



COMPARISON OF VEHICLE  
WEIGHTS UNDER  
CONSIDERATION OF  
ALTERNATIVE DRIVE SYSTEMS  
Work Package 2.2

ALBERO Project

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## Comparison of vehicle weights under consideration of alternative drive systems

It had to be determined whether the vehicle weights of alternatively powered vehicles differed significantly from those of the same design with conventional drive. Popular car models from various vehicle classes were filtered out and their weights had been compared. Car models offered simultaneously with different types of drive were selected to ensure comparability of the same model but with different types of drive. Accordingly, a distinction was made between vehicles that run on diesel, gasoline or gas, or are offered as plug-in hybrids or completely battery-electric.

### Vehicle classification

The following vehicle classes were distinguished:

- Mini
- Small Car
- Compact Class
- Middle Class
- Upper Middle Class
- Upper Class
- All-Terrain Vehicle
- SUV
- Small Van
- Large Van
- Very Large Van
- Sports Car and
- Utilities.

### Model selection

The models are as follows:

- Fiat 500
- VW up!
- Mini Cooper
- Opel Corsa
- VW Golf
- Audi A3
- Mercedes C-Klasse als T Modell
- VW Passat
- BMW 5-er
- Volvo V90
- Mercedes E-Klasse
- Audi A7
- BMW 7-er
- BMW X3
- Mercedes GLC/EQC
- Mercedes GLA

- Volvo XC90
- Kia Soul
- Kia Sorento
- Mercedes B-Klasse
- Mercedes V-Klasse
- Porsche Panamera/Taycan
- Mercedes Sprinter

The Volvo XC60 and the Opel Zafira were not included (see pp. 4, 10).

### Assignment of the models to the different vehicle classes

The models were assigned to classes<sup>1</sup> as follows:

vehicle class	manufacturer and model
Mini	Fiat 500 VW up!
Small Car	Mini Cooper Opel Corsa
Compact Class	VW Golf Audi A3
Middle Class	Mercedes C-Klasse VW Passat
Upper Middle Class	BMW 5-er Volvo V90 <i>Mercedes</i>
Upper Class	Audi A7 BMW 7-er
All-Terrain Vehicle	BMW X3 Mercedes GLC/EQC
SUV	Mercedes GLA Volvo
Small Van	Kia Soul Kia Sorento Mercedes B-Klasse
Very Large Van	Mercedes V-Klasse, EQV
SUV	Volvo XC90
Sports Car	Porsche Panamera, Taycan
Utilities	Mercedes Sprinter

### Comparison of vehicle weights

When comparing the vehicle weights (empty weight in each case), it is noticeable that most battery-electric vehicles are significantly heavier than conventionally gasoline- or diesel-powered vehicles of comparable engine size. Care was taken to ensure that truly comparable vehicle types were selected within model series. This comprehensive presentation of the passenger cars and models used, as well as their weight data, can be found at the end of the document.

According to § 42 para. 3 StVZO, the empty weight is the weight of a vehicle ready for operation without exchangeable load carriers (containers intended and suitable for holding loads, e.g.

<sup>1</sup><https://www.autokiste.de/service/segmente/>

containers), but with 90 percent full built-in fuel tanks and 100 percent full systems for other liquids (excluding systems for used water), including the weight of all equipment carried in operation (for example spare wheels and tires, spare parts, tools, jack, fire extinguisher) plus 75 kg as the driver's weight.

The weights are based on information provided by the manufacturers.

Diagram 1 shows the empty weights of the motor vehicles in comparison according to the type of drive. In each case, the heaviest vehicle is marked with an orange bar and the lightest model variant with a blue bar. The heaviest model variants were always fully electric vehicles or hybrids, while the lightest models were gasoline or diesel vehicles, i.e. cars with conventional drive systems.

The heaviest car in the comparison weighs 2635 kg (Mercedes V-Class BEV) and the lightest 929 kg (VW up! gasoline engine).

In comparison, the V-Class as a conventional diesel variant weighs 2150 kg. The VW up as a BEV variant, for example, has an empty weight of 1235 kg.

The following diagram 2 shows the net weight differences in kg for the lightest (gasoline/diesel) and heaviest (battery-electric/hybrid) vehicles. Here it is noticeable that the difference, i.e. the smallest range, is 125 kg (BMW 7 series: 730 d and 745 e) and the highest is 690 kg (Mercedes SUV GLC gasoline and EQC BEV) of one and the same model, in each case differing only in the type of drive.

The Opel Zafira and the VOLVO XC60 fall out of the usual weight differences and thus out of the comparison, as both models in the different types of drive either had no weight difference and only a weight difference of 63 kg and 76 kg respectively compared to the gasoline or diesel variant. However, these results are not transferable to the other models, even with the same manufacturer, and are therefore negligible due to the small number of 2 models in the overall analysis and should therefore not be taken into account.

