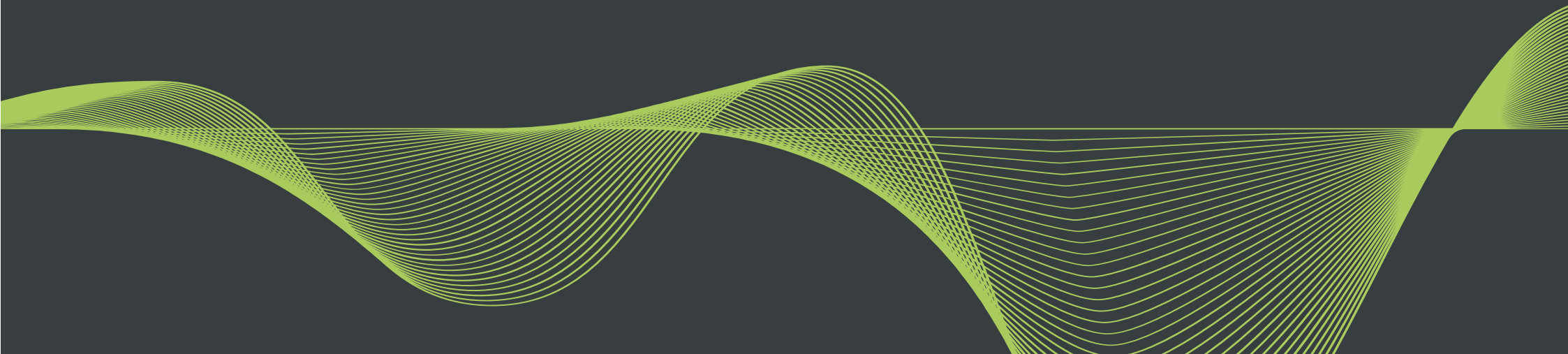


ENERGYA – Electric full liner



Electric full liner

Family feeling

- The complete range of ENERGIA Concrete machinery,
- Transport, Transport and Pumping, Pumping and Shotcrete

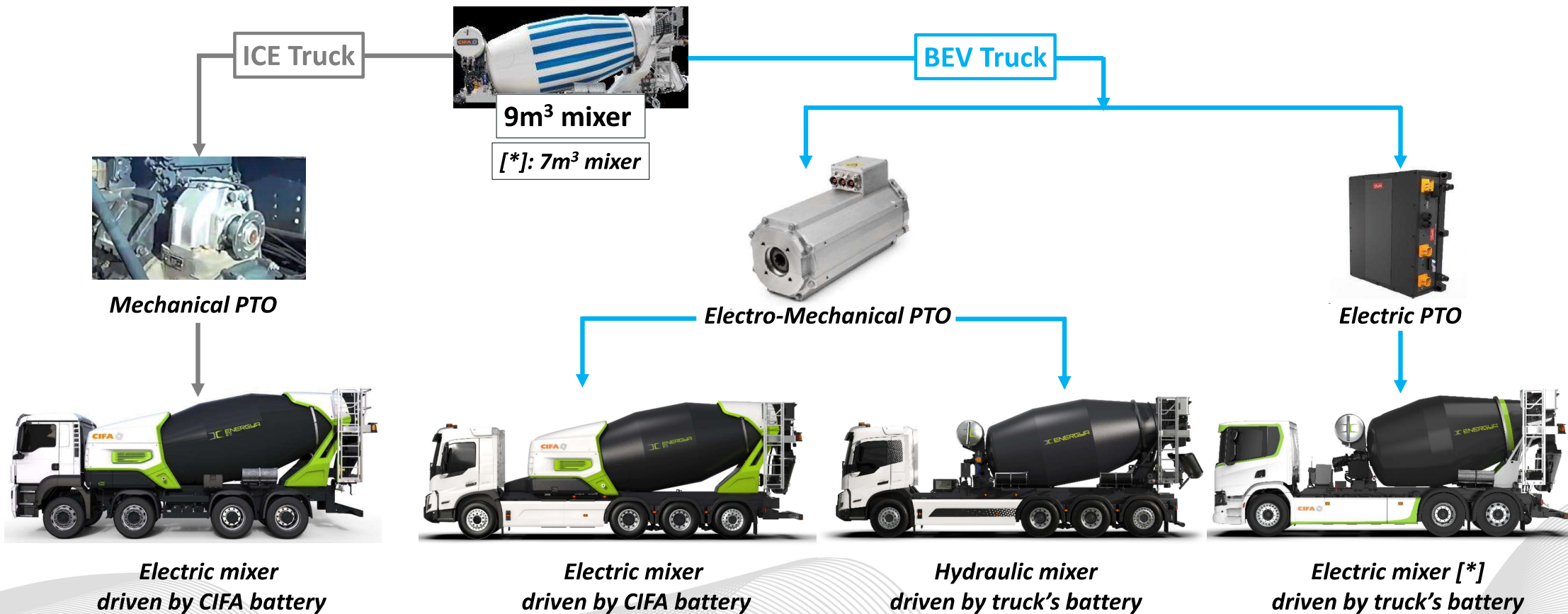


The only ELECTRIC FULL LINER in the concrete machinery industry

CIFA Mixers Electrification

CIFA solutions to provide CO₂-free mixers

JC ENERGIA



Electrification streams

CIFA Strategy

- Electrification of upperstructure with traditional ICE truck → Battery Electric Equipment



