



Allied
Nippon



COMLINE GROUP BRAKE PADS





**ALL-NEW
SPEC**



**ULTRA-LOW
NOISE**

THE **FUTURE** IS HERE

Introducing new **EV brake pads** from the Comline Group, a collection of product ranges engineered for the future of motoring, the future of the aftermarket, and the future of braking - the electric vehicle.

Distinctive and colourful, EV brake pads are available across our three leading brands, **Comline**, **Motaquip** and **Allied Nippon**, the latter of which formally launched its EV+ range to market in early 2024.

Manufactured in our own facilities, these exciting new product lines will deliver a range of key benefits that will have undoubted appeal for the EV motorist. They will also provide both Comline Group distributors and garages everywhere a **unique up-selling opportunity** with Electric Vehicle owners.

Embrace the future and read on to learn more about these exciting new products.

**INSTANT
STOPPING POWER**

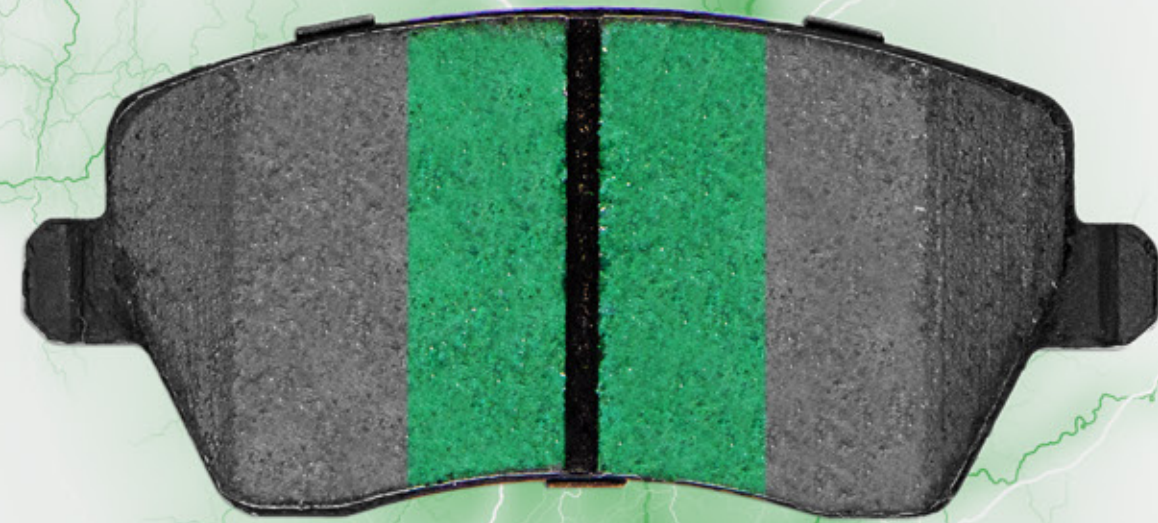


**ENVIRONMENTALLY
SENSITIVE**

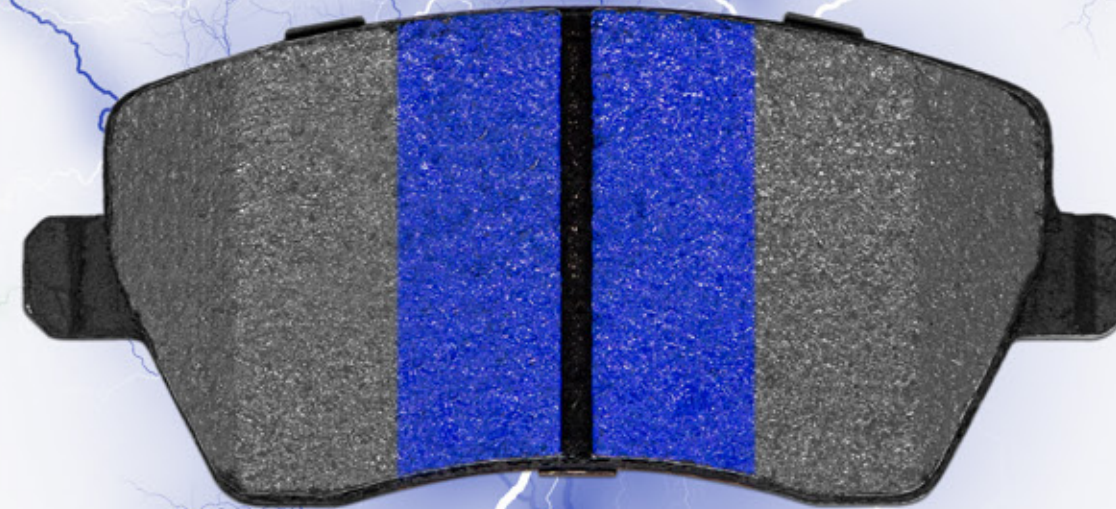




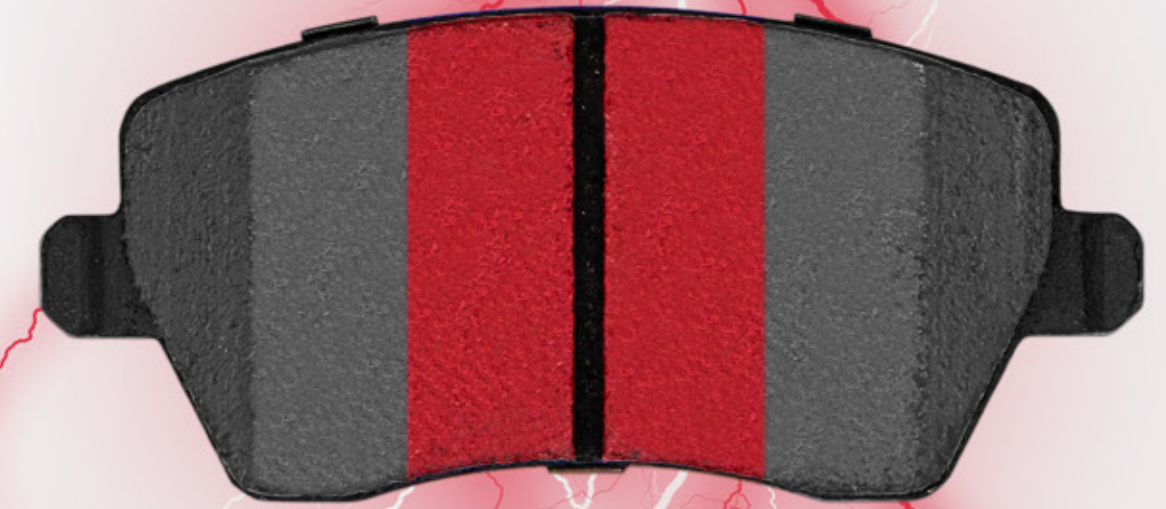
EVOLUTION



EVLINE



EV+



THE FUTURE IS ELECTRIC

The electric vehicle revolution has well and truly begun and continues to gather momentum at an incredible rate.

