DEKAL® LOAD BANKS

DEKAL AGREGATI, LLC
Ulica Ludvika Plambergerja 25
SI-2204 Miklavz na Dravskem polju
S L O V E N I A - E U R O P E
Tel.: +386/2/320 325 0, Fax.: +386/2/320 325 2
www.gse-global.com

MFA 91087-1 - DOC

Date: 13th JAN 2020

TAMAGAWA AERO SYSTEMS CO., LTD.
F #2 Sogo Bldg, 1-7-1, Haneda Airport
Ota-ku, Tokyo 144-0041
JAPAN

TO WHOM IT MAY CONCERN

MANUFACTURER's AUTHORIZATION # 91087-1

Manufacturer Authorization Letter for complete range of products

We hereby authorize **Tamagawa Aero Systems Co., Ltd.,** F #2 Sogo Bldg, 1-7-1, Haneda Airport, Ota-ku, Tokyo 144-0041, Japan as our authorized Japanese partner to represent Dekal Load Banks L.L.C. (Dekal Agregati d.o.,o.), Ulica Ludvika Plambergerja 025, SI-2204 Miklavz na Dravskem polju, Slovenia. This authorization refers to complete range of products distributed by nominated company, submitting bids, tender participation and aviation GSE project involvement for civilian and military applications. Dekal Load Banks L.L.C. as the sole manufacturer will assure the support, services and warranty claims to Tamagawa Aero Systems Co., Ltd for all the products supplied through our local partner; based on prior official quotation for projects declared in the region. We will provide full technical assistance and advisement prior, during and after actual delivery by our authorized local partner.

This Manufacturer's Authorization letter is valid until December 31st 2020. We hereby ratify this document by signature and official seal bellow, where original script of authorization letter is always available within Dekal Load Banks L.L.C. archive data base at company headquarters.

For and on behalf of the manufacturer:

Dejan KALSEK
(CEO & Owner)

DEKAL® LOAD BANKS
DEKAL AGREGATI d.o.o.
Ulica Ludvika Plambergerja 25
2204 Miklavž na Dravskem polju - Slovenija

Dekal Load Banks L.L.C.
Dekal Agregati d.o.o.

Enclosure:

None

NATO OTAN
NCAGE CODE: 12670
2018 AAA Highest Creditworthiness
DEKAL AGREGATI d.o.o.
Company ID: 3968928
Bisnode d.o.o. / 31.12.2018
SLOVENIA Excellent SME ISSUED Sept.20. 2016 CHECK !

DEKAL LOAD BANKS®

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

PORTABLE RESISTIVE 400 Hz LOAD BANKS - ANALOG PANEL

SPECIFICALLY DESIGNED RUGGED UNITS USED FOR THE TESTING AND SERVICING OF 400 Hz 115 / 200 V GPUs

TECHNICAL SPECIFICATION	ALB-45AP	ALB-80AP	ALB-100AP	ALB-120AP	ALB-140AP
VOLTAGE [V] * FREQUENCY [Hz]	115 / 200 V AC ± 10 % * 400 Hz ± 10 %				
LOAD / POWER [kW / kVA cosφ=1]	0 - 48 kW ± 5 %	0 - 80 kW ± 5 %	0 - 104 kW ± 5 %	0 - 120 kW ± 5 %	0 - 144 kW ± 5 %
FINE ADJUSTMENT - POTENTIOMETER	0 - 8 kW	0 - 8 kW	0 - 8 kW	0 - 8 kW	0 - 8 kW
RATE SWITCH REG. LOAD STEPS ± 5% ROUGH ADJUSTMENTS - 8 kW STEPS POWER [kW / kVA cosφ=1]	**5 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW	**9 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW	**12 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW 80 - 88 kW 88 - 96 kW 96 - 104 kW	**14 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW 80 - 88 kW 88 - 96 kW 96 - 104 kW 104 - 112 kW 112 - 120 kW	**17 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW 80 - 88 kW 88 - 96 kW 96 - 104 kW 104 - 112 kW 112 - 120 kW 120 - 128 kW 128 - 136 kW 136 - 144 kW
FORCED AIR COOLING [m³/min & CFM]	44.10 m³/min - 1560 CFM	66.15 m³/min - 2340 CFM	88.20 m³/min - 3120 CFM	88.20 m³/min - 3120 CFM	88.20 m³/min - 3120 CFM
INDICATIONS					
ANALOGUE VOLT METER ANALOGUE AMPERE METER ANALOGUE FREQUENCY METER	VOLT METER - MOVING IRON CLASS 1.5 AMPERE METER - MOVING IRON CLASS 1.5 FREQUENCY METER - MOVING IRON CLASS 0.5				
LIGHT INDICATION	PHASE INDICATION, PHASE ROTATION, INTERLOCK CIRCUIT				
GPU TESTING PROCEDURE*	**Proposal procedure:* LOAD raising from 0 → 100% ⊙ 30 seconds; HOLD at 100% ⊙ 5 minutes; LOAD decrease from 100 → 0% ⊙ 10 minutes				
ENGINE DECARBONISING*	**Proposal procedure:* LOAD raising from 0 → 100% ⊙ 30 seconds; HOLD at 100% ⊙ 45 minutes; LOAD decrease from 100 → 0% ⊙ 15 minutes				
DIMENSIONS & WEIGHT					
LOAD BANK SIZE [L x W x H] mm / Kg LOAD BANK SIZE [L x W x H] In / Lbs	600 x 230 x 630 / 25 23.6 x 9.05 x 24.8 / 55	600 x 230 x 630 / 27 23.6 x 9.05 x 24.8 / 59	600 x 230 x 630 / 30 23.6 x 9.05 x 24.8 / 66	600 x 230 x 630 / 33 23.6 x 9.05 x 24.8 / 73	600 x 230 x 630 / 35 23.6 x 9.05 x 24.8 / 77
TRANSPORT CASING [L x W x H] mm / Kg TRANSPORT CASING [L x W x H] In / Lbs	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42
LOAD BANK PAINTING / TRANSPORT CASING	POWDER COATING FINE STRUCTURE 71319 IGP - SWISS QUALITY / HIGH GRADE ALUMINUM				