- Electrification of upperstructure on electric truck → Full Electric



Electrification streams

- BEV truck configurations available



Electro-Mechanical PTO



Electric mixer

driven by independent battery (CIFA)

E9

BEV Truck



Electric PTO



Electric mixer

driven by truck's battery

SLE-7

1 Battery Electric Equipment Truck Mixer E9

Truck Mixer E9

ENERGYA

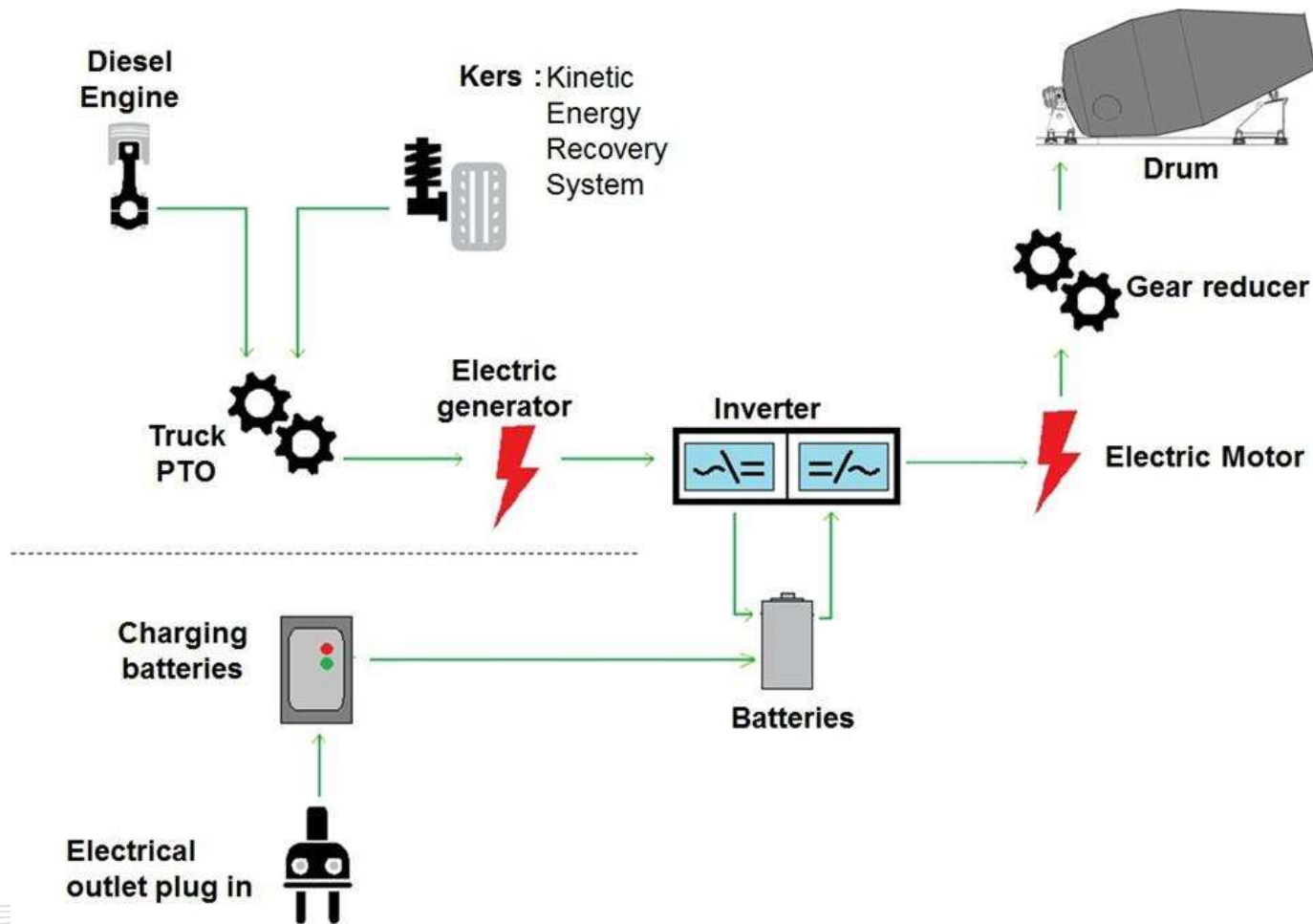


bauma
2013



reddot award 2014
winner

E9 (Diesel / Electric)