## Empty weights - Comparison by type of drive

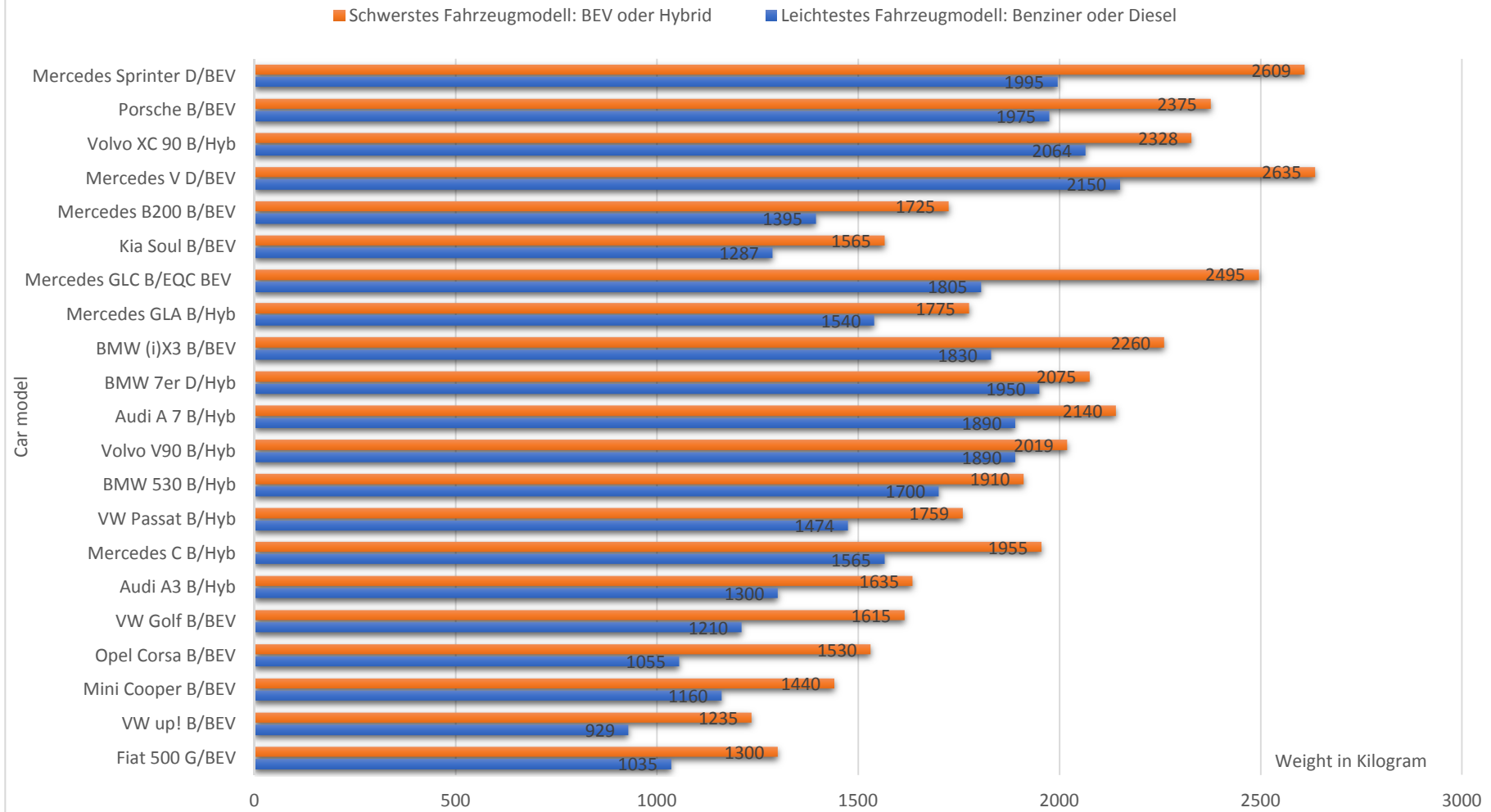


Diagram 1: Empty weights, compared by type of drive

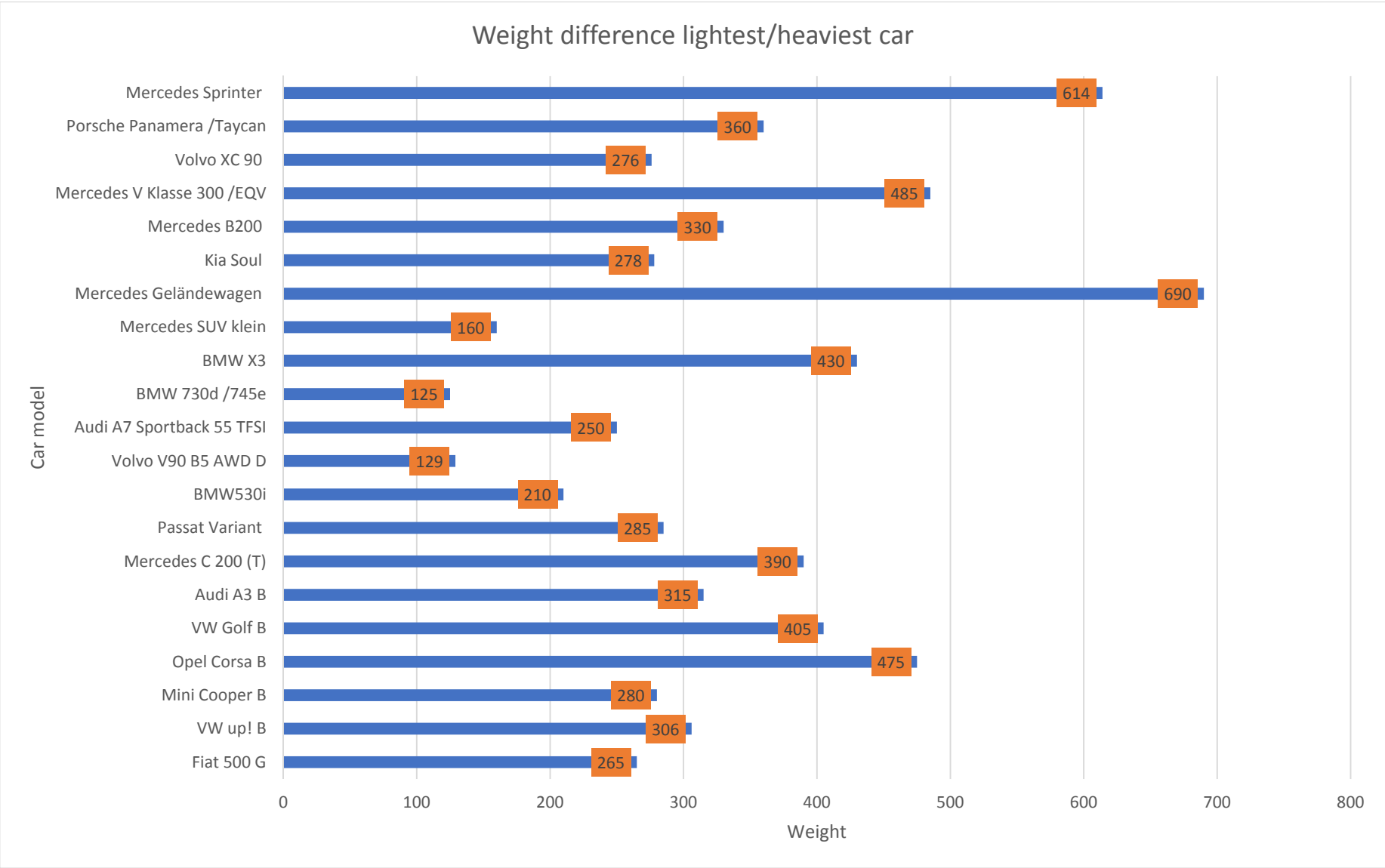


Diagram 2: Weight differences in kg for lightest (gasoline/diesel) and heaviest (battery-electric/hybrid) car

## List of vehicle data used

car class	brand	type of drive	model	power kw/PS	weight
Mini	Fiat	Gasoline	500 1.2 Benziner	51/69	1.127 kg <sup>2</sup>
Mini	Fiat	Gas	500 LPG	51/69	<b>1.035 kg<sup>3</sup></b>
Mini	Fiat	Hybrid	500 1.0 GSE N3 Hybrid	-/70	1.055 kg <sup>4</sup>
Mini	Fiat	BEV	500 E	87/118	<b>1.300 kg<sup>5</sup></b>
Mini	VW	Gasoline	up! 1.0 MPI	55/75 bis 2019	<b>929 kg<sup>6</sup></b>
Mini	VW	Gas	eco-up	50/68	1.071 kg <sup>7</sup>
Mini	VW	BEV	e-up!	61/83	<b>1.235 kg<sup>8</sup></b>
Small Car	Mini	BEV	Cooper SE 3-Türer	135/184	1.440 kg <sup>9</sup>
Small Car	Mini	Gasoline	Cooper S 3-Türer	131/178	1.160 kg <sup>10</sup>
