



Patents

Many of Magnum's products and processes are protected by patents in the United States and other jurisdictions around the world. This notice is provided to satisfy the virtual patent marking provisions under 35 U.S.C. § 287(a) and the America Invents Act ("AIA") as well as the notice provisions of other jurisdictions around the world. It associates certain Magnum products and methods with certain patents and published patent applications for patent marking purposes.

In publishing this list, Magnum does not threaten anyone or waive any right. The list is for notice and informational purposes only. The list may change from time to time and may not be up to date when you check it. The list does not include all Magnum products, patents and patent applications. Other products and services which are not listed here may be now or in the future protected by one or more Magnum patents and pending patent applications in the United States or elsewhere. Magnum may have other patents, patent applications or rights that protect its products, technologies and services which are not reflected here, or are not listed completely and accurately here. The listed patents and pending patent applications may have claims which read on products and methods in addition to their listed associated products and methods.

Product	Patent Number	Pending Applications
ACE Ball Drop	8,307,892 , 8,899,317 , 9,062,522 9,163,477 , 9,441,448 , 9,534,463 9,562,415 , D657,807 , D694,280 D705,821	CA2,783,904 , CA2,791,072 CA2,856,987 , 15/806,826 CA2,985,278
ACE Flo-Back	8,307,892 , 9,062,522 , 9,163,477 9,441,448 , 9,534,463 , 9,562,415 D657,807 , D684,612 , D694,280 D703,713 , D705,821	CA2,783,904 , CA2,791,072 CA2,856,987 , 15/806,826 CA2,985,278
Bullet Ball Drop	CA2,663,423 , 8,079,413 , 8,459,346 8,496,052 , 9,309,744 , 9,359,855 9,534,463 , 9,850,738 , D694,282 D697,088	CA2,783,904
Bullet Flo-Back	9,359,855 , 9,534,463 , D694,281 D694,282 , D697,088 , D698,370 D703,698	CA2,783,904
CR Magnum Series Collet	CA2,603,337 , 7,762,323 , 8,783,341 9,062,522 , 9,441,448 , 9,562,415	CA2,783,903 , CA2,783,904 CA2,856,987 , 13/385,936
CR Magnum Series Poppet	9,062,522 , 9,441,448 , 9,562,415	CA2,783,903 , CA2,783,904 CA2,856,987 , 13/385,936
Dual Magnum Disk	7,806,189 , 8,813,848 , 9,194,209 9,291,031	
Electric Setting Tool		CA2,910,136 , 14/922,969
Extreme Single Magnum Disk	7,806,189 , 8,813,848 , 9,194,209 9,291,031	
Fastballs	8,899,317 , 9,587,475	CA2,985,278
Flapper Stimulation Valve	CA2,528,130 , 7,287,596 , 7,624,809 7,708,066 , 8,157,012 , 8,739,881	



Product	Patent Number	Pending Applications
Hollow Point	9,534,463	CA2,895,507 , CA2,935,508 14/677,242 , 15/189,090 15/355,346 , 15/403,739 15/806,826 , PCT/US13/76054 PCT/US15/37636 , CA2,985,278
Interventionless	CA2,856,927 , 7,806,189 , 8,813,848 9,291,031 , 9,382,778	15/654,156
Interventionless (Finger Style)	7,806,189 , 8,813,848 , 9,291,031	CA2,937,076 , 15/218,457
Long Range Gen 1 Ball Drop	8,307,892 , 9,388,662 , 9,441,448 9,850,736 , D657,807 , D673,182 D694,280 , D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987 , 14/999,637 15/697,572
Long Range Gen 1 Bridge Plug	8,307,892 , 9,062,522 , 9,388,662 9,441,448 , 9,562,415 , 9,850,736 D657,807 , D672,794 , D673,182 D694,280 , D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987 , 14/999,637 15/697,572
Long Range Gen 1 Flo-Back	8,307,892 , 9,388,662 , 9,441,448 9,850,736 , D657,807 , D684,612 D694,280 , D703,713 , D705,821 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987 , 14/999,637 15/697,572
Long Range Gen 2 Ball Drop	8,307,892 , 9,163,477 , 9,388,662 9,441,448 , 9,850,736 , D657,807 D673,182 , D694,280 , D705,821 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987 , 14/999,637 15/697,572
Long Range Gen 2 Bridge Plug	8,307,892 , 9,062,522 , 9,109,428 9,163,477 , 9,388,662 , 9,441,448 9,562,415 , 9,850,736 , D657,807 D672,794 , D673,182 , D694,280 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987 , 14/999,637 15/697,572
Long Range Gen 2 Flo-Back	8,307,892 , 9,163,477 , 9,388,662 9,441,448 , 9,850,736 , D657,807 D684,612 , D694,280 , D703,713 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987 , 14/999,637 15/697,572
Magnum Series Ball Drop	8,307,892 , 9,062,522 , 9,163,477 9,441,448 , 9,562,415 , D657,807 D694,280 , D705,821 , 9,534,463	CA2,783,904 , CA 2,791,072 CA2,856,987
Magnum Series Bridge Plug	8,307,892 , 9,062,522 , 9,109,428 9,163,477 , 9,441,448 , 9,562,415 D657,807 , D672,794 , D694,280 D705,821 , 9,534,463	CA2,783,904 , CA 2,791,072 CA2,856,987
Magnum Series Flo-Back	CA2,639,342 , 8,191,633 , 8,307,892 9,062,522 , 9,163,477 , 9,441,448 9,562,415 , D657,807 , D684,612 D694,280 , D703,713 , D705,821 9,534,463	CA2,783,904 , CA 2,791,072 CA2,856,987