Truck Mixer E9

ENERGYA



CIFA electric mixers - 2023 portfolio: E9

IC ENERGIA



Presented @ECOMONDO Exhibition, Rimini (Italy), Nov-2023

CIFA E9:

- Drum nominal capacity: 9m³
- Max legal concrete payload (32 ton): ≈5.5m³
- Max technical concrete payload (40 ton): ≈9m³
- Electric motor (nominal performance): 170V, 149Nm, 70kW
- Battery: 280V, LFP, 28kWh
- Estimated consumption (mixer only, 4 working cycles): 30kWh/day

Truck BEV Specs:

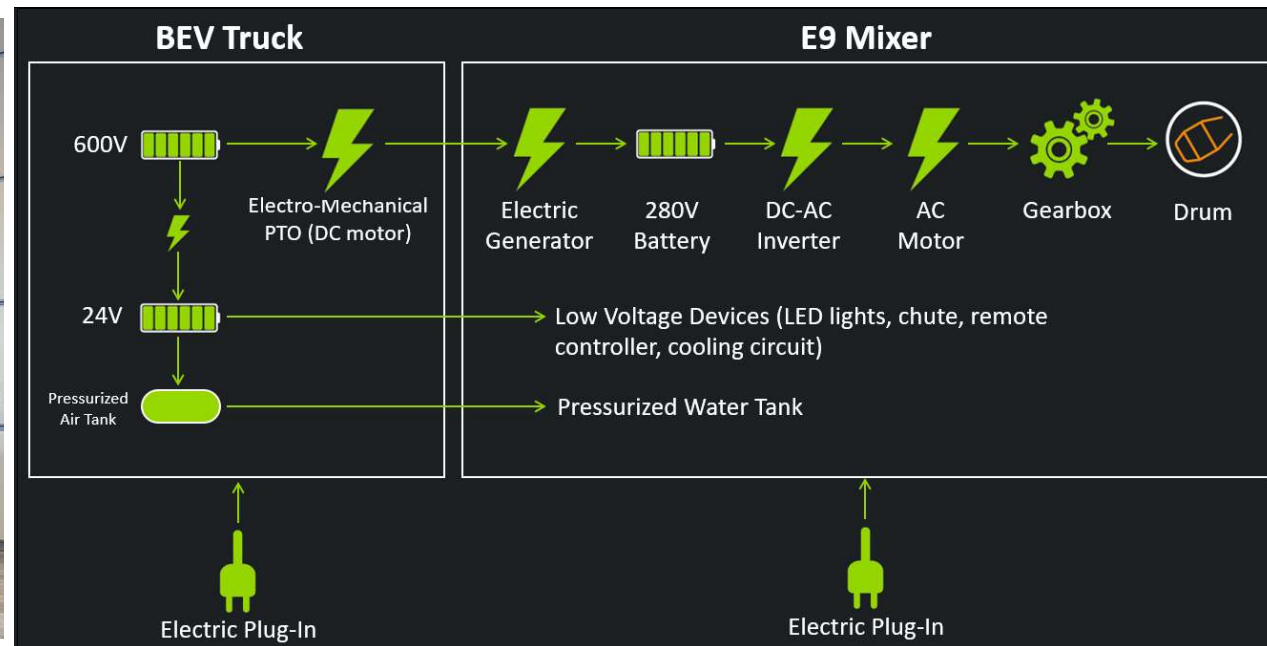
- Volvo, 8x4 (tridem)
- Wheelbase: 4.300mm
- Batteries: 4 packs, 90kWh/each ≈360kWh
- Truck power: 330kW
- Autonomy range (estimated, without mixer operation): 200km
- Battery voltage: 600VDC
- Truck GVW technical: 40 ton (10 ton front, 33 ton rear)

CONCRETE PAYLOAD REDUCTION due to truck batteries:

- 300kWh: ≈ -0,7m³
- 450kWh: ≈ -1,0m³

CIFA electric mixers - 2023 portfolio: E9

ENERGYA



Presented @ECOMONDO Exhibition, Rimini (Italy), Nov-2023

Truck Mixer SLE

JC ENERGY



CIFA electric mixers - 2023 portfolio: SLE-7



Presented @BAUMA Exhibition, Munich (Germany), Oct-2022

CIFA SLE-7:

- Drum nominal capacity: 7m³
- Max legal concrete payload (26 ton): ≈5m³
- Max technical concrete payload (30 ton): ≈6m³
- Electric motor (nominal performance): 650V, 145Nm, 91kW
- Estimated consumption (mixer only, 4 working cycles): 30kWh/day

Truck BEV Specs:

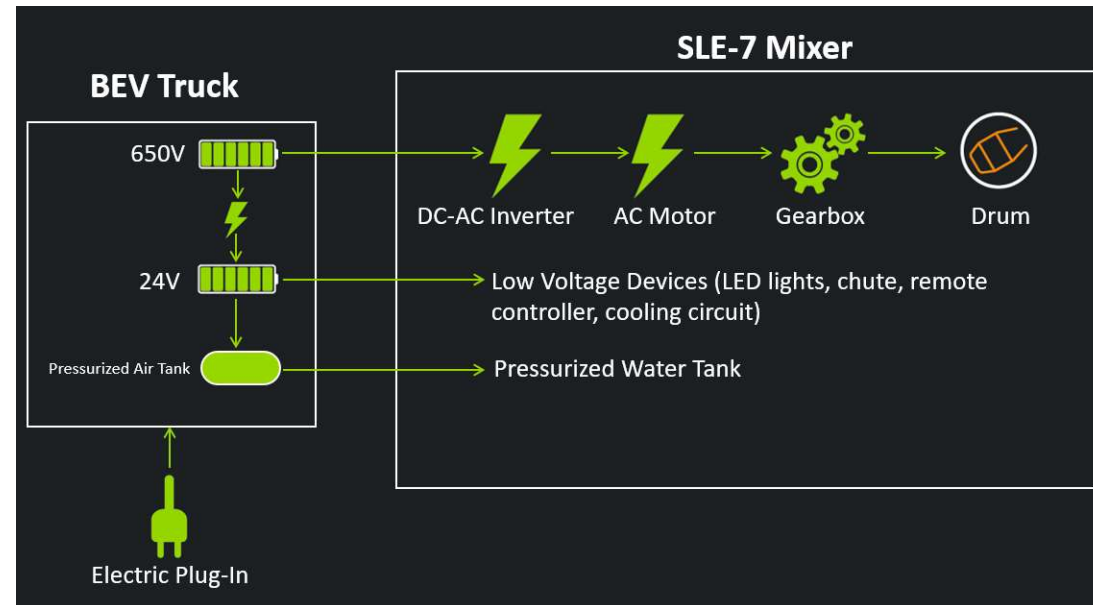
- Scania, 6x2
- Wheelbase: 4.350mm
- Batteries: 9 packs, 33kWh/each ≈300kWh
- Truck power: 230kW
- Autonomy range (estimated, without mixer operation): 200km
- Battery voltage: 650VDC
- Truck GVW technical: 30 ton (9 ton front, 21 ton rear)

CONCRETE PAYLOAD REDUCTION due to truck batteries:

- 300kWh: ≈ -0,7m³
- 450kWh: ≈ -1,0m³

CIFA electric mixers - 2023 portfolio: SLE-7

ENERGYA



Presented @BAUMA Exhibition, Munich (Germany), Oct-2022

SLE7

JC ENERGIA



SLE

ENERGYA



FULL ELECTRIC

SCANIA BEV

- Batteries: 9 pack 33kWh/each ≈300kWh
- Battery power recharge: up to 130kW (DC charger - CCS2)
- Truck power: nominal 230kW, peak 295kW
- Autonomy: 250km
- Battery voltage: 650VDC
- e-PTO Power: nominal 50kW, peak 60kW
- e-PTO Power: nominal 90A, peak 100A
- Truck Payload: 30 ton (9 ton front, 21 ton rear)



Truck Mixer E9

CO₂ emission comparison between conventional, hybrid or fully electric solutions.

CASE STUDY:

- Transported concrete 7 m³ (on 9 m³ drum)
- Concrete type: S3
- Total travel distance: 160 km (4 cycles 40 km each)
- Average fuel consumption of the truck: 2km/l

MIXER'S STANDARD WORKING CYCLE	Power consumption @7m³												
	Battery	Full Electric	CO ₂ emissions		Diesel	SL9 on Diesel truck	CO ₂ emissions		Diesel	E9 on Diesel truck	CO ₂ emissions		
	kW	55	0		l	56	Kg	148		l	32	Kg	83,9
Total cycle @7m³ (*)													

