



# Ground Power Equipment



**RED BOX**  
AVIATION

About Red Box Aviation

The Red Box Aviation GPU range is designed and manufactured by the LPA Group.

We offer a wide range of aircraft ground power equipment; from aircraft start, continuous and combination units, to cable harnesses and connectors.

Designed for use in both civil and military markets, LPA delivers bespoke power solutions to its customers. With a global network of distributors, we provide comprehensive local support and after-sales care to our international customers across all ground support equipment and solutions.

To find out more visit [www.redboxaviation.com](http://www.redboxaviation.com)

Who are LPA Group

LPA Group design and manufacture power connection solutions for the aviation industry and are based in the UK.

With over 70 years of experience in the aviation market, the acquisition of Red Box Aviation is key to our commitment to provide a comprehensive range of high quality and reliable ground power equipment to our customers.

LPA supports a range of customers including major UK and international airports, OEMs, specialist aviation suppliers, and the military. We understand the importance of reliable ground power equipment and are committed to the development and innovation of both the Red Box and LPA product range.

LPA has EN 9100, ISO 9001, ISO 14001 certification and many of our products are NATO codified.

To find out more visit [www.lpa-group.com](http://www.lpa-group.com)

Providing Ground Support Equipment



Ground Power Equipment

Battery Start Units	4
Battery Continuous Power	6
Mains Continuous Power	7
Combination Start and Continuous Power	8

LPA 28VDC Connectors and Cable Harnesses

28VDC Connectors	10
Cable Harnesses and Assemblies	11
28VDC Flanged Receptacles	11
Cable Harness Storage Stand (PCR100)	11



# Start Units

Our comprehensive range of start units are designed to cover every possible start requirement.

The Red Box start units offer 12V, 24V, 26V and 28V starts using either gel lead acid or lithium batteries.



RB75A 1700A

Unit	Max Amps	Starting Amps	Capacity	Voltage	Max Voltage	Size (cm)	Wweight (kg)	Operating Temp.	Case	Voltage Indication	Auxiliary Protection	Aircraft Cable	Charger	Protection
PORTABLE START UNITS														
RB12 12V	2600	1600	32 amp hrs @ 10 Hr rate	12VDC	13VDC	L 35 X W 9 X H 23	16	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 20A	2m heavy duty, NATO connector	4 amp Electronic fixed input charger. Charge time, less than 2 hours from 50%	Reverse polarity warning
RB70 12V	5200	3400	76 amps hrs @ 10 hr rate	12VDC	13VDC	L 40 x W 23 x H 28	32	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 40A	2m heavy duty cable with aircraft connector	8 amp electronic fixed AC input charger. Charging time less than 2 hours	Reverse polarity warning
RB25 24V	1300	800	16 amp hrs @ 10 Hr rate	24VDC	26VDC	L 35 X W 9 X H 23	16	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 20A	2m heavy duty, NATO connector	2.5 Amp Electronic fixed AC input charger. Charging time less than 2 hours fom 50%	Reverse polarity warning
RB75 24V	2600	1700	38 amp hrs @ 10 Hr rate	24VDC	26VDC	L 45 X W 10 X H 38	29	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	8 A Electronic universal AC input. Charging time less than 2 hours from 50%	Reverse polarity warning
RB75 TWIN 24V	5200	3500	76 amp hrs @10 Hr rate	24VDC	26VDC	2 X L 45 X W 10 X H 38	58	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	2 X 8 A Electronic universal AC input. Charging time less than 2 hours from 50%	Reverse polarity warning
RB80 26V	2600	1700	38 amp hrs @ 10 Hr rate	26VDC	28VDC	L 45 x W 10 x H 38	31	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	8A Electronic universal AC input. Charging time less than 2 hours from 50%	Reverse polarity warning
RB85 28V	2600	1700	38 amp hrs @ 10 Hr rate	28VDC	30VDC	L 50 X W 10 X H 38	33	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	8 A Electronic universal AC input. Charging time less than 3 hours from 50%	Reverse polarity warning
RB85 TWIN 28V	5200	3500	76 amp hrs @ 10 Hr rate	28VDC	30VDC	2 X L 50 X W 10 X H 38	66	-40°C to +60°C	Stainless Steel	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	2 X 8 A Electronic universal AC input. Charging time less than 3 hours from 50%	Reverse polarity warning
PORTABLE LITHIUM UNITS														
RBL1200	4000	1500	28 amps hrs @ 10 hr rate	14VDC	28VDC	L 35 X W 10 X H 38	11.6	-30°C to +60°C	Aluminium	Digital to IP65	Circuit Breaker 40A	2m heavy duty cable with aircraft connector	4 A Electronic universal AC input	Reverse polarity warning
RBL2500	2500	800	16 amp hrs @ 10 Hr rate	28VDC	30VDC	L 35 X W 10 X H 38	7.2	-30°C to +60°C	Aluminium	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	4 A Electronic universal AC input	Reverse polarity warning
RBL4000	4000	1500	28 amp hrs @ 10 Hr rate	28VDC	30VDC	L 35 X W 10 X H 38	11.6	-30°C to +60°C	Aluminium	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	4 A Electronic universal AC input	Reverse polarity warning
RBL4000 TWIN	8000	3000	56 amp hrs @ 10 Hr rate	28VDC	30VDC	2 x L 35 X W 10 X H 38	23.2	-30°C to +60°C	Aluminium	Digital to IP65	Circuit Breaker 40A	2m heavy duty, NATO connector	2 x 4 A Electronic universal AC input	Reverse polarity warning

