

CO₂ Laser Consumables**2015 Richardson Electronics CO₂ Laser Consumables Catalog****BYSTRONIC®**



Richardson Electronics is a global distributor of RF tubes (power grid tubes) and consumables used in CO₂ 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. Our inventory includes:

- Laser lenses
- Laser nozzles
- RF tubes (power grid tubes)
- and other laser parts

All of Richardson Electronics' CO₂ laser consumables are manufactured to meet the highest standards of quality and performance that meets, or exceeds the OEM's original specifications. Our Bystronic® laser parts, and parts for other major manufacturers deliver the same level of performance as OEM parts, but are a far more cost effective alternative.

Our superior quality parts, outstanding selection, and competitive pricing make us your number one source for CO₂ laser consumables. Contact Richardson Electronics today for more information, or request a quote for your CO₂ laser replacement parts.

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Bystronic® is a registered trademark of Bystronic Laser AG. Richardson Electronics, Ltd. is not associated with Bystronic Laser AG. The use of the Bystronic names, trademarks and part numbers in this catalogue are for identification and compatibility purposes only. All parts advertised for sale in this catalog are made for and/or by Richardson Electronics, Ltd.

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 National made NL10277-1 used in Bystronic CO₂ laser systems. In addition, we offer the replacement sockets.

We are a worldwide supplier of aftermarket RF power tubes, with presence in over 43 countries around the globe. In addition to our local inventories, we maintain an extensive global inventory network to ensure same day shipping and fast deliveries. By turning customer orders around so quickly, we help you stay on schedule.

The superior quality of our National 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 tubes that your laser system needs.



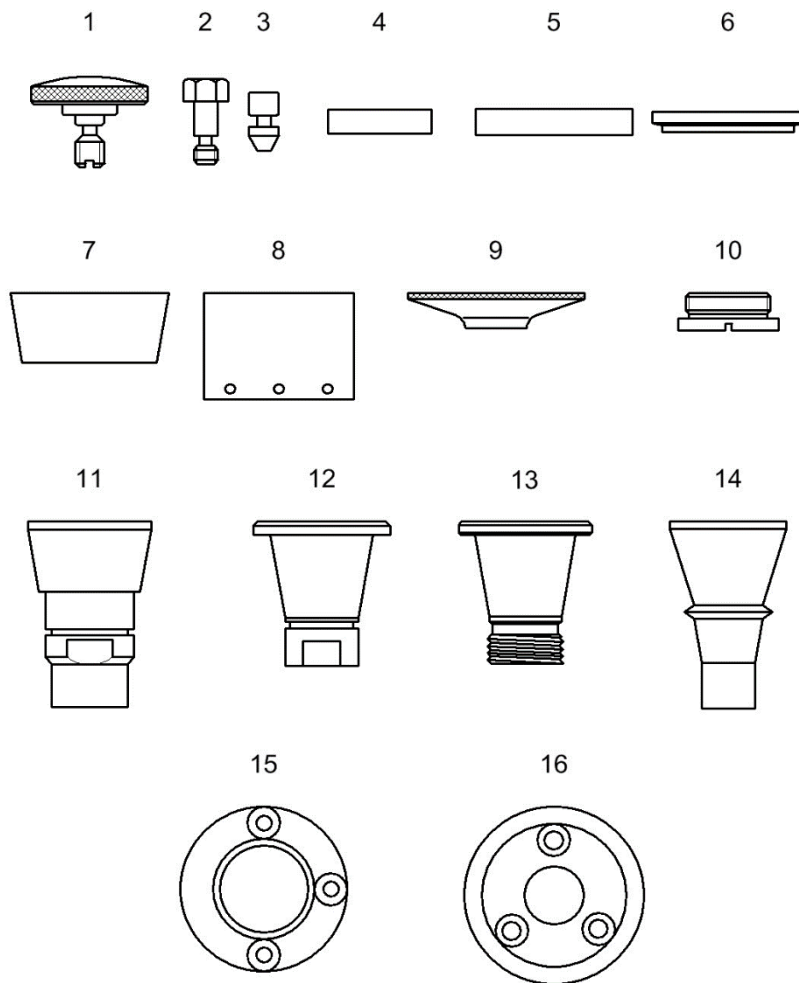
OEM No.	Order No.	DESCRIPTION	Price
	NL10277-1	High Voltage Switch Tube	Call
	122-0275-001	Replacement socket - Giant 5 pin	
	40624/S25671	Anode Connector/Heatsink (Replaces 16335)	