Including transport carrying case per unit / All specifications are subject to change without further notice

DEKAL LOAD BANKS®

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

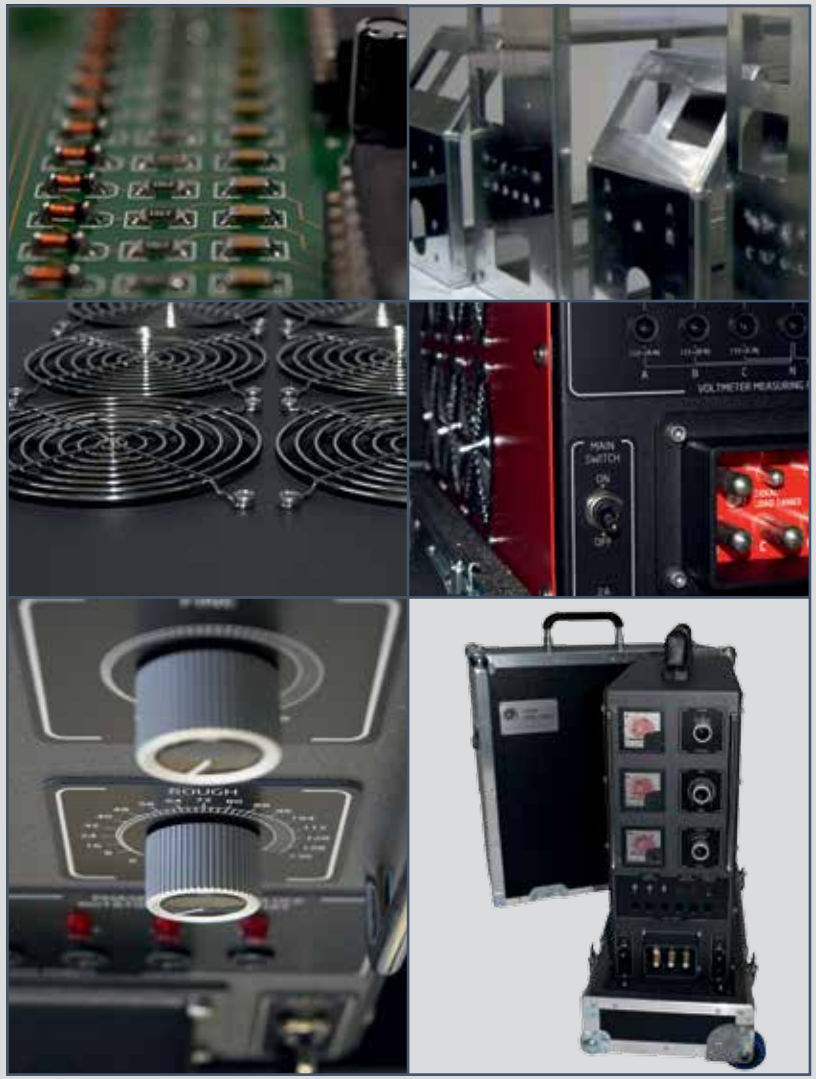
Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

