

# *Dielectric Heating*



- Oscillator Tubes
  - Air Cooled
  - Water Cooled
- High Voltage Capacitors

# RF Tubes for Dielectric Heating

Richardson Electronics is dedicated to supplying only quality products. You will not find a more dependable source for your RF oscillator tube needs.

You can also rely on Richardson Electronics for cross-referencing assistance. We can help you identify industry standard part numbers and technical support, so you select the most efficient replacement product for your application.

The following is a list of oscillator tubes typically found in dielectric heating generators which we carry in our extensive inventory.



Part Number	Cooling	Output Power (kW)	Anode Dissipation (kW)	Amp Factor ( $\mu$ )	Filament Voltage ( $\mu$ )	Filament Current (A)
5866A/TB2.5/400	Air	0.3	0.15	25	6.3	5.8
5867A/TB3/750	Air	1.1	0.35	25	5.0	14.1
RS3002CL	Air	1.4	3	25	3.2	85
8078/TB4/1500	Air	1.6	0.5	21	5.0	32.5
5868/TB4/1250	Air	1.7	0.45	28	10.0	9.9
6T58RA	Air	2.4	0.8	17	5.0	22
TB5/2500/7092	Air	2.7	0.8	22	6.3	32.5
TB5/2500A	Air	2.7	0.8	22	6.3	32.5
A1000-1 / T1000-1	Air	2.8	1	20	8.5	26
E3062E / 7T62RE	Air	3.4	1.5	25	6.3	32
7T84RB	Air	3.8	1.5	17	6.3	22
6623	Air	4	2.5	22	6.0	60
ITL2-1	Air	5	1.5	21	6.3	35
7753/TBL6/4000A	Air	5	2.1	23	6.3	65
YD1150A / BR1195	Air	5	2.5	17	6.3	33
YD1150B / RS3005CL	Air	5	2.5	17	6.3	33
YD1150AFL / ITL3-1	Air	5	2.5	17	6.3	33
7T85RB	Air	5.1	2.5	21	6.3	35
5924/TBL6/6000	Air	6.9	5	32	12.6	33
7T70-R	Air	8	4.5	21	12.6	35
7T69RB	Air	9	4.5	21	12.6	35
TBL7/8000/6961	Air	9	6	32	12.6	33
6961A / BR1162C	Air	9	6	32	12.6	33
7237A / BR1162C1	Air	9	5	32	12.6	33
3CX2500F3/8251	Air	10	4	22	7.5	52
3CX2500H3 / MR240	Air	10	4	20	7.5	52
WL23791/TH150 / TH150C	Air	10	5.4	22	9.0	60
8161R / TH5-6	Air	10	4	20	7.5	52
8T30RA	Air	11	6	50	12.0	40
E3069	Air	11	5	21	12.6	35
E3170	Air	11	5	21	12.6	35
YD1160 / RS3010CL / BR1196	Air	11	5	20	6.3	66
YD1160FL / ITL5-1 / BR1196F	Air	11	5	20	6.3	66
FDC9608	Air	11	5	21	11.0	43
8T85RB	Air	12	10	21	12.0	40
YD1162FL / ITK5-1	Water	12	5	20	6.3	66
8T64RB	Air	13	10	20	12.0	40
8734/YD1173	Air	13	10	45	5.4	65

