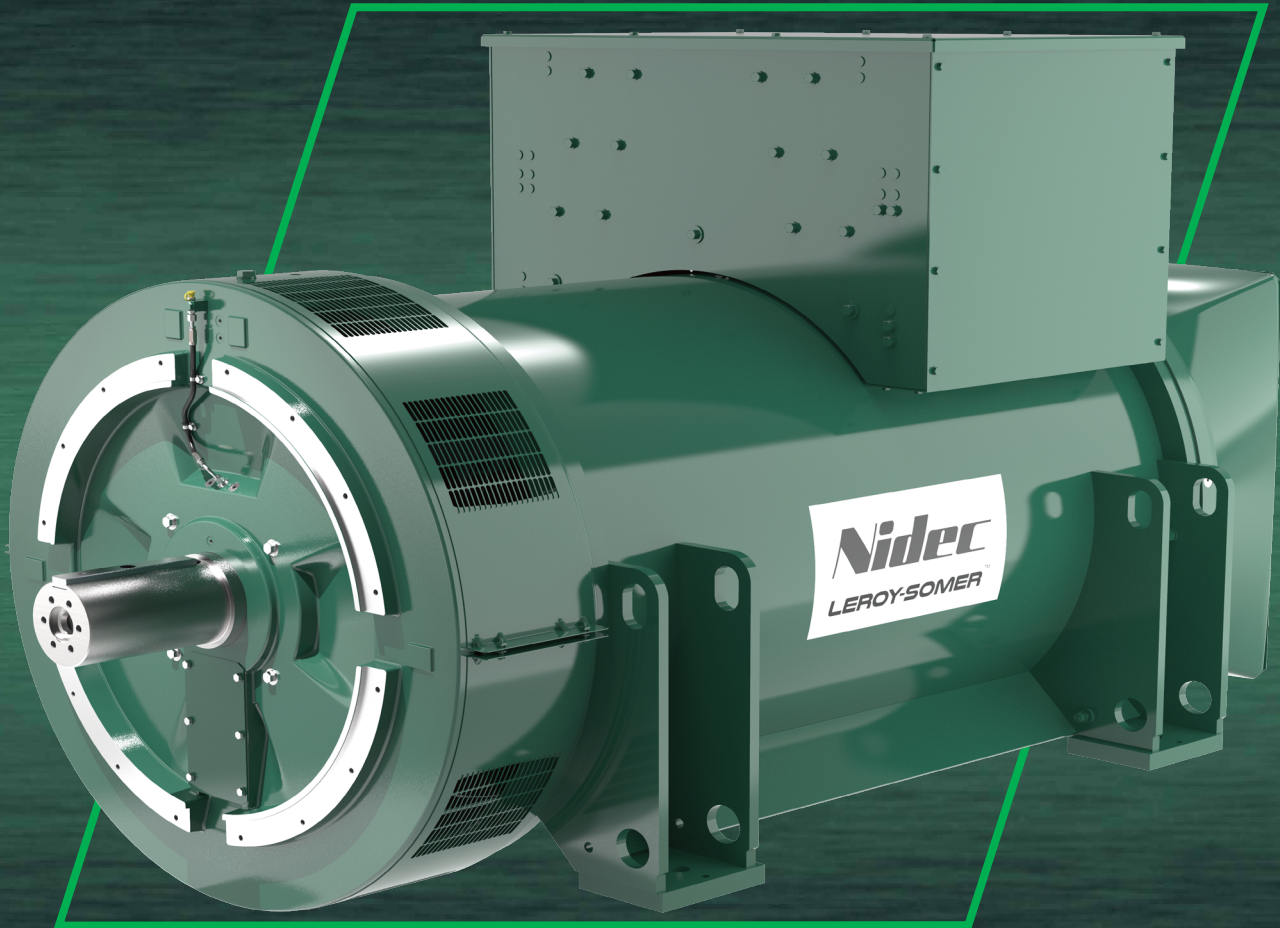


Nidec

Power



Generator Solutions for Data Center

LEROY-SOMER[™]

1600kW-2500kW
(F Class Temperature Rise)

The Data Centers: The Nerve Center of Your Network

We meet your key priority of continuous information availability

A data center hosts the computers and its associated components, such as telecommunications and storage systems. It includes power supply and stand-up communication systems, environmental controls (such as air conditioning and fire-fighting) and safety devices.