Almost all mainstream vehicle manufacturers now have fully electric variants in-range, and many governments across Europe are passing legislation aimed at replacing internal combustion engine vehicles with EVs.

IN 2023, EV
CAR SALES
ACCOUNTED FOR

18%

OF GLOBAL NEW
CAR SALES.

THERE ARE
CURRENTLY
OVER

3 MILLION

ELECTRIC VEHICLES
REGISTERED IN
EUROPE.

RESEARCH SUGGESTS
ANNUAL EV SALES
WILL EXCEED

30 MILLION

VEHICLES BY
THE YEAR 2030.

WHY EV BRAKE PADS?

The information presented here validates the growth of Electric Vehicles and there's little doubt that this will continue, so there is a clear rationale for developing products specifically for EVs. However, you may be asking yourself why we have chosen EV brake pads. Comline Group Director of Braking Product Development, Dr Keith Ellis (pictured right), has the answers:



NOISE REDUCTION

One of the features of an Electric Vehicle is that they are extremely quiet. In fact, below 30kmh, the average EV is around 10% quieter than its ICE counterpart. Comline Group fundamentally believes that EV owners will want to safeguard their serene driving experience with brake pads that are designed to do just that. As such, Comline Group EV brake pads are AA-rated and proven to deliver ultra-low noise.

