

WHEEL HUBS

Wheel hub bearings are subjected to both axial and radial loads.

Hubs are part of a complex system carrying out different functions. As a matter of fact, the space comprised between bearings and wheel rim assembly section is subjected to fatigue.

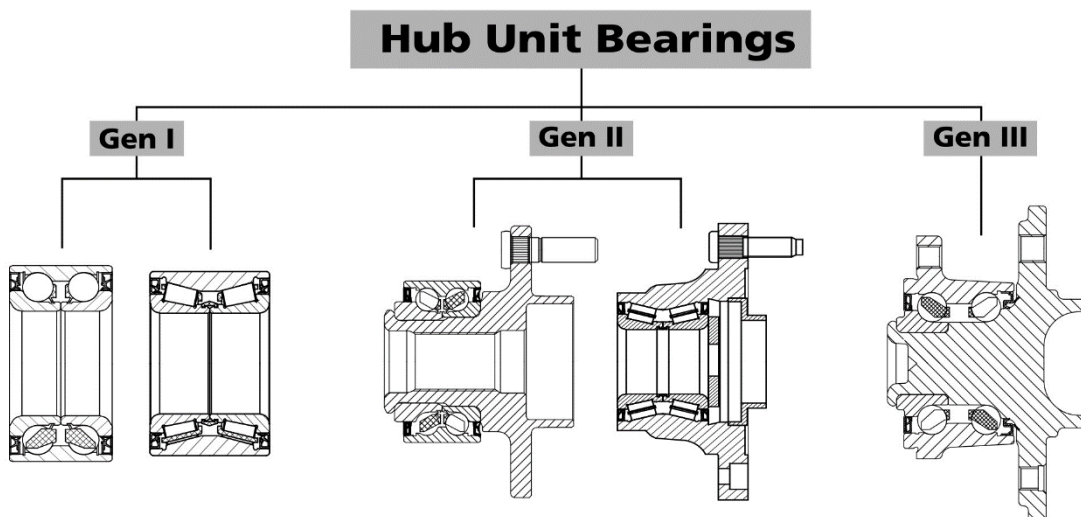
The most critical moment is the braking for the front hub and the acceleration for the rear hub being subject to a torsion load.

MATERIALS

RING MATERIAL	HIGH-PURITY FORGED STEEL The choice of steel depends on its specific application. As a matter of fact, Ima uses spring steel for applications where a high Rs/Rm ratio is required.
GREASE	SPECIFIC GREASE CHARACTERIZED BY: <ul style="list-style-type: none"> • Excellent resistance to degradation at high temperature, which provides longer lubrication intervals • Great EP (extreme pressure) and wear-free properties preventing moving surfaces from wear and assuring longer durability • Good water resistance properties
CAGES	6.6 GLASS-FIBRE REINFORCED POLYAMIDE CAGE
SEALS	HIGH EFFICIENCY SPECIAL RUBBER SCREENS AVAILABLE IN DIFFERENT DESIGN FOR DIFFERENT APPLICATIONS

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Wheel hubs are divided into first, second and third generation hubs.



FIRST GENERATION HUBS

First generation hubs are used in wheel drive applications for medium-sized cars.

They can consist of:

- A double row angular contact ball bearing with a glass-fiber reinforced polyamide cage, shielded with specific grease for high performance, also available with an ABS impulse ring mounted on the rotating ring;
- A tapered roller bearing used for heavy load vehicles.

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SECOND GENERATION HUBS

Second generation hubs incorporate a flange with the outer bearing ring. This facilitates the bearing mounting on the vehicle or on the wheel.

They can be composed of:

- A double row angular contact ball bearing with flanged outer ring, induction hardened outer ring raceways, specific grease shielding for high performance, threaded holes flange or bolts, brake and wheel centering
- A tapered roller bearing ideal for light truck wheel drive applications.

The most common applications are characterized by a fixed flanged ring mounted on the joint by threaded bolts.

Many bearings are equipped with magnetic encoders integrated into the seals.

THIRD GENERATION HUBS

Third generation hubs incorporate one flange in the fixed ring and another in the rotating bearing ring. As a result, they are considered the most compact, light and integrated for chassis applications.

In the most common brake or drum brake and wheel applications, they are mounted on the rotating flange.

They can consist of:

- A double row angular contact ball bearing, with flanged rings as light components, induction hardened outer ring raceways, specific grease shielding for high performance, fixed or rotating threaded holes flange or bolts and brake and wheel centering. They can also be supplied with an ABS impulse ring mounted on the rotating ring.
- A tapered bearing ideal for light trucks idler wheel drive applications.