Part Number	Cooling	Output Power (kW)	Anode Dissipation (kW)	Amp Factor ( $\mu$ )	Filament Voltage ( $\mu$ )	Filament Current (A)
YU108 / 3CX4500F3	Air	14	6	22	7.0	78
YD1170/8666	Air	16	10	30	5.8	130
8T20RB	Air	18	10	21	12.0	40
RS3012CL	Air	18	10	35	6.0	64
3CX5000H3	Air	18.6	5	18	7.5	75
RS3020CL	Air	20	10	22	5.7	135
AML9-1 / ITL9-1 / BR1718F	Air	24	8	22	5.8	145
3CX10000H3	Air	24.5	10	20	7.5	99
YD1175/8952	Air	27	10	45	5.8	130
BR1606F	Air	30	10	24	6.6	100
BR1610F	Air	30	10	13	6.6	103
BR1618F	Air	30	10	22	5.8	145
YD1174FL	Air	30	10	24	5.8	130
8T25RA	Air	31	15	20	8.0	110
AX3026CL / RS3026CL	Air	32	15	20	7.0	115
AX3026CJ / RS3026CJ	Water	32	25	20	7.0	115
AML12-1 / ITL12-1	Air	33	12	22	5.8	145
YD1180/8801	Air	33	15	33	7.0	175
8T87RB	Air	35	20	20	8.0	180
BR1607F	Air	35	10	23	7.5	100
BR1617F	Air	38	10	23	6.3	160
3CX15000H3	Air	41	15	20	6.3	160
YC225 / MR710	Air	41	15	20	6.3	160
AML15-2 / ITL15-2	Air	45	17	25	7.2	180
YD1185/8935	Air	50	15	50	7.0	175
YD1186	Air	50	15	24	7.0	175
AX3040CJ / RS3040CJ	Water	60	35	20	8.0	185
AX3040CL / RS3040CL	Air	60	25	20	8.0	185
AMK15-2 / ITK15-2	Water	63	20	25	7.2	180
3CX20000H3	Air	64	20	20	10.0	160
YC226 / MR1014	Air	64	20	20	10.0	160
3CW40000H3	Water	70	40	20	10.0	160
ITL25-1	Air	75	30	20	9.0	180
6696A	Water	80	60	20	13.0	205
ITK25-1	Water	90	50	20	9.0	180
YD1195/8913	Air	90	30	50	8.4	235
YD1190	Air	96	30	30	8.4	235
BR1601F	Air	118	30	40	8.2	238
BR1647F	Air	118	30	28	8.2	238
BW1601J2F	Water	118	50	40	8.2	238
BW1608J2	Water	118	50	40	12.0	178
BW1647J2F	Water	118	50	28	8.2	238
3CW45000H3	Water	120	45	20	10.0	160
AX3060CJ / RS3060CJ	Water	120	40	22	10.0	190
AX3060CL / RS3060CL	Air	120	35	22	10.0	190
AMK30-2 / ITK30-2	Water	130	50	23	11.0	240
AX3080CJ / RS3080CJ	Water	130	60	19	11.0	205
BW1665J2F	Water	130	50	24	11.0	240
YD1202/8752	Water	163	80	36	12.2	250
BW1184J2/F	Water	166	80	30	12.2	255
9T94A	Water	170	80	30	13.0	320
AMK60-2 / ITK60-2	Water	180	70	23	13.0	250
BW3150J2F	Water	200	80	30	15.0	255
9T38 / 9T38A / LD961	Water	240	120	40	18.3	315
AX3150CJ / RS3150CJ	Water	240	100	22	15.0	255
AW1185J2 / BW1185J2	Water	240	120	41	12.6	380
YD1212/8680	Water	240	120	40	12.6	380

# Richardson Electronics ...

For over 60 years, Richardson Electronics has been supplying power grid tubes to the dielectric heating industry. Our commitment to this industry is second to none. Not only do we supply the components you need, but we also make technical expertise available when you need it. It is going the extra mile that sets Richardson Electronics apart.

An extensive inventory of oscillator tubes is in stock and ready for immediate delivery, from such leading manufacturers as:



**Amperex**



**THALES**

**TOSHIBA**

When you need a replacement tube, turn to the industry leader —  
Richardson Electronics.

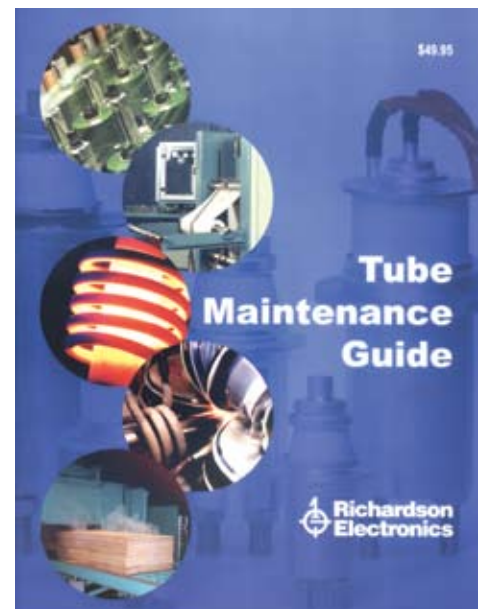
## Tube Maintenance Guide

Richardson Electronics is proud to offer a Tube Maintenance Guide to help our customers get more life out of their tubes and generators. In this document you will find information on...

- How to test tubes,
- How to condition tubes,
- Preventive maintenance for industrial generators, and
- Liquid Cooling Systems

This information can help tube users save thousands of dollars on existing tubes and generators.

**Tube Maintenance Guides are available for only \$49.95 (while supplies last).**



# Markets Served

## High Frequency Heating

### Plastic Welding

The bonding of plastic using RF is the industry standard for many applications including the manufacturing of:

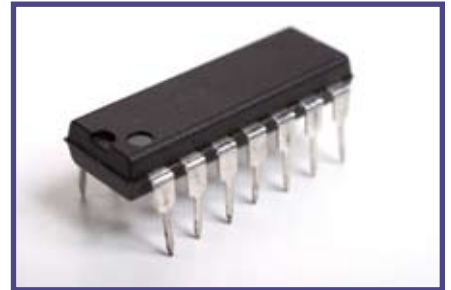
- Inflatable Toys
- Medical Bags
- Tents
- Truck Covers



### Plastic Preheating

Richardson Electronics has the oscillator tube and associated components for your high frequency generator for such plastic preheating applications as:

- Semiconductor Packaging
- Melamine



## Radio Frequency Drying

### Textile Drying

High power radio frequency drying is the most efficient process for the removal of moisture from textiles. We have the correct replacement tube and capacitors for your Radio Frequency Dryer.