Data from data centers must be accessible to users at all times. Therefore, the key task of data center utility is to ensure un-interrupted power to the telecommunication systems, the servers and the safety and building protection systems. To achieve that, the data center utility operators must select reliable back-up solutions.

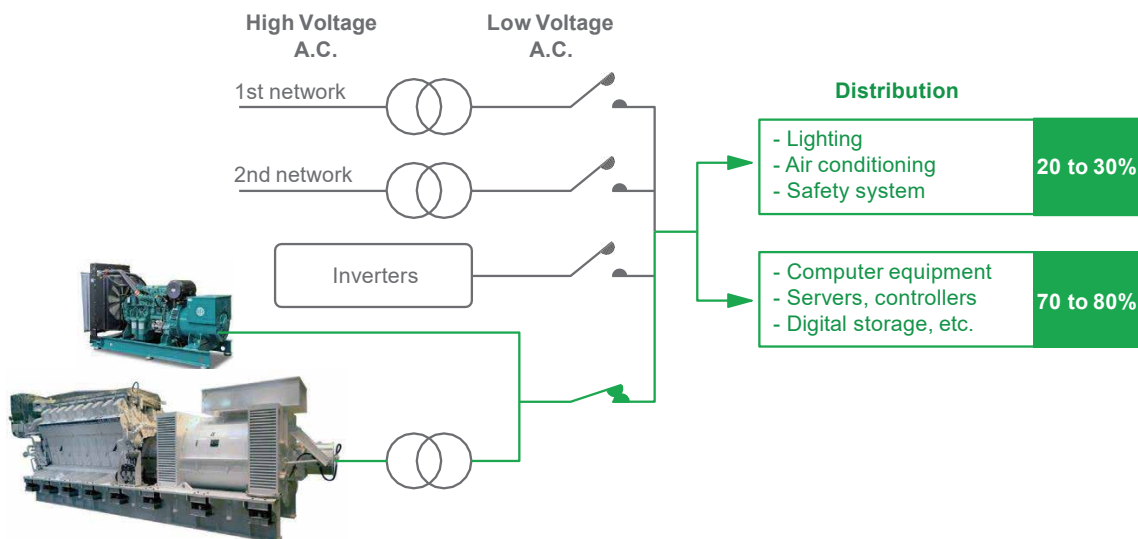
In the event of a power cut, Leroy-Somer alternators, within the back up generator units, can maintain power supply for several days.



Leroy-Somer Solution:

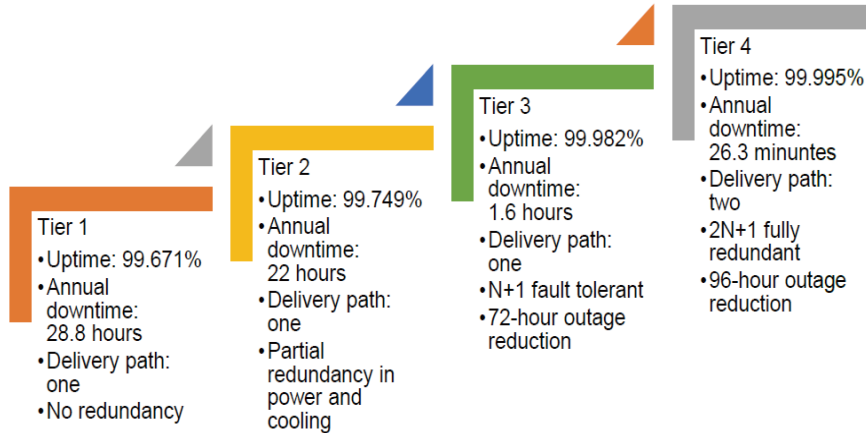
Our alternators are designed to meet the demands of your Data Centers

- > **High efficiency:** Energy efficient with reduced fuel consumption
- > **Low reactance:** Improved performance with distorting loads
- > **Greater starting capacity:** Robust solution capable of supporting high load variations with reduced voltage fluctuations



Meet requirements of Data Centers

In order to achieve the highest level in the classification level (level 4), it is committed to 99.995% or more of continuous power supply capacity.



In order to achieve this goal, the data center business must choose a reliable backup power supply solution.