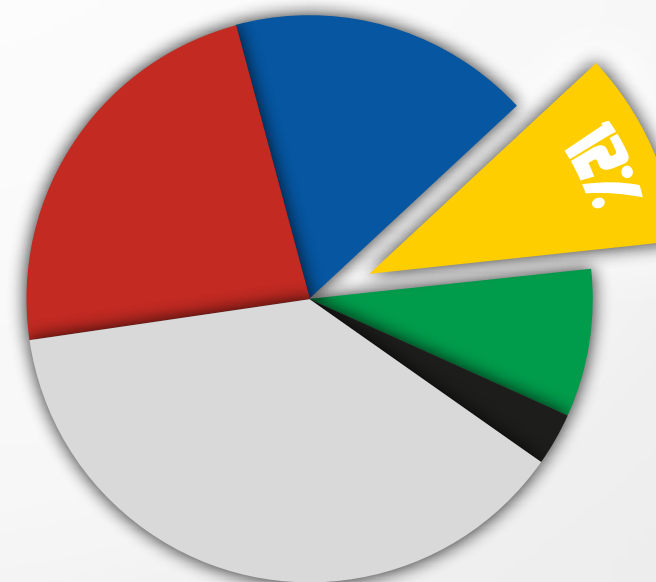


DEVELOPMENT & MANUFACTURING

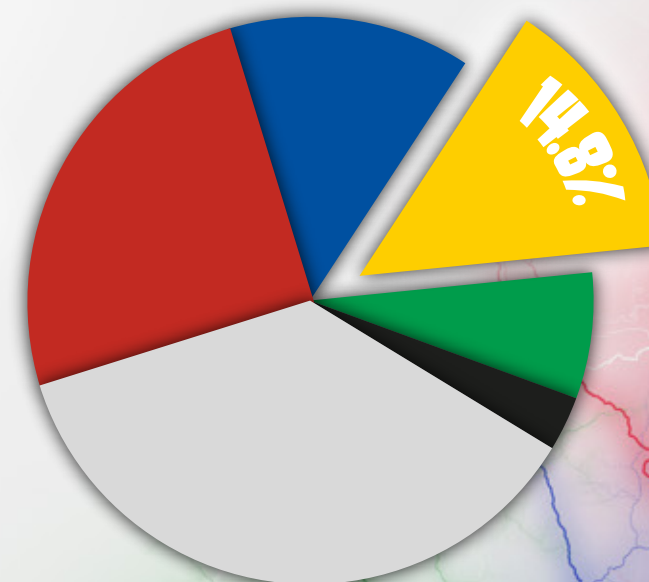
Our brake pad manufacturing capabilities give the Comline Group major advantages when it comes to product development and provided a distinct opportunity for the creation of EV brake pads. Our direct link with World-renowned manufacturing gave us the ability to develop brake pads that are tailored for the needs of Electric Vehicles, and that feature a truly distinctive and premium appearance.

EV GROWTH IN EUROPE

NEW CAR REGISTRATIONS 2022



NEW CAR REGISTRATIONS 2023



PETROL DIESEL BATTERY ELECTRIC VEHICLE (BEV) PLUG-IN HYBRID ELECTRIC VEHICLE (PHEV)
HYBRID ELECTRIC VEHICLE (HEV) OTHERS

SOURCE: EUROPEAN NEW CAR REGISTRATIONS BY POWER TRAIN - EUROPEAN AUTOMOBILE MANUFACTURERS ASSOCIATION

THE FUTURE IS BRIGHT



In developing our new range of EV brake pads, the Comline Group is really making a statement with the appearance - the future is certainly bright!

However, this is not a case of style over substance. These are all-new, R90 approved products with an all-new specification tailored towards Electric Vehicles, and each harnesses a range of premium features that are typically found in more high-end, high-priced OE brake pads.

NEW FRICTION MATERIAL

Comline Group EV brake pads feature a new CEM115 friction material developed for its low noise properties and consistent, stable stopping power.