Small Car	Opel	Gasoline	Corsa GS Line 1.2	96 / 130	<b>1.055 kg<sup>11</sup></b>
Small Car	Opel	BEV	Corsa-E	100/136	<b>1.530 kg<sup>12</sup></b>
Compact Class	VW	Hybrid	Golf 1,4 l eHybrid OPF	110/150	1.590 kg <sup>13</sup>
Compact Class	VW	Hybrid	Golf GTE 1,4 l	110/150	<b>1.624 kg<sup>14</sup></b>
Compact Class	VW	Diesel	Golf 1.6 TDi	81/110	1.295 kg <sup>15</sup>
Compact Class	VW	Gasoline	Golf 1,2 TSi	81/110	<b>1.210 kg<sup>16</sup></b>

<sup>2</sup><https://www.media.fcaemea.com/de-de/download-model-document/58>

<sup>3</sup><https://www.media.fcaemea.com/de-de/download-model-document/58>

<sup>4</sup><https://www.media.fcaemea.com/de-de/download-model-document/58>

<sup>5</sup>[https://www.autobild.de/artikel/fiat-500e-2020-test-](https://www.autobild.de/artikel/fiat-500e-2020-test-17402227.html#:~:text=Damit%20geht%20es%20aus%20dem,kg%20auf%201%2C3%20Tonnen.)