Unit	Max Amps	Starting Amps	Capacity	Voltage	Max Voltage	Size (cm)	Weight (kg)	Operating Temp.	Case	Voltage Indication	Auxiliary Protection	Aircraft Cable	Charger	Protection	Towbar	Handlebar and Castors
START CART UNIT																
TC400/6	7800	5000	114 amp @10 Hr rate	24VDC	26VDC	L 78 X W 35 X H 30	135	-40°C to +60°C	Zinc Coated Steel	Digital to IP65	Circuit Breaker 70A	3m heavy duty, NATO connector	50A Electronic 110/230v. Charging time less than 2 hours from 50%	Reverse polarity warning	50mm ball (optional)	Optional
TC400/8	10400	7000	152 amp @10 Hr rate	24VDC	26VDC	L 78 X W 35 X H 30	165	-40°C to +60°C	Zinc Coated Steel	Digital to IP65	Circuit Breaker 70A	3m heavy duty, NATO connector	50A Electronic 110/230v. Charging time less than 2 hours from 50%	Reverse polarity warning	50mm ball (optional)	Optional
TC400/28	5200	3500	115 amp hrs @10 Hr rate	28VDC	30.3VDC	L 78 X W 54 X H 30	140	-40°C to +60°C	Zinc Coated Steel	Digital to IP65	Circuit Breaker 70A	3m heavy duty, NATO connector	50A Electronic 110/230v. Charging time less than 2 hours from 50%	Reverse polarity warning	50mm ball (optional)	Optional



# Continuous Power Battery Units

Our continuous battery units are designed to provide uninterrupted power to aircraft when mains power isn't available, or when a silent power supply is required.



TC400/28C

TC400/28QU

Unit	Max Amps	Starting Amps	Capacity	Run Time	Voltage	Max Voltage	Size (cm)	Weight (KG)	Operating Temp	Case	Voltage Indication	Auxiliary Protection	Aircraft Cable	Charger	Optional Extras
TC400/28C	5200	3500	136 amp hrs @10 Hr rate	110 amps for an hour, 55 amps for 2 hours, 27 amps for 3 hours	28VDC	30.3VDC	L 78 X W 35 X H 30	140	-40°C to +60°C	Zinc Coated Steel	Digital to IP64	Circuit Breaker 40A	3m heavy duty with connector	50A Electronic 110/230V. Charging time less than 4 hours from 50% (larger chargers available)	Longer cables
TC400/28TW	10400	7000	240 amp hrs @10 Hr rate	164 amps for 1 hour, 95 amps for 2 hours, 66 amps for 3 hours	28VDC	30.3VDC	L 200 X W 108 X H 150	400	-40°C to +60°C	Zinc Coated Steel	Digital to IP65	Circuit Breaker 40A	3m heavy duty with connector	50A Electronic 110/230V. Charging time less than 4 hours from 50% (larger chargers available)	Cable horns, longer cables
TC400/28TR	15600	10400	360 amp hrs @10 Hr rate	245 amps for 1 hour, 140 amps for 2 hours, 100 amps for 3 hours	28VDC	30.3VDC	L 200 X W 108 X H 150	500	-40°C to +60°C	Zinc Coated Steel	Digital to IP65	Circuit Breaker 40A	3m heavy duty with connector	50A Electronic 110/230V. Charging time less than 3 hours from 50% (larger chargers available)	Cable horns, longer cables