ADVANTAGES OF DEKAL LOAD BANKS

- **Simple operation** suitable for non-trained operators
- **Silent operations** < 70 dB(A) at the distance of 7m / 23Ft
- Suitable for **workshop and/or airside operation**
- **Environmental operating temperature** from -20 °C to 55 °C / -4 °F to 122 °F
- **Transport casing** with pull up handle as standard for each load bank
- Triple thermal protection - **extremely resistant** to high temperature
- **Cant protection** - load bank works only in horizontal position
- **Phase detection** - load bank works only if all ABC phases are available
- Phase rotation indicator - **phase sequence of three-phase voltages**
- **Fine regulation as standard for all Digital and Analogue 400 Hz AC** load banks
- Aluminum housing and **non-corrosive parts**
- **High component quality control** by manufacturer
- **High reliability** - effective standardization process
- Isolated jack sockets - **unique user friendly safety feature** for external voltage test
- Spare parts availability and **accurate on-time deliveries**
- **Short worldwide delivery period** with tracking feature & insurance
- **2 years full warranty with extension option** for all DEKAL load banks
- CE certification - health, safety, and environmental protection standards
- Made for GPU's testing procedure according to ISO 6858, DFS 400, ARP 5015
- Classification CE marking, DIN, VDE, IEC, IP 21 protection rate level



NATO OTAN
NCAGE CODE: 1267Q

Excellent SME

A
Creditworthiness Rating

D-U-N-S® REGISTERED

DEKAL LOAD BANKS®

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

PORTABLE RESISTIVE 400 Hz LOAD BANKS - DIGITAL PANEL

SPECIFICALLY DESIGNED RUGGED UNITS USED FOR THE TESTING AND SERVICING OF 400 Hz 115 / 200 V GPUs

TECHNICAL SPECIFICATION	ALB-45DP	ALB-80DP	ALB-100DP	ALB-120DP	ALB-140DP
VOLTAGE [V] * FREQUENCY [Hz]	115 / 200 V AC ± 10 % * 400 Hz ± 10 %				
LOAD / POWER [kW / kVA cosφ=1]	0 - 48 kW ± 5 %	0 - 80 kW ± 5 %	0 - 104 kW ± 5 %	0 - 120 kW ± 5 %	0 - 144 kW ± 5 %
FINE ADJUSTMENT - POTENTIOMETER	0 - 8 kW	0 - 8 kW	0 - 8 kW	0 - 8 kW	0 - 8 kW
RATE SWITCH REG. LOAD STEPS ± 5% ROUGH ADJUSTMENTS - 8 kW STEPS POWER [kW / kVA cosφ=1]	**5 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW	**9 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW	**12 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW 80 - 88 kW 88 - 96 kW 96 - 104 kW	**14 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW 80 - 88 kW 88 - 96 kW 96 - 104 kW 104 - 112 kW 112 - 120 kW	**17 SEQUENCE STEPS:** 8 - 16 kW 16 - 24 kW 24 - 32 kW 32 - 40 kW 40 - 48 kW 48 - 56 kW 56 - 64 kW 64 - 72 kW 72 - 80 kW 80 - 88 kW 88 - 96 kW 96 - 104 kW 104 - 112 kW 112 - 120 kW 120 - 128 kW 128 - 136 kW 136 - 144 kW
FORCED AIR COOLING [m³/min & CFM]	44.10 m³/min - 1560 CFM	66.15 m³/min - 2340 CFM	88.20 m³/min - 3120 CFM	88.20 m³/min - 3120 CFM	88.20 m³/min - 3120 CFM
MEASUREMENTS & INDICATIONS					
DIGITAL PANEL VOLT METER DIGITAL PANEL AMPERE METER DIGITAL PANEL FREQUENCY METER	VOLT METER 1% ACCURACY, WIDE VIEWING ANGLE, PROGRAMMABLE DYNAMIC BACKGROUND COLOUR (Green, Red, White) AMPERE METER 1% ACCURACY, WIDE VIEWING ANGLE, PROGRAMMABLE DYNAMIC BACKGROUND COLOUR (Green, Red, White) FREQUENCY METER 0.1% ACCURACY, WIDE VIEWING ANGLE, PROGRAMMABLE DYNAMIC BACKGROUND COLOUR (Green, Red, White)				
LIGHT INDICATION	PHASE INDICATION, PHASE ROTATION, INTERLOCK CIRCUIT				
GPU TESTING PROCEDURE*	**Proposal procedure:* LOAD raising from 0 → 100% ⊙ 30 seconds; HOLD at 100% ⊙ 5 minutes; LOAD decrease from 100 → 0% ⊙ 10 minutes				
ENGINE DECARBONISING*	**Proposal procedure:* LOAD raising from 0 → 100% ⊙ 30 seconds; HOLD at 100% ⊙ 45 minutes; LOAD decrease from 100 → 0% ⊙ 15 minutes				
DIMENSIONS & WEIGHT					
LOAD BANK SIZE [L x W x H] mm / Kg LOAD BANK SIZE [L x W x H] In / Lbs	600 x 230 x 630 / 25 23.6 x 9.05 x 24.8 / 55	600 x 230 x 630 / 27 23.6 x 9.05 x 24.8 / 59	600 x 230 x 630 / 30 23.6 x 9.05 x 24.8 / 66	600 x 230 x 630 / 33 23.6 x 9.05 x 24.8 / 73	600 x 230 x 630 / 35 23.6 x 9.05 x 24.8 / 77
TRANSPORT CASING [L x W x H] mm / Kg TRANSPORT CASING [L x W x H] In / Lbs	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42	710 x 290 x 860 / 19 27.9 x 11.4 x 33.9 / 42
LOAD BANK PAINTING / TRANSPORT CASING	POWDER COATING FINE STRUCTURE 71319 IGP - SWISS QUALITY / HIGH GRADE ALUMINUM				

