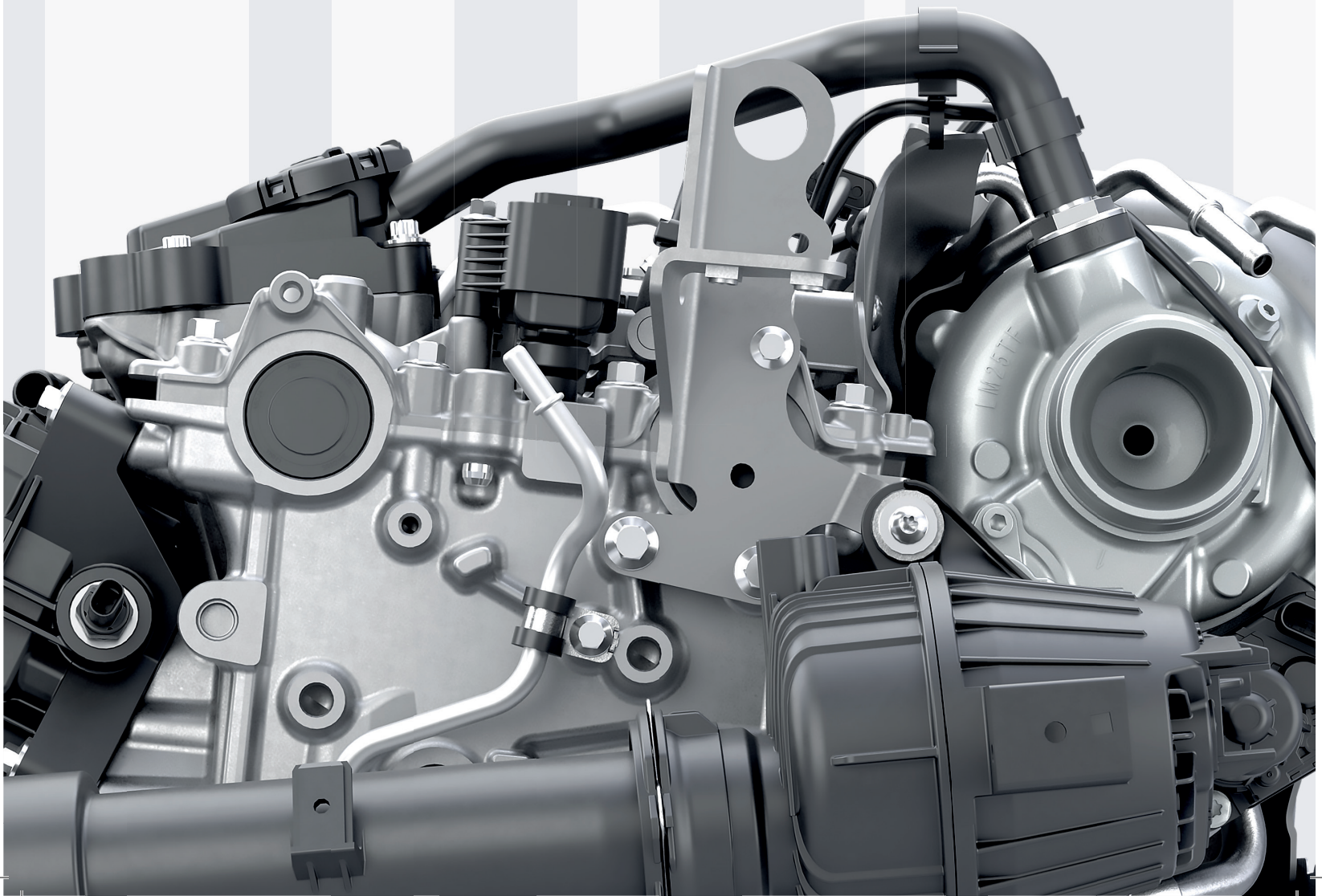


# NEXT-GENERATION POWERTRAIN SOLUTIONS



We offer a range of powertrain solutions to meet the needs of customers, in every region, across every fuel type. From integrated powertrain systems to standalone products: combustion engines, hybrid solutions, transmissions and range extenders.

Whatever your need, we have the expertise, scale and innovation to deliver. Solving the biggest challenges together.

A global footprint.



Argentina	Córdoba
Brazil	Curitiba
Chile	Los Andes
China	Zhangjiakou
	Chunxiao
	Hangzhou Bay
	Yiwu
	Baoji
	Guiyang
	Taizhou
	Changxing
Portugal	Aveiro
Romania	Mioveni
	Titu
Spain	Sevilla
	Madrid
	Valladolid
Sweden	Göteborg
	Skövde
Türkiye	Bursa
United Kingdom	London

# A new global leader in powertrain solutions

Units produced  
per annum

Countries our products  
are present in

Manufacturing Plants

R&D Centers

Employees

+8m

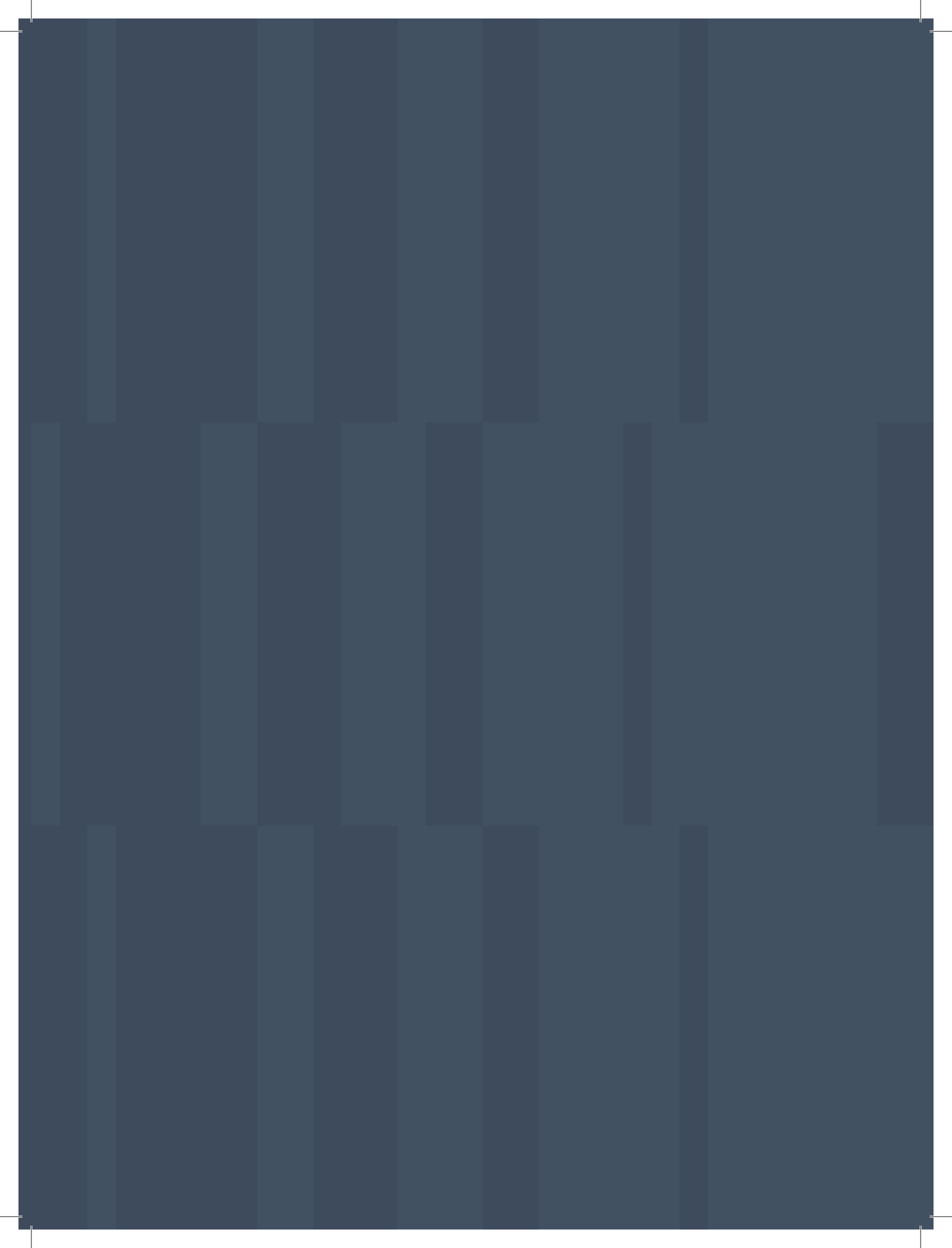
130

18

5

19 000

# POWERTRAIN SYSTEMS





ONE

01

## Horse One combustion powertrain systems

Integrated systems compatible with a variety of fuels  
– from traditional to synthetic, to meet local demand  
around the world.

FUSION

02

## Horse Fusion hybrid powertrain systems

Integrated HEV, PHEV and REEV systems for almost  
any vehicle platform and fuel type, which can quickly  
go into production.

X-RANGE

03

## Horse X-Range powertrains for BEV-native platforms

Integrated systems that allow automakers to hybridize  
BEV-native platforms with minimal modifications.  
Allows automakers to expand their vehicle line-up  
using their BEV investments.

# IN THE SPOTLIGHT

Our latest innovations offer a frictionless way to broaden automakers line-ups on new and existing vehicle platforms. Allowing our customers to focus on the differentiators: design, software and EV platforms.



[PERFORMANCE] 350-400 KW  
[TUNING] DAILY DRIVE, ON TRACK, OFF ROAD  
[MOUNTING] TRANSVERSE, LONGITUDINAL

# HORSE W30



Light. Compact. Powerful.  
A no compromise V6.



V6

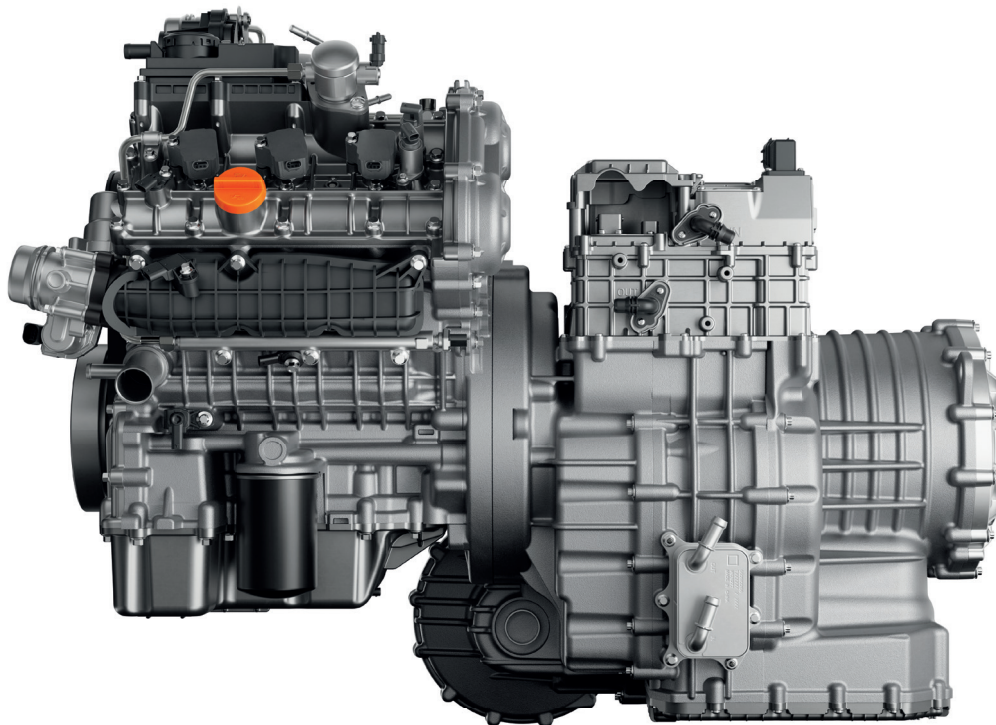
# High Performance

## HORSE W30

Horse Powertrain's first V6 engine is a high performance 3.0-liter engine, designed to support mild- and full-hybrid vehicles. The HORSE W30 weighs just 160kg, 10kg less than the next-lightest V6 on the market today. This engine offers outstanding fuel economy and efficiency.

