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# Tire Model Marketplace

## Easily access high-quality tire model parameter sets for vehicle dynamics simulations

### Benefits

- Provides access to high-quality tire model parameters for vehicle dynamics simulations
- Makes MF-Tyre/MF-Swift parameter sets immediately available
- Delivers excellent price/quality ratio
- Provides accurate and realistic tire-slip characteristics resulting from on-road tire testing

### Summary

Simcenter™ Tire software offers an industry standard solution for representing tire behavior in vehicle simulations ranging from autonomous driving scenarios to component durability. The Tire Model Marketplace is an essential element of the solution, providing off-the-shelf parameter sets used to parameterize the MF-Tyre/ MF-Swift tire model. Parameterization is based on representative on-road testing with the Simcenter Tire test trailer. Yet, these parameter sets are offered at entrance-level pricing that provide an excellent price/quality ratio.

### Tire Model Marketplace

The Tire Model Marketplace provides nonexclusive tire model parameter sets (TIR files) for use in vehicle dynamics simulations. These TIR files can be used to parameterize the MF-Tyre/MF-Swift tire model. This tire model allows you to perform all simulations ranging from handling to durability with a single solver for both desktop as well as real-time applications.

The library is continuously refreshed and expanded and offers close to 100 predefined and validated parameter sets available for download. Available tire sizes range from 185/65R15 all the way to 285/40R22, and parameters are available for dry asphalt, wet asphalt, packed snow and polished ice roads.

### Tire testing

Tire tests that are performed to identify the parameter sets of the Tire Model Marketplace are mainly performed with the Simcenter Tire test trailer. This on-road test laboratory enables testing in real-life conditions using dedicated measurement towers for passenger car and motorcycle tires. Tires can be tested on any type of road surface. The test trailer can even put down a controlled layer of water in front of the tire so it can be tested in wet conditions. The Simcenter Tire test trailer is also used to test tires on snow and ice in Arctic regions.

### Custom tire parameter sets

The Tire Model Marketplace also enables you to develop a parameter set for the tire or your choice. During specific weeks of the year the Simcenter Tire test trailer is available to measure new tires for the Tire Model Marketplace. When you preorder, the tire of your choice will be measured, the model parameters will be identified and the parameter set is added to the marketplace.

# Tire Model Marketplace

## Types of parameter sets

Three types of parameter set categories exist, each with its own level of detail and corresponding price.

### MF-Tyre and turn slip

Within this category the tire-slip characteristics are measured on-road with the Simcenter Tire test trailer on dry asphalt. Complete MF-Tyre parameter sets, including the turn-slip parameters, are identified. The MF-Swift parameters are estimated based on the sophisticated estimation algorithms of the Simcenter Tire team.

### MF-Tyre (including low friction)

Within this category the tire-slip characteristics are measured on-road with the Simcenter Tire test trailer, on dry asphalt, wet asphalt, packed snow and polished ice. Complete MF-Tyre parameter sets are identified but turn-slip parameters are not available for these parameter sets.

### MF-Swift estimated

The complete MF-Tyre/MF-Swift parameter sets in this category are estimated based on the sophisticated estimation algorithms of the Simcenter Tire team. No dedicated tire measurements are performed for parameterization.

For a complete overview of all available parameter sets you can visit our website.

## Delivery content

When ordering a parameter set from the Tire Model Marketplace, you will receive:

- The MF-Tyre/MF-Swift TIR file
- A parameter identification and validation report

Both deliverables are dedicated to you and are watermarked.

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