Including transport carrying case per unit / All specifications are subject to change without further notice

DEKAL LOAD BANKS *

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

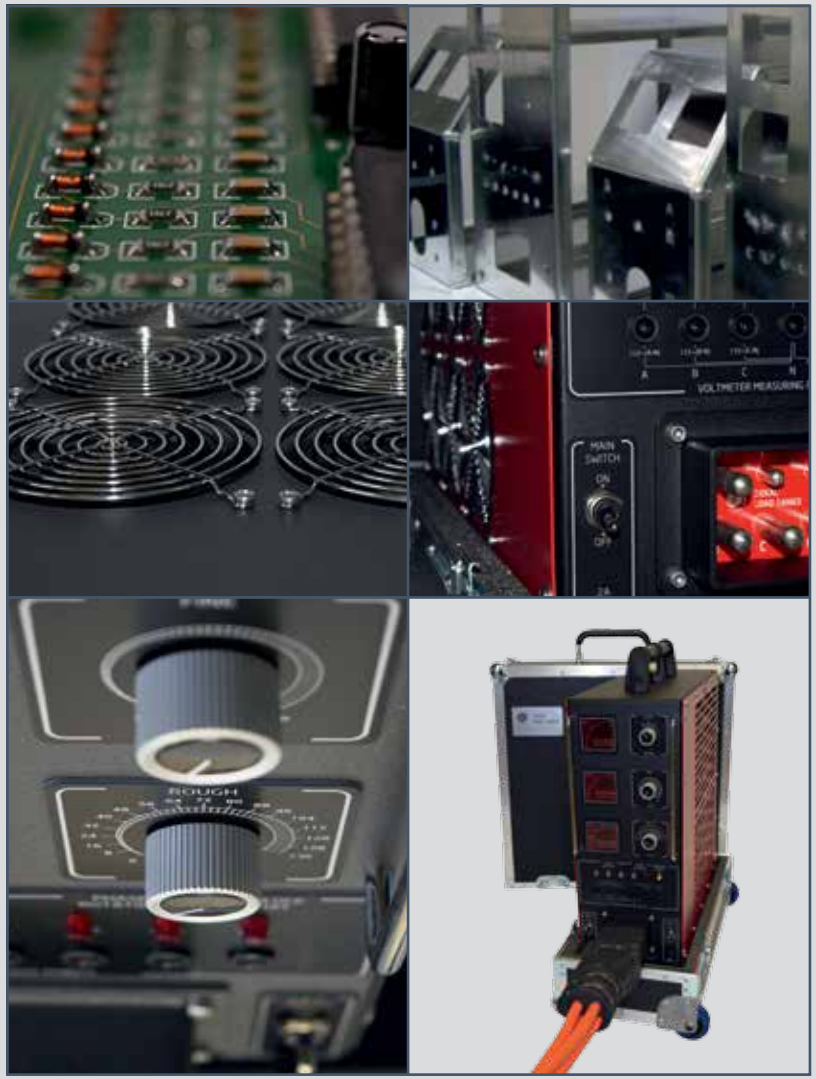
Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

ADVANTAGES OF DEKAL LOAD BANKS

- **Simple operation** suitable for non-trained operators
- **Silent operations** < 70 dB(A) at the distance of 7m / 23Ft
- Suitable for **workshop and/or airside operation**
- **Environmental operating temperature** from -20 °C to 55 °C / -4 °F to 122 °F
- **Transport casing** with pull up handle as standard for each load bank
- **The next generation of load bank data indicator measurements**
- **Programmable** dynamic background colour (Green, Red, White)
- **Effective way of monitoring and displaying measurement data & high indication accuracy**
- Triple thermal protection - **extremely resistant** to high temperature
- **Cant protection** - load bank works only in horizontal position
- **Phase detection** - load bank works only if all ABC phases are available
- Phase rotation indicator - **phase sequence of three-phase voltages**
- **Fine regulation as standard for all Digital and Analogue 400 Hz AC load banks**
- Aluminum housing and **non-corrosive parts**
- **High component quality control** by manufacturer
- **High reliability** - effective standardization process
- Isolated jack sockets - **unique user friendly safety feature** for external voltage test
- Spare parts availability and a**ccurate on-time deliveries**
- **Short worldwide delivery period** with tracking feature & insurance
- **2 years full warranty with extension option** for all DEKAL load banks
- CE certification - health, safety, and environmental protection standards
- Made for GPU's testing procedure according to ISO 6858, DFS 400, ARP 5015
- Classification CE marking, DIN, VDE, IEC, IP 21 protection rate level