## HORSE 4LDHT

Weighing just 199kg, this four-speed hybrid transmission and e-machine is designed to provide a responsive, smooth driving experience with electric traction. It is designed for vehicles using larger-displacement engines from Horse Powertrain in hybrid configurations.



## HORSE W30 Key features

- Deployable in longitudinal and transverse layouts
- Designed as a hybrid-first engine
- Compliant with latest emissions regulations
- Available at the end of 2027

## HORSE W30 Technical specifications

Fuel Type	Gasoline
Hybrid Configuration	HEV/PHEV/REEV
Number of Cylinders	6
Cylinder Arrangement	V-Angle (90°)
Displacement (L)	2.99
Induction	Turbocharged
Fuel Injection Method	Gasoline Direct Injection (GDI)
Max. Power (kW)	350-400
Max. Torque (Nm)	600-700
Weight (kg)	160
Dimensions (mm)	460*690*650

## HORSE 4LDHT Key features

- Features two motors in a P1 + P3 configuration
- Modular integration
- Available in 2028

## HORSE 4LDHT Technical specifications

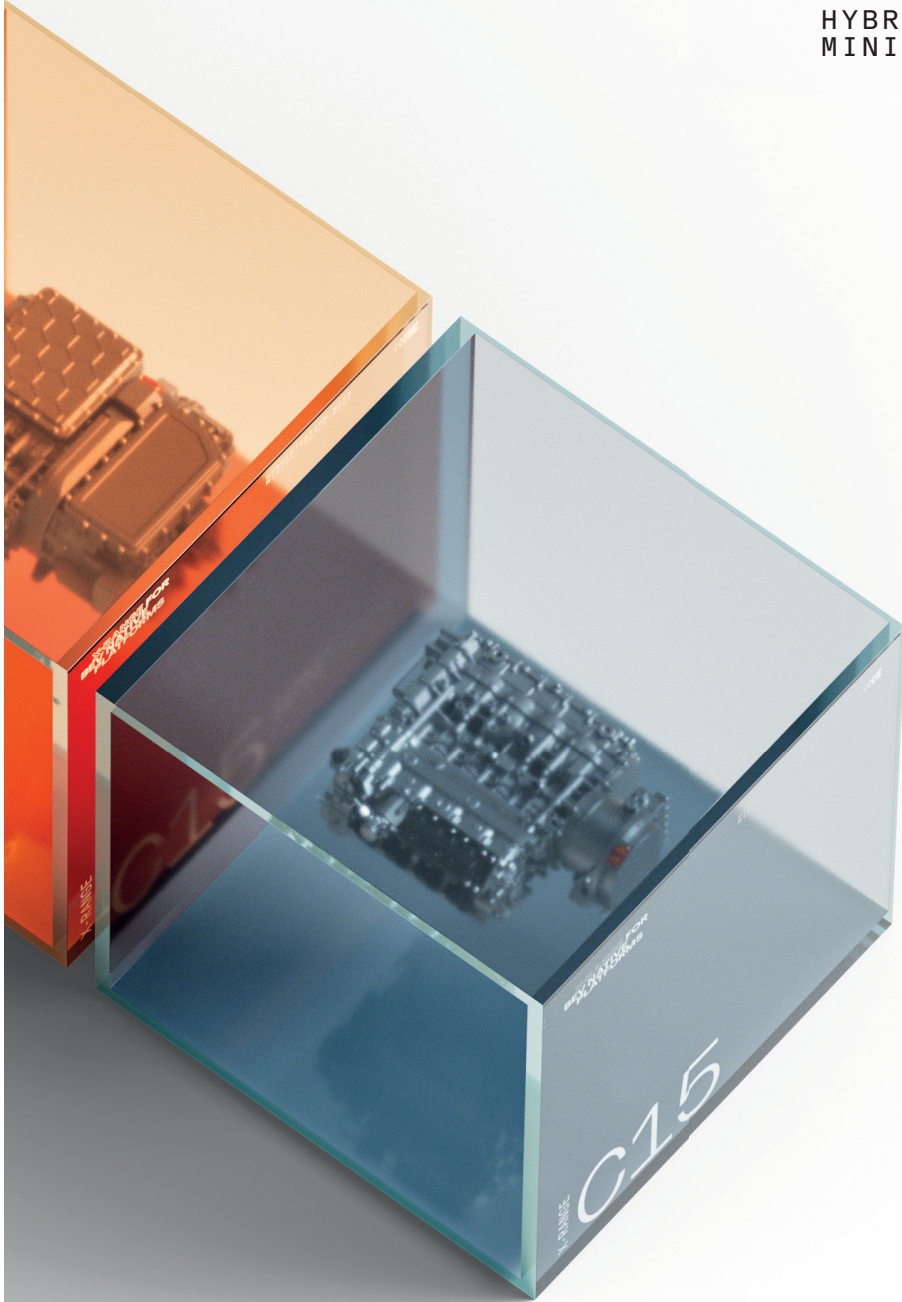
Voltage Platform	800V
Hybrid Architecture	P1+P3 Series-Parallel
Weight Including Oil (kg)	199
Gears	Engine Drive: 4*2-Speed Motor Drive: 1*2-Speed
Max. Wheel Torque (Nm)	>9200
Motor Peak Power (kW)	P1:250-300, P3:350-450



# X-RANGE FOR BEV NATIVE PLATFORMS



HYBRIDIZATION WITH  
MINIMAL ADJUSTMENT

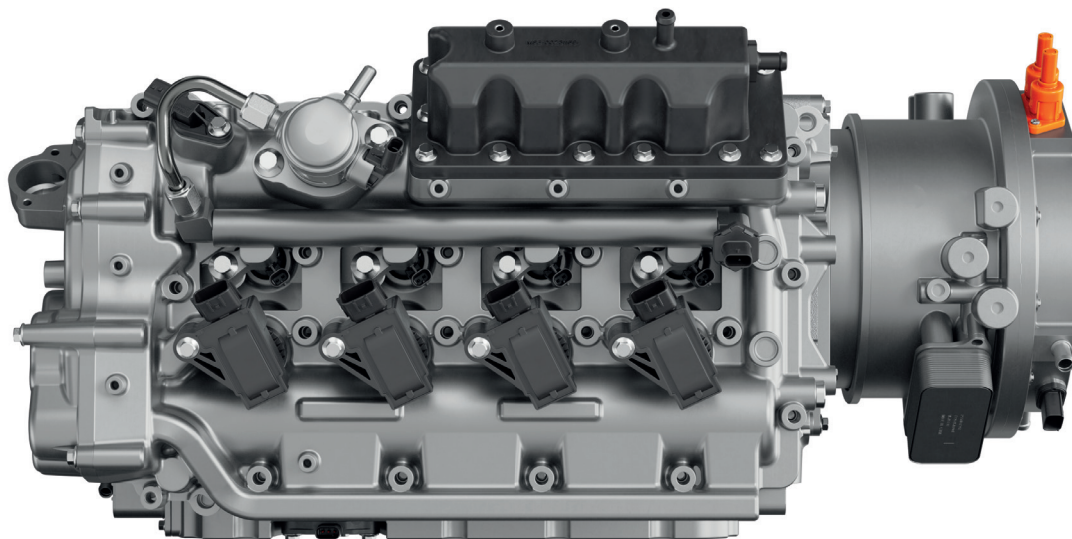


UNIVERSAL FIT.  
FLEXIBLE APPLICATION.  
BEV EXPERIENCE.

## Helping all EVs go the extra mile

### X-RANGE C15

An ultra-compact powertrain that integrates an engine and generator, the HORSE C15 enables existing BEV platforms to serve as the foundation for REEV line-ups. Intended for installation at the front of the vehicle or under the passenger seat, the HORSE C15 allows automakers to deliver pure-electric experiences with maximum range.



## X-RANGE C15

### Key features

- Combines a 1.5-liter, 4-cylinder engine with generator, exhaust, and cooling unit
- Can be packaged horizontally or vertically
- Available with either a naturally aspirated or a turbocharged engine
- Compatible with existing EDUs and suitable for installation in various locations across a BEV, including in the front or rear compartments

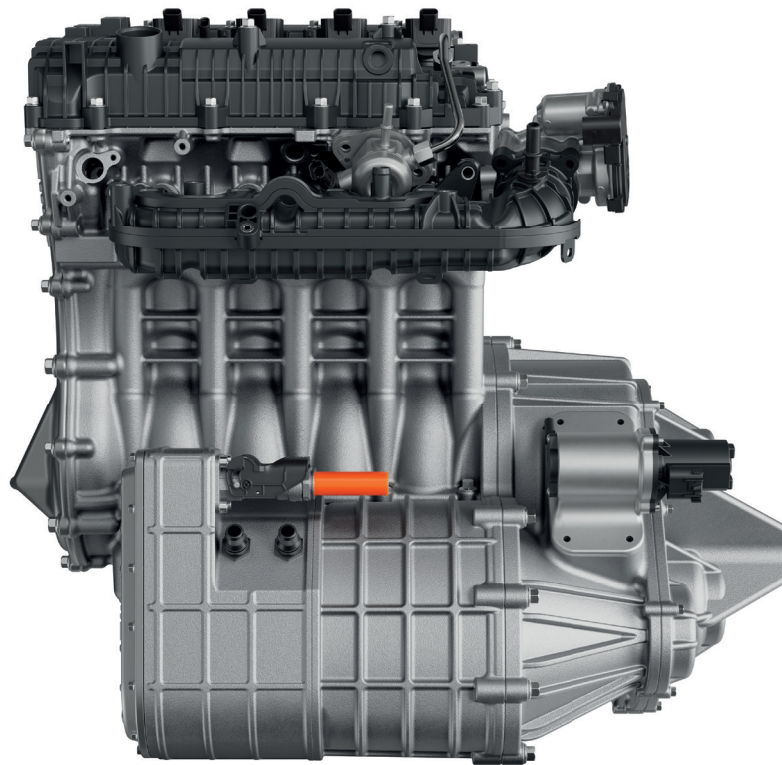
### Technical specifications

Maximum Power:	N/A: up to 70kW, T: up to 120kW
Fuel Type:	Gasoline & e-Fuel
Number of Cylinders:	4
Displacement:	1.5L
Induction:	Naturally Aspirated, Turbocharged
Compression Ratio:	NA 14.5:1 T 11:1
Fuel Injection:	Direct Injection
Dimensions (mm):	500x550x275

## Affordable and cost-effective hybridization

### X-RANGE F15 DIRECT DRIVE

Previously known as the Future Hybrid System, the HORSE F15 is an 'all-in-one' hybrid powertrain designed to replace the front electric drive unit of BEVs. It combines an engine, transmission, motor and power electronics into an integrated system, enabling automakers to use a single shared platform for their BEV, HEV, PHEV, and REEV line-ups.



