

NRE

LOAD BOX



This load box is capable of handling 4,500 HP for DC traction motors. The trailer is fully titled and licensable for highway use, with all DOT approved lights, reflectors, and trailer braking system. Easy to use “plug-in-and-go” system with no switches or complicated setup required. Equipped with gauges to show Amps, Voltage, and HP, behind a fully sealed weather-tight viewing window. NRE’s load box is customizable for customer requirements (warning systems, safety switches, etc.). NRE’s load box uses a new 54” 6-axle radial grid dynamic brake hatch. All cables are fully enclosed in a lockable steel cabinet to prevent theft. A convenient toolbox is located on the front for tool storage.



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For use with up to 4,500 HP locomotives.

Rated for continuous duty, -20°C - 50°C ambient temperature at up to 1000m elevation. *Note: for ratings specific to your application and environmental conditions, consult your NRE sales representative while ordering.

Power requirements: locomotive 64V battery power (only required to power panel meters, optional) *Note: if alternate power

supply, e.g. 120V/60Hz, 240/50Hz, 24VDC is desired, specify requirements while ordering.

Grid resistors: 0.632Ω, 900A

Ventilation: Force-ventilated by 54" cooling fan.

Fan motor: 100hp, 450VDC - powered tapped from GP/GN circuit.

Load type: Fixed resistance. Connect 1,

2 or 3 sets of leads as required for your locomotive. Always connect GP/GN leads as these power the cooling fan.

***NOTE:** If your locomotive has a DC generator, it is important to keep within the MGA/MGV limits. Operating at excessive MGW will result in flashover. Consider the tables below as it may be necessary to hook up an extra set of leads to reduce operating voltage.

Horsepower (hp), main generator current (MGA), main generator voltage (MGV) reference tables Traction hp = MGA*MGV/700

One set of leads connected (GP, GN only)

LOCO HP	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MGA	526	552	576	600	623	644	666	686	706	725	744	763	780	798	815	832	848	865	881	896	911
MGV	665	697	729	758	787	815	841	867	892	917	941	963	987	1009	1031	1052	1073	1092	1112	1133	1153

Two sections connected (GP/1GP, GN/1GN)

LOCO HP	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
MGA	1052	1104	1153	1200	1245	1289	1331	1372	1412	1451	1488	1525	1561	1596	1630	1664	1697	1729	1761	1792	1823
MGV	665	697	729	758	787	815	841	867	892	917	941	964	987	1009	1031	1052	1072	1093	1113	1133	1152

All leads connected (GP/1GP/2GP, GN/1GN/2GN)

LOCO HP	2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500
MGA	2038	2078	2118	2157	2195	2233	2269	2306	2341	2377	2411	2446	2479	2513	2545	2578	2610	2642	2673	2704	2734
MGV	859	876	892	909	925	940	956	971	987	1001	1016	1030	1045	1058	1073	1086	1100	1113	1126	1139	1152

Traction kilowatt (kW), main generator current (MGA), main generator voltage (MGV) reference tables Traction kW = MGA*MGV/938

One set of leads connected (GP, GN only)

LOCO KW	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
MGA	272	334	385	431	472	510	545	578	609	639	667	695	721	746	771	794	817	840	862	883	904
MGV	345	421	487	544	596	644	689	731	770	808	844	878	911	943	974	1005	1034	1061	1089	1116	1142

Two sections connected (GP/1GP, GN/1GN)

LOCO KW	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200
MGA	1335	1362	1389	1416	1442	1467	1492	1517	1541	1565	1589	1612	1635	1657	1680	1702	1723	1745	1766	1787	1807
MGV	843	861	878	895	911	927	943	959	974	989	1004	1019	1033	1048	1061	1075	1089	1102	1116	1129	1142

All leads connected (GP/1GP/2GP, GN/1GN/2GN)

LOCO KW	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300
MGA	1702	1766	1828	1888	1946	2002	2057	2110	2163	2213	2263	2312	2360	2406	2452	2497	2541	2585	2628	2670	2711
MGV	717	744	770	795	820	844	867	889	911	933	954	974	994	1014	1033	1052	1071	1089	1107	1125	1142