- 45%

Coverage

ENERGYA



2 Battery Electric Equipment Pump Mixer MK28E

MK28E

JC ENERGIA



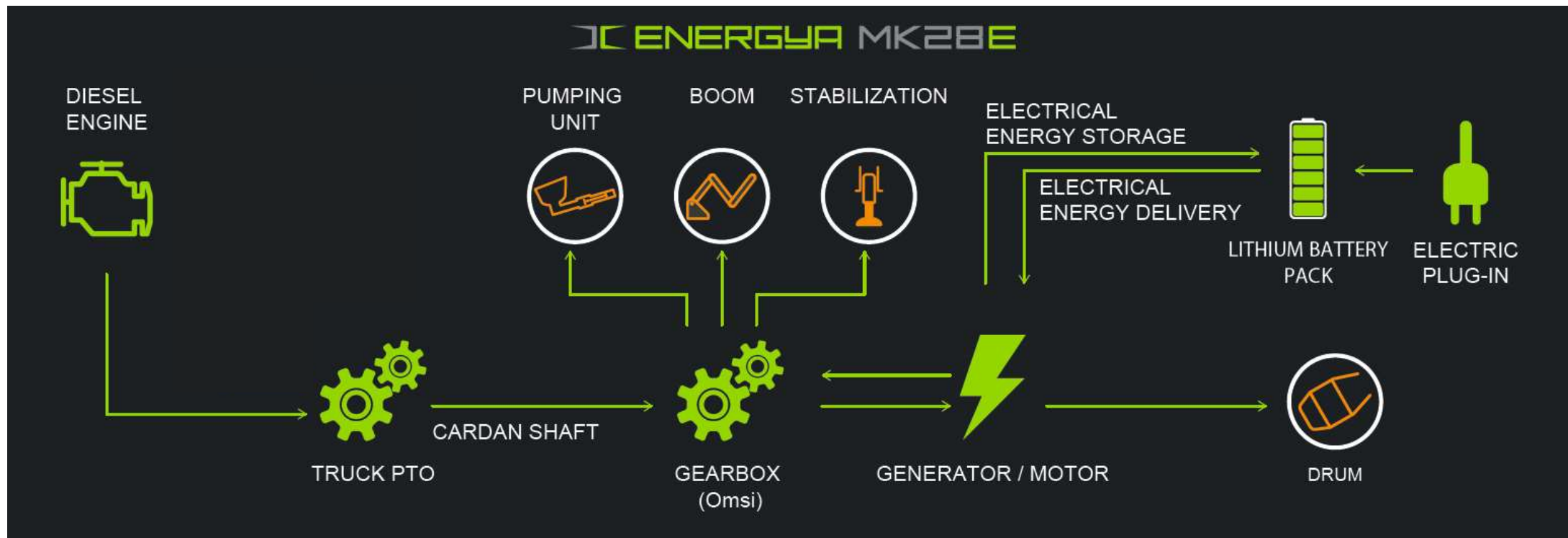
bauma
2019



reddot award 2020
winner

MK28E

ENERGYA

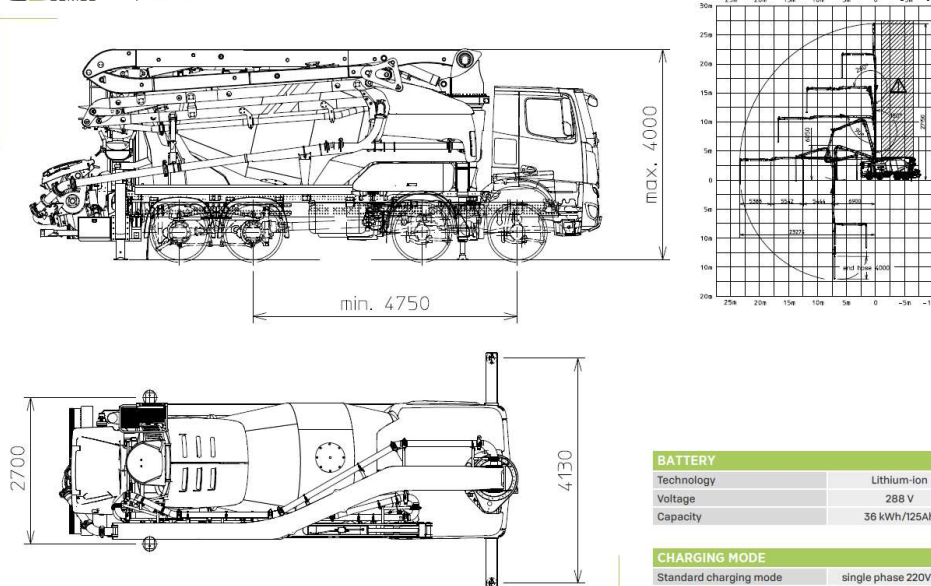


MK28E

PRODUCT DESCRIPTION

ENERGYA is the new CIFA plug-in Hybrid truck pump mixer adopting the latest technologies to decrease fuel consumption, pollution and noise. The system allows the full energy management in all working conditions and the choice and the set up of components maximize the general efficiency of the system. Conventional hydraulic system is replaced by electric transmission with high efficiency. The system allows to rotate the drum, the boom, the stabilization, the pumpin unit with diesel engine off, without exhaust emission and with very low noise in the working area during the charging and discharging phases. Emission and noise reduction make ENERGYA very useful in all areas where high respect for the environment is the first choice.

