



PRODUCT **GUIDE**

PORTFOLIO INFANTRY

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Rheinmetall Portfolio Infantry

Pedites pugnas decernent – Infantry decides the battle!

In modern conflict ground troops have to be able to respond in a scalable manner to multiple threats throughout the world. Infantry forces retain the capability to fight in complex and difficult terrain – be it an urban environment or high in the mountains. Automation and unmanned systems clearly battle winning assets but there is little doubt that “boots on the ground”, i.e. infantrymen, are as important as ever and will continue to play a decisive role in future military scenarios.

As one of the world’s leading suppliers of defence technology systems, Rheinmetall is a proven partner for infantry and dismounted operating forces. Rheinmetall Weapon & Munition’s Infantry product portfolio offers a broad range of ammunition and products which enhance the combat power on the battlefields today and tomorrow.

Ammunition for all intensity levels

According to the Three-Block-War-Theory described by USMC-General Charles C. Krulak, a combined joint task force has to fulfil four missions:

- Logistic support and force training in a safe and secure environment (SASE)
- Peace support operations (PSO) in a high tension environment
- Counter insurgency (COIN) operations against an asymmetric opponent and threat
- High intensity warfare (HIW) against a symmetric opponent

The ammunition needs to reflect the different intensity levels. The diversity of threats faced requires a variety of solutions. RWM Infantry offers a broad range of products to solve the different challenges within the three-block-war scenario.

For counter insurgency and high intensity warfare the RWM Infantry product portfolio includes a range of 40mm low and high velocity ammunition complimented by a selection of Combat hand grenades covering all levels of intensities based on excellent fragmentation pattern and high pressure effect. RWM Infantry provides smoke hand grenades and multiple pyrotechnical devices for signaling and illumination to support troops in the field.

For a combination of military and police operations, which are included in peace support missions; requirements for less than lethal solutions such as RWM Infantry's Sound & Flash devices, various Crowd & Riot Control options and impulse cartridges are available.

Train as you fight – in safe and secure environments it is necessary to train and prepare the units for operations and missions. With this in mind RWM Infantry offers several training devices for all products.

Effectivity, compatibility and reliability.

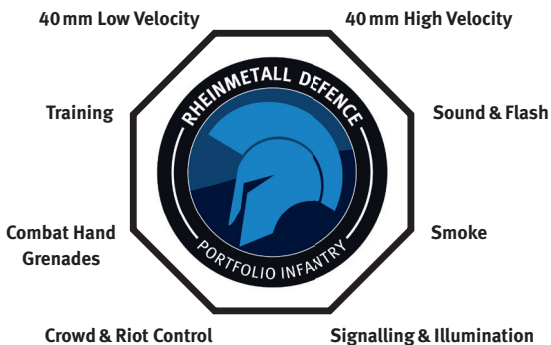
We rely on three important principles: effectivity, compatibility and reliability.

For the variety of different scenarios there are several solutions, the mission defines the required effect. In terms of effectivity our portfolio strives to fulfil the desired effect to the highest possible degree providing the customer with extra benefits.

In terms of interoperability between supporting partners RWM Infantry offers a very broad product spectrum of ammunition and equipment to achieve the highest degree of compatibility with weapons. Standardization is the key word.

RWM is continuously working on improving our products to offer even more. We implement the highest standards in sourcing, production and quality management. This guarantees products with the highest reliability, such as our 40mm high explosive cartridges with a dud rate of less than 1%.

The synergy between our customers experience and our technical knowhow guides us in developing the future solutions for a constantly changing world.



The 40 mm product group offers, with its unique patented propulsion system, low, medium and high velocity ammunition with high accuracy and reliability in all climatic conditions for all intensities of warfare.

Combat hand grenades with excellent fragmentation pattern and high pressure effect are offered as well as various sound & flash stun devices with high deafening sound and hard blinding flash.

We offer smoke hand grenades and pyrotechnics starting with irritant devices for crowd & riot control and a broad range of products for signalling and illumination purposes.

Of special note is the MITHRAS modular hand fired rocket family with a variety of effects.

40 MM LOW VELOCITY

- 10 40mm x 46, HEFRAG14
- 11 40mm x 46, HEDP14
- 12 40mm x 46, HEBE14 SO
- 13 40mm x 46, HEFRAG16
- 14 40mm x 46, HEDP16
- 15 40mm x 46, Target Practice Marker
- 16 40mm x 46, CS-D
- 17 40mm x 46, CS-P
- 18 40mm x 46, Sound & Flash, Delay 1.3 s
- 19 40mm x 46, Sound & Flash, Impact Fuze
- 20 40mm x 46, Impulse
- 21 40mm x 46, Illumination
- 22 40mm x 46, Smoke, NT
- 23 40mm x 46, Coloured Smoke



40 MM X 46, HEFRAG14

The 40 mm x 46 High Explosive Fragmentation 14 cartridge is a high performance tactical resource for military applications. The projectile is equipped with a base fuze featuring a pyrotechnical self-destruct mechanism to maintain highest safety standards. The warhead provides a specially designed fragmentation sleeve. On impact the projectile provides a superior fragmentation with more than 1,000 fragments.