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Consumables for Bystronic® BY Series Lasers

Outline No.	OEM No.	Order No.	DESCRIPTION	Price
1	4-03136	RMB437/SCW	Knurled Screw	Call
2	4-00324	RMB438/SCW	Screw	
3	4-03137	RMB439/PIN	Pin	
4	4-09010	RNB470/CR	Ceramic Insulating Ring	
5	4-01642	RNB433/R	Ceramic Insulating Ring	
6	3-13113-1	RNB493/SIR	Ceramic Insulating Ring - Small	
7	4-01959	RNB434/R	Conical Ceramic Insulating Ring	
8	3-13422	RNB494/LIR	Insulating Ring - Large	
9	2-08700	RMB472/SH	Shield Copper	
10	3-11071	RMB473/NUT	Fastener Nut	
11	3-02291	RNB474/B	Nozzle Body	
12	3-05497	RNB432/B	Nozzle Body	
13	2-08701	RNB471/B	Nozzle Body	
14	2-10837-1	RNB495/B	Nozzle Body	
15	3-06035	RMB440/TD	Teflon Insulating Disk	
16	3-03663	RMB469/TD	Teflon Insulating Disk (formerly 3-02951)	



Consumables for Bystronic® BY Series Lasers

Outline No.	OEM No.	Order No.	DESCRIPTION	Price*
Standard Copper Nozzles (Sold in packages of 10)				
19	3-01894	RNB403/10	Nozzle 1.0mm	(10)
	3-01895	RNB404/125	Nozzle 1.25mm	(12)
	3-01896	RNB405/15	Nozzle 1.5mm	(15)
19	3-01899	RNB408/10	Nozzle 1.0mm	(H10)
	3-01900	RNB409/125	Nozzle 1.25mm	(H12)
	3-01901	RNB410/15	Nozzle 1.5mm	(H15)
	3-01902	RNB411/175	Nozzle 1.75mm	(H17)
	3-01903	RNB412/20	Nozzle 2.0mm	(H20)
17	3-01905	RNB413/10	Nozzle 1.0mm	(K10)
	3-01906	RNB414/125	Nozzle 1.25mm	(K12)
	3-01907	RNB415/15	Nozzle 1.5mm	(K15)
	3-01908	RNB416/175	Nozzle 1.75mm	(K17)
	3-01909	RNB417/20	Nozzle 2.0mm	(K20)
	3-04274	RNB426/25	Nozzle 2.5mm	(K25)
17	3-01910	RNB418/10	Nozzle 1.0mm	(HK 10)
	3-01911	RNB419/125	Nozzle 1.25mm	(HK 12)
	3-01912	RNB420/15	Nozzle 1.5mm	(HK 15)
	3-01913	RNB421/175	Nozzle 1.75mm	(HK 17)
	3-01914	RNB422/20	Nozzle 2.0mm	(HK 20)
	3-03854	RNB423/25	Nozzle 2.5mm	(HK 25)
	3-06112	RNB425/30	Nozzle 3.0mm	(HK 30)
	na	RNB424/35	Nozzle 3.5mm	(HK 35)

