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### Selecting the correct Tilton 7 1/4" Cerametallic Clutch

There are many considerations when choosing a clutch. The variety of clutches available is quite large, with a wide range of diameters, friction materials and number of plates. The general rule in selecting a competition clutch is to choose the smallest clutch diameter allowed by regulations, determine how many discs it takes to meet your engine's torque capacity, and add one additional plate for heat capacity and durability reasons. If you would like our assistance with the selection then please contact us with details of your application for our recommendation, otherwise the following factors should be considered when selecting the right clutch.

#### Torque Capacity:

The amount of engine torque that the clutch can hold before slipping. Torque capacity of a clutch is dependant on the number of driven plates used, the diameter of the clutch and the clamp load that the diaphragm spring places on the driven plates. Tilton OT-Series clutches are rated by dynamic torque capacity. Some clutch manufacturers rate their clutches by breakaway torque capacity. Dynamic torque capacity takes torque spikes from engine firing into consideration, better representing the conditions under which clutches operate. Generally, a Tilton OT-Series clutch does not slip until the torque is 50% above the rated torque capacity, making the rating rather conservative. Other clutch manufactures may rate a clutch at the torque level it starts to slip in an effort to provide a more impressive rating.

#### Heat Capacity:

Heat capacity refers to the amount of heat the clutch can withstand before damage or failure occurs. Heat is generated every time the clutch is engaged. The heat generated during engagement is mostly absorbed by the clutch's pressure plate, floater plates and discs. Some heat is also absorbed by the flywheel. The more mass a clutch has, the more heat/temperature it can absorb. The same is true with clutches as with brakes and tyres, higher temperatures do more damage! A clutch with an extra disc will have better heat capacity due to the increased mass, exposing the clutch to lower overall temperatures.

#### 1-plate

Diaphragm Spring	Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in <sup>2</sup> /kg-m <sup>2</sup> )	Part Number
Buff	200/272	520/229	5.6/2.5	52.4/0.154	66-301HBF
Orange	250/340	560/247	5.6/2.5	52.4/0.154	66-301HORA
Grey	310/422	620/273	5.6/2.5	52.4/0.154	66-301HG
Double Grey	350/476	690/304	5.6/2.5	52.4/0.154	66-301HGG

#### 2-plate

Diaphragm Spring	Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in <sup>2</sup> /kg-m <sup>2</sup> )	Part Number
Buff	400/544	520/229	8.2/3.7	76.3/0.225	66-302HBF
Orange	500/680	560/247	8.2/3.7	76.3/0.225	66-302HORA
Grey	620/844	620/273	8.2/3.7	76.3/0.225	66-302HG
Double Grey	700/952	690/304	8.2/3.7	76.3/0.225	66-302HGG

\*Values listed are typical for release bearings with a 44mm contact diameter. Larger contact diameters will increase release load.

\*\* Weight and M.O.I. includes driven plate(s)

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