## Continuous Power

Our continuous power supplies offer clean 14V and 28VDC power, up to 600 Amps.

From hand portable to mobile units we offer a solution to all DC aircraft requirements.



RBSC100

Unit	Output Current	Output Voltage	Output Ripple	Input Frequency	AC Input Supply	Phase	Power Factor Correction	Input Rating	Dims Body (cm)	Weight (kg)	LED Voltmeter/ Ammeter Display
RBPS25	25 amps	14/28VDC	<150 mV	47-63 Hz	104V-264V	1Ø	Included	775 VA	L 13 x W 46 x H 22	5	YES
RBPS50	50 amps	14/28VDC	<150 mV	47-63 Hz	104V-264V	1Ø	Included	1550 VA	L 13 x W 46 x H 22	6.5	YES
RBPS100	100 amps	14/28VDC	<150 mV	47-63 Hz	104V-264V	1Ø	Included	3100 VA	L 25 x W 51 x H 24	11.6	YES
RBSC100	100 amps	14/28VDC	<150 mV	47-63 Hz	95V-264V	1Ø	Included	3000 VA	L 45 x W 20 x H 23	9	YES
RBSC200	200 amps	14/28VDC	<150 mV	47-63 Hz	95V-264V	1Ø	Included	6000 VA	L 51 X W 22 X H 36	16	YES
RBSC300	300 amps	28VDC	<250 mV	45-65 Hz	200V-460V	3Ø	Included	10500 VA	L 91 X W 80 X H 61	70	YES
RBSC600	600 amps	28VDC	<250 mV	45-65 Hz	200V-460V	3Ø	Included	21600 VA	L 91 X W 80 X H 77	90	YES



RBPS25 on a Cirrus SR20



# Combination Start and Continuous

Combining the quality and functionality of both our start and continuous units into a single, easy-to-manoeuvre unit.



TC3000/100-6



TC3000/300-6



Visit [www.redboxaviation.com](http://www.redboxaviation.com) or call us on +44 (0)1799 512800 for more information on our hybrid units

Unit	Max Amps	Starting Amps	Capacity	Starting Voltage	Max Start Voltage	Continuous Voltage	Continuous Power	AC Input	Size (cm)	Weight (kg)	Operating Temperature	Case	Voltage Indication	Performance Monitoring	Aircraft Cable	Charger	Handle Bar & Castors Or Towbar
TC3000/100-4	5200	3500	76 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	100 amps	95v-270V 1Ø	L 84 X W 63 X H 56	115	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	100A Electronic inbuilt. Charging time less than 60min from 50%	Optional
TC3000/100-6	7800	5200	114 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	100 amps	95v-270V 1Ø	L 103 X W 63 X H 56	139	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	100A Electronic inbuilt. Charging time less than 30min from 50%	Optional
TC3000/200-4	5200	3500	76 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	200 amps	95v-270V 1Ø	L 103 X W 63 X H 56	145	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	100A Electronic inbuilt. Charging time less than 60min from 50%	Handle Bar and Castors
TC3000/200-6	7800	5200	114 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	200 amps	95v-270V 1Ø	L 103 X W 63 X H 56	175	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	100A Electronic inbuilt. Charging time less than 30min from 50%	Handle Bar and Castors
TC3000/300-4	5200	3500	76 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	300 amps	200V-460V 3Ø	L 130 X W 63 X H 56	135	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	300A Electronic inbuilt. Charging time less than 30min from 50%	Handle Bar and Castors
TC3000/300-6	7800	5200	114 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	300 amps	200V-460V 3Ø	L 130 X W 63 X H 56	160	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	300A Electronic inbuilt. Charging time less than 1 hour from 50%	Handle Bar and Castors
TC3000/300-8	10400	7000	152 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	300 amps	200V-460V 3Ø	L 130 X W 63 X H 56	185	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	300A Electronic inbuilt. Charging time less than 1 hour from 50%	Handle Bar and Castors
TC3000/600-6	7800	5200	114 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	600 amps	200V-460V 3Ø	L 130 X W 63 X H 80	235	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	600A Electronic inbuilt. Charging time less than 30min from 50%	Handle Bar and Castors
TC3000/600-8	10400	7000	152 amp hrs @10 Hr rate	24VDC	26VDC	28VDC	600 amps	200V-460V 3Ø	L 130 X W 63 X H 80	235	-40°C to +60°C	Zinc Coated Steel	LED display	LED display	3m heavy duty	600A Electronic inbuilt. Charging time less than 30min from 50%	Handle Bar and Castors