[17402227.html#:~:text=Damit%20geht%20es%20aus%20dem,kg%20auf%201%2C3%20Tonnen.](https://www.autobild.de/artikel/fiat-500e-2020-test-17402227.html#:~:text=Damit%20geht%20es%20aus%20dem,kg%20auf%201%2C3%20Tonnen.)

<sup>6</sup><https://www.auto-motor-und-sport.de/marken-modelle/vw/up/technische-daten/>

<sup>7</sup><https://www.volkswagen.de/de/modelle-und-konfigurator/eco-up.html#CONFIGURE>

<sup>8</sup><https://ev-database.de/pkw/1189/Volkswagen-e-Up>

<sup>9</sup><https://www.auto-motor-und-sport.de/elektroauto/mini-cooper-s-e-fahrbericht/technische-daten/>

<sup>10</sup><https://www.press.bmwgroup.com/deutschland/article/attachment/T0210182DE/309438>

<sup>11</sup>[https://www.auto-pieroth.de/downloads/opel/corsa\\_preisliste.pdf](https://www.auto-pieroth.de/downloads/opel/corsa_preisliste.pdf)

<sup>12</sup><https://www.opel.de/fahrzeuge/corsa-modelle/corsa-e/masse-gewichte.html>

<sup>13</sup><https://www.volkswagen-newsroom.com/de/golf-etsi-golf-ehybrid-und-golf-gte-international-media-drive-6336/die-technischen-daten-der-neuen-golf-hybridmodelle-6344>

<sup>14</sup><https://www.volkswagen-newsroom.com/de/golf-etsi-golf-ehybrid-und-golf-gte-international-media-drive-6336/die-technischen-daten-der-neuen-golf-hybridmodelle-6344>

<sup>15</sup><https://www.autobild.de/artikel/vw-golf-7-gebrauchtwagen-test-9433003.html>

<sup>16</sup><https://www.auto.de/magazin/test-vw-golf-1-2-tsi-der-nicht-so-ganz-volkswagen/>



Compact Class	VW	Gas	Golf TGI	81/110	1.385 kg <sup>17</sup>
Compact Class	VW	Hybrid	Golf GTE	110/ 150	1.615 kg <sup>18</sup>
Compact Class	VW	BEV	7 e-Golf	100 /136	<b>1.615 kg<sup>19</sup></b>
Compact Class	Audi	Hybrid	A3 Sportback TFSI e	110/150	<b>1.635 kg<sup>20</sup></b>
Compact Class	Audi	Gas	A3 Sportback g-tron	81/110	1.335 kg <sup>21</sup>
Compact Class	Audi	Diesel	A3 Sportback 2.0 TDI	110/150	1.395 kg <sup>22</sup>
Compact Class	Audi	Gasoline	A3 Sportback 1.4 TFSI	110/150	<b>1.300 kg<sup>23</sup></b>

Table 1: Overview of weights for minis, small cars and compacts

<sup>17</sup>[https://www.adac.de/ext/itr/tests/autotest/AT5092\\_VW\\_Golf\\_1\\_4\\_TGI\\_BlueMotion\\_Comfortline\\_Erdgasbetrieb/VW\\_Golf\\_1\\_4\\_TGI\\_BlueMotion\\_Comfortline\\_Erdgasbetrieb.pdf](https://www.adac.de/ext/itr/tests/autotest/AT5092_VW_Golf_1_4_TGI_BlueMotion_Comfortline_Erdgasbetrieb/VW_Golf_1_4_TGI_BlueMotion_Comfortline_Erdgasbetrieb.pdf)

<sup>18</sup><https://www.motorsport-total.com/auto/news/vw-e-golf-golf-gte-2017-test-bilder-preis-reichweite-daten-17032902>

<sup>19</sup><https://ev-database.de/pkw/1087/Volkswagen-e-Golf>

<sup>20</sup>[https://www.audi.de/dam/nemo/models/misc/pdf/my-2021/preislisten/preisliste\\_a3-sportback\\_a3-limousine\\_s3-sportback\\_s3-limousine\\_a3-sportback-g-tron\\_a3-sportback-tfsi-e.pdf](https://www.audi.de/dam/nemo/models/misc/pdf/my-2021/preislisten/preisliste_a3-sportback_a3-limousine_s3-sportback_s3-limousine_a3-sportback-g-tron_a3-sportback-tfsi-e.pdf)

<sup>21</sup><https://www.green-motors.de/auto/audi-a3-g-tron>

<sup>22</sup><https://www.auto-motor-und-sport.de/fahrbericht/audi-a3-sportback-20-tdi-fahrbericht-2016/technische-daten/>