### Wood Glue Drying

The wood industry has many applications which use RF tubes. RF can be used to remove the moisture from lumber and plywood, embossing, forming or laminating to fiberboard or for OSB and chip board curing.



The most popular application for the wood industry is to cure the glue used when combining multiple pieces of wood together to accelerate the drying time and increase production.

### Food Drying

Using RF in the food industry has many advantages and can be used for various processes such as:

- Post Bake Moisture Removal
- Pasteurization / Sterilization
- Preheating or Precooking





# High Voltage Capacitors

With over 80,000 capacitor and related units shipped annually, Richardson Electronics has demonstrated the ability to service our global customers' "high frequency, high voltage" needs. We complement our power tube and solid-state offerings with a wide selection of high voltage capacitors and related products.

Whether for an MRO requirement or a new design-in project, our sales and technical support staff can find the right product for any need. We have over 15,000 different part numbers on file, representing a wide variety of markets and applications.

## Popular Types Include:

103-8200PF	CFC-200AS/30	CKT-250-0030	HY57Y500KA
3560/6	CFC-250AS/30	CVCD-3000-5S	PD70-300
4411/96139	CFD-450BS/45	CVHP-650-55S	PE100-600
804-2500PF	CFHP-450-55S	CVD-650BS/55	PE100-1600
847-33PF	CKT1-100-0025	DF30X90-1200	PE140-2000-10
860-3000PF	CKT-12-0035	DB30X88-1000PF	PE200-5000-20
CFC-25AS/35	CKT-25-0035	DB45X155-100PF	PEF-220-2500PF
CFC-50AS/35	CKT-50-0305	HPC60-2000	PS30-560-5
CFC-75AS/35	CKT-100-0035	HY57Y101KA	TOS16X10-16-10
CFC-100AS/35	CKT-150-0030	HY57Y201KA	
CFC-150AS/30	CKT-200-0030	HY57Y250KA	



**800-348-5580 (USA/Canada) • 630-208-2200**  
**industrial.rell.com • edg@rell.com**

Visit [www.rell.com/locations.asp](http://www.rell.com/locations.asp) for a complete listing of our worldwide locations.

## Asia / Pacific Rim / Australia

<b>Australia</b>	Melbourne	+613-9874-8292
<b>China</b>	Beijing	+86-10-6588-5548
	Chengdu	+86-28-8620-3488
	Nanjing	+86-25-8320-0266
	Shanghai	+86-21-6235-1788
	Shenzhen	+86-755-8294-3736
	Xi'an	+86-29-8420-1225
	Xiamen	+86-592-5033801
	Wuhan	+86-27-8752-5616
<b>India</b>	Noida	+91 120 477-4200
<b>Japan</b>	Tokyo	+81-3-5844-0521
<b>Korea</b>	Seoul	+82 (2) 539-4731
<b>Malaysia</b>	Selangor	+60 (3) 5511-5421
<b>Philippines</b>	Pasig City	+632-636-8891
<b>Singapore</b>	Centro Bianco	+65 6487 5995
<b>Taiwan</b>	Taipei	+886 (2) 26983288
<b>Thailand</b>	Bangkok	+66 (2) 749-4402
<b>Vietnam</b>	Ho Chin Minh City	+84 89974245

## Middle East / Africa

<b>Israel</b>	Ra'anana	+972-9-7483232
<b>Italy</b>	Florence	+39 (055) 420831

## Europe

<b>France</b>	Colombes	+33 (1) 55.66.00.30
<b>Germany</b>	Puchheim	+49 (89) 890 214-0
<b>Italy</b>	Florence	+39 (055) 420831
	Milan	+39 (039) 653145
<b>Netherlands</b>	Amsterdam	+31 (0) 23 556 0490
<b>Sweden</b>	Stockholm	+46 8 564 705 90
<b>Spain</b>	Madrid	+34 (91) 528 3700
<b>United Kingdom</b>	Slough	+44 (1753) 733010
	Lincoln	+44 (01522) 501200

## Latin America

<b>Brazil</b>	São Paulo	+(55) 11 5186 9655
<b>Colombia</b>	Sante Fe	
	de Bogota, DC	+(57-1) 636-1028
<b>Florida</b>	Ft. Lauderdale	(954) 735-4425
	Latin America Hdqtrs.	
<b>Mexico</b>	Mexico City	+52 (55) 5208-9830