Product	Patent Number	Pending Applications
Magnum Series Flow Check	8,307,892 , 9,062,522 , 9,163,477 9,441,448 , 9,562,415 , D657,807 D684,612 , D694,280 , D705,821 9,534,463	CA2,783,904 , CA 2,791,072 CA2,856,987
Mechanical Set Retainers	CA2,603,337 , 7,762,323 , 8,783,341 9,441,448	CA2,783,903 , CA2,783,904 CA2,856,987 , 13/385,936
Mill E-Z Ball Drop	9,441,448 , 9,534,463	CA2,783,904 , CA2,856,987
Mill E-Z Bridge Plug	6,796,376 , 9,441,448 , 9,534,463	CA2,783,904 , CA2,856,987
Mill E-Z Collet	CA2,603,337 , 7,762,323 , 8,783,341 9,441,448	CA2,783,903 , CA2,783,904 CA2,856,987 , 13/385,936
Mill E-Z Flo-Back	9,441,448 , 9,534,463	CA2,783,904 , CA2,856,987
Mill E-Z Flow check	9,441,448 , 9,534,463	CA2,783,904 , CA2,856,987
Mill E-Z Poppet	9,441,448	CA2,783,903 , CA2,783,904 CA2,856,987 , 13/385,936
MVP	CA2,663,423 , 8,079,413 , 8,459,346 8,496,052 , 8,899,317 , 9,127,527 9,181,772 , 9,217,319 , 9,309,744 9,359,855 , 9,500,061 , 9,506,309 9,534,463 , 9,587,475 , D694,282 D697,088	CA2,895,507 , CA2,935,508 15/189,090 , 15/355,346 15/403,739 , PCT/US13/76054 15/672,790 , 15/806,826 CA2,985,278
PerfXtender	CA2,604,996 , 7,861,785 , 8,033,333	
Rapid Mill Ball Drop	CA2,663,423 , 8,079,413 , 8,307,892 8,459,346 , 8,496,052 , 8,899,317 9,062,522 , 9,163,477 , 9,309,744 9,359,855 , 9,441,448 , 9,562,415 D657,807 , D694,280 , D694,282 D697,088 , D705,821 , 9,534,463	CA2,783,904 , CA 2,791,072 CA2,856,987
Rapid Mill Ball Drop-Bottom Set	CA2,663,423 , 8,079,413 , 8,307,892 8,459,346 , 8,496,052 , 8,899,317 D694,282 , D697, 088 , 9,163,477 9,309,744 , 9,359,855 , 9,441,448 9,850,738 , 9,534,463	CA2,783,904 , CA2,856,987
Rapid Mill Bridge Plug	CA2,663,423 , 8,079,413 , 8,307,892 8,459,346 , 8,496,052 , 9,062,522 9,109,428 , 9,163,477 , 9,441,448 9,562,415 , D657,807 , D672,794 D694,280 , D694,282 , D697,088 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987
Rapid Mill Flo-Back	CA2,663,423 , 8,079,413 , 8,307,892 8,459,346 , 8,496,052 , 9,062,522 9,163,477 , 9,441,448 , 9,562,415 D657,807 , D684,612 , D694,280 D698,370 , D703,698 , D703,713 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987



Product	Patent Number	Pending Applications
Rapid Mill Flow check	CA2,663,423 , 8,079,413 , 8,307,892 8,459,346 , 8,496,052 , 9,062,522 9,163,477 , 9,359,855 , 9,441,448 9,562,415 , D657,807 , D684,612 D694,280 , D694,281 , D694,282 D697,088 , D698,370 , D703,698 D705,821 , 9,534,463	CA2,783,904 , CA2,856,987
Safety arm select firing subs	6,412,388	
Single Magnum Disk	7,806,189 , 8,813,848 , 9,194,209 9,291,031	
Smart Sleeve	CA2,639,341	
Snub Nose Ball Drop	8,307,892 , 8,899,317 , 9,062,522 9,163,477 , 9,441,448 , 9,562,415 D657,807 , D673,183 , D694,280 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987
Snub Nose Bridge Plug	8,307,892 , 9,062,522 , 9,109,428 9,163,477 , 9,441,448 , 9,562,415 D657,807 , D672,794 , D673,183 D694,280 , D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987
Snub Nose CTS		15/806,826 , CA2,985,278
Snub Nose Flo-Back	CA2,639,342 , 8,191,633 , 8,307,892 9,062,522 , 9,163,477 , 9,441,448 9,562,415 , D657,807 , D673,183 D684,612 , D694,280 , D703,713 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987
Snub Nose Flow check	8,307,892 , 9,062,522 , 9,163,477 9,441,448 , 9,562,415 , D657,807 D673,183 , D684,612 , D694,280 D705,821 , 9,534,463	CA2,783,904 , CA2,791,072 CA2,856,987