NCAGE CODE: 1267Q

Excellent SME

Creditworthiness Rating

D-U-N-S® REGISTERED

DEKAL LOAD BANKS®

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

PORTABLE RESISTIVE 28.5 V DC LOAD BANKS - ANALOG PANEL

SPECIFICALLY DESIGNED RUGGED UNITS USED FOR THE TESTING AND SERVICING OF 28.5 V DC GPUs

TECHNICAL SPECIFICATION	DLB-03AP	DLB-ESS-15AP	DLB-ESS-20AP	DLB-ESS-25AP
VOLTAGE [V]	28.5 V DC ± 10 %			
LOAD REGIME OPTIONS [A]	300 A ± 20 %	300 A OR 600 A CONTINUOUS & 1500 A ± 20 % ESS PROCEDURE	300 A OR 600 A CONTINUOUS & 2000 A ± 20 % ESS PROCEDURE	300 A CONTINUOUS OR 1400 A, 2500 A ± 20 % ESS PROCEDURE
LOAD TEST PROCEDURE TYPE	/	AIRCRAFT ENGINE START SIMULATION (ESS) in duration of 35 seconds DECREASING		
LOAD TEST SPECIFICATION AT 28.5 V DC [CONTINUOUS & DECREASING]	/	SEQUENCE OF 6 STEPS ENGINE START SIMULATION Step 1: 1500 A for ⊙ 1 second Step 2: 1200 A for ⊙ 3 seconds Step 3: 1000 A for ⊙ 10 seconds Step 4: 800 A for ⊙ 20 seconds Step 5: 700 A for ⊙ 30 seconds Step 6: 400 A for ⊙ 35 seconds	SEQUENCE OF 6 STEPS ENGINE START SIMULATION Step 1: 2000 A for ⊙ 1 second Step 2: 1700 A for ⊙ 3 seconds Step 3: 1200 A for ⊙ 10 seconds Step 4: 1000 A for ⊙ 20 seconds Step 5: 700 A for ⊙ 30 seconds Step 6: 400 A for ⊙ 35 seconds	SEQUENCE OF 6 STEPS ENGINE START SIMULATION Step 1: 2500 A for ⊙ 1 second Step 2: 1900 A for ⊙ 3 seconds Step 3: 1300 A for ⊙ 10 seconds Step 4: 1000 A for ⊙ 20 seconds Step 5: 700 A for ⊙ 30 seconds Step 6: 400 A for ⊙ 35 seconds
LOAD TEST SPECIFICATION AT 28.5 V DC [CONTINUOUS - SELECTED MANUALLY]	300 A CONTINUOUS LOAD	300 A CONTINUOUS LOAD 600 A CONTINUOUS LOAD	300 A CONTINUOUS LOAD 600 A CONTINUOUS LOAD	300 A CONTINUOUS LOAD
[DECREASING ESS - SELECTED MANUALLY]	/	1500 A DECREASING ESS	2000 A DECREASING ESS	1400 A or 2500 A DECREASING ESS
FORCED AIR COOLING [m³/min & CFM]	22.05 m³/min - 780 CFM	44.10 m³/min - 1560 CFM	44.10 m³/min - 1560 CFM	44.10 m³/min - 1560 CFM
MEASUREMENTS & INDICATIONS				
ANALOG VOLT METER ANALOG AMPERE METER	VOLT METER - MOVING IRON CLASS 1.5 AMPERE METER - MOVING IRON CLASS 1.5			
LIGHT INDICATION	28.5 V DC POWER INDICATION, FAILURE INDICATOR			
GPU TESTING PROCEDURE AND ENGINE DECARBONISING PROPOSAL(*)	*LOAD 300A for ⊙ 20 minutes	*LOAD 300 A or 600 A ⊙ 30 / 15 minutes ESS in 6 STEPS 100% → 0% ⊙ 35 seconds		*LOAD 300 A ⊙ 30 minutes or ESS in 6 STEPS 100% → 0% ⊙ 35 seconds
OPERATING TEMPERATURE [°C / °F]	from -20 °C to 55 °C / from -4 °F to 122 °F			
NOISE LEVEL [dB] AT DISTANCE [m/Ft]	< 70 dB(A) at the distance of 7m / 23Ft			
DIMENSIONS & WEIGHT				
LOAD BANK SIZE [L x W x H] mm / Kg LOAD BANK SIZE [L x W x H] In / Lbs	570 x 230 x 450 / 18 22.5 x 9 x 18 / 39	570 x 230 x 450 / 20 22.5 x 9 x 18 / 44	570 x 230 x 450 / 25 22.5 x 9 x 18 / 55	570 x 230 x 450 / 26 22.5 x 9 x 18 / 57
TRANSPORT CASING [L x W x H] mm / Kg TRANSPORT CASING [L x W x H] In / Lbs	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37
LOAD BANK PAINTING / TRANSPORT CASING	POWDER COATING FINE STRUCTURE 71319 IGP, SWISS QUALITY / HIGH GRADE ALUMINUM			