<sup>23</sup><https://www.autoklicker.de/autokatalog/audi-a3-14-tfsi-cylinder-on-demand-technische-daten12847.html>

car class	brand	type of drive	model	power kw/PS	weight
Compact Class	Mercedes	Hybrid	C 300 de (T)	143/194	<b>1.955 kg<sup>24</sup></b>
Compact Class	Mercedes	Hybrid	C 300 e (T)	155/211	1.870 kg <sup>25</sup>
Compact Class	Mercedes	Diesel	C 220 d (T)	143/194	1.645 kg <sup>26</sup>
Compact Class	Mercedes	Gasoline	C 200 (T)	135/184	<b>1.565 kg<sup>27</sup></b>
Compact Class	VW	Hybrid	Passat Variant GTE Variant	115/ 156	<b>1.759 kg<sup>28</sup></b>
Compact Class	VW	Diesel	Passat Variant 2.0 TDI SCR	110/150	1.568 kg <sup>29</sup>
Compact Class	VW	Gasoline	Passat Variant 1,5 I Tsi OPF	110/150	<b>1.474 kg<sup>30</sup></b>
Upper Middle Class	BMW	Diesel	530d Limousine	210/286	1.835 kg <sup>31</sup>
Upper Middle Class	BMW	Hybrid	530e Limousine	185/252	<b>1.910 kg<sup>32</sup></b>
Upper Middle Class	BMW	Gasoline	530i Limousine	215/292	<b>1.700 kg<sup>33</sup></b>
Upper Middle Class	Volvo	Diesel	V90 B5 AWD Diesel	173/235	<b>1.890 kg<sup>34</sup></b>
Upper Middle Class	Volvo	Gasoline	V90 B6 AWD	220/300	1.933 kg <sup>35</sup>
Upper Middle Class	Volvo	Gasoline	V90 T6 AWD Benzin	/320	<b>1.679 kg</b>

<sup>24</sup>[https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205\\_kl.pdf](https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205_kl.pdf)

<sup>25</sup>[https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205\\_kl.pdf](https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205_kl.pdf)

<sup>26</sup>[https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205\\_kl.pdf](https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205_kl.pdf)

<sup>27</sup>[https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205\\_kl.pdf](https://www.sueverkruerp.de/mercedes-benz/wp-content/uploads/sites/2/2020/04/PL2020-07-C-Klasse-T-Modell-S205_kl.pdf)

<sup>28</sup><https://www.spindler-gruppe.de/angebote/VW/VW-Passat-GTE-Variant-/MSP05287/>

<sup>29</sup><https://www.volkswagen-newsroom.com/de/publikationen/preislisten/technik-und-preise-passat-und-passat-variant-ausgabetag-22-10-2020-9/download>

<sup>30</sup><https://www.volkswagen-newsroom.com/de/publikationen/preislisten/technik-und-preise-passat-und-passat-variant-ausgabetag-22-10-2020-9/download>

<sup>31</sup><https://www.bmw-hubauer.de/kataloge-preislisten/BMW-5er-Limousine-Katalog-Preisliste.pdf>

<sup>32</sup><https://www.bmw-hubauer.de/kataloge-preislisten/BMW-5er-Limousine-Katalog-Preisliste.pdf>

<sup>33</sup><https://www.bmw-hubauer.de/kataloge-preislisten/BMW-5er-Limousine-Katalog-Preisliste.pdf>

<sup>34</sup>[http://downloads.volvocars-aktionen.at/pricelist/Volvo\\_V90.pdf](http://downloads.volvocars-aktionen.at/pricelist/Volvo_V90.pdf)

<sup>35</sup>[https://www.auto-nova.de/download/?1000006920\\_preisliste+volvo+v90\\_stand+13.03.20.pdf](https://www.auto-nova.de/download/?1000006920_preisliste+volvo+v90_stand+13.03.20.pdf)

Upper Middle Class	Volvo	Hybrid	V90 T6 AWD Recharge	251/340	<b>2.100 kg<sup>36</sup></b>
Upper Middle Class	Mercedes	Natural Gas	E 200 NGD	/ 156	1.795 kg <sup>37</sup>
Upper Middle Class	Mercedes	Diesel	E220 d	143/194	1.780 kg <sup>38</sup>
Upper Middle Class	Mercedes	Gasoline	E 200	135/184	<b>1.605 kg<sup>39</sup></b>
Upper Middle Class	Mercedes	Hybrid	EQE	n.b.	<b>n.b.<sup>40</sup></b>

Table 2: Overview of weights for middle and upper middle class

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<sup>36</sup><https://www.evocars-magazin.de/marken/driven-marken/volvo-v90-t6-recharge-awd-im-test-der-neue-luxus/>

<sup>37</sup> <https://www.adac.de/rund-ums-fahrzeug/autokatalog/marken-modelle/mercedes/e-klasse/207-212-facelift/238085/#technische-daten>