## X-RANGE F15 DIRECT DRIVE

### Key features

- Integrates engine with dedicated hybrid transmission, full suite of power electronics, and electric motors
- Available in a 'Performance' variant with a pair of P1 + P3 motors, or a 'Compact' variant with a single P2 motor
- Supports front-wheel and all-wheel drive
- Allows BEV platforms to be the foundations of HEV, PHEV, and REEV models by replacing front electric drive unit

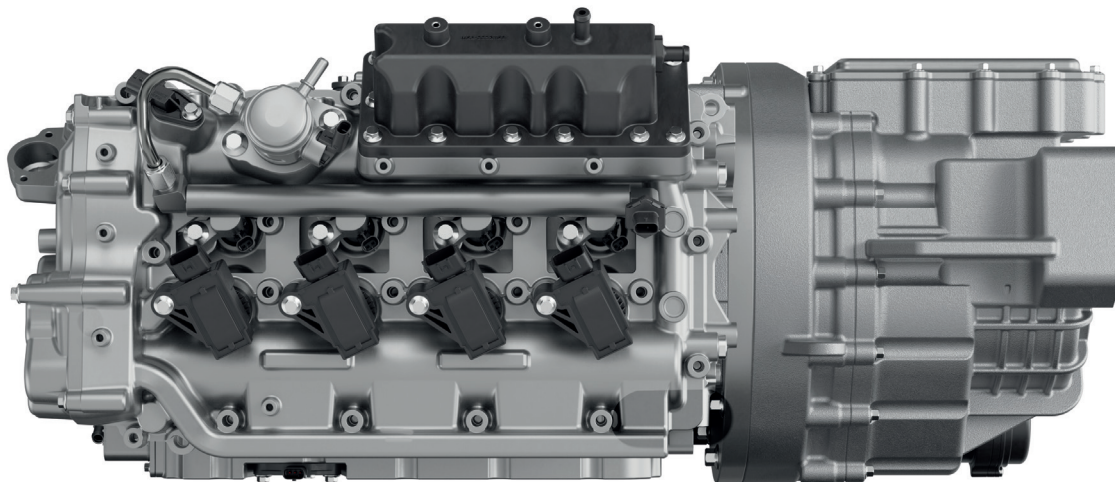
### Technical specifications

Maximum power	N/A: up to 70kW, T: up to 120kW
Displacement	1.5L
Generator power	N/A: up to 70kW, T: up to 85kW
E-traction power	>200kW
Voltage	800V

## Transformative and compact

### X-RANGE C15 DIRECT DRIVE

An ultra-compact 'all-in-one' powertrain designed to seamlessly replace the rear electric drive unit of BEVs, transforming them into hybridized vehicles. The flexible system can support rear- and all-wheel-drive applications, allowing a single platform to offer BEV, xHEV and REEV vehicles, with minimal vehicle modifications or retooling.



## X-RANGE C15 DIRECT DRIVE

### Key features

- Integrates engine with dedicated hybrid transmission, full suite of power electronics, and electric motor
- Supports rear-wheel and all-wheel drive
- Available with either a naturally aspirated or a turbocharged engine
- Allows BEV platforms to be the foundations of HEV, PHEV, and REEV models by replacing rear electric drive unit
- Designed to mount to the rear subframe enabling a double isolated installation for best NVH.
- Package location on the rear axle also enables compact integration of the exhaust and after treatment systems at the rear of the car, maximizing floor space for batteries or the passenger compartment

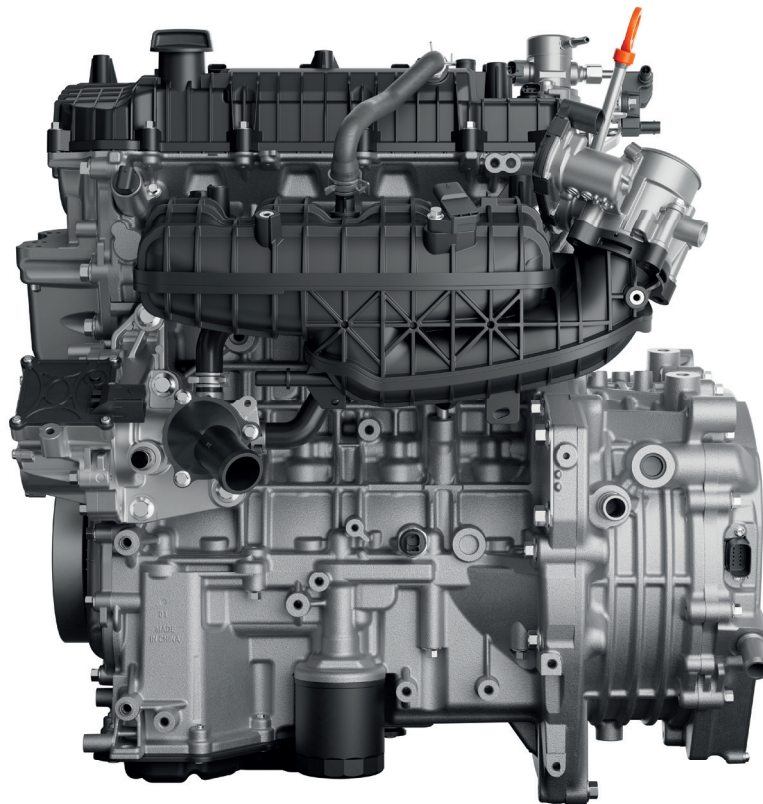
### Technical specifications

ICE Power	N/A: up to 70kW, T: up to 120kW
Displacement	1.5L
Generator power	N/A: up to 56kW, T: up to 110kW
E-traction power	>200kW
Voltage	800V

# Ultra efficient alternative fuels

## HORSE B15 METHANOL + EG50

This REEV powertrain consists of two complementary parts. The first is the HORSE B15 Methanol, an ultra-efficient engine capable of burning gasoline-methanol fuel blends from pure-gasoline to M100. The second is the HORSE EG50, an optimized electrical generator designed for range extender applications.



## HORSE B15 METHANOL + EG50

### Key features

- Uses a four-cylinder 1.5-liter engine, designed to run on methanol flex fuel blends
- Generator features Gallium Nitride (GaN) embedded power module for optimized packaging and thermal performance
- Powertrain is fully compatible with China 6b emissions standards

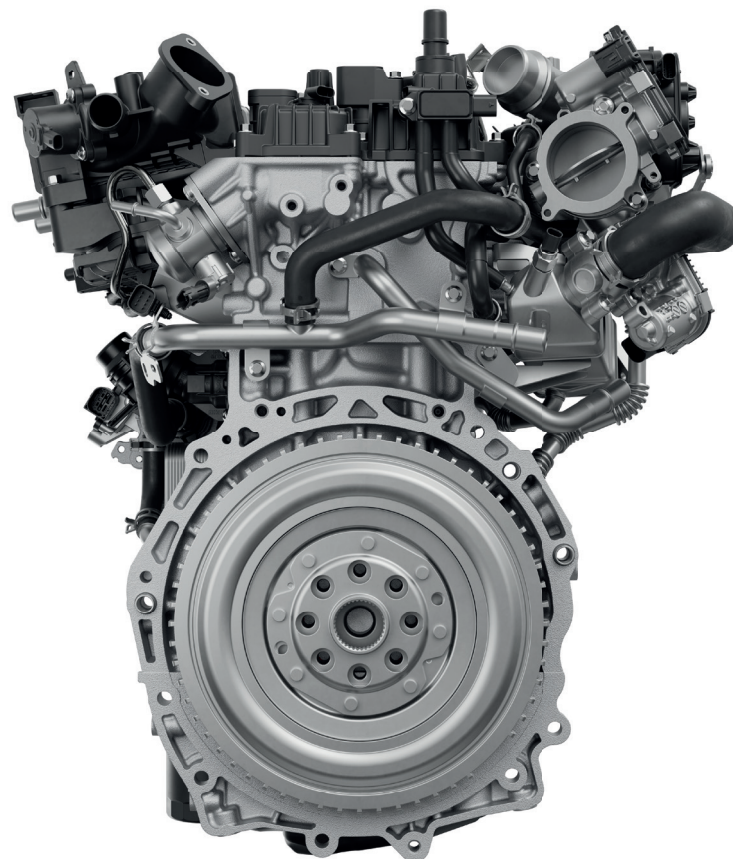
### Technical specifications

Fuel Type	M0~M100 (Methanol Flexible Fuel)
Emission Standard	China 6b
Hybrid Configuration	REEV
Cylinder Arrangement	Inline
Displacement (L)	1.499
Induction	Naturally Aspirated
Fuel Injection Method	Methanol High-Pressure Direct Injection System
P1 Motor Type	PMSM
Voltage Platform	400V
P1 Continuous Power (kW)	50
Power Module	"Ice Blade" Series GaN Embedded Power Module Engine

# Water tight, ready for adventure

## HORSE B20

This rugged powertrain is designed for use in HEVs, PHEVs, and REEVs. Ideal for extreme all-terrain driving and wading through water, the HORSE B20 has a sealed waterproof design that allows it to operate while submerged at depths of up to 1.1 meters.



## HORSE B20

### Key features

- Compliant with IPX8 waterproofing standards
- Direct injection system paired with an efficient turbocharger
- Gantry-type aluminum block with integrated exhaust manifold and a simplified balance shaft system

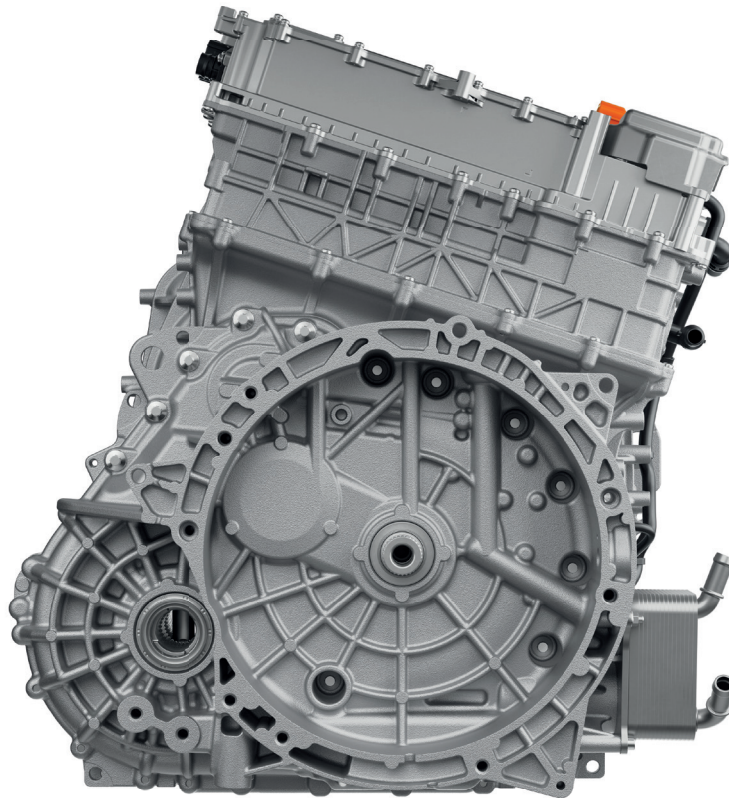
### Technical specifications

Fuel Type	Gasoline
Emission Standard	China 6b
Hybrid Configuration	HEV/PHEV/REEV
Number of Cylinders	4
Cylinder Arrangement	Inline
Displacement (L)	1.999
Induction	Turbocharged
Fuel Injection Method	Gasoline Direct Injection (GDI)
Max. Power (kW)	140-185
Max. Torque (Nm)	300-380

# Unlocking new possibilities for hybridization

## HORSE DHTS210

This 14-in-1 transmission and e-machine is one of the first public showcases of Horse Powertrain's upcoming generation of integrated e-axes – bringing together transmissions, motors, and power electronics into a single unit of unprecedented efficiency and compactness.



