

Autobosch

Powertrain
solutions





We are Aurobay – we believe in hybrid futures

Accelerating our journey towards a fossil-fuel free future means moving beyond dependence on individual technologies, scarce resources or fragile infrastructures.

Aurobay develops and produces world-class powertrain solutions for a global market. We are leading the way in innovation, offering engines running on everything from low-to-negative greenhouse gas fuels, including e-fuels and electrification, to offering transmissions and hybrid systems.

As a pioneering global supplier of propulsion technology, development services and contract manufacturing with capabilities in two continents, we create value for customers and consumers by producing premium hybrid powertrains that already power millions of vehicles.

Aurobay combines the heritage of Volvo Cars in Sweden and Geely in China. In one business we bring together expertise, dynamism, global reach and commitment to innovation.

Aurobay solutions and services



End-to-end powertrain partnerships

- Powertrain research and development for great fuel efficiency, performance and neat vehicle integration
- Optimizing high-volume production for minimal cost and maximum quality and efficiency
- Production and assembly of combustion engines, hybrid powertrains and range extenders
- Access to high-quality and sustainable suppliers, thanks to our scale, knowhow and networks
- Flexible logistics set-up of engines and vehicle mounted installation parts to complete the powertrain



Analysis and verification

- State-of-the-art simulations for powertrain development
- Hardware and software testing in both test cell and vehicle simulation environments
- Diagnostics, calibration and verification of combustion, emissions, air, thermal and fluids
- Assembly, build and instrumentation of your prototype to inform mass production
- Analysis of your powertrain data and calibration optimization



Contract & Component Manufacturing

- Production and assembly of hybrid systems, combustion engines and E-drives and transmissions
- Production of components for combustion engines, electric motors and transmissions
- Remanufacturing set-ups for used engines to their original performance to give them a second life
- Reconditioning tools to save costs and minimize environmental impact
- Support with design for manufacturing: consultancy from our R&D and Manufacturing Engineering teams to optimize your designs for production