<sup>38</sup> <https://www.autoklicker.de/autokatalog/mercedes-benz-e-220-d-technische-daten15250.html>

<sup>39</sup><https://www.adac.de/rund-ums-fahrzeug/autokatalog/marken-modelle/mercedes/e-klasse/213-238/251729/#Allgemein>

<sup>40</sup>Zum Zeitpunkt der Recherche nicht bekannt.

car class	brand	type of drive	model	power kw/PS	weight
Upper Class	Audi	Diesel	A7 Sportback 50 TDI	210/286	1.955 kg <sup>41</sup>
Upper Class	Audi	Gasoline	A7 Sportback 55 TFSI	250/340	<b>1.890 kg</b> <sup>42</sup>
Upper Class	Audi	Hybrid	A7 Sportback TFSI e	220/299	<b>2.140 kg</b> <sup>43</sup>
Upper Class	BMW	Diesel	730d	210/286	<b>1.950 kg</b> <sup>44</sup>
Upper Class	BMW	Gasoline	750i	390/530	2.045 kg <sup>45</sup>
Upper Class	BMW	Hybrid	745e	210/286	<b>2.075 kg</b> <sup>46</sup>
All-Terrain Vehicle	BMW	Diesel	X3 xDrive30d	210/286	2.005 kg <sup>47</sup>
All-Terrain Vehicle	BMW	Gasoline	X3 xDrive30i	185/252	<b>1.830 kg</b> <sup>48</sup>
All-Terrain Vehicle	BMW	Hybrid	X3 Xdrive30e	135/184	2.065 kg <sup>49</sup>
All-Terrain Vehicle	BMW	BEV	iX3	210/286	<b>2.260 kg</b> <sup>50</sup>
All-Terrain Vehicle	Mercedes	Gasoline	GLC 300	190/258	<b>1.805 kg</b> <sup>51</sup>
All-Terrain Vehicle	Mercedes	Hybrid	GLC 300e	245/333	2.030 kg <sup>52</sup>
All-Terrain Vehicle	Mercedes	Diesel	GLC 400d	242/330	1.910 kg <sup>53</sup>

<sup>41</sup> [https://www.audi.de/dam/nemo/models/misc/pdf/my-2020/preislisten/a7-sportback\\_s7-sportback.pdf](https://www.audi.de/dam/nemo/models/misc/pdf/my-2020/preislisten/a7-sportback_s7-sportback.pdf)

<sup>42</sup> [https://www.audi.de/dam/nemo/models/misc/pdf/my-2020/preislisten/a7-sportback\\_s7-sportback.pdf](https://www.audi.de/dam/nemo/models/misc/pdf/my-2020/preislisten/a7-sportback_s7-sportback.pdf)

<sup>43</sup> [https://www.audi.de/dam/nemo/models/misc/pdf/my-2020/preislisten/a7-sportback\\_s7-sportback.pdf](https://www.audi.de/dam/nemo/models/misc/pdf/my-2020/preislisten/a7-sportback_s7-sportback.pdf)

<sup>44</sup> <https://www.bmw.de/de/neufahrzeuge/7er/limousine/2019/bmw-7-er-limousine-technische-daten.bmw-730d-limousine.html>

<sup>45</sup> <https://www.bmw.de/de/neufahrzeuge/7er/limousine/2019/bmw-7-er-limousine-technische-daten.bmw-750i-xdrive-limousine.html>

<sup>46</sup> <https://www.bmw.de/de/neufahrzeuge/7er/limousine/2019/bmw-7-er-limousine-technische-daten.bmw-745e-limousine.html>

<sup>47</sup> <https://www.bmw.de/de/neufahrzeuge/x/x3/2019/bmw-x3-technische-daten.bmw-x3-xdrive30d.html>

<sup>48</sup> <https://www.bmw.de/de/neufahrzeuge/x/x3/2019/bmw-x3-technische-daten.bmw-x3-xdrive30i.html>

<sup>49</sup> <https://www.bmw.de/de/neufahrzeuge/x/x3/2019/bmw-x3-technische-daten.bmw-x3-xdrive30e.html>

<sup>50</sup> <https://www.bmw.de/de/neufahrzeuge/x/ix3/2020/bmw-ix3-technische-daten.html>

<sup>51</sup> <https://media.daimler.com/marsMediaSite/de/instance/ko/Technische-Daten-der-Mercedes-Benz-Modelle.xhtml?oid=43504638>

<sup>52</sup> <https://www.schade.de/fileadmin/docs/SCHADE/Neuwagen/Pkw/MB/GLC-SUV-Preisliste-0320.pdf>

<sup>53</sup> <https://www.schade.de/fileadmin/docs/SCHADE/Neuwagen/Pkw/MB/GLC-SUV-Preisliste-0320.pdf>