Requirements

Features of Leroy-Somer Alternators

High Reliability	Leroy-Somer alternator provide great efficiency and designed to high global standards
High Quality Power Supply	2/3 pitch winding eliminates the third harmonic of LV Alternator and the 5/6 pitch winding eliminates the 5th and 7th harmonics of the MV/HV Alternator
Selective Short Circuit Protection	Low reactance winding adapts to changes in voltage and current, effectively reducing voltage drop and harmonics
Low Voltage Drop	High Starting Capability
Fast AVR Reaction Time During Sudden load Change	Sustain 3 times short circuit current in 10 seconds (to achieve selective protection)
Compact Design Due To Limited Space	Customer satisfaction through fast response rate
High Efficiency Reduced Fuel Consumption	AREP patented technology alternative to permanent magnet machine

General characteristics

Insulation class	H	Excitation system	AREP + PMI
Winding pitch	5/6	AVR type	D550
Number of wires	6	Voltage regulation (*)	± 0.5%
Protection	IP 23	Short-circuit current	300% (3 IN) : 10s
Altitude	≤1000m	Total Harmonic distortion THD (**)	< 1.5%
Over speed	2250min ⁻¹	Waveform: NEMA = TIF (**)	< 50

(*) Steady state (**) between phases

10.5kV/11kV	Temp.Class F						Temp.Class H					
	Continue 105/40°C		Standby 130/40°C		Standby 143/27°C		Continue 125/40°C		Standby 150/40°C		Standby 163/27°C	
	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW
LSA53VL7 IDC	2000	1600	2100	1680	2200	1760	2100	1680	2250	1800	2295	1836
LSA53XL9 IDC	2250	1800	2363	1890	2420	1936	2363	1890	2500	2000	2550	2040
LSA53XL11 IDC	2500	2000	2625	2100	2730	2184	2625	2100	2750	2200	2805	2244
LSA53ZL12 IDC	2750	2200	2888	2310	3030	2424	2888	2310	3030	2424	3091	2472
LSA53ZL14 IDC	3000	2400	3150	2520	3300	2640	3150	2520	3300	2640	3366	2693
LSA53ZL15 IDC	3125	2500	3312.5	2650	3344	2675	3281	2625	3438	2750	3516	2813

10kV	Temp.Class F						Temp.Class H					
	Continue 105/40°C		Standby 130/40°C		Standby 143/27°C		Continue 125/40°C		Standby 150/40°C		Standby 163/27°C	
	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW
LSA53VL7 IDC	1850	1480	1943	1554	2035	1628	1943	1554	2081	1665	2123	1698
LSA53XL9 IDC	2081	1665	2186	1749	2239	1791	2186	1749	2247	1798	2292	1834
LSA53XL11 IDC	2338	1870	2454	1964	2553	2042	2454	1964	2571	2057	2623	2098
LSA53ZL12 IDC	2591	2072	2720	2176	2854	2283	2720	2176	2854	2283	2911	2329
LSA53ZL14 IDC	2838	2270	2980	2384	3122	2497	2980	2384	3122	2497	3184	2547
LSA53ZL15 IDC	3000	2400	3180	2544	3210	2568	3150	2520	3300	2640	3375	2700

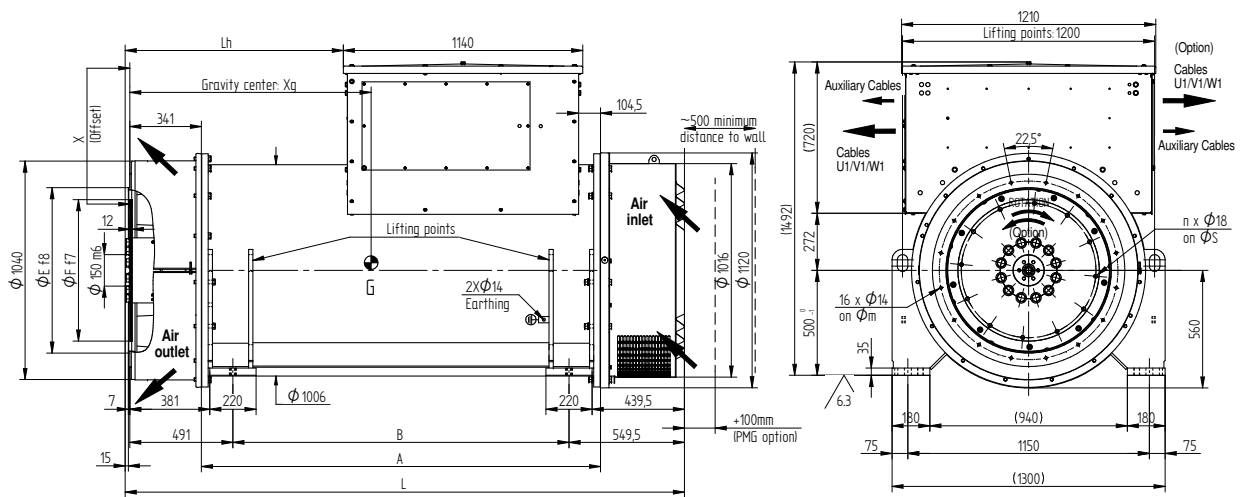
Ratings are based on Temperature Rise by Resistance measurement method

