



# Fact Sheet XXL

FIA Formula E  
2018/2019

## **This is Formula E**

All facts and figures +++ The Audi e-tron FE05 +++ The team  
+++ The drivers +++ The partners +++ All races +++  
Mobility for tomorrow +++ The history +++ Contact details +++

**SCHAEFFLER**



## EDITORIAL

Welcome to the mega-thrilling finale of the Formula E season! In the two final races of the 2018/2019 season in New York City, our Audi Sport ABT Schaeffler team still has chances of defending the teams' title and winning the second drivers' title after 2016/2017 – even though everything has to “fit” for this to happen – like last year when we converted a deficit into a triumph. We're going to give our all once again!



**Daniel Pokorny**  
Head of Corporate  
Communications Future Trends

# Evolution of Formula E

## 2014/2015

In season one all teams compete with specification cars. The history of Formula E begins sensationally: Lucas di Grassi wins the inaugural race in Beijing. Following five more podiums, he finishes third overall and Daniel Abt eleventh overall.



Spark-Renault SRT 01E

## 2015/2016

The series slackens the technical regulations in terms of development. From then on, Schaeffler contributes the know-how for the powertrain of the new race car. Thanks to three victories in the 2015/2016 season Lucas di Grassi, with a deficit of just two points, finishes overall runner-up. Daniel Abt as the runner-up in Berlin clinches his best result to date.



ABT Schaeffler FE01

## 2016/2017

At the top of the standings, a duel ensues between title defender Sébastien Buemi and Lucas di Grassi. At the season's midpoint, Buemi looks like the sure champion. Then di Grassi launches a fightback and crowns it with the title win at the finale.



ABT Schaeffler FE02

## 2017/2018

Following a bumpy start of the season, Audi Sport ABT Schaeffler rises to top form: In eight consecutive races, at least one driver of the team mounts the podium. In the end, the team scores the teams' championship win, Lucas di Grassi finishes overall runner-up and Daniel Abt fifth overall.



Audi e-tron FE04

# Pioneer of Formula E

Ever since Formula E was formed in 2014, Schaeffler has been one of the most notable and successful players in this racing series.

New technology – from the total vehicle to the powertrain and through to a radically modified battery system – plus new teams, drivers and locations now mark the beginning of the second era of Formula E in which Schaeffler wants to continue its success story. 13 races on five continents are on the calendar in season five.

“For Schaeffler, Formula E has been and will continue to be an ideal stage for presenting our expertise in the field of forward-thinking technologies and ideas for sustainable mobility,” says Prof. Peter Gutzmer who as Chief Technology Officer and Deputy CEO initiated the Formula E project five years ago. “Since then, the series has evolved into the trendiest hotspot in the motorsport world, thrilling fans and media alike around the globe and with numerous

manufacturers and companies offering a competitive environment of the highest international caliber.”

In season four of the all-electric racing series, the Audi e-tron FE04 was very often the most efficient car. The successor for 2018/2019 is the evolution of this success model. This is particularly true for the centerpiece of the Audi e-tron FE05: the powertrain. The motor-generator unit named Audi Schaeffler MGU03 was developed jointly by Audi and its technology partner Schaeffler. The main focus of the engineers was on making the package even more efficient than before and to further increase its energy efficiency. The successful outcome of the project: 95 percent of all the powertrain components are new, plus the engineers managed to reduce weight by ten percent.

Daniel Abt and Lucas di Grassi are racing in Formula E with the newly developed Audi e-tron FE05





## Teamwork

Daniel Abt and Lucas di Grassi are the only driver pairing in the field to have contested all Formula E races in history side by side.



