

# AutoStem Generation 3

*Patent protected*

June 2019 product catalogue



## Next Generation blasting technology

*9mm – 87mm range of non-detonating blasting cartridges*

*Dual-Stemming™*

*Safety Lock™*

*AutoStem™ sequential*

*Waterproof*

*Detonator and electric Initiation*



# An evolution in blasting products

AutoStem's 2019 NewGen formulation means unmatched performance at **38% more power than conventional packaged explosives\***, yet with greater than a **95% reduction in shock (and vibration)** relative to conventional explosives.

Unlike a conventional explosive, AutoStem Gen 3 requires no stemming, no explosive accessories and a minimal clearing area. Only one action is required, disarming the safety.

As a result, AutoStem can be used with minimal user risk.

AutoStem 3 is an evolution in explosive technology.

\* AutoStem cartridges are up to 2.0x more powerful than traditional ANFO type products



# Safest blasting product available in 2019 globally

Designed with one objective in mind – to be the safest blasting product available world over today.

Accredited as 1.4s in each of the world's main markets including the USA, the 27 member states of the EU, Eastern Europe, North America, Australia, Africa and India. AutoStem is in full compliance with the standards set by the United Nations under the Series 6 Requirements for the Transportation and Storage of Dangerous Goods.

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Our unique patented safety features designed into our Generation III cartridge include:

The AutoStem Safety Lock™, our 2<sup>nd</sup>-generation *slide safety* which completely prevents accidental initiation in transport, storage and use (only available from June 2019).

Dual Self-stemming™ allows blasters to immediately clear the rockface as soon as product is loaded without requiring of them to tamp a live explosive in a borehole. And the AutoStem waterproof casing ensures safe use in water-logged holes.

The AutoStem NewGen powder formulation prevents deflagration if AutoStem products are accidentally initiated outside of a borehole. There is no mass detonation hazard risk in the even of fire and no explosive accessories are required when using AutoStem products.

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Should the worst happen, there is no safer product than the AutoStem Gen 3 blasting cartridge.



### AutoStem™ Gen III Splitter

- Dual stemming, electric initiation
- Highly delicate blasting work
- Waterproof
- **Max borehole size: 10mm**



Product code: 9mm x 3g  
Performance: 0.1m<sup>3</sup>/cartridge  
Cartridges per box: 150



Product code: 9mm x 6g  
Performance: 0.3m<sup>3</sup>/cartridge  
Cartridges per box: 150



Product code: 9mm x 9g  
Performance: 0.5m<sup>3</sup>/cartridge  
Cartridges per box: 150

### AutoStem™ Gen III Fragmentor

- Dual stemming, electric initiation
- More significant blasting work
- Safety switch
- Waterproof
- **Max borehole size: 20mm**



Product code: 17mm x 20g  
Performance: 0.8m<sup>3</sup>/cartridge  
Cartridges per box: 100



Product code: 17mm x 30g  
Performance: 2.0m<sup>3</sup>/cartridge  
Cartridges per box: 100



Product code: 17mm x 40g  
Performance: 4.0m<sup>3</sup>/cartridge  
Cartridges per box: 100

### AutoStem™ Gen III 35mm

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Oversize, tunneling, trenching, demolition
- **Max borehole size: 40mm**



Product code: 35mm x 100g  
Performance: 5.0 m<sup>3</sup>/cartridge  
Cartridges per box: 70



Product code: 35mm x 180g  
Performance: 7.0 m<sup>3</sup>/cartridge  
Cartridges per box: 70



Product code: 35mm x 300g  
Performance: 10.0 m<sup>3</sup>/cartridge  
Cartridges per box: 50

### AutoStem™ Gen III 43mm

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Tunneling, trenching, low level benching
- **Max borehole size: 50mm**



Product code: 43mm x 350g  
Performance: 15.0m<sup>3</sup>/cartridge  
Cartridges per box: 36



Product code: 43mm x 550g  
Performance: 25.0 m<sup>3</sup>/cartridge  
Cartridges per box: 30

### AutoStem™ Gen III 87mm

- Dual stemming
- Electric or shocktube initiation
- Safety switch
- Waterproof
- Benching, tunneling, heavy duty blasting
- **Max borehole size 103mm**



Product code: 87mm x 1700g  
Performance: >50.0 m<sup>3</sup>/cartridge  
Cartridges per box: 8

## The AutoStem Gen III product range



AutoStem Gen III also available to be used with standard detonator/shocktube assembly

Our new generation safety slide requires slide-in arming by blaster before use in borehole for maximum user safety



Dual stemming for optimal confinement in borehole and efficient delivery of energy to rock

*Note: Indicated performance statistics are dependent on rock type, application type and drill hole depth and should not be followed blindly by users. Certain cartridges should not be used in certain applications. The above should be considered as "rule of thumb" guidelines only, and users should consult the AutoStem Standard Operating Procedures or contact us for site-specific recommendations.*