Call

Outline drawings on the following page

Hard Chromium Plated Nozzles (Sold in packages of 10)				
19	3-01894	RNB403/10C	Nozzle 1.0mm Hard Chromium Plated	(10)
	3-01895	RNB404/125C	Nozzle 1.25mm Hard Chromium Plated	(12)
	3-01896	RNB405/15C	Nozzle 1.5mm Hard Chromium Plated	(15)
19	3-01899	RNB408/10C	Nozzle 1.0mm Hard Chromium Plated	(H10)
	3-01900	RNB409/125C	Nozzle 1.25mm Hard Chromium Plated	(H12)
	3-01901	RNB410/15C	Nozzle 1.5mm Hard Chromium Plated	(H15)
	3-01902	RNB411/175C	Nozzle 1.75mm Hard Chromium Plated	(H17)
	3-01903	RNB412/20C	Nozzle 2.0mm Hard Chromium Plated	(H20)
17	3-01905	RNB413/10C	Nozzle 1.0mm Hard Chromium Plated	(K10)
	3-01906	RNB414/125C	Nozzle 1.25mm Hard Chromium Plated	(K12)
	3-01907	RNB415/15C	Nozzle 1.5mm Hard Chromium Plated	(K15)
	3-01908	RNB416/175C	Nozzle 1.75mm Hard Chromium Plated	(K17)
	3-01909	RNB417/20C	Nozzle 2.0mm Hard Chromium Plated	(K20)
	3-04274	RNB426/25C	Nozzle 2.5mm Hard Chromium Plated	(K25)
17	3-01910	RNB418/10C	Nozzle 1.0mm Hard Chromium Plated	(HK 10)
	3-01911	RNB419/125C	Nozzle 1.25mm Hard Chromium Plated	(HK 12)
	3-01912	RNB420/15C	Nozzle 1.5mm Hard Chromium Plated	(HK 15)
	3-01913	RNB421/175C	Nozzle 1.75mm Hard Chromium Plated	(HK 17)
	3-01914	RNB422/20C	Nozzle 2.0mm Hard Chromium Plated	(HK 20)
	3-03854	RNB423/25C	Nozzle 2.5mm Hard Chromium Plated	(HK 25)
	3-06112	RNB425/30C	Nozzle 3.0mm Hard Chromium Plated	(HK 30)
	na	RNB424/35C	Nozzle 3.5mm Hard Chromium Plated	(HK 35)

Call

Outline drawings on the following page

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Consumables for Bystronic® BY Series Lasers

Outline No.	OEM No.	Order No.	DESCRIPTION	Price*
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Standard Copper Nozzles (Sold in packages of 10)

18	3-16058	RNB428/10D	Double Nozzle 1.0mm	(NK10 or NK10-15)	Call
	3-16059	RNB429/12D	Double Nozzle 1.2mm	(NK 12 or NK12-15)	
	3-16060	RNB430/15D	Double Nozzle 1.5mm	(NK15 or NK15-15)	
	3-14317	RNB431/17D	Double Nozzle 1.7mm	(NK17 or NK17-15)	
	3-14318	RNB432/20D	Double Nozzle 2.0mm	(NK20 or NK20-15)	
	3-14319	RNB433/25D	Double Nozzle 2.5mm	(NK25 or NK25-15)	
	3-16256	RNB433/25DA	Double Nozzle 2.5mm	(NK25A or NK25-20)	
	3-16061	RNB435/30D	Double Nozzle 3.0mm	(NK30 or NK30-17)	
	3-16257	RNB435/30DA	Double Nozzle 3.0mm	(NK30A or NK30-20)	
	na	RNB434/35D	Double Nozzle 3.5mm	(NK35 or NL35-30)	

Hard Chromium Plated Nozzles (Sold in packages of 10)

18	3-16058	RNB418/10DC	Double Nozzle 1.0mm Hard Chromium Plated	Call
	3-16059	RNB419/12DC	Double Nozzle 1.2mm Hard Chromium Plated	
	3-16060	RNB420/15DC	Double Nozzle 1.5mm Hard Chromium Plated	
	3-14317	RNB421/17DC	Double Nozzle 1.7mm Hard Chromium Plated	
	3-14318	RNB422/20DC	Double Nozzle 2.0mm Hard Chromium Plated	
	3-14319	RNB423/25DC	Double Nozzle 2.5mm Hard Chromium Plated	
	3-16256	RNB423/25DA	Double Nozzle 2.5mm Hrd Chromium Plated	
	3-16061	RNB425/30DC	Double Nozzle 3.0mm Hard Chromium Plated	
	3-16257	RNB425/30DA	Double Nozzle 3.0mm Hrd Chromium Plated	
	na	RNB424/35DC	Double Nozzle 3.5mm Hard Chromium Plated	

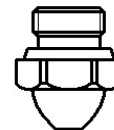
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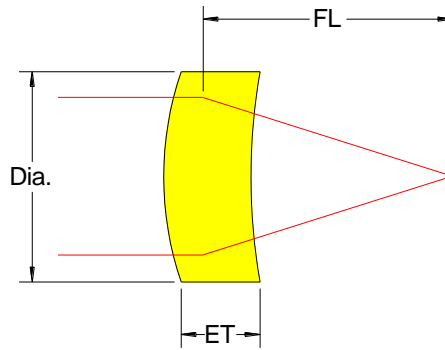
Optics



Richardson Electronics lenses 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.

