# PATENT INFORMATION GUIDE

**NOTICE:** This document provides a summary of important information concerning Magnequench's patent position and is provided solely for convenience. Statements concerning interpretation of patents are offered as a general guideline and are the opinion of Magnequench. The user is strongly advised to rely solely on the advice of his or her own attorney. Magnequench is not responsible for any damages, direct or consequential, arising from the use of this information.

## INTELLECTECTUAL PROPERTY PROTECTION:

While certain broad Magnequench patents have expired, the remaining Magnequench patent portfolio continues to cover the majority of products manufactured by the jet casting method where energy product is 14MGOe or greater based on RE-Fe-B alloys; and also where La and/or Ce is introduced to produce powders with 12-13 MGOe properties.

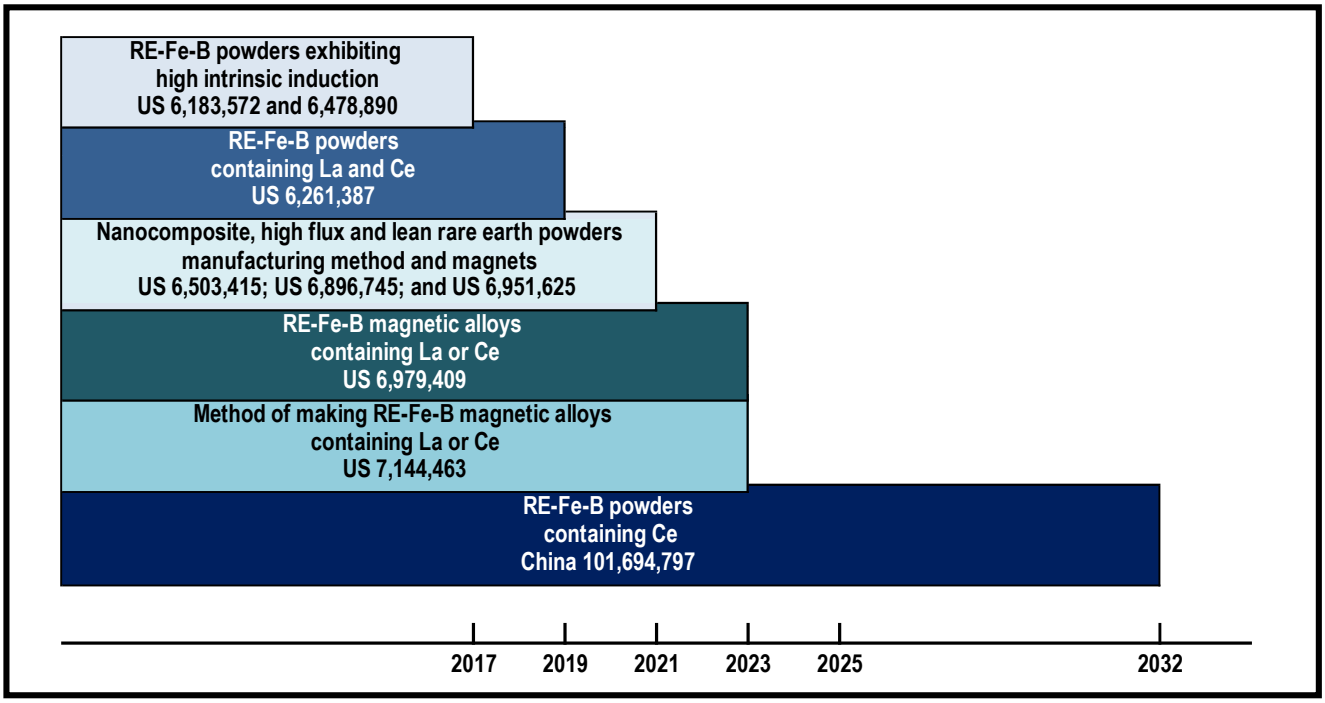
As Magnequench has done in the past, Magnequench will continue to work with magnet and motor users to ensure that the magnetic materials used throughout the supply chain do not infringe upon any of Magnequench's patents.

## SUMMARY OF SELECTED KEY PATENTS:

- **US 6,183,572** (*expires December, 2017)*: This patent is directed to isotropic RE-Fe-B powders exhibiting high intrinsic induction while maintaining certain coercivity levels. This patent covers the majority of products manufactured and sold by Magnequench.
- **US 6,478,890** (*expires December, 2017)*: This patent is a continuation in part of 6,183,572.
- **US 6,261,387** *(expires September, 2019)*: This patent is directed generally to RE-Fe-B powders in which La and Ce are present. Equivalent patents exist in Thailand.
- **US 6,503,415; US 6,896,745; and US 6,951,625** *(latest of which expires June, 2021)*: This patent family is generally directed to nanocomposite or lean rare earth RE-Fe-B powders. Equivalent patents exist in China, Japan, Korea, Europe, and other geographic regions.
- **US 6,979,409** (*expires February, 2023)*: This patent is directed generally to RE-Fe-B magnetic alloys containing Lanthanum or Cerium additions. Equivalent patents exist in China, Japan, Korea, Europe, and other geographic regions.

- **US 7,144,463** (*expires February 2023 )*: This patent is directed generally to methods of making the RE-Fe-B magnetic materials described in 6,979,409. Equivalent patents exist in China, Japan, Korea, Europe, and other geographic regions.

- **China 101,694,797** *(expires August, 2032)*: This patent is directed to RE-Fe-B magnetic materials containing Cerium.




**Timeline of Patented Powders and Products:**

Magnequench holds a number of patents on RE-Fe-B powders and magnets. Although a few Magnequench patents relating to rapidly solidified RE-Fe-B powders and magnets produced from these powders have begun to expire, other key patents relating to these products remain and will last several more years. Magnequench has continued to file patents on new products and technologies developed more recently.

**Magnequench Testing Program:**

As a result of patent infringement suits filed in the past, Magnequench and the defendants in these actions created a testing program aimed at eliminating the use of infringing materials. This program, developed over 10 years ago, involves continuous cooperation between Magnequench and the program's participating companies. On a monthly basis, program participants submit bonded RE-Fe-B magnets or products containing bonded RE-Fe-B magnets to Magnequench. Magnequench then analyzes the magnetic material to determine whether or not the magnetic material falls within the scope of any of our patents but is not made with Magnequench material.

If products within the scope of any of our patents are made with non-Magnequench material, the program participants will take immediate action to rid their supply chains of the non-Magnequench material. This action includes discontinuing purchases from any supplier that provides the program participants with such materials.

Users of magnets or products containing magnets should contact us directly if they have any patent related questions or concerns about the magnets which they are using.

## FOR FURTHER INFORMATION, CONTACT:

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