## HORSE DHTS210

### Key features

- Designed for P1 + P3 hybrid architectures
- Includes an electric drive unit, electronic control units, cooling and lubrication systems, high-pressure execution pumps, clutches, and gearshafts
- Packaged within a 516mm x-axis length

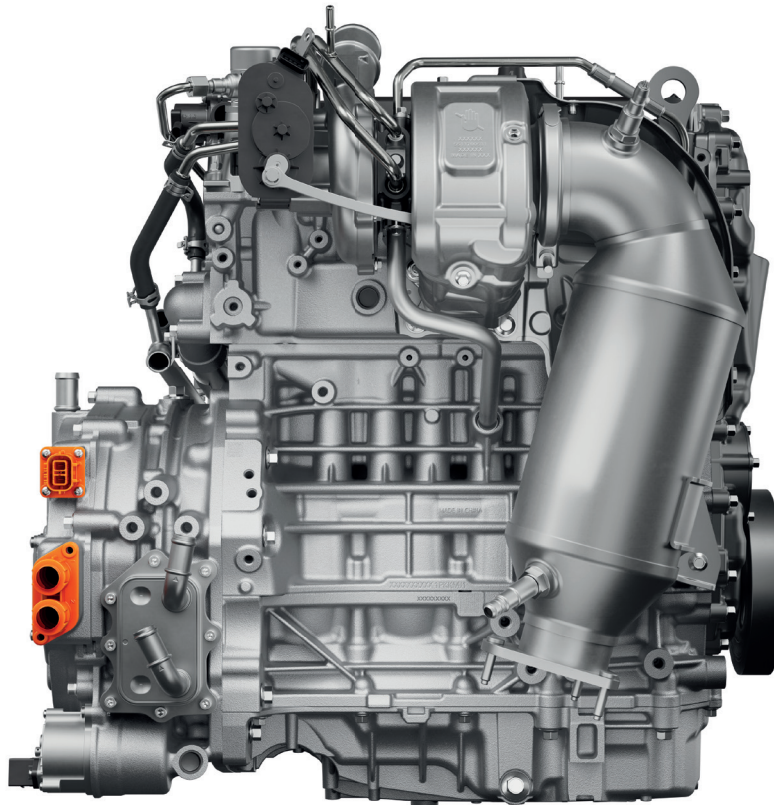
### Technical specifications

Voltage Platform	400V
Hybrid Architecture	P1+P3 Series-Parallel
Weight Including Oil (kg)	120
Gears	Engine Drive: 1-Speed Motor Drive: 1-Speed
Max. Wheel Torque (Nm)	3500
Motor Peak Power (kW)	P1:100, P3:210

# An industry first

## HORSE D20 METHANOL

This innovative REEV powertrain brings together the HORSE D20 Methanol, a four-cylinder, 2-liter pure-methanol engine with the industry's first mass-produced dual-rotor axial flux motor, delivering major power density and packaging improvements.



## HORSE D20 METHANOL

### Key features

- Capable of pure-methanol cold starts from temperatures as low as -40°C
- 'Yokeless' dual-rotor axial flux machine is designed to for use in a P1 configuration, and features immersion cooling system and silicon carbide power electronics
- Paired together as a REEV powerplant, the HORSE D20 Methanol can deliver up to 2kWh of power per liter of methanol

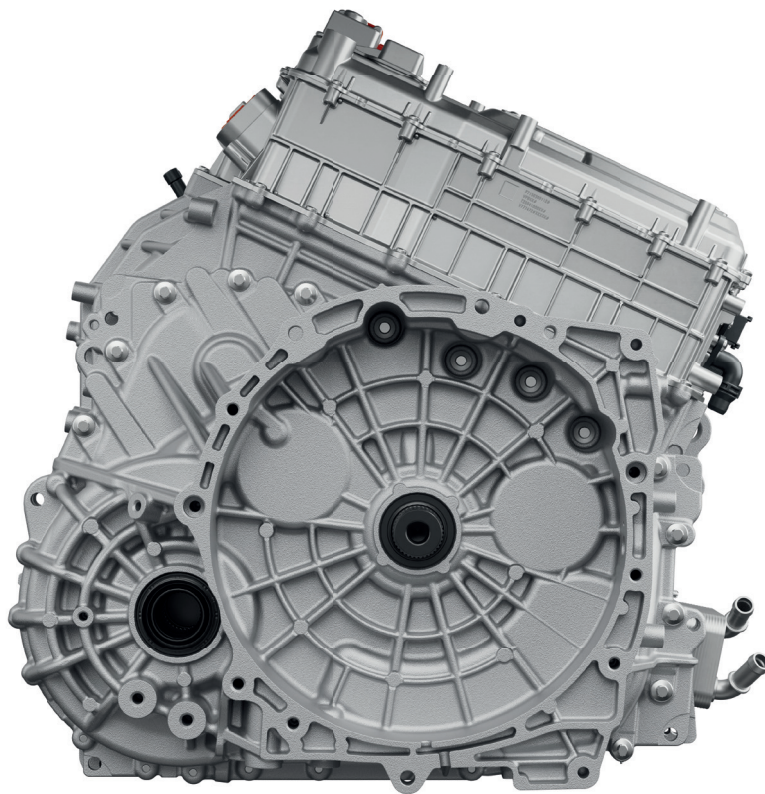
### Technical specifications

Fuel Type	Methanol
Emission Standard	China 6b
Cylinder Arrangement	Inline
Displacement (L)	1.974
Induction	Turbocharged
Fuel Injection Method	Methanol High-Pressure Direct Injection System
P1 Motor Type	Axial Flux Motor
Voltage Platform	400V/800V
P1 Continuous Power (kW)	100-120
Power Module	"Ice Blade" Power Module Matrix:SiC Modules

# Quiet and smooth for the ultimate driving experience

## HORSE DHT290

A single-speed transmission, the HORSE DHT290 is designed to deliver top-end performance and responsiveness combined with superior noise-reduction for a smooth and comfortable EV and hybrid driving experience.



## HORSE DHT290

### Key features

- P1 + P3 series-parallel architecture, enabling pure-EV driving, engine-only drive, or combined hybrid power
- Near 1000V platform enables fixed gear ratio, superior responsiveness, and minimized noise
- 1200V SiC Mini-HPD

### Technical specifications

Voltage Platform	900V
Hybrid Architecture	P1+P3 Series-Parallel
Weight Including Oil (kg)	129
Gears	Engine Drive: 1-Speed Motor-Drive: 1-Speed
Max. Wheel Torque (Nm)	4920
Motor Peak Power (kW)	P1:145, P3:290

# Improved engine efficiency and fuel economy

## ACTIVE LEAN BURN PRE-CHAMBER TECHNOLOGY

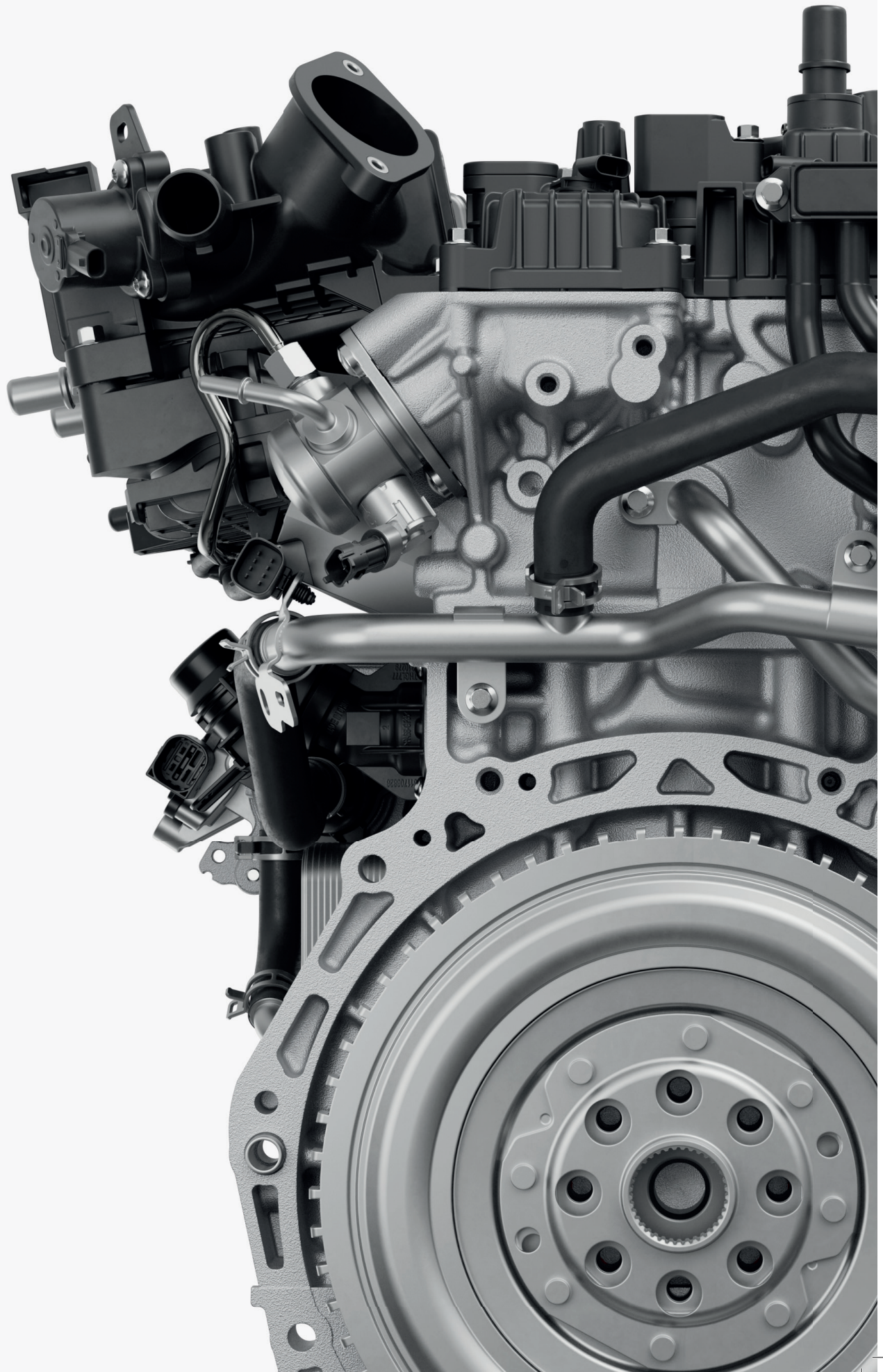
Replacing a traditional spark plug, this active lean burn pre-chamber enables a significant increase in the air-to-fuel ratio of combustion events in the engine cylinder. This 'lean' burn significantly improves engine efficiency and fuel economy, while also minimizing production of additional pollutants such as NO<sub>x</sub>.