OEM No.	Order No.	DESCRIPTION	Price
4-00186	RLB404/50S	5" F/L, 1.5" Dia., 0.236 ET, AR ≤ 0.20%	Call
4-00187	RLB403/75S	7.5" F/L, 1.5" Dia., 0.236 ET, AR ≤ 0.20%	
4-05094	RLB400/50S	5" F/L, 1.5" Dia., 0.350 ET, AR ≤ 0.20%	
4-05095	RLB401/75S	7.5" F/L, 1.5" Dia., 0.350 ET, AR ≤ 0.20%	
4-07475	RLB502/50LA	5" F/L, 1.5" Dia., 0.350 ET, AR ≤ 0.15% (Low Absorption)	
4-07476	RLB503/75LA	7.5" F/L, 1.5" Dia., 0.350 ET, AR ≤ 0.15% (Low Absorption)	
	EK1546027T	Lens Cleaning Paper - Sold in packs of 50 sheets	
	EK1463728T	Lens Cleaning Solution - 16 oz.	
	EZ-TEST	Used to test lenses for stress that can lead to failure	



Bellows



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.

OEM No.	Order No.	DESCRIPTION	Price
1-02954	RBB954/20RBX	BYSTAR 4020 Rail/Beam X - Bellows	Call
1-03354	RBB354/20RBX	BYSTAR 4020 Rail/Beam Y - Bellows	
1-06523	RBB102/15BRX	Rail/Beam X - Bellows	
1-07623	RBB623/15BPY	Byspeed 3015 Beam Path Y - Bellows	
1-08296	RBB120/15BPX	BYSTAR II 3015 Beam X - Bellows	
1-08992	RBB103/15BPY	Byspeed 3015 Beam Y - Bellows	
1-09451	RBB451/15BY	Byspeed 3015 Rail Y - Bellows	
1-09598	RBB598/15RX	Byspeed 3015 Rail X - Bellows	
2-01024	RBB024/15BY	BYSTAR 3015 Beam Y - Bellows	
2-02177	RBB177/20BY	BYSTAR 4020 Beam Y - Bellows	
2-04835	RBB835/20RY	BYSTAR 4020 Rail Y - Bellows	
2-05092	RBB092/20RY	BYSTAR 4020 Rail Y - Bellows	
2-06418	RBB418/15RX	BYSTAR II 3015 Rail X - Bellows	
2-06431	RBB431/20RX	BYSTAR II 4020/4025 Rail X- Bellows	
2-07780	RBB780/25BY	BYSTAR 4025 Beam Y - Bellows	
2-12795	RBB795/20RY	BYSTAR II 4020/4030 Rail Y - Bellows	
3-06607	RBB607/20RBPZ	BYSTAR II 3015/4020 Rail/Beam Z - Bellows	

Can't find the bellow you are looking for? Contact us for a quote!

Donaldson® Ultrafilter Replacement Components

Richardson is pleased to offer the original Donaldson replacement filters and desiccant cartridges for their Ultrapac 2000 Heatless Air Dryer systems. Replacement components are available individually or as a complete Carepac kit, that includes filters, cartridges, gaskets and cartridge lever (where applicable). If you do not see your dryer model listed below, please give us a call, as we can supply the full line of Donaldson replacement components.



Model Number	Filter Element			Desiccant Cartridges			Carepac Kit ¹
	Size	MF - P/N	PE - P/N	Size	Qty Required	P/N	
UP0015-60	0610	1C121522	1C120022-25	10/2	10	1C977300	1C977184
UP0020-60	0420	1C121524	1C120024-05	10/4	4	1C977301	1C977185
UP0030-60	0520	1C121532	1C120032-05	10/4	6	1C977301	1C977186
UP0040-60	0525	1C121540	1C120040-05	10/4	8	1C977301	1C977187

¹ The Carepac kits include:

- O-rings
- Filter Elements
- Gasket
- Desiccant Cartridges
- Cartridge Lever (models UP0020-60 to UP0040-60 only)