Options

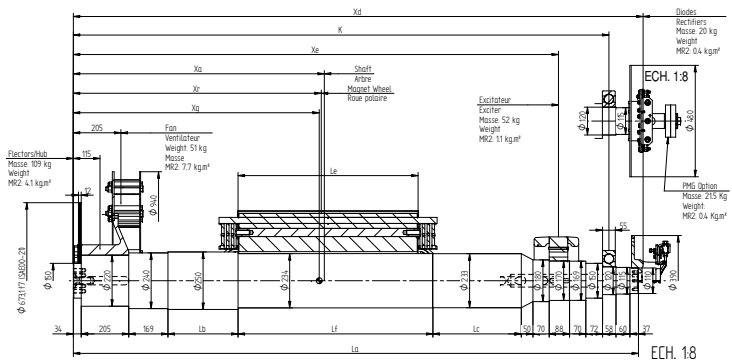
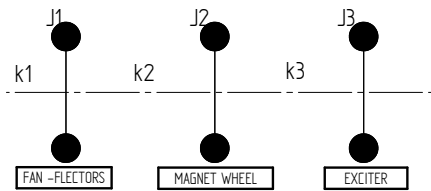
- Droop CT
- Space heaters
- Thermal protection for stator windings &/or bearing (PT100)
- Measuring/Protection CT
- AVR: D550
- PMG

Excitation system			Voltage regulation			
AREP+PMI	PMG		CT Mains	Mains	3 Phase Sensing	Option External Pot.
D550	Standard	Option	Option	Included	Included	Option