Including transport carrying case per unit / All specifications are subject to change without further notice

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

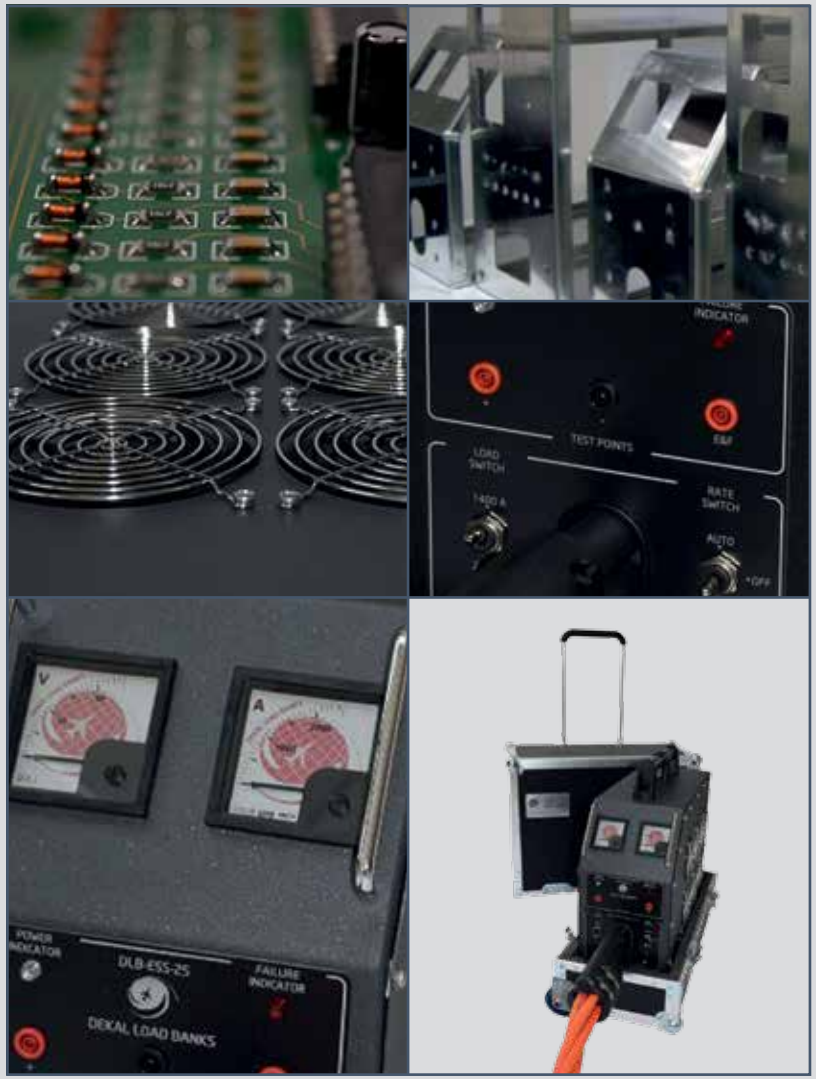
Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

ADVANTAGES OF DEKAL LOAD BANKS

- **Simple operation** suitable for non-trained operators
- **Silent operations** < 70 dB(A) at the distance of 7m / 23Ft
- Suitable for **workshop and/or airside operation**
- **Environmental operating temperature** from -20 °C to 55 °C / -4 °F to 122 °F
- **Transport casing** with pull up handle as standard for each load bank
- Triple thermal protection - **extremely resistant** to high temperature
- **Cant protection** - load bank works only in horizontal position
- Aluminum housing and **non-corrosive parts**
- **High component quality control** by manufacturer
- **High reliability** - effective standardization process
- Isolated jack sockets - **unique user friendly safety feature** for external voltage test
- Spare parts availability and **accurate on-time deliveries**
- **Short worldwide delivery period** with tracking feature & insurance
- **2 years full warranty with extension option** for all DEKAL load banks
- CE certification - health, safety, and environmental protection standards
- Made for GPU's testing procedure according to ISO 6858, DFS 400, ARP 5015
- Classification CE marking, DIN, VDE, IEC, IP 21 protection rate level