All-Terrain Vehicle	Mercedes	BEV	EQC	300/408	<b>2.495 kg<sup>54</sup></b>
SUV	Mercedes	Diesel	GLA 200 d	110/150	<b>1.615 kg<sup>55</sup></b>
SUV	Mercedes	Gasoline	GLA 250 SUV	/218	1.540 kg <sup>56</sup>
SUV	Mercedes	Hybrid	GLA 250e SUV	160/218	<b>1.775 kg<sup>57</sup></b>
Small Van	Kia	Diesel	Soul 1.6 CRDi	100/136	1.383 kg <sup>58</sup>
Small Van	Kia	Gasoline	Soul 1.6 GDI	97/132	<b>1.287 kg<sup>59</sup></b>
Small Van	Kia	BEV	Soul EV	81/110	<b>1.565 kg<sup>60</sup></b>
Small Van	Kia	Diesel	Sorento 2.2 CRDI AWD	147/200	1.715 kg <sup>61</sup>
Small Van	Kia	Hybrid	Sorento 1.6 T-GDI 2WD	132/180	1.741 kg <sup>62</sup>
Small Van	Mercedes	Gas	B 200 NGD	115/156	1.505 kg <sup>63</sup>
Small Van	Mercedes	Hybrid/BEV	B 250e	132/179	<b>1.725 kg<sup>64</sup></b>
Small Van	Mercedes	Hybrid	B 250 e	193/262	1.725 kg <sup>65</sup>
Small Van	Mercedes	Gasoline	B-200 7 G DCT	115/156	<b>1.395 kg<sup>66</sup></b>

<sup>54</sup> <https://www.mercedes-benz-sueverkruep.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/EQC/Mercedes-Benz-Preisliste-EQC-N293.pdf.asset.SIJOeY2Y9rTGqMHkDWe9-vXxCKbAzshi6WRjaFJIIYA.pdf>

<sup>55</sup> [https://www.mercedes-benz-sternauto.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/G-Klasse,%20GLA,%20GLC,%20GLE%20und%20GLS/Mercedes-Benz-Preisliste-GLA-SUV-H247.pdf.asset.UloAPWSbNgKDiXGhmG13rmRaHavncW8Jo6u\\_SMKmOpQ.pdf](https://www.mercedes-benz-sternauto.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/G-Klasse,%20GLA,%20GLC,%20GLE%20und%20GLS/Mercedes-Benz-Preisliste-GLA-SUV-H247.pdf.asset.UloAPWSbNgKDiXGhmG13rmRaHavncW8Jo6u_SMKmOpQ.pdf)

<sup>56</sup> [https://www.mercedes-benz-sternauto.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/G-Klasse,%20GLA,%20GLC,%20GLE%20und%20GLS/Mercedes-Benz-Preisliste-GLA-SUV-H247.pdf.asset.UloAPWSbNgKDiXGhmG13rmRaHavncW8Jo6u\\_SMKmOpQ.pdf](https://www.mercedes-benz-sternauto.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/G-Klasse,%20GLA,%20GLC,%20GLE%20und%20GLS/Mercedes-Benz-Preisliste-GLA-SUV-H247.pdf.asset.UloAPWSbNgKDiXGhmG13rmRaHavncW8Jo6u_SMKmOpQ.pdf)

<sup>57</sup> [https://www.mercedes-benz-sternauto.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/G-Klasse,%20GLA,%20GLC,%20GLE%20und%20GLS/Mercedes-Benz-Preisliste-GLA-SUV-H247.pdf.asset.UloAPWSbNgKDiXGhmG13rmRaHavncW8Jo6u\\_SMKmOpQ.pdf](https://www.mercedes-benz-sternauto.de/content/dam/deutschland/reference/PKW/NEUFAHRZEUGE/PREISLISTEN/G-Klasse,%20GLA,%20GLC,%20GLE%20und%20GLS/Mercedes-Benz-Preisliste-GLA-SUV-H247.pdf.asset.UloAPWSbNgKDiXGhmG13rmRaHavncW8Jo6u_SMKmOpQ.pdf)

<sup>58</sup> <https://www.auto-motor-und-sport.de/marken-modelle/kia/soul/technische-daten/>

<sup>59</sup> <https://www.auto-motor-und-sport.de/marken-modelle/kia/soul/technische-daten/>

<sup>60</sup> <https://www.auto-motor-und-sport.de/marken-modelle/kia/soul/technische-daten/>

<sup>61</sup> <https://www.adac.de/rund-ums-fahrzeug/autokatalog/marken-modelle/kia/kia-sorento/>

<sup>62</sup> <https://www.adac.de/rund-ums-fahrzeug/autokatalog/marken-modelle/kia/kia-sorento/>

<sup>63</sup> <https://www.auto-motor-und-sport.de/news/mercedes-b-200-ngd-mehr-spar-spass-mit-gas/technische-daten/>

<sup>64</sup> <https://ev-database.de/pkw/1013/Mercedes-B-250e>

<sup>65</sup> <https://www.mercedes-benz.de/passengercars/mercedes-benz-cars/models/b-class/hatchback-w247/specifications/b-class-hatchback-nba.module.html>