Single bearing

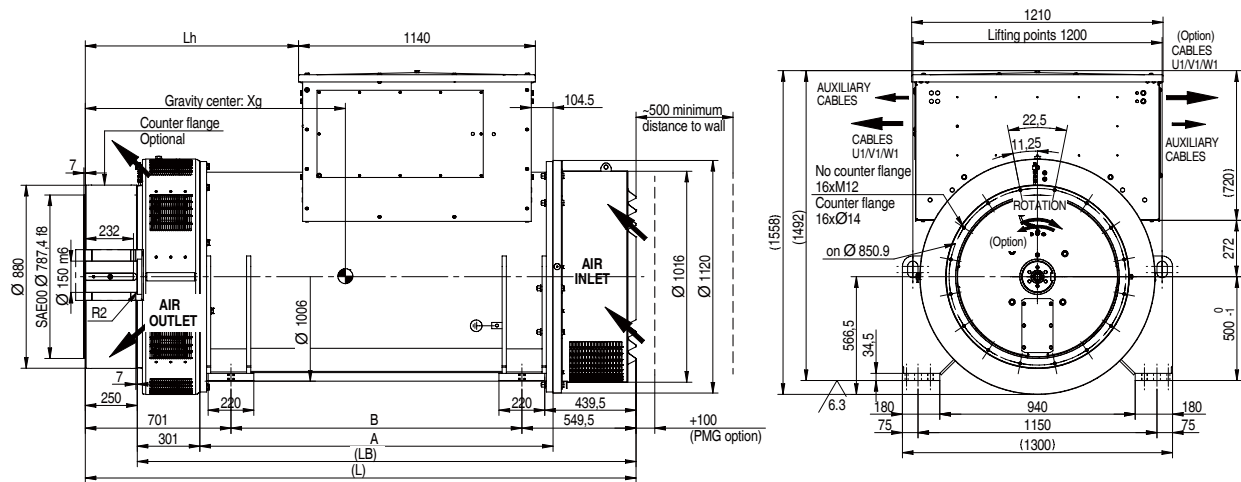


VOLTAGE	Type	Lh [mm]	A [mm]	B [mm]	L [mm]	Xg [mm]	Weight [kg]
10500V	LSA53VL7 IDC	838.5	1700	1400	2462.5	1071	5700
	LSA53XL9 IDC	838.5	1700	1400	2462.5	1081	5900
	LSA53XL11 IDC	1038.5	1900	1600	2662.5	1146	6200
	LSA53ZL12 IDC	1038.5	1900	1600	2662.5	1161	6460
	LSA53ZL14 IDC	1138.5	2000	1700	2762.5	1216	6970
	LSA53ZL15 IDC	1138.5	2000	1700	2762.5	1233	7250

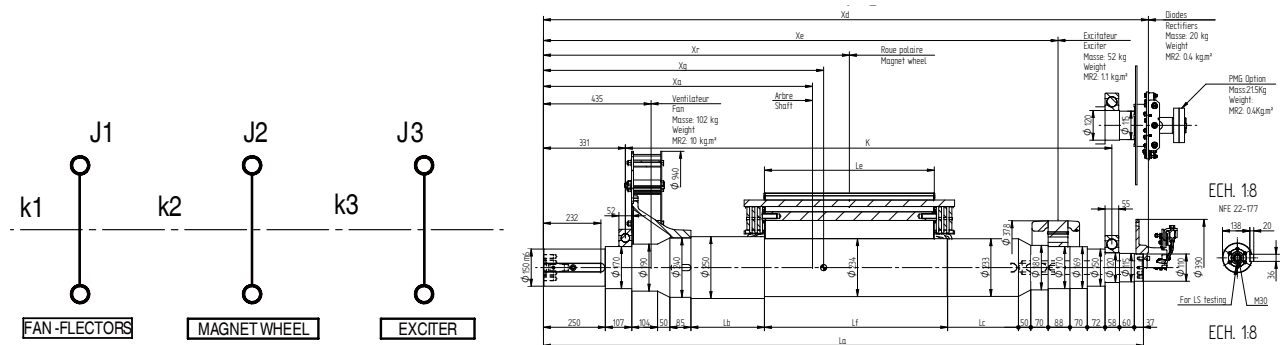


VOLTAGE	Type	ROTOR					
		K [mm]	Xe [mm]	Xd [mm]	Xg [mm]	Weight [kg]	MR2 [kg.M²]
10500V	LSA53VL7 IDC	2108.5	1891	2256	975	2070	76.2
	LSA53XL9 IDC	2108.5	1891	2256	988	2133	79.3
	LSA53XL11 IDC	2308.5	2091	2456	1045	2288	84.3
	LSA53ZL12 IDC	2308.5	2091	2456	1071	2360	87.7
	LSA53ZL14 IDC	2408.5	2191	2556	1128	2572	96.5
	LSA53ZL15 IDC	2408.5	2191	2556	1148	2688	101.6

Double bearing



VOLTAGE	Type	Lh [mm]	LB [mm]	B [mm]	A [mm]	L [mm]	Xg [mm]	Weight *[kg]
10500V	VL7 IDC	1026.5	2400.5	1400	1700	2650.5	1260	5800
	XL9 IDC	1026.5	2400.5	1400	1700	2650.5	1273	6000
	XL11 IDC	1226.5	2600.5	1600	1900	2850.5	1338	6300
	ZL12 IDC	1226.5	2600.5	1600	1900	2850.5	1351	6500
	ZL14 IDC	1326.5	2700.5	1700	2000	2950.5	1407	7170
	ZL15 IDC	1326.5	2700.5	1700	2000	2950.5	1423	7450