# #11

### Lucas di Grassi

**Date of birth**  
August 11, 1984

**Place of birth**  
São Paulo (BR)

**Residence**  
Monaco (MC)

**Height**  
1.80 m

**Weight**  
75 kg

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**2007**  
2nd GP2 Series, Formula 1 test driver

**2014**  
2nd 24 Hours of Le Mans, 4th WEC

**2015**  
3rd Formula E

**2016**  
2nd Formula E

**2017**  
1st Formula E

**2018**  
2nd Formula E



# #66

### Daniel Abt

**Date of birth**  
December 3, 1992

**Place of birth**  
Kempten (D)

**Residence**  
Kempten/Munich (D)

**Height**  
1.79 m

**Weight**  
72 kg

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danielabt.de

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**2009**  
1st ADAC Formula Masters

**2012**  
2nd GP3 Series

**2015**  
1st 24 Hours of Le Mans (in class)

**2016**  
7th Formula E

**2017**  
8th Formula E

**2018**  
5th Formula E



### Audi e-tron FE05

**Length**  
5,200 mm

**Width**  
1,800 mm

**Height**  
1,250 mm

**Wheelbase**  
3,100 mm

**Minimum weight**  
900 kg (incl. driver)

**Powertrain**  
Rear-wheel drive, motor-generator unit Audi Schaeffler MGU03, 1-speed transmission

**Bodywork**  
Specification Spark carbon body with specification aerodynamics, FIA crash and safety standard

**Battery**  
Lithium-ion battery from McLaren Applied Technologies, usable capacity 52 kWh, charging time approx. 45 minutes, weight approx. 385 kilograms (wet)

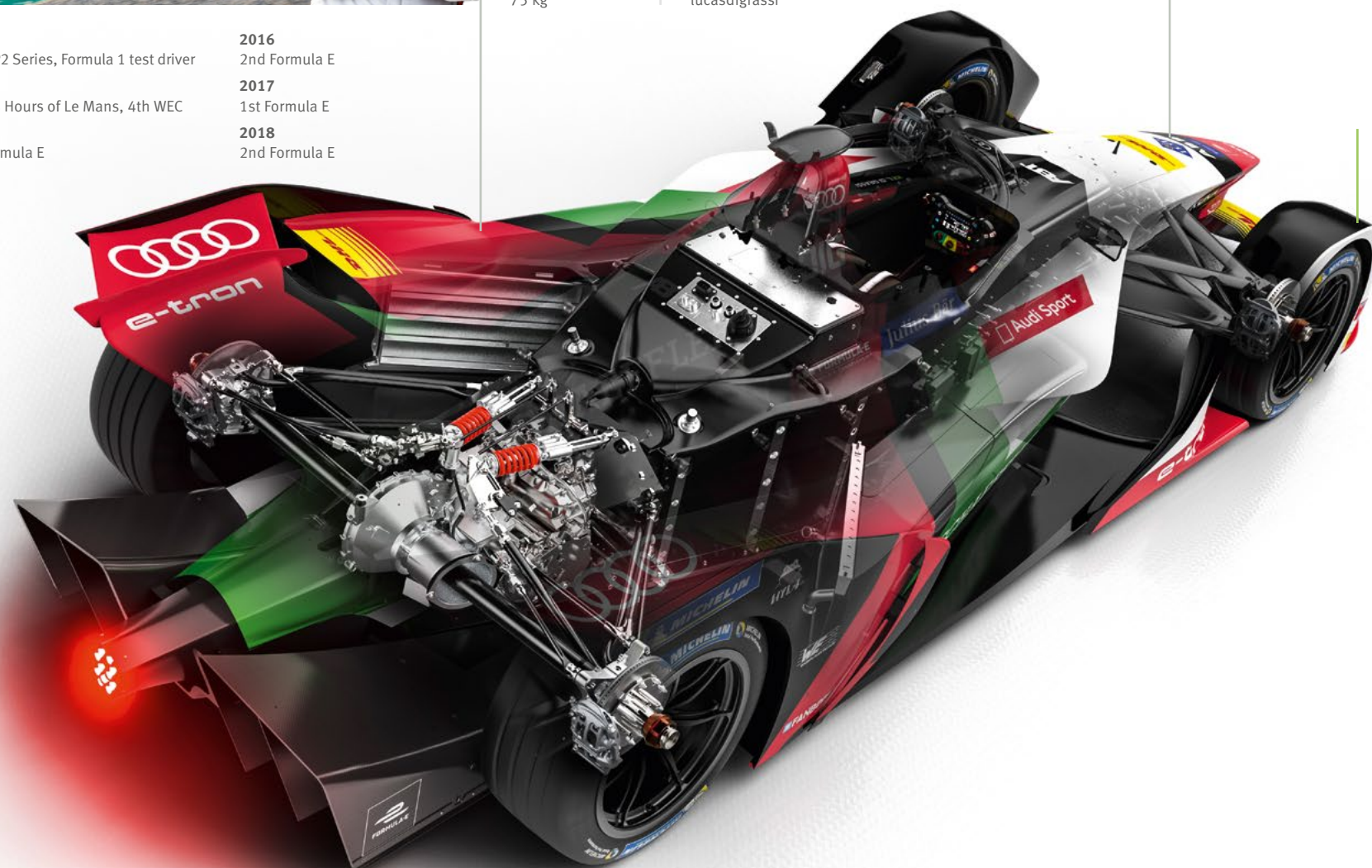
**Brakes**  
Hydraulic dual-circuit braking system, electronically controlled brake force distribution, carbon fiber brake discs, "brake by wire" on rear axle