<sup>66</sup> <https://www.autoplenum.de/auto/mercedes-benz/b-klasse/van-2011/b-200-blueefficiency-156-ps>

ry Large Van	Mercedes	Diesel	V 300 d	176/239	2.150 kg <sup>67</sup>
Very Large Van	Mercedes	BEV	EQV	150 /204	2.635 kg <sup>68</sup>

Table 3: Overview of weights for upper class, SUVs and vans

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<sup>67</sup> <https://blog.mercedes-benz-passion.com/2019/04/v-klasse-modellpflege-mit-239-ps-im-ersten-fahrtst/>

<sup>68</sup> <https://www.mercedes-benz.de/passengercars/mercedes-benz-cars/models/eqv/explore/specifications.module.html>

car class	brand	type of drive	model	power kw/PS	weight
SUV	Volvo	Gasoline	XC 90 B5 AWD Geartronic Momentum	/250	<b>2.064 kg</b> <sup>69</sup>
SUV	Volvo	Hybrid	XC 90 T 8	/407	<b>2.328 kg</b> <sup>70</sup>
Sports Car	Porsche	BEV	/ Taycan 4S	390/530	2.215 kg <sup>71</sup>
Sports Car	Porsche	Diesel	Panamera 4s	310/422	1.990 kg <sup>72</sup>
Sports Car	Porsche	Gasoline	Panamera 4	243/330	<b>1.975 kg</b> <sup>73</sup>
Sports Car	Porsche	Hybrid	Panamera 4 E-Hybrid	340/462	2.375 kg <sup>74</sup>
Utilities (nfz.)	Mercedes	Diesel	Sprinter 211 CDI	84/114	1.995 kg <sup>75</sup>
Utilities (nfz.)	Mercedes	BEV	eSprinter (47 kWh)	86/116	2.609 kg <sup>76</sup>

Table 4: Overview of weights for SUVs, sports cars and utilities

<sup>69</sup> [https://pricelists.volvocars.com/volvo-xc90/?ds\\_rl=1270704&ds\\_rl=1270704&gclid=Cj0KCQjA4feBBhC9ARIsABp\\_nbXomq2BD7wRq5FSMVxUz23rLHwWhTSAK-hp1vlo-p88IA4DUKtLLZEaAjcYEALw\\_wcB&gclsrc=aw.ds&gclsrc=aw.ds&page=85](https://pricelists.volvocars.com/volvo-xc90/?ds_rl=1270704&ds_rl=1270704&gclid=Cj0KCQjA4feBBhC9ARIsABp_nbXomq2BD7wRq5FSMVxUz23rLHwWhTSAK-hp1vlo-p88IA4DUKtLLZEaAjcYEALw_wcB&gclsrc=aw.ds&gclsrc=aw.ds&page=85)

<sup>70</sup> <https://pricelists.volvocars.com/volvo-xc90-recharge/?page=79>

<sup>71</sup> <https://www.porsche.com/germany/models/taycan/taycan-models/taycan-4s/>

<sup>72</sup> <https://www.porsche.com/germany/models/panamera/panamera-models/panamera-4s/>

<sup>73</sup> <https://www.porsche.com/germany/models/panamera/panamera-models/panamera-4/>

<sup>74</sup> <https://www.porsche.com/germany/models/panamera/panamera-models/panamera-4-e-hybrid-executive/>

<sup>75</sup> <https://www.mercedes-benz.de/vans/de/sprinter/panel-van/technical-data>

<sup>76</sup> <https://www.mercedes-benz.de/vans/de/sprinter/e-sprinter-panel-van/technical-data>

Special Cases					
Large van	Opel	Diesel	Zafira Life Tourer M2.0	110/150	1.785 kg <sup>77</sup>
Large Van	Opel	BEV	Zafira-e Life Selection M (50 kWh)	100/136	1.785 kg <sup>78</sup>
SUV	Volvo	Diesel	XC60 D5	176/240	<b>2.149 kg<sup>79</sup></b>
SUV	Volvo	Gasoline	XC60 T6	246/335	2.162 kg <sup>80</sup>
SUV	Volvo	Hybrid	XC60 Recharge T8 Polestar	186-251/341	<b>2.225 kg<sup>81</sup></b>

Table 5: Overview of special cases with no or negligible weight differences

<sup>77</sup> [https://www.auto-pieroth.de/downloads/opel/zafira-life\\_preisliste.pdf](https://www.auto-pieroth.de/downloads/opel/zafira-life_preisliste.pdf)

<sup>78</sup> <https://www.opel.de/fahrzeuge/zafira-life/zafira-e-life/masse-gewichte.html>

<sup>79</sup> <https://www.adac.de/rund-ums-fahrzeug/autokatalog/markenmodelle/volvo/xc60/2generation/269248/#technische-daten>

<sup>80</sup> <https://www.adac.de/rund-ums-fahrzeug/autokatalog/markenmodelle/volvo/xc60/2generation/269246/#technische-daten>

<sup>81</sup> <https://pricelists.volvocars.com/volvo-xc60-recharge/?page=85>