ENERGYA | DATASHEET



BATTERY	
Technology	Lithium-ion
Voltage	288 V
Capacity	36 kWh/125Ah

CHARGING MODE	
Standard charging mode	single phase 220V ~ 16A
High speed charging mode	400Vac (Three phase) ~ 35kW

ENERGYA

ENERGYA MK28E

CONCRETE MIXER TECHNICAL DATA

Model	RH 80	
Nominal capacity	m ³	7
Drum geometric volume	m ³	12,8
Filling ratio	%	55
Max. drum speed	r.p.m.	14
Pressurized water tank capacity	/	600
Liter-counter scale	/	0-500

PUMPING UNIT TECHNICAL DATA

Model	PB607EPC	
Max. theoretical output	m ³ /h	61
Max. pressure on concrete	bar	31
Max. number of cycles per minute	n°	12
Concrete cylinders (diam. x stroke)	mm	200 X 1000
Concrete hopper capacity	l	400
"S" valve diameter	"	7

PLACING BOOM TECHNICAL DATA

Model	MK28H	
Pipeline diameter	mm	100
Max. vertical reach	m	27,150
Max. horizontal distance	m	23,274
Section numbers		4
1st section opening angle		90°
2nd section opening angle		180°
3rd section opening angle		260°
4th section opening angle		251°
Rotating angle		-240° / +240°
End hose length	m	4

MK28E

Filed tests have showed that the shorter the distances from the plant to the construction site, the more is the saving.



Noise saving
-10 dB



FUEL SAVING

Fuel Consumption

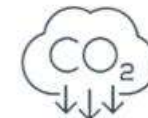


-20%

DIESEL ENERGYA



STANDARD DIESEL MIXER



EMISSIONS
SAVING

CO₂ Emissions



-40%

DIESEL ENERGYA



STANDARD DIESEL MIXER

- (1) Saving calculated with full battery and average 90 km distance. CNG saving is based on truck manufactured declaration -15% compared with standard diesel solution
(2) This covers the emissions from production and usage of the fuel so called "well to wheel".

Coverage

ENERGYA



NORWAY



FINLAND



ITALY



NETHERLANDS

3 Battery Electric Equipment Truck Pump K42E

K42E

A unique design for unique performances

- Combination of electric motors and hydraulic circuit:
- Less complexity
- Multiple power supply system possible
- Same performance of a conventional machine
- 2 electric motors: one for Pumping Unit and one for outriggers and Boom.

**PATENT
PENDING**



K42E

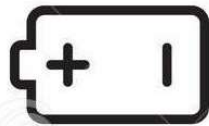


Battery power mode

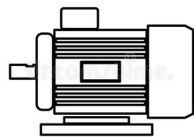
- Battery pack connected to both electric motors
- Split hydraulic circuits for each system
- Possibility to pump concrete in battery mode

**PATENT
PENDING**

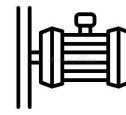
Plug to recharge



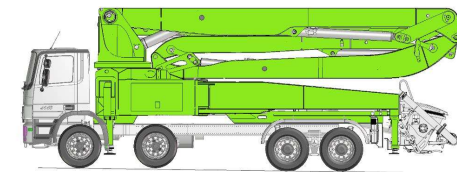
Battery
pack



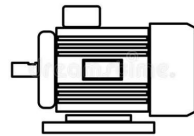
Motor 1



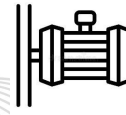
Hydraulic
pump



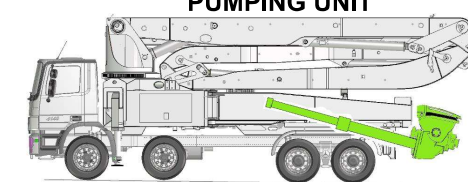
BOOM AND OUTRIGGERS OPERATIONS



Motor 2



Hydraulic
pump



PUMPING UNIT

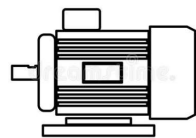
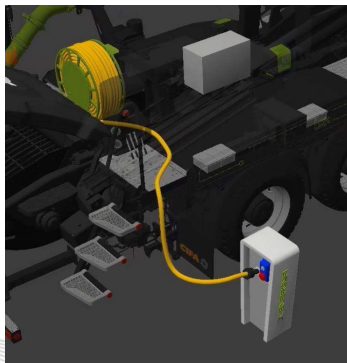
K42E

Electric supply mode

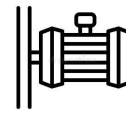
- Direct plug-in to job-site power supply
- The system by-pass the battery pack
- 40 m cable
- Power goes to both engine to operate both Pumping Unit, Boom and outriggers

