



THE ULTIMATE IN NON-DETONATING ROCK BREAKING CARTRIDGES

AUTOSTEM™ GEN III CATALOGUE - 2018

Includes all new products from the AutoStem™ research and development team including:

The 9mm AutoStem Splitter™ range

The 17mm AutoStem Fragmentor™ range

The entire AutoStem™ Gen III range from 35mm - 87mm

Dual-Stemming™ / Safety Lock™ / AutoStem™ sequential / Waterproof / Detonator/Electric Initiation

AutoStem™ Gen III splitter

- Dual stemming, electric initiation
- Highly delicate blasting work
- Max borehole size: $\frac{3}{8}$ "



Product code: $\frac{3}{8}$ " x 3g
Performance: 0.3m³ /cartridge
Cartridges per box: 150



Product code: $\frac{3}{8}$ " x 6g
Performance: 0.6m³ /cartridge
Cartridges per box: 150

AutoStem™ Gen III Fragmentor

- Dual stemming, electric initiation
- More significant blasting work
- Max borehole size: $\frac{1}{2}$ "



Product code: $\frac{1}{2}$ " x 20g
Performance: 0.8m³ /cartridge
Cartridges per box: 100



Product code: $\frac{1}{2}$ " x 30g
Performance: 1.0m³ /cartridge
Cartridges per box: 100



Product code: $\frac{1}{2}$ " x 40g
Performance: 2.0m³ /cartridge
Cartridges per box: 100

AutoStem™ Gen III 1 $\frac{3}{8}$ "

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Oversize, tunneling, trenching, demolition
- Max borehole size: 1 $\frac{1}{4}$ "



Product code: 1 $\frac{3}{8}$ " x 180g
Performance: 10 m³ /cartridge
Cartridges per box: 70



Product code: 1 $\frac{3}{8}$ " x 300g
Performance: 12 m³ /cartridge
Cartridges per box: 50

AutoStem™ Gen III 1 $\frac{1}{2}$ "

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Oversize, tunneling, trenching, low level benching
- Max borehole size: 2"



Product code: 1 $\frac{1}{2}$ " x 200g
Performance: 10.0 m³ /cartridge
Cartridges per box: 50



Product code: 1 $\frac{1}{2}$ " x 350g
Performance: 12.0m³ /cartridge
Cartridges per box: 35



Product code: 1 $\frac{1}{2}$ " x 550g
Performance: 18.0 m³ /cartridge
Cartridges per box: 30

AutoStem™ Gen III 2 $\frac{3}{8}$ "

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Benching, tunneling, heavy duty blasting
- Max borehole size 2 $\frac{3}{4}$ "



Product code: 2 $\frac{3}{8}$ " x 500g
Performance: 20.0 m³ /cartridge
Cartridges per box: 20



Product code: 2 $\frac{3}{8}$ " x 700g
Performance: 30.0 m³ /cartridge
Cartridges per box: 20

AutoStem™ Gen III 3 $\frac{7}{16}$ "

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Benching, tunneling, heavy duty blasting
- Max borehole size 3 $\frac{1}{2}$ "



Product code: 3 $\frac{7}{16}$ " x 1000g
Performance: 40.0 m³ /cartridge
Cartridges per box: 10



Product code: 3 $\frac{7}{16}$ " x 1700g
Performance: 50.0 m³ /cartridge
Cartridges per box: 10



Dual-stemming Technology

- Self-stemming functions at each end of the cartridge upon initiation
- Ensures an effective gas seal over the length of the AutoStem Gen III cartridge
- Caters for poor ground conditions or boreholes drilled all the way through the rock
- Aircraft aluminum moulds enabling cartridge to balloon to borehole walls
- Alternating helical design improves coupling between cartridge & borehole

The world's only dual-stemming range of cartridges, we remain at the forefront of self stemming technology having introduced the world's first self-stem product in 2013.



AutoStem Safety Lock

- World's only "safety" lock on a rock breaking product
- Prevents any accidental initiation in transport, handling or storage
- Requires user to "turn-the-switch" in prior to use

AutoStem Gen III is the world's only entirely safe rock breaking product. Without turning the safety lock prior to use, initiation of the product cannot cause harm, ensuring maximum user safety at all times.



High energy rating

- Energy of 5,121 j/g compared to 2,500 j/g in packaged explosives
- Energy delivery completely decoupled from VOD
- AutoStem VOD of only 340 m/s, compared to explosive VOD in excess of 5,000 m/s
- The avoided shockwave enables users to stand clear by only 50m and leads to a 90% reduction in vibration

Gen III incorporates a proprietary nitrocellulose compound liberating energy without shock achieving uniformity in fragmentation without fines, dust or harmful gasses.

Performance characteristics:

Density: 1,5 g/cm³
Speed of deflagration: 340 m/s
Specific energy: 5,121 j/g
Relative strength (to ANFO): 2.5x
Vibration (PPV): <2mm/s at 6m
Water resistance: Yes

Shocktube or electric initiation with sequential firing

- Interchangeable initiation method - electric or detonating/shocktube
- Can be integrated with any centralized blasting system from any supplier
- Universal detonator adaptor meaning any detonator can be used with Gen III
- Cartridge will remain non-detonating, even if initiated by shocktube/detonator

Gen III can accommodate any detonator from any supplier, or it can be initiated without explosive accessories simply using a factory-fitted fuse head. Energy requirement with fuse head initiation is 2.12A per cartridge and resistance of 0.56 ohm.

Waterproof

- All AutoStem Gen III Cartridges are waterproof to a depth of 30m
- Can be used in dry/wet boreholes without blowing out water from drilling

Gen III products can be used in almost any situation and offer an environmentally friendly alternative for harbor and port blasting.



Non-detonating blasting cartridge range www.autostemUS.com

DECOUPLING OF PERFORMANCE VARIABLES

The achievement of AutoStem technology is as a result of the effective decoupling of two performance variables, previously thought to be inextricably linked, combined with a highly efficient proprietary energy-delivery mechanism.

Conventional explosives are characterized by high velocity of detonation imparting shock into surrounding rock/concrete. The higher the VOD (in excess of 5,000 m/s), the greater the quantum of energy released in the form of a shockwave.

It has always been assumed that shock and energy were synonymous and increasing one, necessarily meant ramping up the other.

Our research led to a decoupling of energy released and VOD, resulting in a technology which offers greater energy liberation than conventional packaged explosives, while avoiding the creation of a shockwave entirely by reacting at a low VOD.

By reducing VOD by 90% compared to conventional explosives, PPV (vibration) is reduced by 90% without any loss or capability in energy delivery, fly-rock is reduced dramatically, harmful gases eliminated entirely and the consequence of shockwave avoided.

Generation 3 delivers 2x the energy available to rock than that of conventional products. The AutoStem range of products also requires no stemming and is the first in the world with this technology.



Wholesalers Across The United States

See Website for The Wholesaler in your State
www.AutostemUS.com

USA Distributor
Alternative Blasting Company LLC
Tom Bowden
Ramona, California
W: www.autostemUS.com
E: tom@alternativeblastingco.com
619-210-5925