|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Verfasser: | Martin Schreiber | Datum: | 2024-04-08 |

# Normalisierung:

## Erstelle ein ER Modell in der 3ten Normalform

Vewende dazu die Daten auf den folgenden Seiten. Notiere und begründe alle zusätzlich getroffenen Annahmen.

# Daten:

Die Tabelle enthält die folgenden Daten:

* brandName: Name des Motorradherstellers
* brandDescription: Beschreibung des Motorradherstellers
* modelName: Name des Motorrad-Modells
* productionYear: Produktionsjahr des Motorrad-Modells
* tuningPartName: Name des Tuning-Teiles
* tuningPartBrandName: Name des Tuning-Teil Herstellers
* tuningPartBrandDescription: Beschreibung des Tuning-Teil Herstellers
* InstallationTimeMin: geschätzter Zeitaufwand der Montage des jeweiligen Bauteils (pro Motoradmodell)
* categoryName: Name der Tuning-Teil Kategorie
* categoryDescription: Beschreibung der Tuning-Teile Kategorie

Beachte: Ein Tuning-Teil kann für mehrere verschiedene Motorrad-Modelle passend sein.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| brandName | brandDescription | modelName | productionYear | tuningPartName | tuningPartBrandName | tuningPartBrandDescription | InstallationTimeMin | categoryName | categoryDescription |
| BMW | German motorcycle manufacturer | S1000RR | 2020 | Slip-On Exhaust | Akrapovič | Premium exhaust systems manufacturer | 40 | Exhaust | Tuning parts for exhaust system |
| BMW | German motorcycle manufacturer | S1000RR | 2020 | Rear Shock Absorber | Öhlins | High-performance suspension components manufacturer | 60 | Suspension | Tuning parts for suspension system |
| Ducati | Italian motorcycle manufacturer | Panigale V4 | 2021 | Slip-On Exhaust | Akrapovič | Premium exhaust systems manufacturer | 30 | Exhaust | Tuning parts for exhaust system |
| Ducati | Italian motorcycle manufacturer | Panigale V4 | 2021 | Rear Shock Absorber | Öhlins | High-performance suspension components manufacturer | 60 | Suspension | Tuning parts for suspension system |
| Honda | Japanese motorcycle manufacturer | CBR1000RR | 2021 | Slip-On Exhaust | Akrapovič | Premium exhaust systems manufacturer | 30 | Exhaust | Tuning parts for exhaust system |
| Honda | Japanese motorcycle manufacturer | CBR1000RR | 2021 | Rear Shock Absorber | Öhlins | High-performance suspension components manufacturer | 300 | Suspension | Tuning parts for suspension system |
| Honda | Japanese motorcycle manufacturer | CBR1000RR | 2021 | Power Commander | Dynojet | Leading manufacturer of fuel management systems | 100 | Electronics | Tuning parts for electronic control |
| Honda | Japanese motorcycle manufacturer | CBR1000RR | 2021 | Brake Pads | Brembo | Renowned braking system manufacturer | 100 | Brakes | Tuning parts for braking system |
| Honda | Japanese motorcycle manufacturer | CBR1000RR | 2021 | Windscreen | Puig | Specializes in motorcycle aerodynamics components | 20 | Aerodynamics | Tuning parts for aerodynamic improvements |
| Kawasaki | Japanese motorcycle manufacturer | Ninja ZX-10R | 2022 | Slip-On Exhaust | Akrapovič | Premium exhaust systems manufacturer | 30 | Exhaust | Tuning parts for exhaust system |
| Kawasaki | Japanese motorcycle manufacturer | Ninja ZX-10R | 2022 | Rear Shock Absorber | Öhlins | High-performance suspension components manufacturer | 60 | Suspension | Tuning parts for suspension system |
| Suzuki | Japanese motorcycle manufacturer | GSX-R750 | 2020 | Slip-On Exhaust | Akrapovič | Premium exhaust systems manufacturer | 50 | Exhaust | Tuning parts for exhaust system |
| Suzuki | Japanese motorcycle manufacturer | GSX-R750 | 2020 | Rear Shock Absorber | Öhlins | High-performance suspension components manufacturer | 100 | Suspension | Tuning parts for suspension system |
| Suzuki | Japanese motorcycle manufacturer | GSX-R750 | 2020 | Power Commander | Dynojet | Leading manufacturer of fuel management systems | 120 | Electronics | Tuning parts for electronic control |
| Suzuki | Japanese motorcycle manufacturer | GSX-R750 | 2020 | Brake Pads | Brembo | Renowned braking system manufacturer | 40 | Brakes | Tuning parts for braking system |
| Suzuki | Japanese motorcycle manufacturer | GSX-R750 | 2020 | Windscreen | Puig | Specializes in motorcycle aerodynamics components | 40 | Aerodynamics | Tuning parts for aerodynamic improvements |
| Yamaha | Japanese motorcycle manufacturer | YZF-R6 | 2019 | Slip-On Exhaust | Akrapovič | Premium exhaust systems manufacturer | 20 | Exhaust | Tuning parts for exhaust system |
| Yamaha | Japanese motorcycle manufacturer | YZF-R6 | 2019 | Rear Shock Absorber | Öhlins | High-performance suspension components manufacturer | 200 | Suspension | Tuning parts for suspension system |
| Yamaha | Japanese motorcycle manufacturer | YZF-R6 | 2019 | Power Commander | Dynojet | Leading manufacturer of fuel management systems | 60 | Electronics | Tuning parts for electronic control |
| Yamaha | Japanese motorcycle manufacturer | YZF-R6 | 2019 | Brake Pads | Brembo | Renowned braking system manufacturer | 60 | Brakes | Tuning parts for braking system |
| Yamaha | Japanese motorcycle manufacturer | YZF-R6 | 2019 | Windscreen | Puig | Specializes in motorcycle aerodynamics components | 30 | Aerodynamics | Tuning parts for aerodynamic improvements |