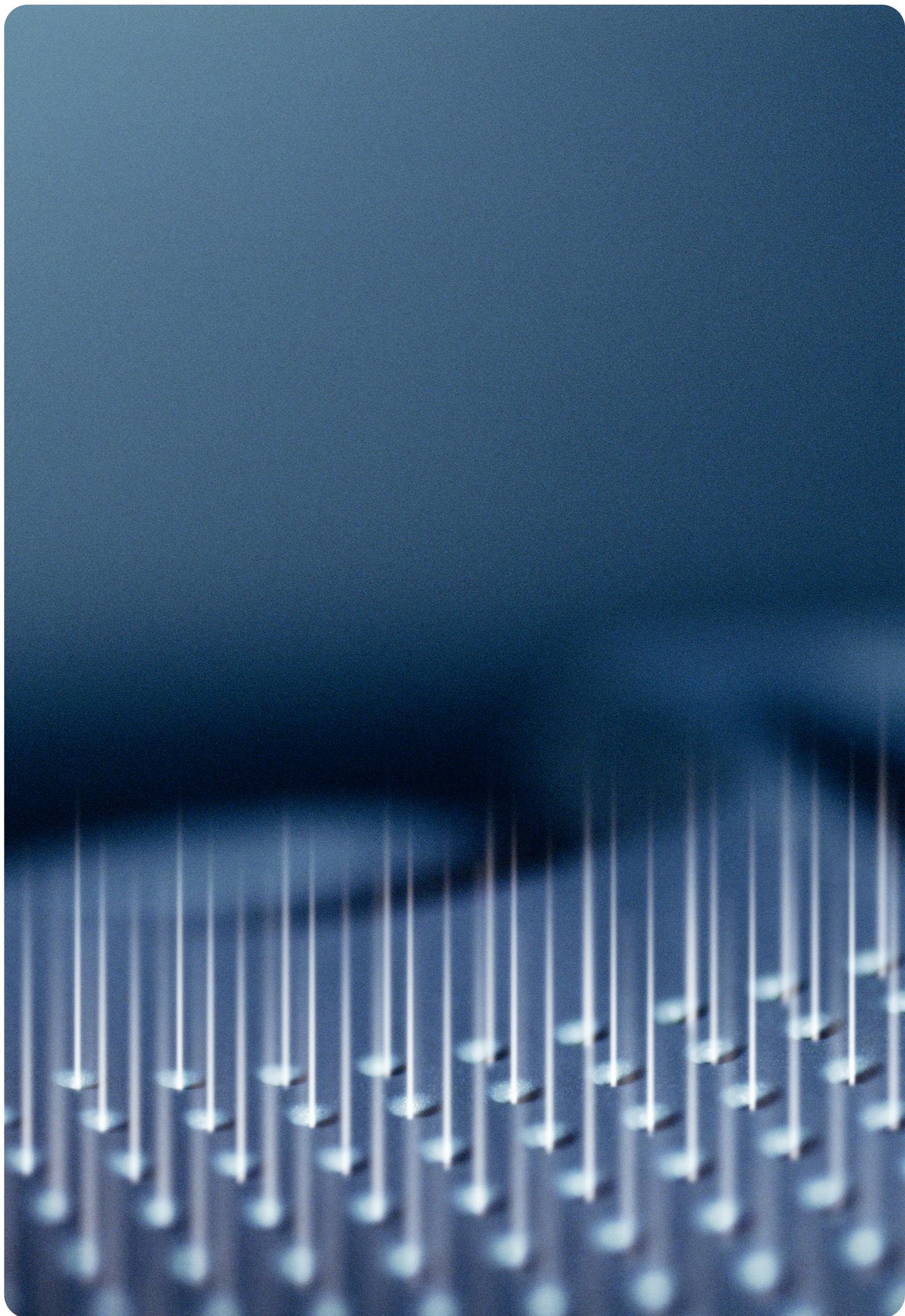
Tailored engineering services

- Defining an engine concept from scratch through simulation verification to running prototype
- Parameter optimization and component development to meet the requested emission standards from a given hardware configuration
- Feasibility studies to ensure powertrain and powertrain component designs will perform well and be cost-effective to produce and install
- Production processes and machine flow planned according to lean principles to maximize efficiency
- Engine component design, both internal and external, including physical verification
- Powertrains and powertrain components designed for efficiency, cost-effectiveness and manufacturability at high or low volumes
- State-of-the-art, digitally-enabled quality control to eliminate failures through the complete chain

Award-winning engine architecture

Aurobay aims to be the supplier of choice for world-class powertrain solutions. We're focused on developing next generation combustion engines and hybrid solutions and transmissions – creating a portfolio of powertrains that will suit the needs of every market and every infrastructure.

Our compact hybrid-ready engines are highly efficient, based on our award-winning modular architecture that adapts easily to a wide range of vehicles. They offer outstanding performance at optimal cost of ownership.



Engines

Designed & developed
in Sweden

Spark ignition 2.0 liter

Compact, modular high-performance 4-cylinder engine that's hybrid-ready with world-class fuel efficiency.



- Fuel: Petrol, E30 (HP, MP, LP), E22 (HP+), M15
- Hybridization: MHEV 48 V (HP, MP, LP), PHEV 400 V (HP+)
- Cylinders: 4

Compression ignition 2.0 liter

A high performance, clean and efficient 4-cylinder diesel that's hybrid-ready and suitable for biofuels.



- Fuel: Diesel, HVO 100
- Hybridization: MHEV 48 V
- Cylinders: 4

Technical specifications

	Spark ignition 2.0 liter PHEV	Spark ignition 2.0 liter HP
Fuel type	Petrol	Petrol
Alternative fuels	E22, M15	E30, M15
Certified emission standards	Brazil L7, China 6b, Euro 6b, Japan SULEV, TZEV	China 6b, Euro 6d, SULEV30
Planned emission standards	Euro 6e-bis	Euro 6e-bis
Hybridization	PHEV 400 V	MHEV 48 V
Cylinders (#)	4	4
Cylinder configuration	Inline	Inline
Displacement (L)	1.969	1.969
Bore (mm)	82.0	82.0
Stroke (mm)	93.2	93.2
Engine cylinder block material	Aluminum	Aluminum
Cylinder head material	Aluminum	Aluminum
Induction	Turbocharged	E-charged and turbocharged
Compression ratio	10.3:1	9.0:1
Valves (#/cylinder)	4	4
Valvetrain	Dual Overhead Cam (DOHC), Variable Valve Timing (VVT)	Dual Overhead Cam (DOHC), Variable Valve Timing (VVT)
Fuel injection	Direct Injection (DI)	Direct Injection (DI)
Ignition sequence	1-3-4-2	1-3-4-2
Maximum power (kW @ RPM)	230 @ 5800-6000	220 @ 5400-5700
Maximum torque (Nm @ RPM)	400 Nm @ 4500	420 Nm @ 2100-4800
Engine idling speed (RPM)	875 ± 50	750 ± 50
Maximum engine speed (RPM)	6000	6300
Horsepower	313	300
Weight (kg) engine as shipped/ DIN 70020-GZ weight (kg)	149/154	140/152

Spark ignition 2.0 liter MP (Miller Cycle)	Spark ignition 2.0 liter LP (Miller Cycle)	Compression ignition 2.0 liter
Petrol	Petrol	Diesel
E30, M15	E30, M15	HVO 100
China 6b, Euro 6e, SULEV30 PM1	China 6b, Euro 6d	Euro 6d
Euro 6e-bis	Euro 6e-bis	NRE: Euro Stage V, US Tier 4
MHEV 48 V	MHEV 48 V	MHEV 48 V
4	4	4
Inline	Inline	Inline
1.969	1.969	1.969
82.0	82.0	82.0
93.2	93.2	93.2
Aluminum	Aluminum	Aluminum
Aluminum	Aluminum	Aluminum
Turbocharged	Turbocharged	Twin turbocharged
11.5:1	12.0:1	15.8:1
4	4	4
Dual Overhead Cam (DOHC), Variable Valve Timing (VVT)	Dual Overhead Cam (DOHC), Variable Valve Timing (VVT)	Dual Overhead Cam (DOHC)
Direct Injection (DI)	Direct Injection (DI)	i-ART common rail direct injection (CRDI)
1-3-4-2	1-3-4-2	1-3-4-2
184 @ 5400-5700	145 @ 4750-5250	173 @ 5000
360 Nm @ 2000-4500	300 Nm @ 1500-4500	480 Nm @ 1750-2250
750 ± 50	750 ± 50	750 ± 50
6200	6000	5000
250	197	180
131.5/141	137/141	152/165