# Reliable Powerful Blast Performance

AutoStem's 2019 NewGen formulation offers itself as the most powerful blasting cartridge today with a relative strength to ANFO of up to 1.5x

9mm range <i>Splitter</i>	17mm range <i>Fragmentor</i>	35mm range	43mm range	87mm range
<p>0.7x: TNT equivalence</p> <p>0.7x: Strength relative to ANFO</p> <p>&lt;150m/s: Velocity of deflagration</p> <p>&lt;2mm/s: Vibration (PPV) at 10m</p> <p>10-30m: Fly-rock scatter area</p> <p>&lt;500MPa: Peak pressure</p> <p>3g – 9g: Power charges available</p> <p>2m: Water resistant</p> <p>Initiation : Electric</p>	<p>0.9x: TNT equivalence</p> <p>0.9x: Strength relative to ANFO</p> <p>&lt;250m/s: Velocity of deflagration</p> <p>&lt;5mm/s: Vibration (PPV) at 20m</p> <p>30m – 80m: Fly-rock scatter area</p> <p>&lt;1,000MPa: Peak pressure</p> <p>20g – 40g: Power charges available</p> <p>2m: Water resistant</p> <p>Initiation : Electric</p>	<p>1.0x: TNT equivalence</p> <p>1.2x: Strength relative to ANFO</p> <p>&lt;350m/s: Velocity of deflagration</p> <p>&lt;5mm/s: Vibration (PPV) at 20m</p> <p>50m – 150m: Fly-rock scatter area</p> <p>&lt;1,500MPa: Peak pressure</p> <p>100g – 300g: Power charges available</p> <p>2m: Water resistant</p> <p>Initiation : Electric and/or none</p>	<p>1.1x: TNT equivalence</p> <p>1.5x: Strength relative to ANFO</p> <p>&lt;350m/s: Velocity of deflagration</p> <p>&lt;10mm/s: Vibration (PPV) at 20m</p> <p>50m – 200m: Fly-rock scatter area</p> <p>&lt;6,500MPa: Peak pressure</p> <p>350g – 550g: Power charges available</p> <p>2m: Water resistant</p> <p>Initiation : Electric and/or none</p>	<p>1.1x: TNT equivalence</p> <p>1.5x: Strength relative to ANFO</p> <p>&lt;350m/s: Velocity of deflagration</p> <p>&lt;10mm/s: Vibration (PPV) at 50m</p> <p>100-200m: Fly-rock scatter area</p> <p>&lt;6,500MPa: Peak pressure</p> <p>1700g: Power charge available</p> <p>2m: Water resistant</p> <p>Initiation : Electric and/or none</p>
				

- Refer to AutoStem Standard Operating Procedures for more information regarding use, recommended clearing area and other safety information
- Note that recommended clearing area will depend on amongst other factors the rock type, power cartridge used and the application type
- Above information based partly upon measured performance data, thermochemical models and manufacturer approximation
- Improved water resistance can be requested for deeper underwater use

# Design your own AutoStem cartridge

## Power rating

- ☐ TNT equivalence of 0.8x (Standard packaged explosive rating)
- ☐ TNT equivalence of 1.1x (NewGen AutoStem formulation)

## Design suitable for borehole diameter

- ☐ 10mm – 15mm
- ☐ 16mm – 22mm
- ☐ 28mm – 34mm
- ☐ 36mm – 40mm
- ☐ 42mm – 50mm
- ☐ 55mm – 60mm
- ☐ 64mm – 72mm
- ☐ 94mm – 101mm

## Safety switch options

- ☐ Rotational safety lock
- ☐ Slide switch safety lock (available June 2019)

## Initiation method

- ☐ Standard electric fuse head initiation
- ☐ Designed for use with non-electric and other explosive accessories (incl. detonators)

## Power charge (cartridge length equivalent)

- ☐ 3g – 9g
- ☐ 20g – 40g
- ☐ 60g – 100g
- ☐ 100g – 300g
- ☐ 350g – 850g
- ☐ 1,000g – 2,000g
- ☐ >2,500g
  - Certain power charges will be limited to certain diameters

## Product color

- ☐ Red
- ☐ Yellow
- ☐ Black
- ☐ Blue
- ☐ Green
- ☐ Additional branding
  - Color coding available to distinguish one product size from another for ease of use.
  - Dual branding available depending on commercial agreement

## Standard features include

UN 1.4s accreditations

Full packaging accreditation

Full logistics solution from factory to your preferred port of entry

Dual Stemming™

Water proofing

Box packaging of approximately c.18kg

## For pricing and ordering



[www.autostemtechnology.com](http://www.autostemtechnology.com)



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