## P28 Connector (28VDC)

The P28 connector comes with fixed electrical contacts, providing a cost-effective connection system to power aircraft. Suitable for a wide range of composite, 3 or 5 core cable types.

### Key features:

- Easy connection to cable
- Low maintenance
- IP66 & IP67 rated (no filler required)
- Suitable for a wide range of composite and single core cables
- External components manufactured from impact, abrasion and chemically resistant thermal stable polymers
- Exterior handle / stain relief system
- High conductivity silver-plated copper contacts

### Technical information:

#### Power components

- Nominal voltage: 28VDC
- Current carrying capacity: 450 A (power), 35 A (control)
- Current overload: 1500 A for 1 minute (power)
- High voltage test: 4000 V
- Operating temperature: -25°C to +90°C (includes temperature rise)
- Applicable standards: ISO 4611, ISO 461-2, VG 96966 and MIL-C-7974 D
- Overall weight: 1.2kg

P28 Socket

Type 20/21/23 Plug



## Cable Harnesses

Bespoke assemblies and cable harnesses to meet customer requirements.

### Key features:

- Composite cable, 3 single core or 5 single core cable options
- 28VDC supply
- Quick assembly using standard stock items
- Cable lengths in meters, from 5 to 30M and in 5M increments
- Low maintenance and impact resistant
- Ideal for cable retrievers and reelers

**Extension Harness (EH)**  
28VDC Single Core Extension Harness with P28



**Power Harness (PH)**  
28VDC 5 Single Core Cable Harness & P28



## 28VDC Flanged Plug & Socket

Easy connection to cable & low maintenance.

### Key features:

- Protected flange mounted 28VDC connectors
- Cast aluminium alloy housing and lid
- Epoxy powder coated black finish
- Exterior material: CSPE
- Interior manufactured to ISO 461
- IP54 rated
- Crimped or soldered contacts
- Mounting boxes available

### Technical information:

#### Power components

- 450 A maximum continuous current
- 1500 A for maximum 1 min control components
- 35 A maximum continuous current
- All flanged plugs have a split control pin (part number – 29176) and all flanged sockets have a split control tube (part number – 13196)

**Type 19 Plug**  
28VDC 3 pole Plug



**Type 16 Socket**  
28VDC 3 pole Socket



## Cable Harness Storage Stand (PCR100)

Designed for use in the hanger or on the airport apron, the PCR100 prevents damage to the cable and can hold up to 100kg per side.

### Key features:

- Suits multicore and composite cables
- Holds 100kg per side (maximum)
- Bright yellow finish and fitted with high visibility reflective tape





**RED BOX**  
AVIATION



---

**LPA Group Plc**

Light & Power House  
Shire Hill  
Saffron Walden  
Essex, CB11 3AQ  
UK

+44 (0)1799 512800

[enquiries@lpa-group.com](mailto:enquiries@lpa-group.com)

[www.redboxaviation.com](http://www.redboxaviation.com)

[www.lpa-group.com](http://www.lpa-group.com)

---

0325/100



EN 9100: FM 759856



ISO 9001: FM 01660

ISO 14001: EMS 758363