RFT757/10 | For Handte systems MF-L-2000, MF-L-2500 & MF-L-3000 | |

^{*} New pleated design that provides greater filtration, when compared to the old style SINBRAN® membrane material.

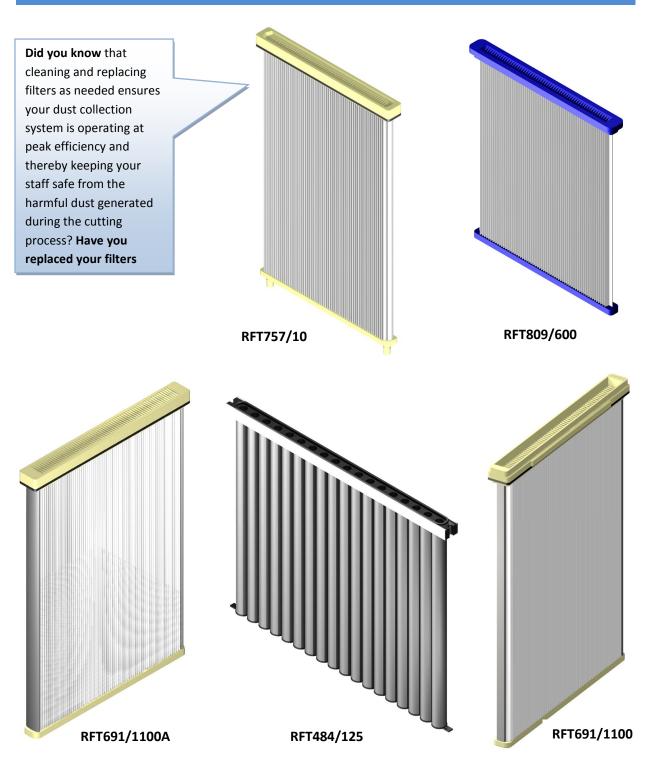
${\ensuremath{\mathsf{NEW}}}$ items shown in ${\ensuremath{\mathsf{BOLD}}}$ type



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Dust Collection Filters



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Air Filters, by Donaldson®

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|-------------|---|-------|
| 0123674 | 1C125116 | Ultrair FF 03/10 .01µm Silicon Free Fine Filter Element | |
| 0123675 | 1C125716 | Ultrair SMF 03/10 .01µm Silicon Free Sub-Micro Filter Element | |
| 0123676 | 1C125824 | Ultrac AK 04/20 Silicon Free Activated Carbon Absorption | |
| 0377006 | 1C125116 | Ultrair FF 03/10 .01µm Silicon Free Fine Filter Element | |
| 0377005 | 1C125716 | Ultrair SMF 03/10 .01µm Silicon Free Sub-Micro Filter Element | Call |
| 0377004 | 1C125824 | Ultrac AK 04/20 Silicon Free Activated Carbon Absorption | |
| 0147239 | 1C170032-25 | Ultrair PEP 05/20 Silicon Free Air Filter | |
| 0147240 | 1C125432 | Ultrair MFP05/20 Silicon Free Air Filter | |
| 0147241 | 1C125732 | Ultrair SMFP05/20 Silicon Free Air Filter | |



Donaldson Air Filters

Water Filter

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|----------------|--|-------|
| 0143106 | CP102480 | Chisso 10 µm Water Filter | |
| 0146152 | CP102480 | Chisso 10 µm Water Filter | Call |
| 1888631 | RFT102/20-50UM | 50 μm Water Filter, 20" (508mm) (Used on newer fiber lasers) | |

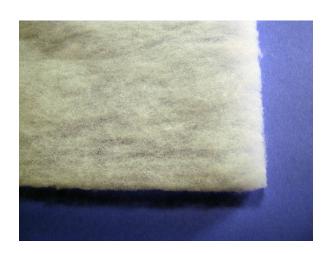


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Chiller Filter Material

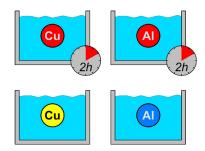
| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|--------------|--|-------|
| | RFT100/1X20 | Sold in rolls - 13mm x 1M x 20M (1/2" x 39.4" x 65.6') | Call |
| | RFT101/25X65 | Sold in rolls - 1/2" x 25" x 65' (13mm x 0.64M x 20M) | Call |



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Water Treatment Kits & Accessories



We are now offering the copper (Cu) and aluminum (Al) chiller system water treatment kits used in Trumpf® CO_2 lasers. The kits that we are offering are equivalents to the OEM original kits. Each kit contains the exact portions of biocide and inhibitor for your specific chiller systems. The water treatment kits last for 12 months, keeping your down time to a minimum. Each kit contains a CD with the MSDS information as well as protective gear.

Note: Care should always be taken when handling these, or any other chemicals. The use of safety glasses and protective gloves is strongly recommended.