OE MATCHING CHAMFERS

An angled section on the perimeter of the friction material that controls how the pad edge contacts with the brake disc. These OE-type chamfers help ensure effective contact to further reduce noise.

ADHESIVE COATING

Ensures optimal bonding between friction material and back plate.

UNDERLAYER

Improves bonding and provides thermal/noise control.

SLOT/GROOVE

Aids in relieving surface stress in the pad material and in dispersing gases and brake debris formed during the braking operation.

SHIM CLIPS

Secures the shim to the backplate.

BACKING SHIMS

Our trio of EV brake pads feature multi-material backing shims and, where applicable, additional stainless-steel shims to match the OE application. Such shims are more durable and act as vibration dampening to eliminate unwanted noise.

IDENTIFICATION

Product markings including:

- Part Number
- Batch Code
- R90 Code



BACK PLATE

Comline Group EV brake pads feature high quality back plates with spigot holes that facilitate mechanical locking.

BEDDING-IN COMPOUND

The distinctive colour applied to the friction surface of Comline EV brake pads is far more than just a fancy paint job.

This coating is actually a resin-based bedding-in compound which is layered over the friction material to deliver improved friction during the initial bedding-in period.

ENVIRONMENTALLY SENSITIVE

The electric revolution is charged by the environmental advantages of Electric Vehicles.

Playing our part, Comline Group EV brake pads are certified copper free, 'N' rated by the AASA, guarding against marine habitat contamination that can occur from brake pad wear when copper is present.

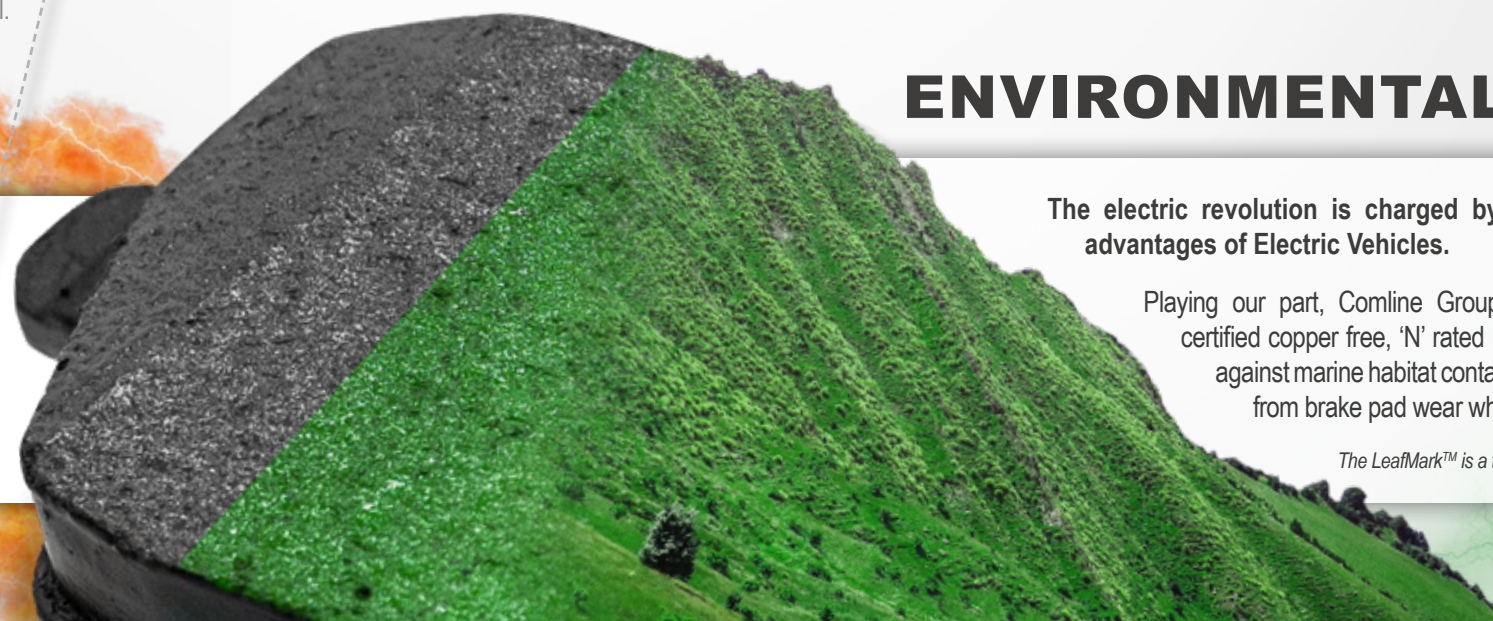


The LeafMark™ is a trademark of The Motor and Equipment Manufacturers Association.

