

**Q: Are NTN's ULTAGE SAFD housings designed with drainage holes?**

A: Yes. All ULTAGE SAFD housings contain a drainage hole on each side.

**Q: What grade of bolts are used with NTN's ULTAGE SAFD housings?**

A: NTN ULTAGE SAFD housings are furnished with Grade 8 bolts.

**Q: Can sensors or monitoring devices be used on NTN's ULTAGE SAFD housings?**

A: Yes. NTN's standard SAFD housing design provides a flat area (undrilled) to ensure proper positioning and mounting of sensors for different condition monitoring equipment models.

**Q: What type of material are ULTAGE SAFD housings made of?**

A: NTN offers the ULTAGE SAFD housing in ductile iron.

**Q: What bore sizes are available?**

A: Bore sizes 1 <sup>7</sup>/<sub>16</sub>" through 7 <sup>15</sup>/<sub>16</sub>". SAFD509 through SAFD544.

**Q: Are ULTAGE SAFD units available in fixed and expansion options?**

A: Yes. The housing comes as a fixed unit, but the removal of the stabilizing rings are required for expansion.

**Q: How does the expansion bearing move in the housing?**

A: Expansion capability is allowed by removing the stabilizing rings inside the housing.

**Q: How much expansion do NTN's ULTAGE SAFD housings allow?**

A: The amount of expansion depends on the bearing series and where the bearing is installed inside the housing. The size of two fixing rings used for a unit defines the maximum expansion possible.

**Q: Are cover plates available with NTN's ULTAGE SAFD housings?**

A: Yes. End blanking disks can be offered for end shaft positions by adding M3 suffix when ordering.

**Q: Is the base of the housing reinforced?**

A: Yes. The ULTAGE SAFD housing base has been designed and optimized with a reinforced "X-support" structure.

**Q: Does the cap of the housing have pry slots?**

A: No. The cap does not require pry slots. NTN uses a hardened-steel, spherical locating ball which always provides easy cap removal, as well as cap to base precision locating.

**Q: Are NTN's ULTAGE SAFDs provided with eye bolts?**

A: Yes. NTN's ULTAGE SAFD housing sizes 520 and above are provided with eye bolts, which allow for easy handling and safety.

**Q: What type of bearing insert is used with NTN's ULTAGE SAFD bearing?**

A: NTN's ULTAGE 22200K series, E-type, double-row spherical roller bearings, which boast an industry leading load capacity, are the most common for the ULTAGE SAFD series. The new ULTAGE SAFD500 series can also accommodate 23200K series bearings by selecting the appropriate stabilizing ring size. Smaller units can also be fitted with 1200 or 2200 series double-row, self-aligning ball bearing by selecting the appropriate stabilizing rings.

**Q: What color options are available for NTN's ULTAGE SAFD housing?**

A: NTN offers the ULTAGE SAFD housing in black.

**Q: Are the cap and base of the ULTAGE SAFD housing machined together?**

A: Yes. The cap and based are machined together to an ISO G7 fit. This ensures a proper bearing insert fit and guarantees that the bearing can always float in the housing.

**Q: Are the cap and base of the ULTAGE SAFD housing interchangeable?**

A: No. Caps and base of split style housings are not interchangeable as they are machined as a unit. The cap and base are marked with a unique code to ensure they remain matched at installation.

**Q: Is NTN's ULTAGE SAFD housing supplied with a seal?**

A: Yes. The standard seal supplied is the LER ring seal. LOR and Taconite seal options are available as an upgrade

**Q: Does NTN offer other types of seal options for the ULTAGE SAFD bearing?**

A: Yes, LOR and Taconite seals options are available as an upgrade.

**Q: What type of retainer (cage) options are available for the NTN bearing insert?**

A: NTN offers EA pressed-steel and EM machined-brass retainer (cage) options.

**Q: What is the clearance of the bearing insert supplied with the housing?**

A: Typically, C3 clearance bearings are ordered, and are most readily available, however, C4 or other clearances are available upon request

**Q: Are stabilizing rings supplied with NTN's ULTAGE SAFD housing?**

A: Yes. Each housing will be supplied with two stabilizing rings. The "G2" housing will contain stabilizing rings for the 22200K series bearing insert. The "G3" housing will contain stabilizing rings for the 23200K series bearing insert.