Engines

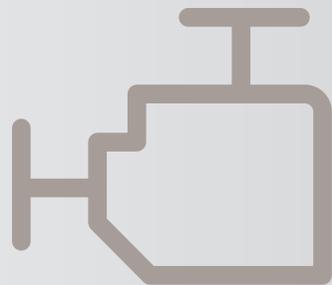
Designed & developed
in China



BHE15

Compact, modular high-performance 1.5L engine with world-class fuel efficiency.

- Fuel: Petrol
- Hybridization: ICE, HEV, PHEV, REEV
- Cylinders: 4



DHE20

2.0L dedicated hybrid engine with high performance and excellent thermal efficiency

- Fuel: Petrol
- Hybridization: HEV, PHEV, REEV
- Cylinders: 4
- Engine layout: transversal, longitudinal

Technical specifications

	BHE15D	BHE15PFI	BHE15TD
Fuel type	Petrol	Petrol	Petrol
Certified emission standards	CN6b, EU6e	CN6b, EU6e	CN6b, EU6e
Hybridization	ICE/HEV/PHEV/REEV	ICE/HEV/PHEV/REEV	ICE/HEV/PHEV/REEV
Cylinders (#)	4	4	4
Cylinders configuration	Inline	Inline	Inline
Displacement (L)	1.499	1.499	1.499
Engine cylinder block material	Aluminium	Aluminium	Aluminium
Engine cylinder head material	Aluminium	Aluminium	Aluminium
Induction	Naturally aspirated	Naturally aspirated	Turbocharged
Valvetrain	Dual Overhead Cam (DOHC) Variable Valve Timing (VVT)	Dual Overhead Cam (DOHC) Variable Valve Timing (VVT)	Dual Overhead Cam (DOHC) Variable Valve Timing (VVT)
Fuel injection	Direct injection (DI)	Port Fuel Injection (PFI)	Direct injection (DI)
Maximum power (kW)	93	82	133
Maximum continues torque (N.m)	152	143	290

BHE15TD PLUS**BHE15TD EVO****DHE20TD**

Petrol

Petrol

Petrol

CN6b, EU6e

CN6b, EU6e

CN6b, EU6e

HEV/PHEV/REEV

HEV/PHEV/REEV

ICE/HEV/PHEV/REEV

4

4

4

Inline

Inline

Inline

1.499

1.499

1.974

Aluminium

Aluminium

Aluminium

Aluminium

Aluminium

Aluminium

Turbocharged

Turbocharged

Turbocharged

Dual Overhead Cam (DOHC)
Variable Valve Timing (VVT)Dual Overhead Cam (DOHC)
Variable Valve Timing (VVT)Dual Overhead Cam (DOHC)
Variable Valve Timing (VVT)

Direct injection(DI)

Direct injection (DI)

Direct injection (DI)

120

110-120

200

255

230-255

400

Transmissions

Designed & developed
in China



DHT PRO

Super-integrated 3 gears DHT transmission, the super powerful and torque to weight ratio 41Nm/kg DHT in the world.

- Hybrid type: P1+P2 serial & parallel
- Gears: motor 3 + engine 3



DHT EVO

Excellent electrical performance, "BEV" driving pleasure. High-efficiency, strong-power, good-NVH performance.

- Hybrid type: P1+P3 serial & parallel
- Gears: motor 1 + engine 3



7DCT EVO 300

High integration and compact structure, low weight. High efficiency, fuel-saving transmission.

- ICE Application
- Driving mode: FWD/AWD
- Gears: 7



7DCT EVO 380

High integration and compact structure, low weight. High efficiency, fuel-saving transmission.

- ICE Application
- Driving mode: FWD/AWD
- Gears: 7

Technical specifications

	DHT PRO	DHT EVO	7DCT EVO 300
SOP	2021	2023	2022
Hybrid type	P1+P2 serial & parallel	P1+P3 serial & parallel	-
Weight with oil (kg)	120	138	80
Gears	3+3	1+3	7
Working mode	20	14	-
Maximum torque at wheel end (Nm)	4920	4920	4182
Motor (peak power) (kW)	P1: 60 P2: 107	P1: 100 P3: 160	-

7DCT EVO 380

SILVIA-LP

SILVIA-HP

2021

2024

2025

-

P1+P3

P1+P3

80

126

127

7

REEV / 1

REEV / 1

-

-

-

4920

3118

4920

-

P1: 95
P3: 140~150

P1: 160
P3: 258

Aurobay at a glance

- World-class powertrain solutions, services and contract manufacturing
- Formed from the merger of Volvo Cars' powertrain business with Geely
- Manufacturing, R&D and sales capabilities
- Focused on developing and producing next-generation combustion engines and hybrid solutions

Aurobay

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