**0–100 km/h**  
approx. 2.8 s

**Top speed**  
240 km/h

**Output in qualifying**  
250 kW

**Output in the race**  
200 kW



## Partners

### Audi



Active in motorsport with factory-backed commitments since the 1980s +++ Successes in rally, sports car and touring car racing +++ Initially gives its name to the team in Formula E +++ In 2016/2017, partnership with Schaeffler and ABT intensified +++ Since 2017/2018 season, active as manufacturer and entrant

**Formula E**  
1 x teams' champion

**WEC**  
2 x drivers' world champion  
2 x manufacturers' world champion  
13 x winner Le Mans 24H

**DTM/Super Touring Cars**  
10 x drivers' champion (DTM)  
4 x manufacturers' champion (DTM)  
12 x drivers' champion (STW)  
8 x manufacturers' champion (STW)

**Rally**  
2 x drivers' world champion  
2 x manufacturers' world champion

### ABT



Founded in 1896 as a smithy +++ Bavarian family-owned business +++ Leading tuner for automobiles from the Volkswagen Group +++ Firmly established in motorsport since the 1990s +++ Formula E race team since season one +++ Daniel Abt is the son of CEO Hans-Jürgen Abt

**Formula E**  
1 x drivers' champion  
1 x teams' champion

**DTM**  
5 x drivers' champion  
4 x teams' champion

**ADAC GT Masters**  
1 x drivers' champion  
1 x teams' champion

## The success story

In 2014, when nobody is ready yet to really believe in Formula E, ABT and Schaeffler, two pioneers in electric mobility, team up to dare this adventure. What follows is a motorsport success story performed in four acts.



**2014/2015 season: The adventure begins**  
In Formula E's inaugural season, Schaeffler and ABT with Lucas di Grassi and Daniel Abt form the only German team.



**2015/2016 season: Schaeffler inside**  
Schaeffler together with ABT develops the powertrain of the new ABT Schaeffler FE01 race car.



**2016/2017 season: Champion!**  
In the ABT Schaeffler FE02 that has been further developed in all areas, Lucas di Grassi becomes champion.



**2017/2018 season: The best team**  
Audi enters the series with a factory-backed commitment, Schaeffler remains exclusive technology partner. Audi Sport ABT Schaeffler becomes champion.



## E-Mobility as an innovation driver

Schaeffler is actively involved in shaping the rapid developments for "Mobility for tomorrow." Quality, technology and – sometimes spectacular – innovations are keys to success.

Alongside the digital transformation and Industry 4.0 (aka IIoT and smart factories) Schaeffler views electric mobility as one of the key innovation drivers going forward and has consolidated all of its activities in

this sector in a new "E-Mobility" business unit. By 2020, Schaeffler will have invested more than 500 million euros in research, development and production of electric drive units. Schaeffler has long begun to manufacture components and system solutions such as e-axes and hybrid modules in high-volume production.