### ACTIVE PRE-CHAMBER LEAN BURN COMPONENT

#### Key features

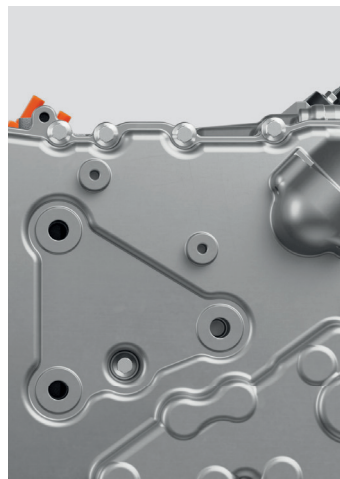
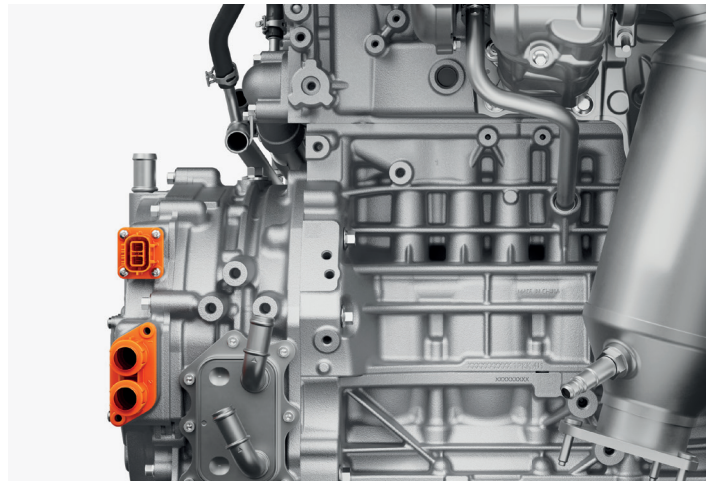
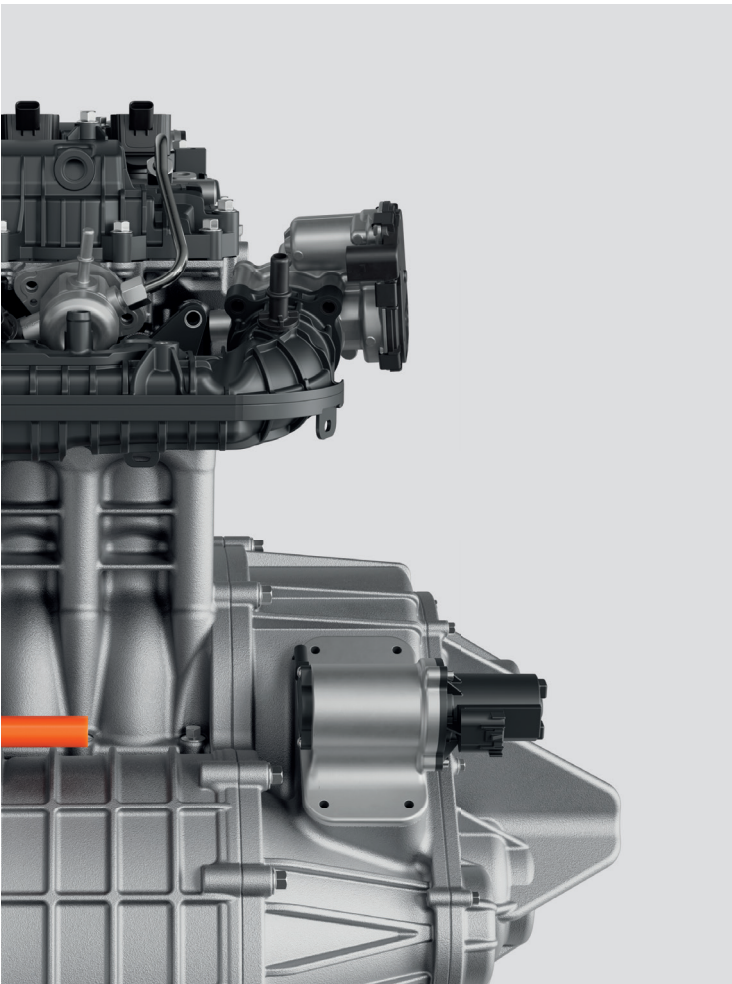
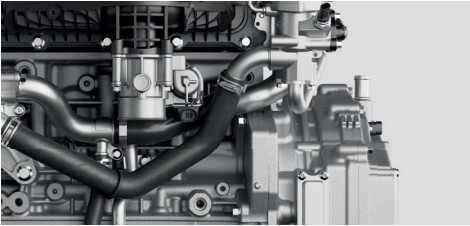
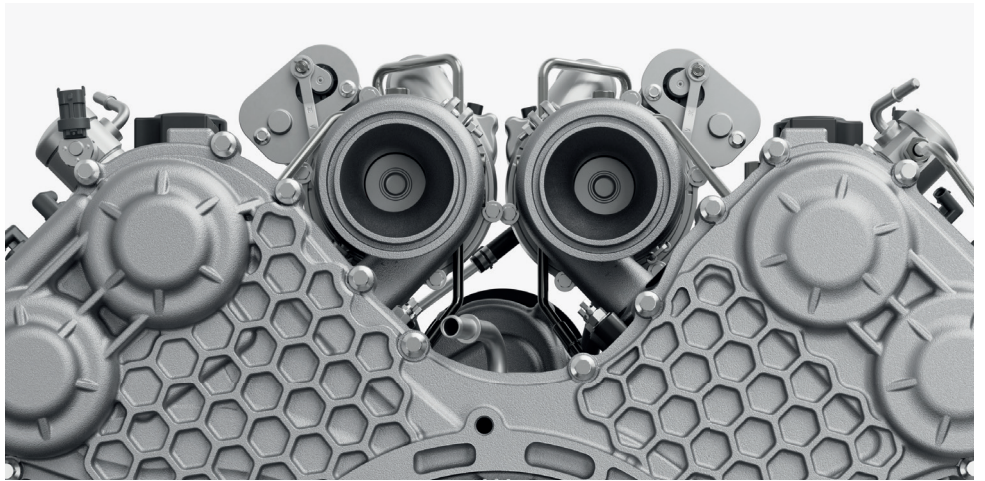
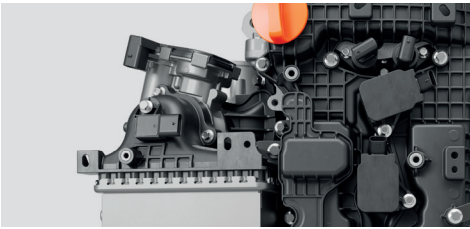
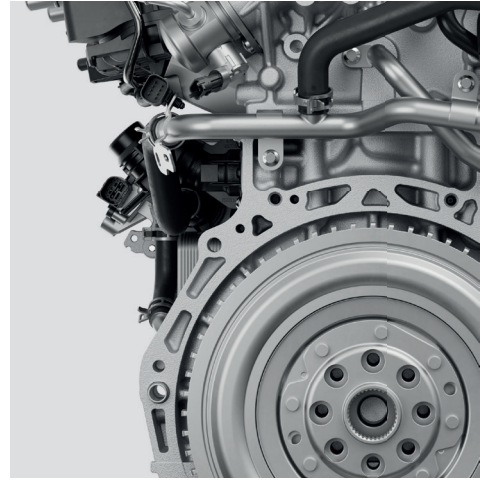
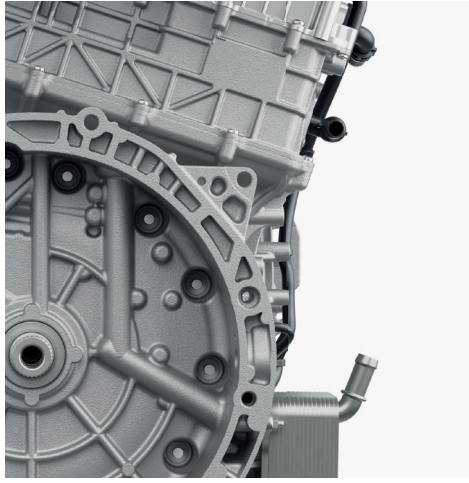
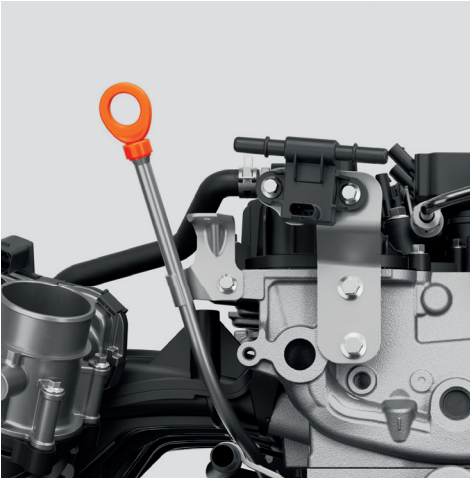
- Designed for installation on Miller cycle engine
- Capable of lambda values greater than 2, with stable and rapid combustion