NCAGE CODE: 1267Q

Excellent SME

Creditworthiness Rating

D-U-N-S® REGISTERED

DEKAL LOAD BANKS *

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

PORTABLE RESISTIVE 28.5 V DC LOAD BANKS - DIGITAL PANEL

SPECIFICALLY DESIGNED RUGGED UNITS USED FOR THE TESTING AND SERVICING OF 28.5 V DC GPUs

TECHNICAL SPECIFICATION	DLB-03DP	DLB-ESS-15DP	DLB-ESS-20ADP	DLB-ESS-25DP
VOLTAGE [V]	28.5 V DC ± 10 %			
LOAD REGIME OPTIONS [A]	300 A ± 20 %	300 A OR 600 A CONTINUOUS & 1500 A ± 20 % ESS PROCEDURE	300 A OR 600 A CONTINUOUS & 2000 A ± 20 % ESS PROCEDURE	300 A CONTINUOUS OR 1400 A, 2500 A ± 20 % ESS PROCEDURE
LOAD TEST PROCEDURE TYPE	/	AIRCRAFT ENGINE START SIMULATION (ESS) in duration of 35 seconds DECREASING		
LOAD TEST SPECIFICATION AT 28.5 V DC [CONTINUOUS & DECREASING]	/	SEQUENCE OF 6 STEPS ENGINE START SIMULATION Step 1: 1500 A for ⊙ 1 second Step 2: 1200 A for ⊙ 3 seconds Step 3: 1000 A for ⊙ 10 seconds Step 4: 800 A for ⊙ 20 seconds Step 5: 700 A for ⊙ 30 seconds Step 6: 400 A for ⊙ 35 seconds	SEQUENCE OF 6 STEPS ENGINE START SIMULATION Step 1: 2000 A for ⊙ 1 second Step 2: 1700 A for ⊙ 3 seconds Step 3: 1200 A for ⊙ 10 seconds Step 4: 1000 A for ⊙ 20 seconds Step 5: 700 A for ⊙ 30 seconds Step 6: 400 A for ⊙ 35 seconds	SEQUENCE OF 6 STEPS ENGINE START SIMULATION Step 1: 2500 A for ⊙ 1 second Step 2: 1900 A for ⊙ 3 seconds Step 3: 1300 A for ⊙ 10 seconds Step 4: 1000 A for ⊙ 20 seconds Step 5: 700 A for ⊙ 30 seconds Step 6: 400 A for ⊙ 35 seconds
LOAD TEST SPECIFICATION AT 28.5 V DC [CONTINUOUS - SELECTED MANUALLY]	300 A CONTINUOUS LOAD	300 A CONTINUOUS LOAD 600 A CONTINUOUS LOAD	300 A CONTINUOUS LOAD 600 A CONTINUOUS LOAD	300 A CONTINUOUS LOAD
[CONTINUOUS - SELECTED MANUALLY]	/	1500 A DECREASING ESS	2000 A DECREASING ESS	1400 A or 2500 A DECREASING ESS
FORCED AIR COOLING [m³/min & CFM]	22.05 m³/min - 780 CFM	44.10 m³/min - 1560 CFM	44.10 m³/min - 1560 CFM	44.10 m³/min - 1560 CFM
MEASUREMENTS & INDICATIONS				
DIGITAL PANEL VOLT METER DIGITAL PANEL AMPERE METER	VOLT METER 1% ACCURACY, WIDE VIEWING ANGLE, PROGRAMMABLE DYNAMIC BACKGROUND COLOUR (Green, Red, White) AMPERE METER 1% ACCURACY, WIDE VIEWING ANGLE, PROGRAMMABLE DYNAMIC BACKGROUND COLOUR (Green, Red, White)			
LIGHT INDICATION	28.5 V DC POWER INDICATION, FAILURE INDICATOR			
GPU TESTING PROCEDURE AND ENGINE DECARBONISING PROPOSAL(*)	*LOAD 300A for ⊙ 30 minutes	*LOAD 300 A or 600 A ⊙ 30 / 15 minutes ESS in 6 STEPS 100% → 0% ⊙ 35 seconds		*LOAD 300 A ⊙ 30 minutes or ESS in 6 STEPS 100% → 0% ⊙ 35 seconds
OPERATING TEMPERATURE [°C / °F]	from -20 °C to 55 °C / from -4 °F to 122 °F			
NOISE LEVEL [dB] AT DISTANCE [m/Ft]	< 70 dB(A) at the distance of 7m / 23Ft			
DIMENSIONS & WEIGHT				
LOAD BANK SIZE [L x W x H] mm / Kg LOAD BANK SIZE [L x W x H] In / Lbs	570 x 230 x 450 / 18 22.5 x 9 x 18 / 39	570 x 230 x 450 / 20 22.5 x 9 x 18 / 44	570 x 230 x 450 / 25 22.5 x 9 x 18 / 55	570 x 230 x 450 / 26 22.5 x 9 x 18 / 57
TRANSPORT CASING [L x W x H] mm / Kg TRANSPORT CASING [L x W x H] In / Lbs	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37	620 x 280 x 690 / 17 24.4 x 11 x 27.2 / 37
LOAD BANK PAINTING / TRANSPORT CASING	POWDER COATING FINE STRUCTURE 71319 IGP, SWISS QUALITY / HIGH GRADE ALUMINUM			

Including transport carrying case per unit / All specifications are subject to change without further notice