### Schaeffler facts

**> 92,500** employees worldwide

**14.2 bn** euro sales in 2018

**2,400** patents filed in 2018

**26,000** active patents and patents filed

**170** locations in more than 50 countries

**75** plants worldwide

**60** Schaeffler components in automobiles worldwide (average)

**18** research and development centers worldwide

For Schaeffler, Formula E is an ideal test laboratory for the development of electric mobility technologies and an ideal fit for "Mobility for tomorrow," the strategy pursued by the globally operating technology group in helping to shape mobility.

In the form of the Schaeffler 4ePerformance concept vehicle, the group has put a particularly fascinating e-mobility ambassador on wheels. The prototype provides a good example of the technology transfer from racing into a production-based powertrain concept.



# All races

- R1**  **December 15, 2018**  
Ad Diriyah, KSA
- R2**  **January 12, 2019**  
Marrakesh, MA
- R3**  **January 26, 2019**  
Santiago de Chile, RCH
- R4**  **February 16, 2019**  
Mexico City, MEX
- R5**  **March 10, 2019**  
Hong Kong, HK
- R6**  **March 23, 2019**  
Sanya, CN
- R7**  **April 13, 2019**  
Rome, I
- R8**  **April 27, 2019**  
Paris, F
- R9**  **May 11, 2019**  
Monaco, MC
- R10**  **May 25, 2019**  
Berlin, D
- R11**  **June 22, 2019**  
Bern, CH
- R12/13**  **July 13 & 14, 2019**  
New York City, USA

# ABB FORMULA-E

 **FORMULA-E CHAMPIONSHIP**

## Drivers & teams

No.	Driver	Team
<b>11</b>	<b>Lucas di Grassi (BR)</b>	<b>Audi Sport ABT Schaeffler</b>
<b>66</b>	<b>Daniel Abt (D)</b>	<b>Audi Sport ABT Schaeffler</b>
<b>25</b>	<b>Jean-Eric Vergne (F)</b>	DS TECHEETAH
<b>36</b>	<b>André Lotterer (D)</b>	DS TECHEETAH
<b>2</b>	<b>Sam Bird (GB)</b>	Envision Virgin Racing
<b>4</b>	<b>Robin Frijns (NL)</b>	Envision Virgin Racing
<b>64</b>	<b>Jérôme d'Ambrosio (B)</b>	MAHINDRA RACING
<b>94</b>	<b>Pascal Wehrlein (D)</b>	MAHINDRA RACING
<b>22</b>	<b>Oliver Rowland (GB)</b>	Nissan e.dams
<b>23</b>	<b>Sébastien Buemi (CH)</b>	Nissan e.dams
<b>3</b>	<b>Alexander Lynn (GB)</b>	Panasonic Jaguar Racing
<b>20</b>	<b>Mitch Evans (NZ)</b>	Panasonic Jaguar Racing
<b>19</b>	<b>Felipe Massa (BR)</b>	Venturi Formula E Team
<b>48</b>	<b>Edoardo Mortara (CH)</b>	Venturi Formula E Team
<b>8</b>	<b>Tom Dillmann (F)</b>	NIO Formula E Team
<b>16</b>	<b>Oliver Turvey (GB)</b>	NIO Formula E Team
<b>6</b>	<b>Maximilian Günther (D)</b>	GEEX DRAGON
<b>7</b>	<b>José María López (RA)</b>	GEEX DRAGON
<b>27</b>	<b>Alexander Sims (GB)</b>	BMW ANDRETTI
<b>28</b>	<b>António Félix da Costa (P)</b>	BMW ANDRETTI
<b>5</b>	<b>Stoffel Vandoorne (B)</b>	HWA RACELAB
<b>17</b>	<b>Gary Paffett (GB)</b>	HWA RACELAB

### On television

All TV schedules at [www.fiaformulae.com](http://www.fiaformulae.com)

### Schaeffler

**Facebook**  
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### Audi Sport

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[audi.com/audisport](http://audi.com/audisport)

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AudiSportOfficial

**Instagram**  
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### Team ABT

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### FIA Formula E

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