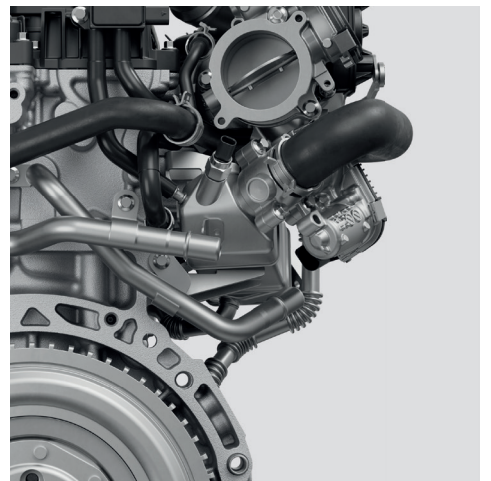
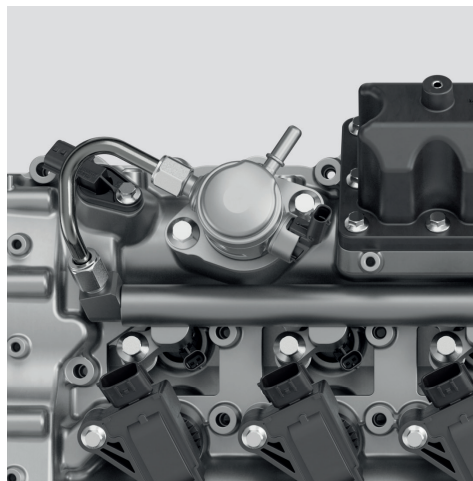
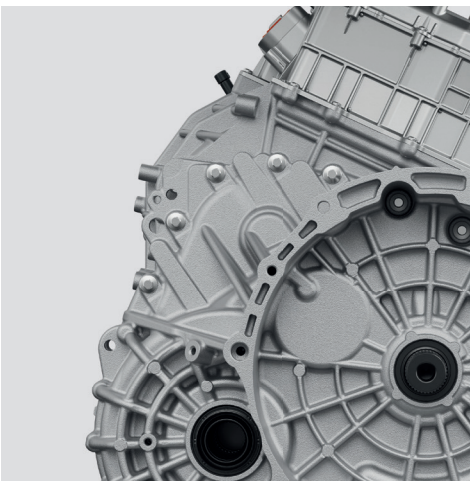
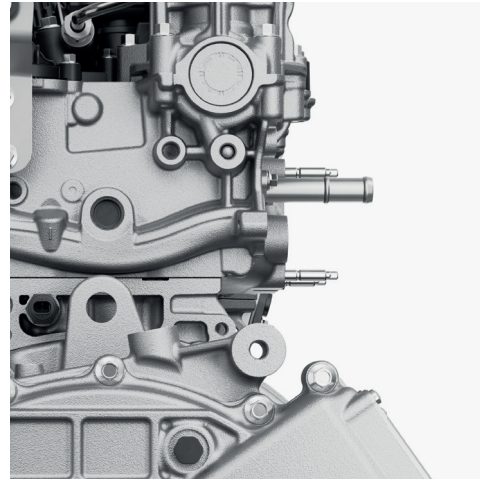
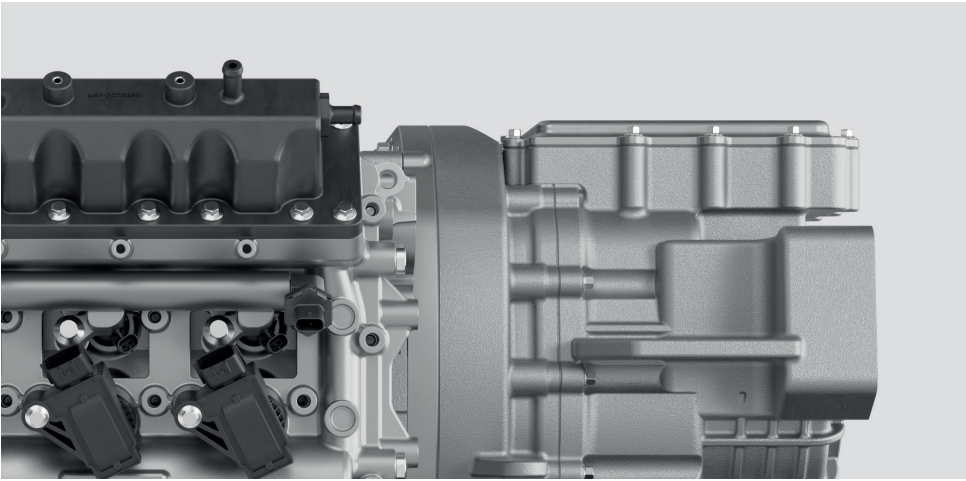
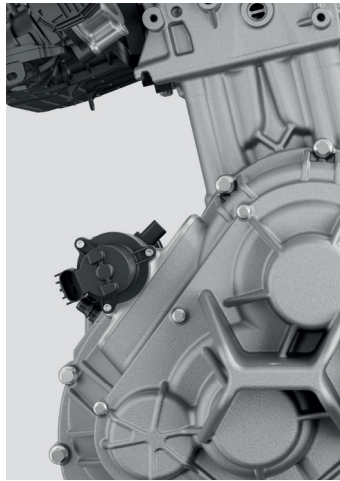
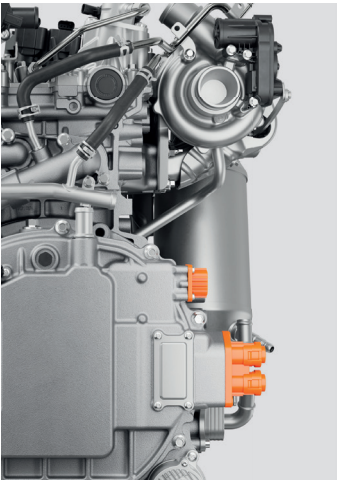
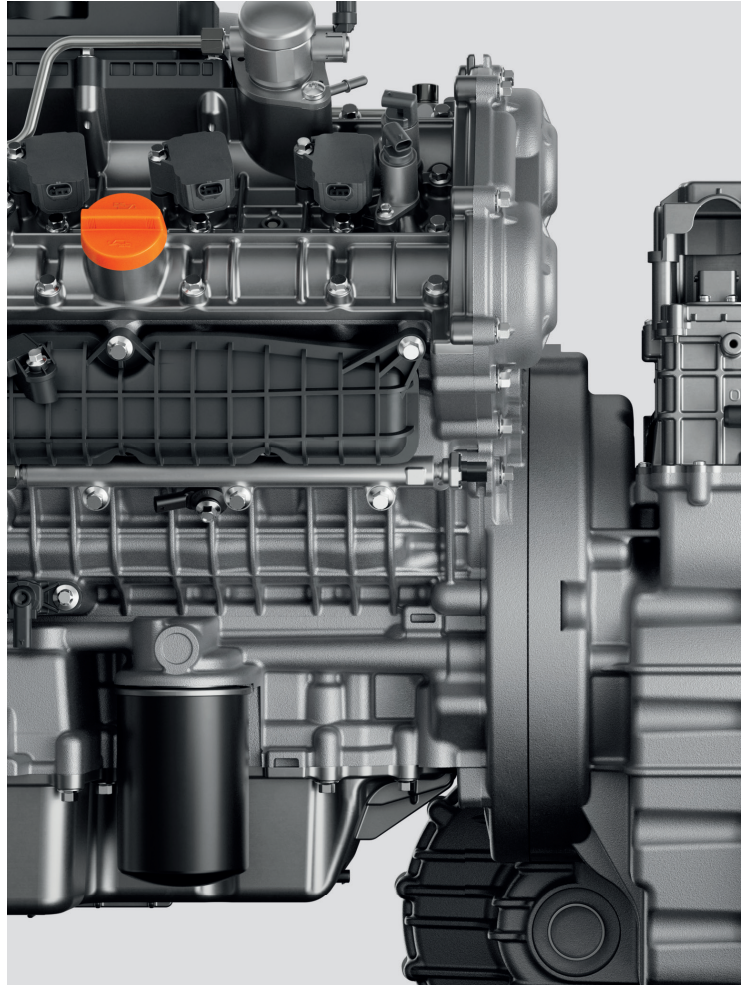
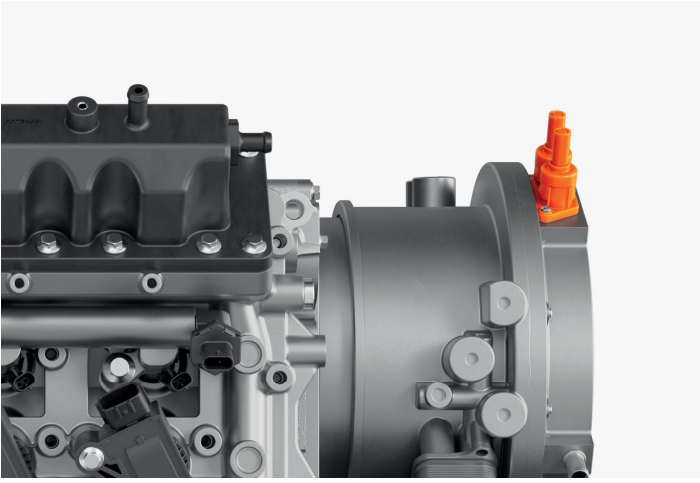
SYSTEM  
CONFIGURATION



# PRODUCT PORTFOLIO

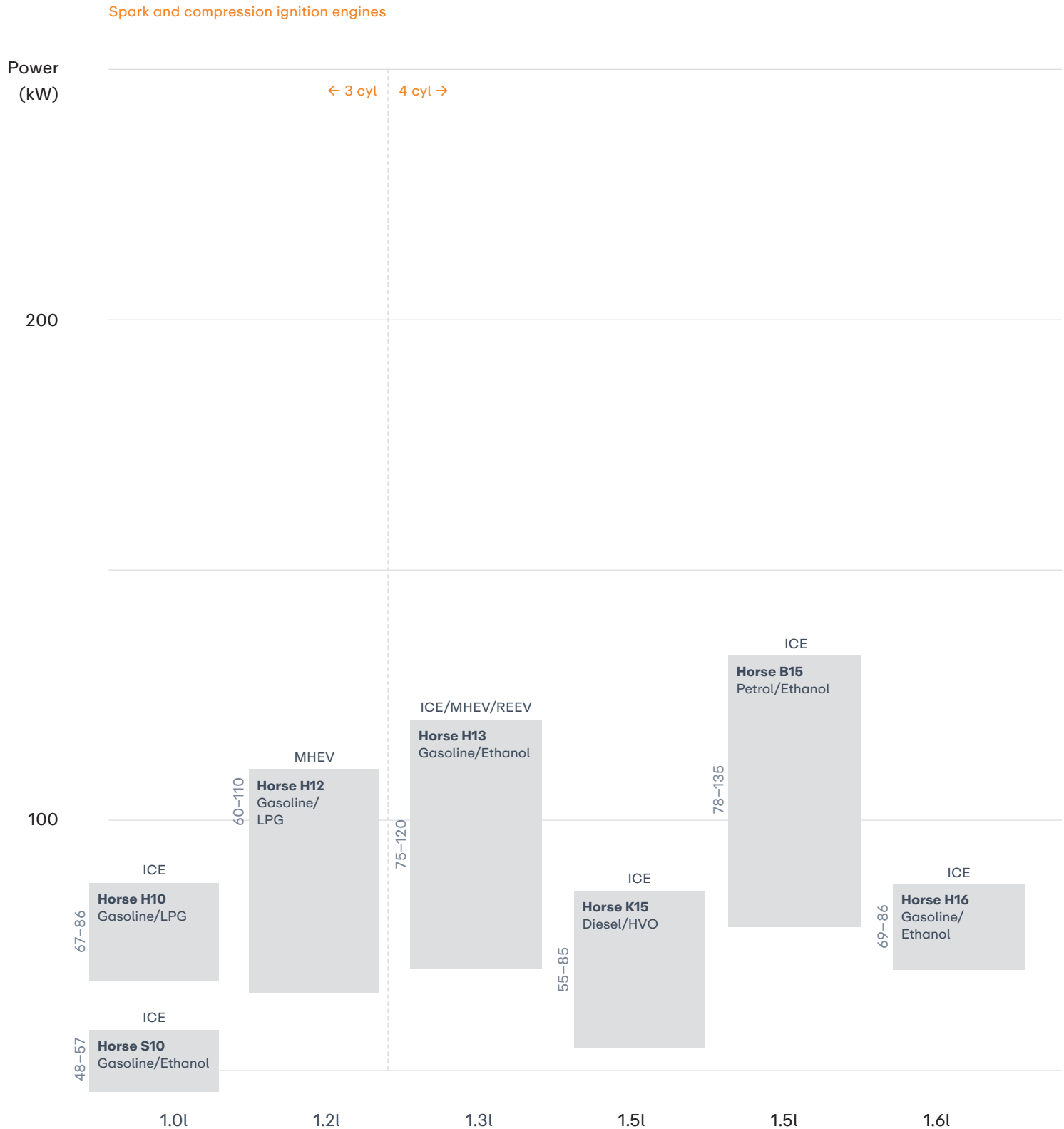
With a broad range of durable, reliable and versatile products, we meet the varied needs of the global market. All of our products can be delivered separately or as part of a One, Fusion or X-Range system configuration.