**PATENT
PENDING**

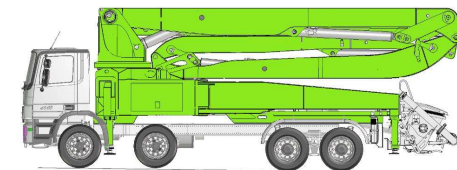
Plug-in cable to job-site power supply



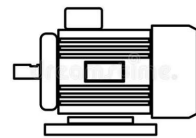
Motor 1



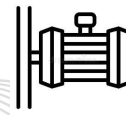
Hydraulic pump



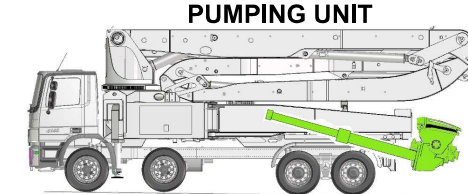
BOOM AND OUTRIGGERS OPERATIONS



Motor 2



Hydraulic pump



PUMPING UNIT

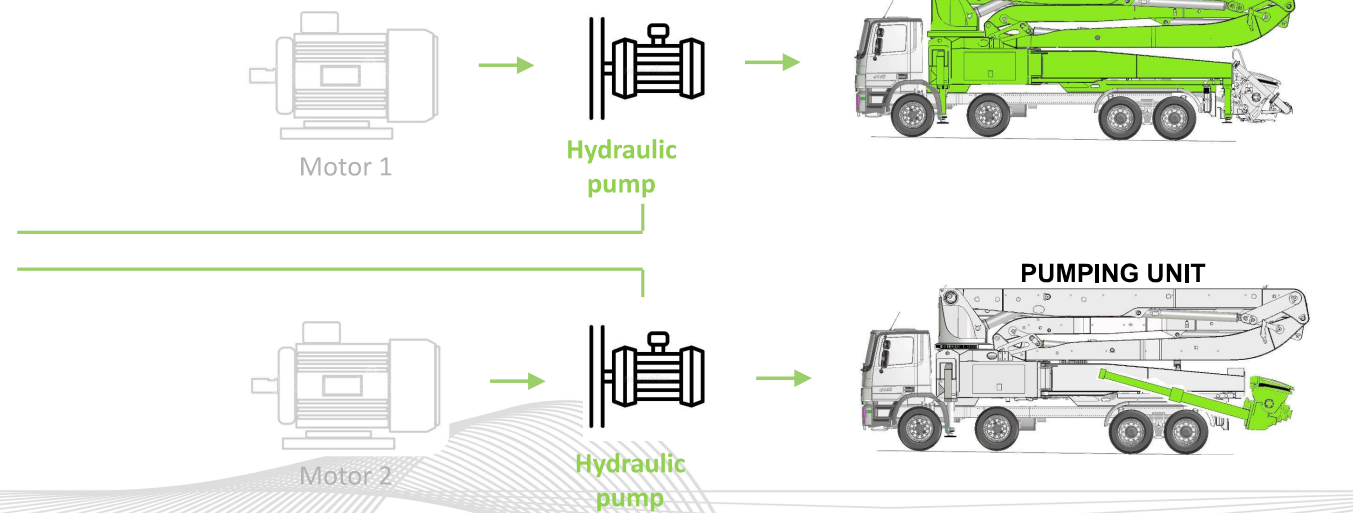
K42E

Recovery mode

- Direct connection to truck PTO
- Electric system (Battery, motors) bypassed
- Direct connection to hydraulic circuit to operate all functions

**PATENT
PENDING**

Combustion engine recovery mode



4 Battery Electric Equipment Shotcrete CSSE

CSSE

JC ENERGIA



BETTER WORKING
CONDITION
HEALTHY
ENVIRONMENT



LESS CONSUMPTION
FEWER EMISSIONS

ENERGYA CSSE can work in electric mode in all working phases without any fuel consumption and CO2 emissions.

The new hybrid system allows the full energy management in every working condition since the conventional hydraulic system is replaced and supported by high efficiency electrical devices.

CSSE

SMART SAVINGS

CSSE allows for lower consumption. The vehicle can operate in electrical mode during all the working stages: traction, pumping, boom handling, additive dosing, water pump and carriage services. If the vehicle is connected to the mains during the pumping stage, it can simultaneously operate and charge its batteries, thereby further extending its operating life. Plus, it is fitted with Kers, the braking energy saving system that allows you to increase the residual charge.