Europe Kits (For use in Europe ONLY)

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------|--------------------|--------------------------------------|-------|
| 1652091 | RWK300/EZAL1EU | Aluminum Water Treatment Kit 1 | |
| 1652604 | RWK310/EZAL2EU | Aluminum Water Treatment Kit 2 | |
| 1652605 | RWK320/EZAL3EU | Aluminum Water Treatment Kit 3 | |
| 1652624 | RWK300/EZAL1EU | Aluminum Water Treatment Kit 1 | |
| 1652625 | RWK300/EZAL1EU | Aluminum Water Treatment Kit 1 | |
| 1652630 | RWK310/EZAL2EU | Aluminum Water Treatment Kit 2 | |
| 1652632 | RWK310/EZAL2EU | Aluminum Water Treatment Kit 2 | |
| 1652640 | RWK320/EZAL3EU | Aluminum Water Treatment 17.3 | |
| 1652943 | RWK320/EZAL3EU | Aluminum Water Treatment Kit 3 | |
| 1652964 | RWK330/EZAL4EU | Aluminum Water rreatment kit. | |
| 1652969 | RWK330/EZAL4EU | Aluminum water Treatment Kit 4 | |
| 1652981 | RWK200/EZCU1-3EU | Copper Water Treatment K. 1, 2 & 3 | |
| 1652993 | RWK200/EZCU1-3EU | Copper Waler Treal ment Kit 1, 2 % 3 | |
| 1652994 | RWK200/EZCU1 SEU | Conput Val. Treatment Vi. 1, 2 & 3 | Call |
| 1652995 | RWK200/LZCU1-3EU | ο μer Water Treatment Kit 1, 2 & 3 | |
| 1653090 | RW. 200/EZCU1-3 (U | opper Water reatment Kit 1, 2 & 3 | |
| 1653107 | RWK210/EZ U4EU | Copper water Treatment Kit 4 | |
| 1653111 | RWK200/EZCU1-3EU | Copper Water Treatment Kit 1, 2 & 3 | |
| 1653112 | RWK200/EZCU1-3F | Copper Water Treatment Kit 1, 2 & 3 | |
| 1653119 | RWK200/EZC51-3EU | Copper Water Treatment Kit 1, 2 & 3 | |
| 1653120 | RWK200/EZCU1-3EU | Copper Water Treatment Kit 1, 2 & 3 | |
| 1653122 | RWK330/EZAL4EU | Aluminum Water Treatment Kit 4 | |
| 1653126 | RWK220/EZCU5EU | Copper Water Treatment Kit 5 | |
| 1653127 | RWK220/EZCU5EU | Copper Water Treatment Kit 5 | |
| 1653130 | RWK210/EZCU4EU | Copper Water Treatment Kit 4 | |
| 1653131 | RWK210/EZCU4EU | Copper Water Treatment Kit 4 | |
| 1653132 | RWK220/EZCU5EU | Copper Water Treatment Kit 5 | |

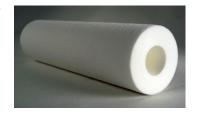
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For use anywhere except Europe and Japan

| Trumpf No. | Order No. | DESCRIPTION | Price |
|------------------------------|----------------|--------------------------------|-------|
| 1652091, 1652606, 1652623 | RWK623/EZAL1NA | Aluminum Water Treatment Kit 1 | |
| 1652981, 1652991, 1652992 | RWK991/EZCU1NA | Copper Water Treatment Kit 1 | |
| 1652607, 1652630, 1652631 | RWK631/EZAL2NA | Aluminum Water Treatment Kit 2 | |
| 1652995, 1653088, 1653089 | RWK088/EZCU2NA | Copper Water Treatment Kit 2 | |
| 1652605, 1652608, 1652609 | RWK608/EZAL3NA | Aluminum Water Treatment Kit 3 | Call |
| 1653112, 1653113, 1653114 | RWK113/EZCU3NA | Copper Water Treatment Kit 3 | |
| 1652964, 1652965, 1652968 | RWK965/EZAL4NA | Aluminum Water Treatment Kit 4 | |
| 1653107, 1653108, 1653109 | RWK108/EZCU4NA | Copper Water Treatment Kit 4 | |
| 1653124, 1653125, 1653132 | RWK124/EZCU5NA | Copper Water Treatment Kit 5 | |

Be sure to order new Chisso water filters (Trumpf ID No. 0146152 – our P/N CP102480) when you order your water kits!





Keeping the water clean is the #1 maintenance tip you should follow. You want to keep the purity of the water within the manufacturers recommended conductivity levels, measured in micro-Siemens (μS), to prevent corrosion of the valuable copper and aluminum components in your laser. Measuring the conductivity of your chiller water is quick and easy with the Hanna HI98311 meter. Simply turn on the meter, insert the probe end into the water and view the reading on the LCD display. It's that simple! The lower the conductivity reading, the better your water quality is!

ABOUT RICHARDSON ELECTRONICS, LTD.

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Richardson Electronics, Ltd. is a leading global provider of engineered solutions, power grid and microwave tubes and related consumables, and customized display solutions serving customers in the alternative energy, aviation, broadcast, communications, industrial, marine, medical, military, scientific and semiconductor markets. We bring together a deep understanding of engineering, wide-ranging capabilities and a worldwide network to deliver high quality products such as:

<u>Capacitors</u> | <u>Electromechanical</u> | <u>Electron Tubes & Vacuum Devices</u> | <u>Electro-optics</u> | <u>High Energy Transfer Products</u> | <u>Inductors</u> | <u>High Power Microwave</u> | <u>Passive Devices</u> | <u>CRTs</u> | <u>LCDs</u> | <u>Power Amplifiers</u>

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