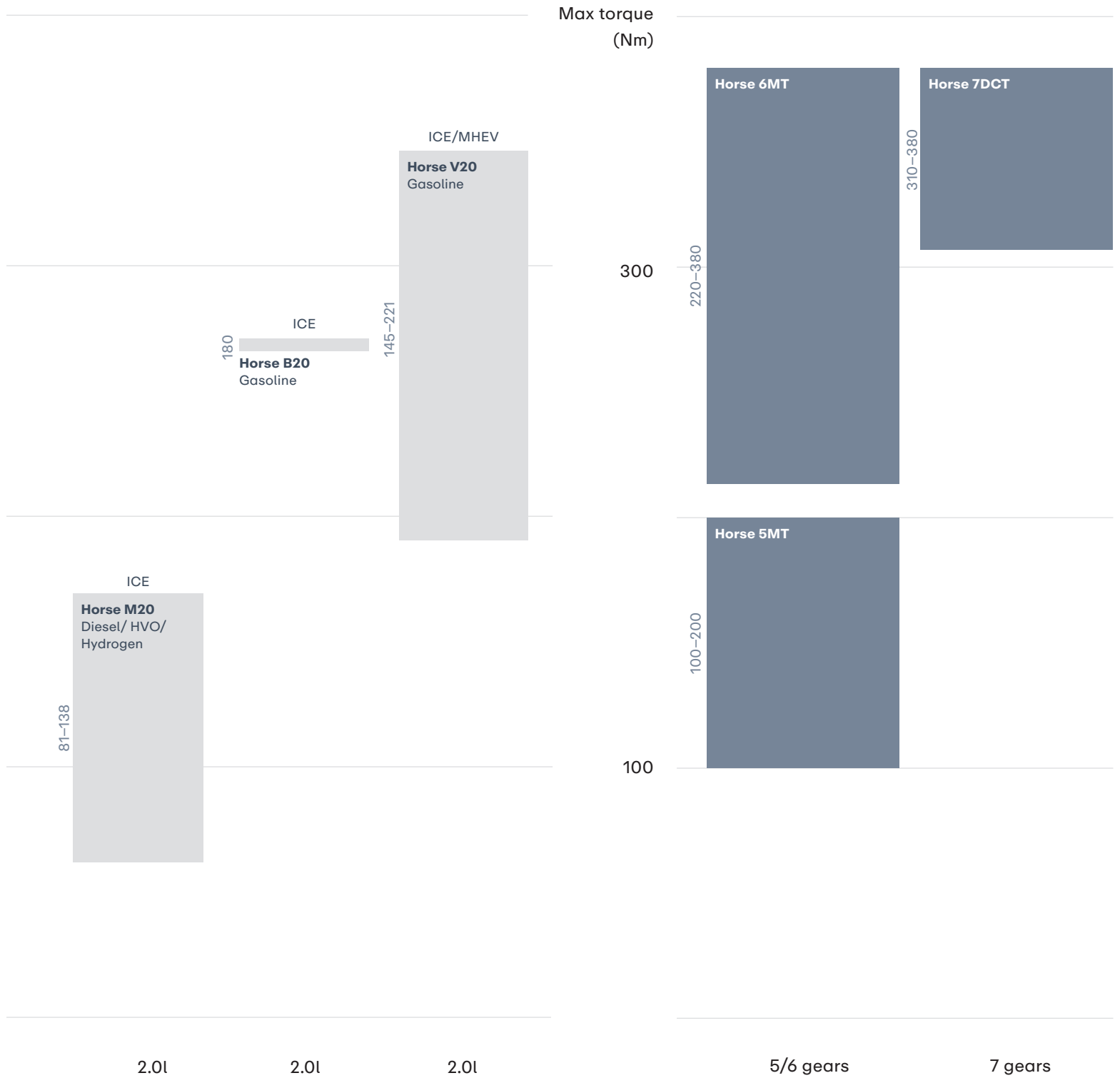


## System overview

Horse One combustion engines and transmissions



Manual transmissions

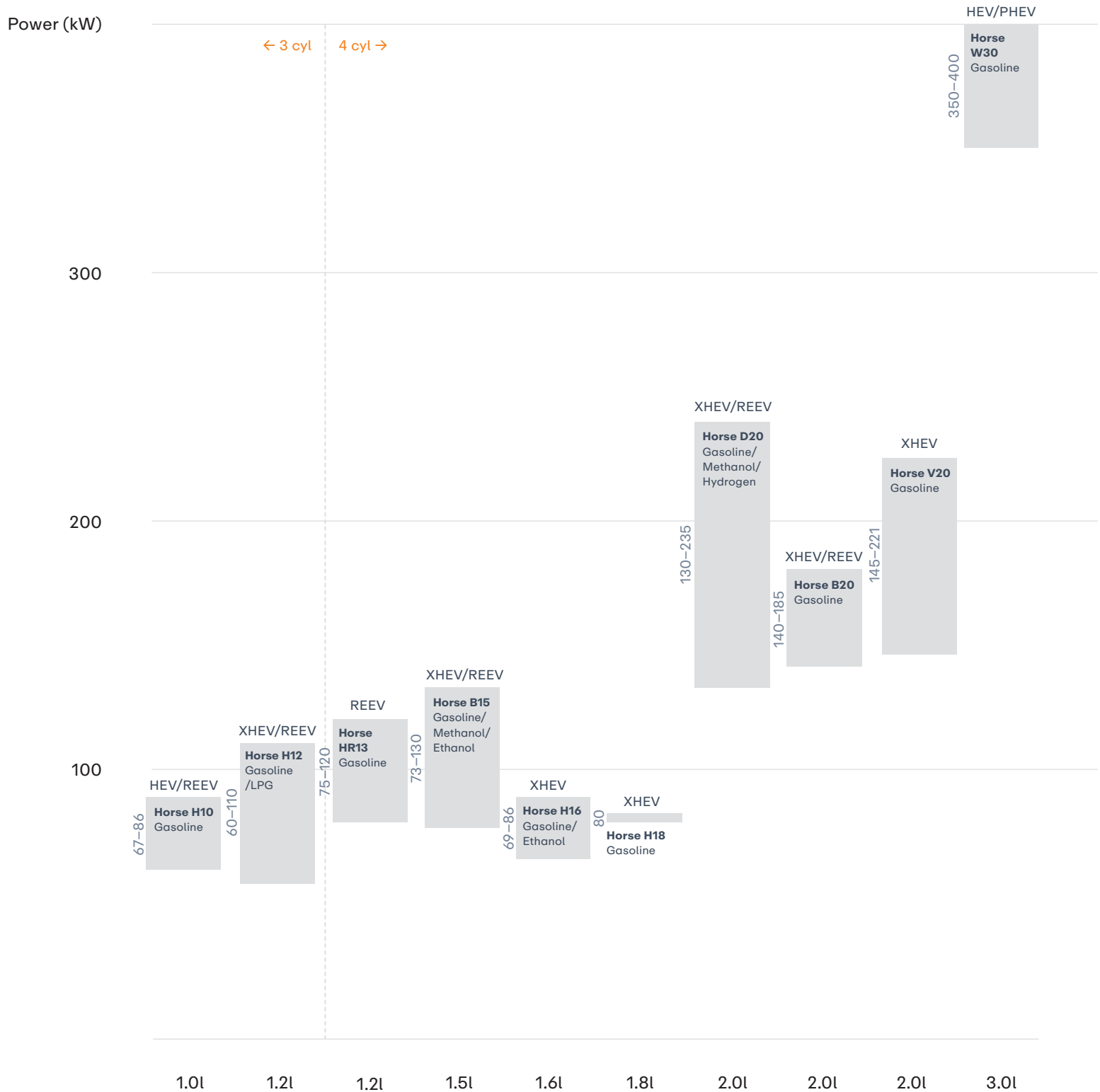


# FUSION

## System overview

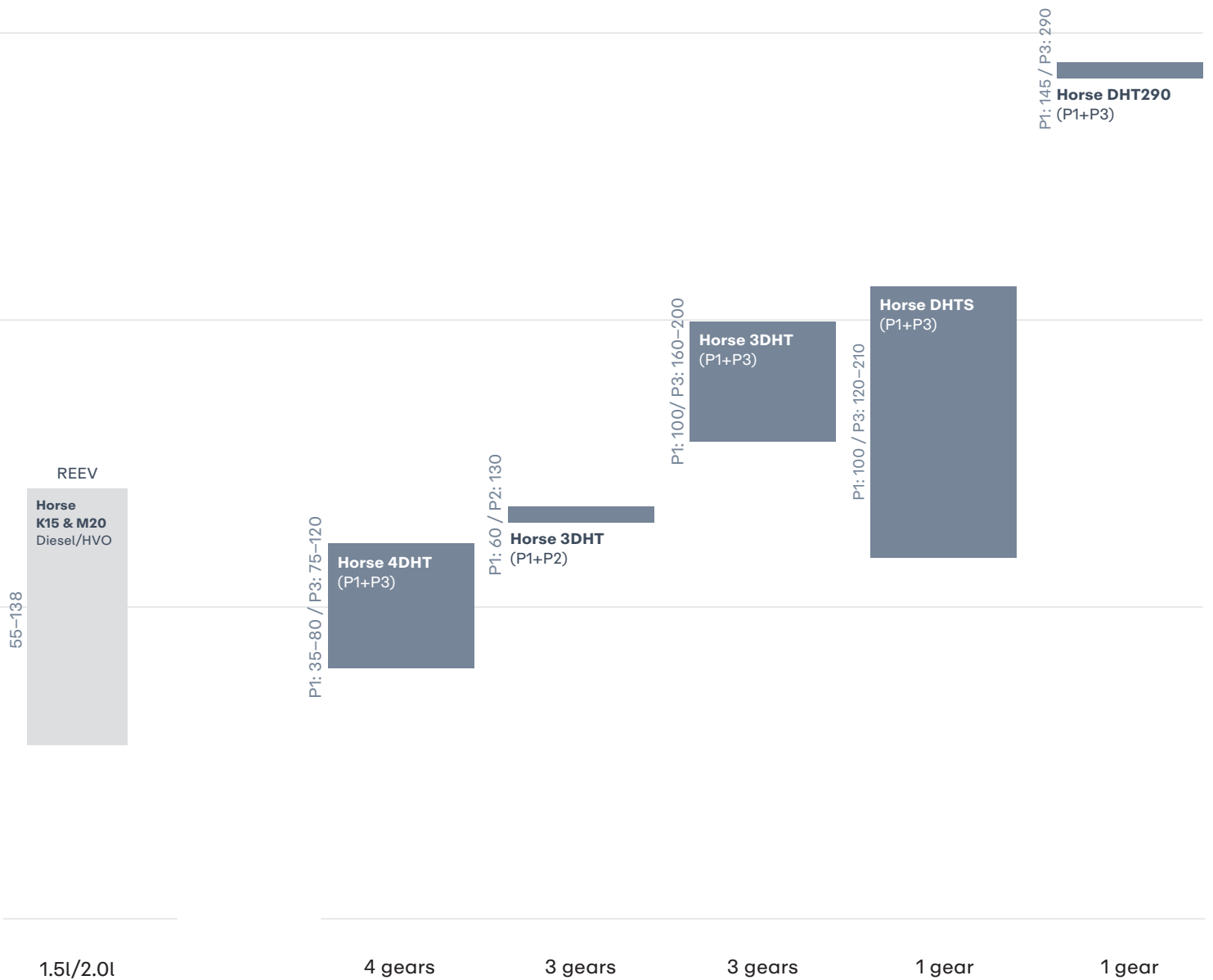
### Horse Fusion hybrid engines and transmissions

Spark and compression ignition engines



Hybrid  
transmissions

Traction  
Motor Peak  
power (kW)