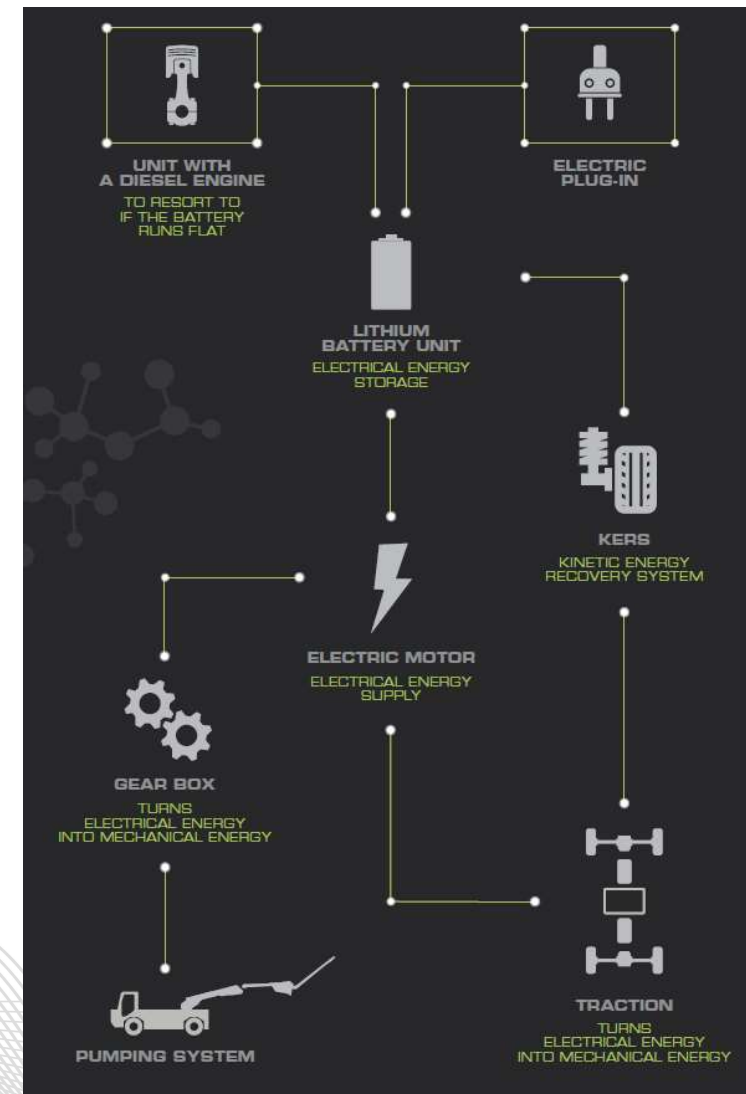
TRACTION WITH ELECTRIC CONTROL

Traction is controlled by two electric motors connected directly to each individual axis to overcome any kind of difficulty in tunnels by ensuring full efficiency and a 100% eco-friendly approach. It has a simplified layout compared to the traditional hydrostatic transmission system, which allows for a considerable reduction of the mechanical components, and in turn this means less maintenance.

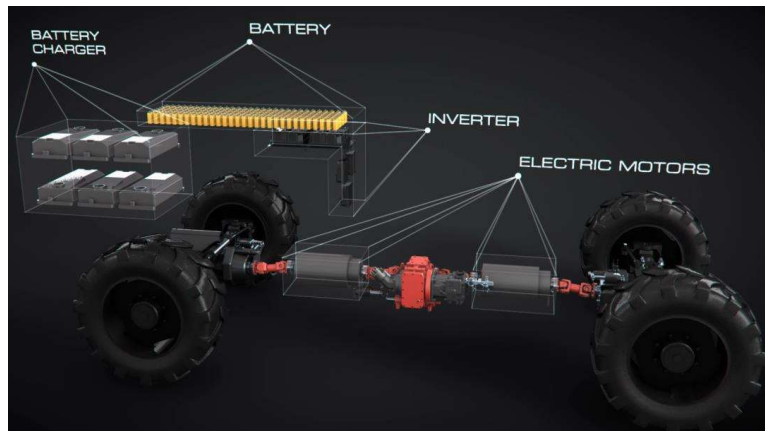


OPTIMAL CONTROL OF PERFORMANCE

CIFA's software ensures full control of all functions, with an ideal management of energy consumption among the various components. This way the electronic system optimises efficiency.



CSSE

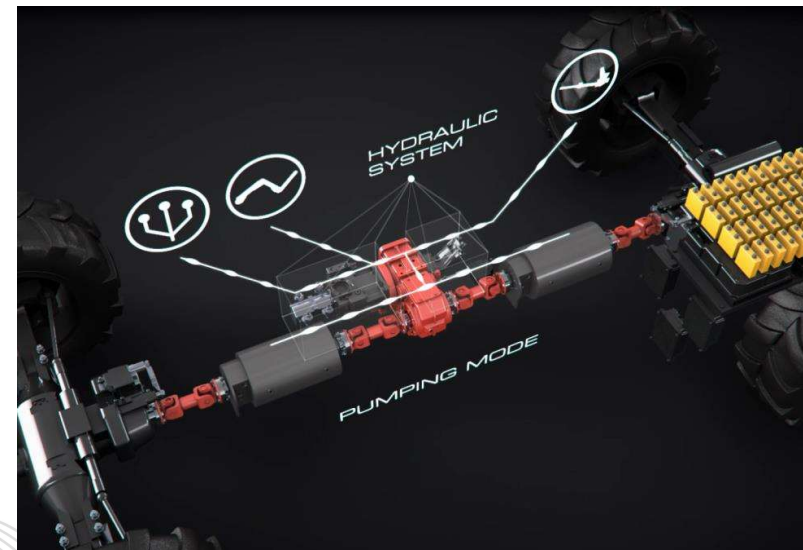


DRIVING MODE PERFORMANCE

- **1st gear:**
 - 0% slope: max speed 6 km/h, range 4,5 km, time 41 min.
- **2nd gear:**
 - 0% slope: max speed 17,5 km/h, range 5,5 km, time 18 min.

PUMPING MODE

- Possibility to pump only with battery, or connected to electric net of the tunnel.





ENERGYA SERIES
more than a range
an **ECOSYSTEM**