NEW SCORCHING

New to Comline Group EV brake pads is scorching, an additional heat treatment process that takes place after the pad is cured.

This process improves friction stability, particularly at high temperatures, and contributes further to the ultra-low noise properties of the pads.



THE FUTURE IS QUIET

As Electric Vehicle ownership continues to rise, the volume is being turned down on the vehicle parc. One thing is for sure, the electric revolution is also a quiet one.

Early generation EVs are eerily quiet, and even with mandatory AVAS (Acoustic Vehicle Alerting System) fitted to current EV variants, it is fair to say the average Electric Vehicle is quieter than its internal combustion counterpart.

WHAT ABOUT AVAS?

All new EV's being sold in the EU are now equipped with an Acoustic Vehicle Alerting System, or AVAS. This manufactured noise must be emitted between 56Db – 75Db and is aimed at improving pedestrian safety. Will these systems mask brake noise?

The answer is 'no', well not fully at least. Crucially, as illustrated by the graph opposite, a proportion of brake pad noise will exceed the top-end, 75Db sound made by an AVAS, meaning such systems will not fully drown out brake pad noise. So, the noisier the brake pad, the more an EV owner will hear inside the cabin.



UPSELLING

Upsell your customers to a specialised EV product with premium features, unique aesthetics, and ultra-low noise.



PROFITABILITY

Boost your braking revenue and enhance profitability with products that will command a higher selling price in the marketplace.

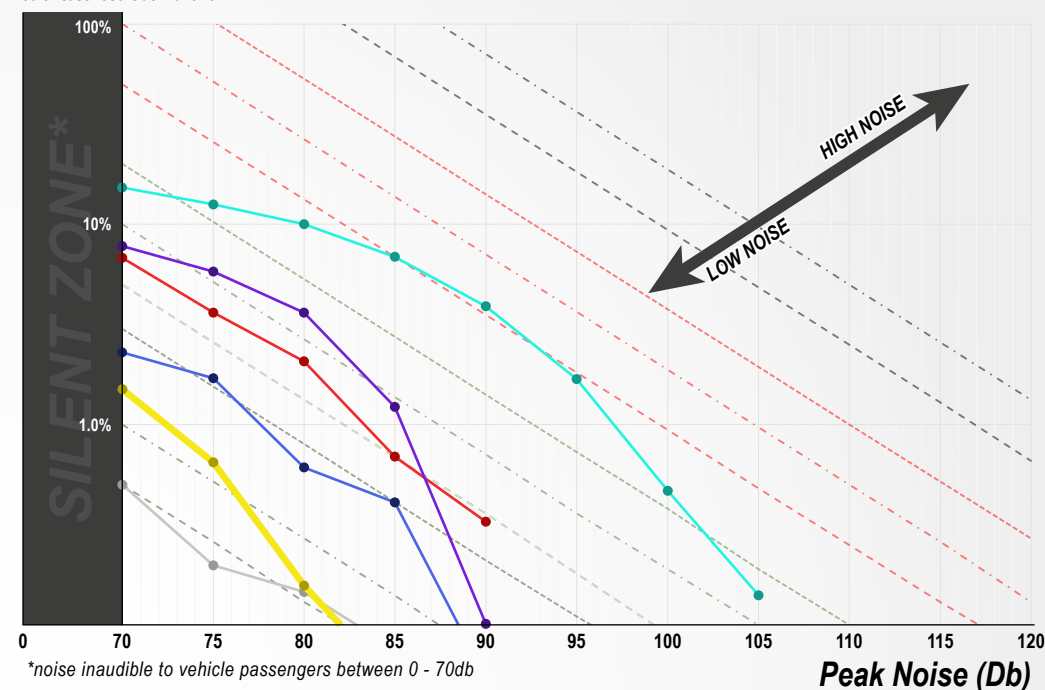


BRAND IMAGE

These eye-catching EV ranges will benefit the image of our brands, making them a stronger proposition globally and within your local market.