Voltage	Type	ROTOR										
		XE [mm]	XD [mm]	XG [mm]	Weight [kg]	MR2 [kg.m ²]	K1 [Nm/rad]	K2 [Nm/rad]	K3 [Nm/rad]	J1 [kg.m ²]	J2 [kg.m ²]	J3 [kg.m ²]
10500V	LSA53VL7 IDC	2079	2444	1211	2010	74.2	1.61 10E7	6.40 10E7	2.81 10E7	11.2	60.8	2.2
	LSA53XL9 IDC	2079	2444	1224	2073	77.3	1.61 10E7	6.29 10E7	2.93 10E7	11.2	63.9	2.2
	LSA53XL11 IDC	2279	2644	1281	2229	82.3	1.61 10E7	6.09 10E7	2.46 10E7	11.2	68.6	2.4
	LSA53ZL12 IDC	2279	2644	1296	2301	85.7	1.61 10E7	5.96 10E7	2.57 10E7	11.2	72.1	2.3
	LSA53ZL14 IDC	2379	2744	1348	2518	94.5	1.61 10E7	5.64 10E7	2.56 10E7	11.3	80.9	2.3
	LSA53ZL15 IDC	2379	2744	1366	2628	99.6	1.61 10E7	5.54 10E7	2.72 10E7	11.3	86.1	2.2

Know-how and Expertise

A quarter of the world's generators is equipped with a Leroy-Somer alternator

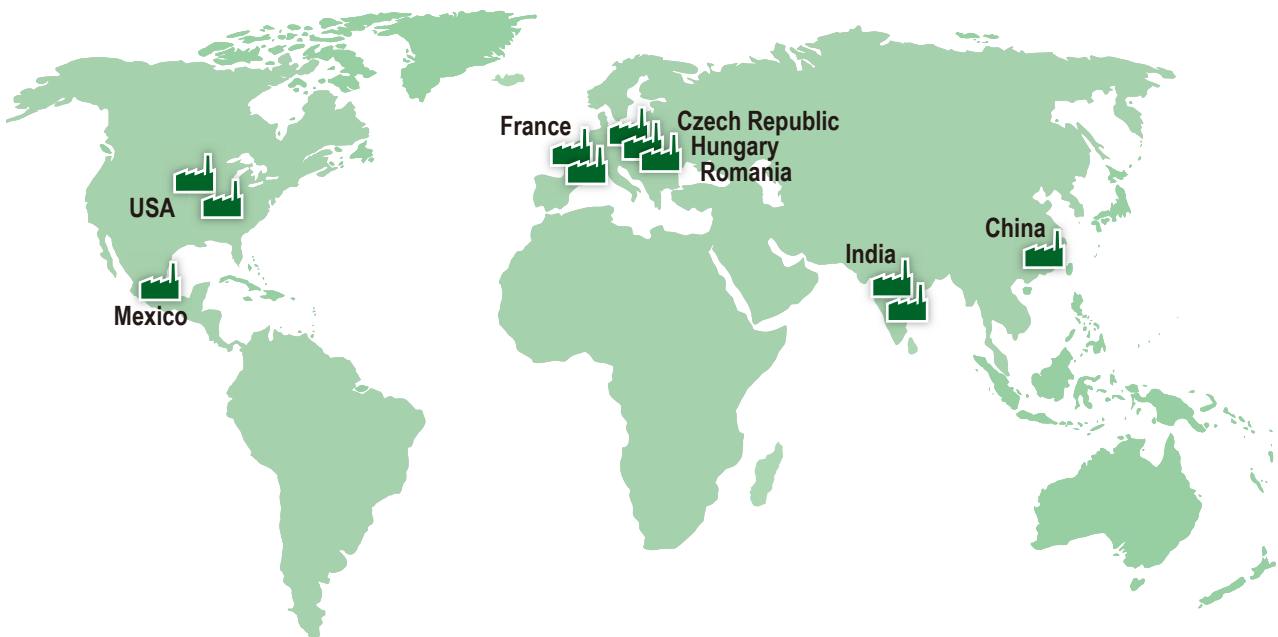
Leroy-Somer has been sharing its experience of electrical power generation with many data center operators for more than two decades.

With some of the world's largest telecommunications and technology companies choosing Leroy-Somer, Leroy-Somer is one of the the global back-up alternator leaders for data centers.



Global Presence and Customer Service

With Leroy-Somer's global manufacturing footprint of 11 factories, we ensure that you get the most suited product in the shortest lead time. Our network of 80 sales and service outlets is able to assist you 24/7, at any part of the world.





www.nidecpower.com

Connect with us at:



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Moteurs Leroy-Somer SAS. Siège : Bd Marcellin Leroy, CS 10015, 16915 Angoulême Cedex 9, France.
Share Capital: 32,239,235 €, RCS Angoulême 338 567 258.