DEKAL LOAD BANKS * DEKAL AGREGATI LLC
UL. LUDVIKA PLAMBERGERJA 25
SI-2204 MIKLAVZ NA DR. POLJU
SLOVENIA * EU

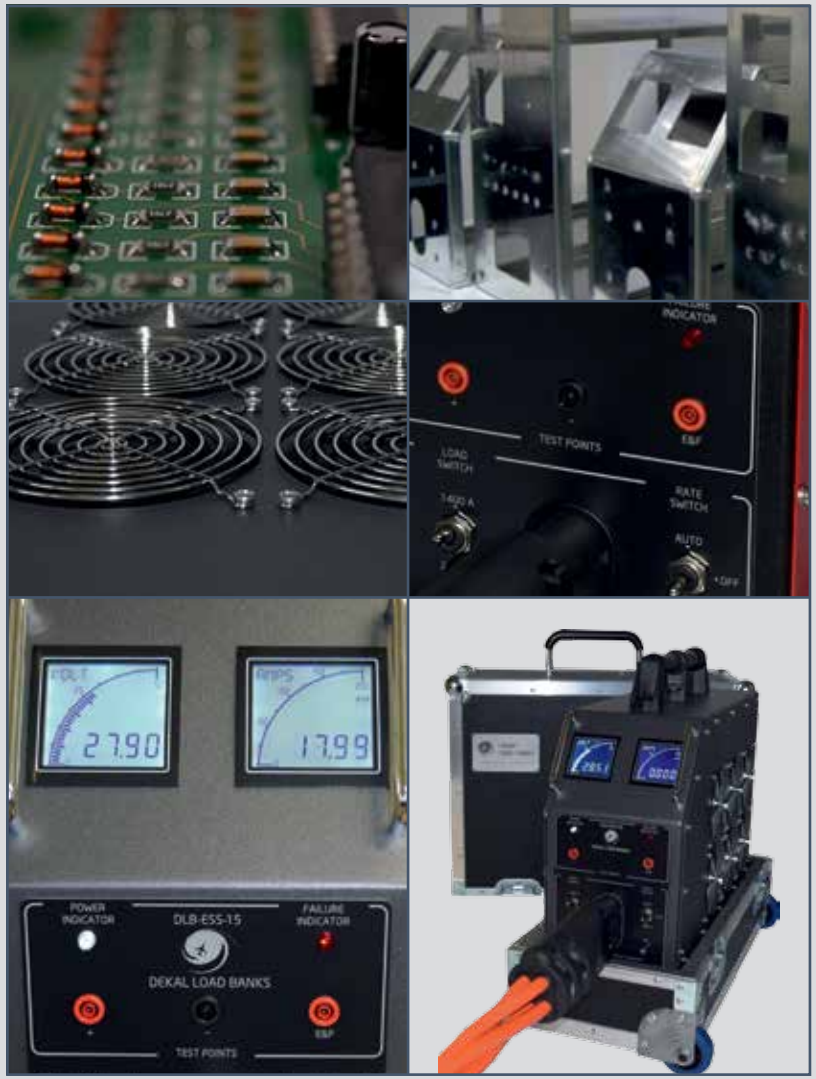
Tel.: + 386 2 320 325 0 * Fax: + 386 2 320 325 2
Email: info@dekalloadbanks.com
Web: www.dekalloadbanks.com

DEKAL LOAD BANKS USA LLC
c/o CATALYST CONNECTION
2000 TECHNOLOGY DRIVE
PITTSBURGH, PA 15219 * USA

Tel.: + 1 800 323 9172
Email: info@dekalloadbanks-us.com
Web: www.dekalloadbanks-us.com

ADVANTAGES OF DEKAL LOAD BANKS

- **Simple operation** suitable for non-trained operators
- **Silent operations** < 70 dB(A) at the distance of 7m / 23Ft
- Suitable for **workshop and/or airside operation**
- **Environmental operating temperature** from -20 °C to 55 °C / -4 °F to 122 °F
- **Transport casing** with pull up handle as standard for each load bank
- **The next generation of load bank data indicator measurements**
- **Programmable** dynamic background colour (Green, Red, White)
- **Effective way of monitoring and displaying measurement data**
- **High instrument indication accuracy**
- Triple thermal protection - **extremely resistant** to high temperature
- **Cant protection** - load bank works only in horizontal position
- Aluminum housing and **non-corrosive parts**
- **High component quality control** by manufacturer
- **High reliability** - effective standardization process
- Isolated jack sockets - **unique user friendly safety feature** for external voltage test
- Spare parts availability and **accurate on-time deliveries**
- **Short worldwide delivery period** with tracking feature & insurance
- **2 years full warranty with extension option** for all DEKAL load banks
- CE certification - health, safety, and environmental protection standards
- Made for GPU's testing procedure according to ISO 6858, DFS 400, ARP 5015
- Classification CE marking, DIN, VDE, IEC, IP 21 protection rate level



NCAGE CODE: 1267Q

Excellent SME

Creditworthiness Rating

D-U-N-S® REGISTERED