BRAKE PAD NOISE TESTING

% of test result at Db level



The development process for new Comline Group EV brake pads has seen our new formulation put through its paces across a variety of tests.

With the goal of delivering ultra-low noise it was essential to fully test this element and to benchmark our new product against the competition.

The results speak volumes for just how quiet our new EV pad formulation actually is.

	OE Sample	CEM115 Comline Group EV Brake Pads	NAM112A Comline Group Brake Pads	Competitor Sample 1	Competitor Sample 2	Competitor Sample 3
Appearance on chart	Grey	Yellow	Blue	Red	Purple	Cyan
Noise Rating	AAA	AA	A	BBB	BB	CCC
% of noise over 70Db	0.85%	2.67%	5.10%	13.7%	19%	52.45%
Peak Noise (Db)	82	82	88	90	90	105

ULTRA-LOW NOISE

We believe that EV owners greatly value the quieter drive provided by their new-gen vehicles, so Comline Group has gone 'ultra-low' and firmly into OE territory with the noise properties of our new, specialist EV brake pads.

The formulation is AA-rated and, impressively, during testing, registered sounds audible to a vehicle passenger in just 2.67% of cases. Our products also matched the equivalent OE formulation in terms of peak noise output.

With Comline Group EV brake pads, the future is quiet!



**ALL
MAKES**

THE RANGE

Following careful analysis of TecDoc VIO (Vehicle In Operation) data, our Comline Group product experts have meticulously assembled a range of 47 brake pad references that will form the initial launch of our EV products. This covers the European aftermarket's most popular electric vehicles including the Nissan Leaf, Renault Zoe, Tesla Model 3 and VW e-Golf, meaning our launch range is well placed to cater for current EV brake pad demand.

As with all Comline Group product ranges we will continue to monitor the market and be quick to respond with new-to-range references for the latest and most popular EV models.

For pricing contact your Comline Group Sales Manager.

Motaquip Evolution	Comline EV-Line	Allied Nippon EV+	Position	Applications
MEV1920	CEV02443	AEV02443	Front	AUDI E->TRON (2018->)
MEV1970	CEV02691	AEV02691	Rear	AUDI E->TRON (2018->)
MEV1973	CEV02444	AEV02444	Front	BMW i3 (2013->)
MEV2192	CBP04026	AEV04026	Front	Citroen e->C4 (2021->), Peugeot e->2008 (2021->), Peugeot e-> 208 (2021->)
MEV2194	CBP34028	AEV34028	Front	FIAT 500e (2020->)
MEV2052	CEV32777	AEV32777	Front	FIAT 500e (2020->)
MEV1978	CEV32343	AEV32343	Front	HYUNDAI IONIQ (2016->)
MEV1968	CEV02385	AEV02385	Front	JAGUAR I->PACE (2018->)
MEV2209	CEV03813	AEV03813	Rear	JAGUAR I-PACE (2018->)
MEV2021	CEV32529	AEV32529	Front	KIA NIRO (DE) (2016->), HYUNDAI KONA (2017->)
MEV1777	CEV32161	AEV32161	Rear	KIA NIRO (DE) (2016->), HYUNDAI KONA (2017->), HYUNDAI IONIQ (2016->), KIA SOUL III (2019->)
MEV2177	CBP33967	AEV33967	Front	Kia Soul EV (2019->)
MEV2204	CBP33787	AEV33787	Rear	Maxus eDeliver 9 (2020->), Maxus V90 Bus EV90 (2021->)
MEV2205	CBP33789	AEV33789	Front	Maxus eDeliver 9 (2020->), Maxus V90 Bus EV90 (2021->)
MEV2203	CBP33796	AEV33796	Rear	Maxus eDeliver 9 (2020->), Maxus V90 Bus EV90 (2021->)
MEV2066	CEV32857	AEV32857	Rear	MAZDA MX->30 (2020->)
MEV2072	CEV02863	AEV02863	Front	MERCEDES->BENZ EQA (H243) (2021->)
MEV1314	CEV01569	AEV01569	Front	MERCEDES->BENZ eSPRINTER (2020->)
MEV2185	CEV34014	AEV34014	Rear	MG 4 (2022->)