**Q: What is the temperature range for the NTN ULTAGE SAFD bearings units?**

A: ULTAGE spherical roller bearings are heat stabilized to 392°F (200°C). Self-aligning ball bearings are heat stabilized to 248°F (120°C). Allowable temperature range is also a function of bearing clearance and lubrication, but normally sits between -30°F (-34°C) to 248°F (120°C). For temperatures above +176°F (80°C), please consult NTN as relubrication intervals and clearance need to be increased and closely monitored.

**Q: How do you keep split housings clean?**

A: As the bearing and housing are exposed, it is important to ensure the base and cap are completely clean of debris. NTN paints the internal ULTAGE SAFD housing lubrication reservoirs white to help ensure they are clean and to easily identify any foreign debris.

**Q: Do the NTN ULTAGE SAFD bearings allow for undersized shafting?**

A: Yes. All bore sizes which use an adapter sleeve mount can accommodate the nominal shaft size to an undersized value depending on shaft size. Check service instructions for actual recommended shaft tolerances.

**Q: How are ULTAGE SAFD units installed? How do you set mounted clearance?**

A: Typical clearance reduction procedures are necessary for the bearing. See mounting instructions and clearance reduction card for spherical roller bearings. Self-aligning ball bearings are tightened ¼ of a turn after an initial positive contact starting point is achieved.

**Q: What tools are required to install the NTN ULTAGE SAFD bearing units?**

A: NTN recommends using our spanner wrenches to secure the locknut for smaller units (i.e., up to SAFD528). For larger bearings, the use of hydraulic nut mounting may also be necessary. Feeler gauges for measuring spherical roller bearing clearance and wrenches to tighten cap and base bolts are also required. All bolts should also be torqued properly so, if available, a torque wrench is beneficial.

**Q: How should I store an ULTAGE SAFD bearing and housing?**

A: NTN recommends that all bearing parts be stored in their original packaging, in a clean and dry environment until ready for installation. During installation, it is as important to maintain cleanliness of the bearing and housing cavity.

**Q: What is the required torque to tighten the cap and base bolts?**

A: Each housing size has specific torque requirements. Check the service instructions for specific housing requirements.

**Q: What adapters can be used with the NTN ULTAGE SAFD series?**

A: Either the imperial SNW or the metric H series with imperial bore adapters can be used with the ULTAGE SAFD series.

**Q: Can NTN ULTAGE SAFD housings be used with grease or oil?**

A: Yes. NTN ULTAGE SAFD housings are designed to accept grease or oil lubrication.

**Q: How do the bearing inserts get greased?**

A: During the assembly process, grease is installed into the bearing by hand to ensure that each roller is 100% covered. Relubrication of the SAFD housing can be achieved through the relubrication access points located on the top of the housing.

**Q: How much grease should be placed in the ULTAGE SAFD housing?**

A: Recommended grease quantity generally depends on the speed of the bearing and environment. The general rule of thumb is that split housings are filled with grease approximately 1/3 to 2/3 of internal volume.

**Q: Is the ULTAGE SAFD cap filled with grease?**

A: No. Typically only the base is filled with grease. However, higher volumes of grease may be recommended for slow speed and contaminated environments.

**Q: What is the recommended grease for NTN ULTAGE SAFD bearing units?**

A: Lithium-based greases are very common but the ULTAGE SAFD can be filled with any type of grease suited for the application.

# ULTAGE<sup>AE</sup>

## The ULTAGE Advantage

### THE INDUSTRY'S HIGHEST LOAD CAPACITY

- The bearings have a significantly increased roller diameter and maximum number of rollers, thus achieving both a high load capacity and a longer service life

### THE INDUSTRY'S HIGHEST ALLOWABLE SPEED

- The new pressed steel cage results in allowable bearing speeds up to 20% greater than NTN's previous design

### PRESSED STEEL AND BRASS CAGE OPTIONS

- The window-type EA pressed steel cage provides high rigidity as four cage pocket tabs stabilize the roller position
- The heavy duty one piece finger-type EM machined brass cage is recommended for severe vibration and impact

### IMPROVED EASE-OF-USE

- Simple window-type pressed steel cage improves ease of assembly/disassembly

# Beyond Bearings

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Trouble-shooting. And more.

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