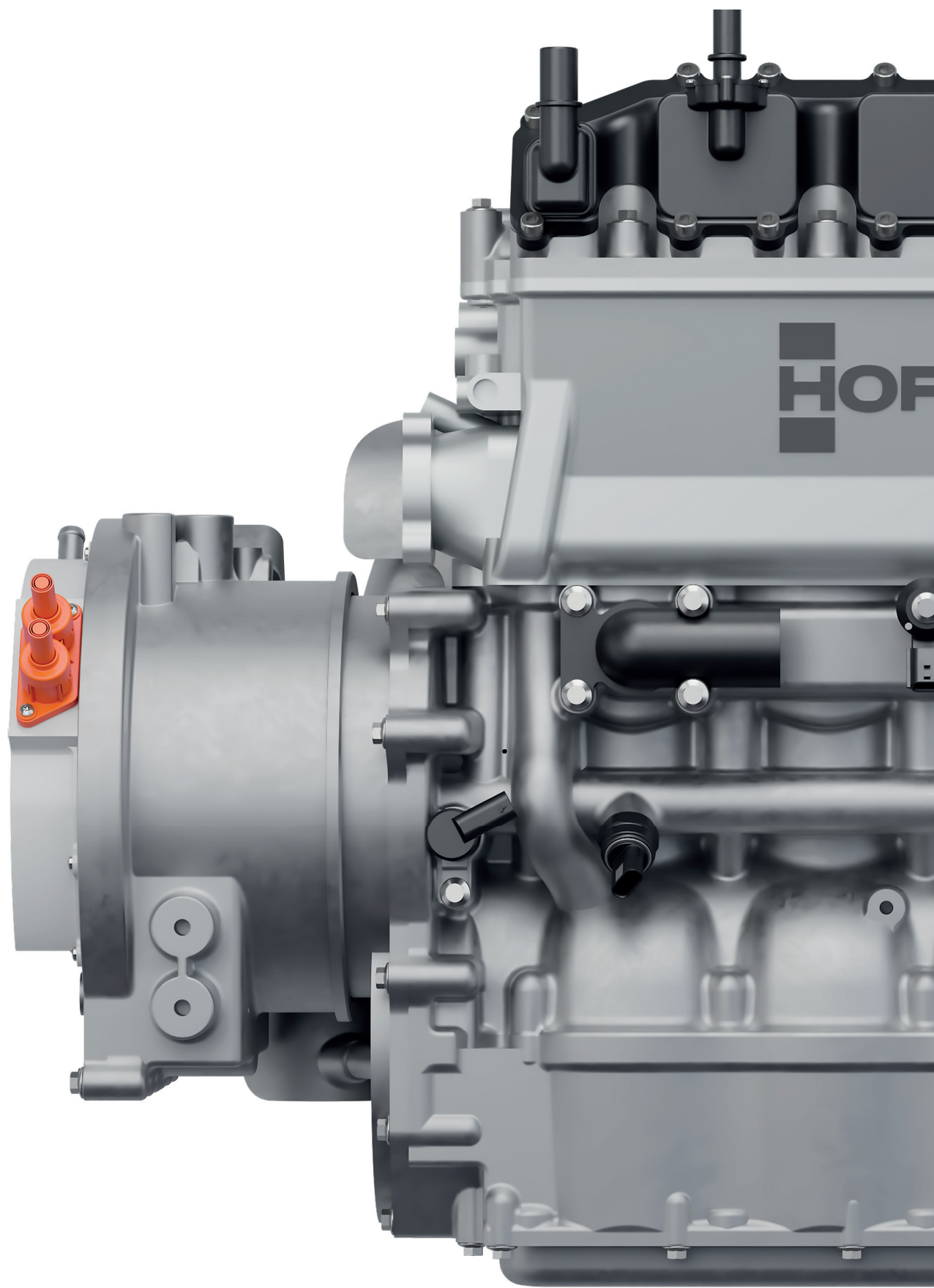


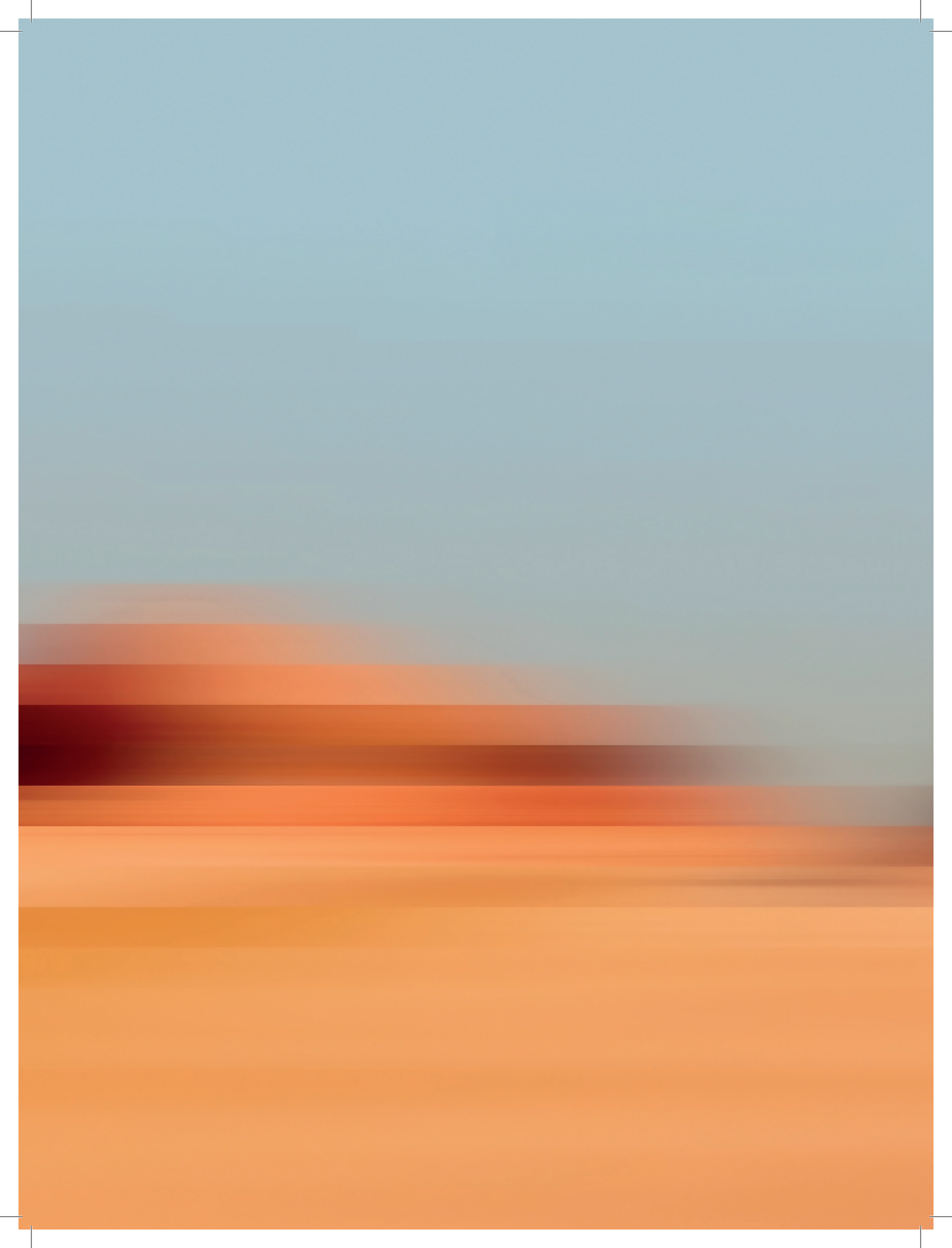
## System overview

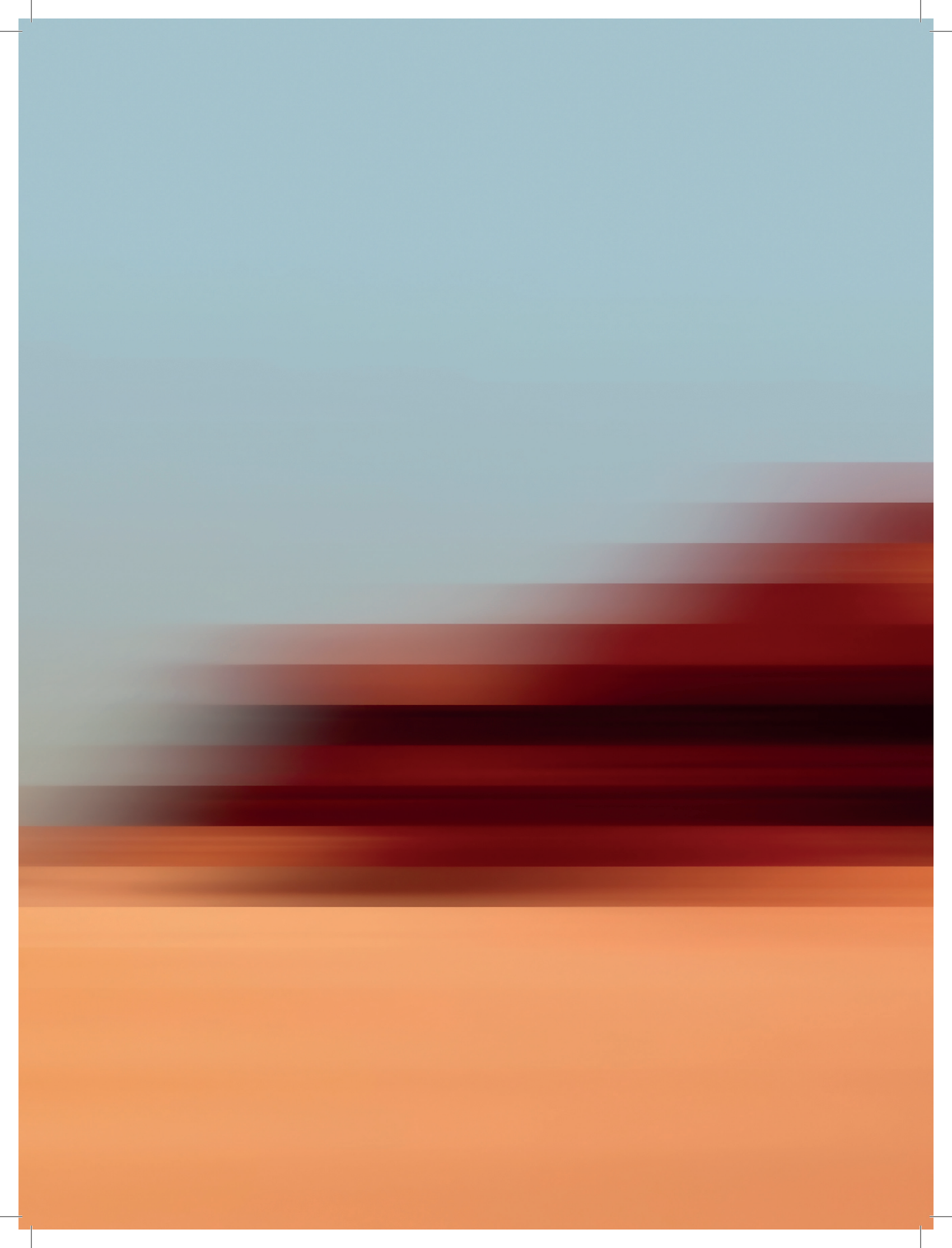
Horse X-Range powertrains for dedicated EV platforms

Continuous  
Power (kW)











NEXT - GEN  
POWERTRAIN  
SOLUTIONS

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