Motaquip Evolution	Comline EV-Line	Allied Nippon EV+	Position	Applications
MEV2186	CEV33523	AEV33523	Front	MG 4 (2022->)
MEV2168	CEV03971	AEV03971	Front	MG ZS (2018->)
MEV2159	CEV03653	AEV03653	Rear	MG ZS (2018->)
MEV1086	CEV3912	AEV3912	Rear	NISSAN LEAF (ZE0) (2010 -> 2017), NISSAN LEAF (ZE1) (2017->)
MEV2097	CEV32573	AEV32573	Front	NISSAN LEAF (ZE0) (2010->2017)
MEV1864	CEV32336	AEV32336	Front	NISSAN LEAF (ZE0) (2010->2017), NISSAN NV200 / EVALIA (2010->)
MEV2015	CEV02486	AEV02486	Front	NISSAN LEAF (ZE1) (2017->), NISSAN LEAF (ZE1) (2019->)
MEV1798	CEV32277	AEV32277	Rear	NISSAN LEAF (ZE1) (2017->), NISSAN LEAF (ZE1) (2019->)
MEV1981	CEV32445	AEV32445	Rear	NISSAN NV200 / EVALIA (2010->)
MEV2051	CEV02775	AEV02775	Rear	PEUGEOT 208 II (2019->), PEUGEOT 2008 II (2019->)
MEV1135	CEV0984	AEV0984	Front	RENAULT KANGOO (2008->), RENAULT ZOE (2012->)
MEV1418	CEV01677	AEV01677	Front	RENAULT ZOE (2012->)
MEV1428	CEV02014	AEV02014	Rear	RENAULT ZOE (2012->)
MEV2138	CEV33494	AEV33494	Rear	RENAULT ZOE (2012->)
MEV2139	CEV33495	AEV33495	Rear	TESLA MODEL 3 (2017->)
MEV2140	CEV33496	AEV33496	Front	TESLA MODEL 3 (2017->)
MEV2141	CEV33497	AEV33497	Front	TESLA MODEL S (2012->)
MEV1898	CEV32308	AEV32308	Rear	TESLA MODEL S (2012->), TESLA MODEL X (2015->)
MEV2068	CEV32859	AEV32859	Front	TESLA MODEL S (2012->), TESLA MODEL X (2015->)
MEV2070	CEV36065	AEV36065	Rear	TESLA MODEL S (2012->), TESLA MODEL X (2015->)
MEV1006	CEV01525	AEV01525	Front	VAUXHALL CORSA V (F) (2019->), PEUGEOT 208 II (2019->)
MEV1640	CEV02027	AEV02027	Front	VAUXHALL CORSA V (F) (2019->), PEUGEOT 208 II (2019->), PEUGEOT 2008 II (2019->)
MEV1760	CEV32234	AEV32234	Rear	VAUXHALL/OPEL CORSA V (F) (2019->), PEUGEOT 208 II (2019->), PEUGEOT 2008 II (2019->), VAUXHALL/OPEL MOKKA (2020->)
MEV2180	CEV24017	AEV24017	Front	VOLKSWAGEN ID.3 (2019->)
MEV1751	CEV02156	AEV02156	Rear	VW GOLF VII (2012->)
MEV2154	CEV02158	AEV02158	Front	VW GOLF VII (2012->)
MEV2122	CEV03412	AEV03412	Front	VW ID.4 (2020->), AUDI Q4 Sportback (F4) (2021->), SKODA ENYAQ iV SUV (2020->)
MEV2123	CEV13413	AEV13413	Front	VW ID.4 (2020->), AUDI Q4 Sportback (F4) (2021->), SKODA ENYAQ iV SUV (2020->)

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