CHARACTERISTICS

- High fragmentation
- High accuracy
- Self-destruct fuze

USE APPLICATIONS

- Engaging soft targets

TECHNICAL DATA

Range	max. 400 m
Number of fragments	≥ 1,000
Arming distance	11 to 19 m
Self-destruct time	approx. 12 s



40 MM X 46, HEDP14

The 40 mm x 46 High Explosive Dual Purpose 14 cartridge is a high performance tactical resource for military applications. The projectile is equipped with a base fuze featuring a pyrotechnical self-destruct mechanism to maintain highest safety standards. The warhead contains a shaped charge and a fragmentation sleeve. On impact the projectile provides a penetration capability of up to 50 mm RHA steel.

CHARACTERISTICS

- High penetration capabilities
- High accuracy
- Self-destruct fuze

USE APPLICATIONS

- Engaging lightly armored targets
- Engaging soft targets

TECHNICAL DATA

Range	max. 400m
Penetration	>50 mm RHA
Number of fragments	≥ 1,000
Arming distance	11 to 19m
Self-destruct time	approx. 12 s



40 MM X 46, HEBE14 SO

The 40 mm x 46 High Explosive Blast Enhanced cartridge is a high performance tactical resource for both military and law enforcement applications. On impact the projectile provides a massive blast effect of approx. 0.2 bar in a distance of 3 meters. In combination with its low fragmentation, the cartridge is suitable for room clearing. A unique feature and game changer concerning the tactical use is the attachable standoff spike. By screwing the standoff spike on top of the projectile the massive blast effect is utilized for breaching light reinforcements such as doors and windows.

CHARACTERISTICS

- Minimum fragmentation
- Enhanced blast effect
- Multipurpose tactical resource
- Attachable standoff spike
- Self-destruct fuze

USE APPLICATIONS

- Room clearing
- Breaching of reinforcements

TECHNICAL DATA

Range	400/50*m
Arming distance	11 to 19m
Self-destruct time	approx. 12s

* Value with attached Stand-Off Spike



40 MM X 46, HEFRAG16

The 40 mm x 46 High Explosive Fragmentation 16 cartridge is a high performance tactical resource for military applications. The projectile is equipped with a base fuze featuring a pyrotechnical self-destruct mechanism to maintain highest safety standards. The warhead provides a specially designed fragmentation pattern developed by Rheinmetall. On impact the projectile provides a superior fragmentation with a lethal radius up to 10m and more than 1,400 fragments. The 40 mm x 46 High Explosive Fragmentation 16 cartridge is a game changer for modern infantry operations.

CHARACTERISTICS

- Superior fragmentation
- High accuracy
- Self-destruct fuze

USE APPLICATIONS

- Engaging soft targets

TECHNICAL DATA

Range	max. 400m
Number of fragments	≥ 1,400
Arming distance	11 to 19m
Self-destruct time	approx. 12s



40 MM X 46, HEDP16

The 40 mm x 46 High Explosive Dual Purpose 16 cartridge is a high performance tactical resource for military applications. The projectile is equipped with a base fuze featuring a pyrotechnical self-destruct mechanism to maintain highest safety standards. The warhead contains a specially designed shaped charge developed by Rheinmetall. On impact the projectile provides a superior penetration capability of up to 70 mm RHA steel. This penetration capability in combination with a massive fragmentation makes this cartridge a game changer for modern infantry operations.

CHARACTERISTICS

- Superior penetration capabilities
- High accuracy
- Self-destruct fuze

USE APPLICATIONS

- Engaging lightly armored targets
- Engaging soft targets

TECHNICAL DATA

Range	max. 400 m
Penetration	>70 mm RHA
Number of fragments	≥ 1,000
Arming distance	11 to 19 m
Self-destruct time	approx. 12 s



40 MM X 46, TARGET PRACTICE MARKER

The cartridge 40 mm x 46, Target Practice Marker is a highly precise training ammunition. The projectile is equipped with a frangible ogive filled with orange marking dye giving a clear indication of the point of impact. The cartridge is available in different variants for various training methods. As the projectile's trajectory is identical with Rheinmetall's live ammunition, the 40 mm x 46 Target Practice Marker is the perfect solution for train as you fight scenarios.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Train as you fight

USE APPLICATIONS

- Training

TECHNICAL DATA

Range	400 m
Projectile Weight	180 g

VARIANTS

- Target Practice Marker (TPM)
- Target Practice Marker with Tracer (TPM-T)
- Target Practice without Marker (TP)



40 MM X 46, CS-D

The cartridge 40 mm x 46, CS Dust is a highly effective irritant grenade. The projectile is equipped with a powdery CS payload which is released upon impact as a plume; thus there is no risk of starting a fire when used indoors. The projectile is also capable of penetrating plywood doors.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Flameless
- Training variant available
- Penetrates plywood doors

USE APPLICATIONS

- Law Enforcement
- Hostage rescue

TECHNICAL DATA

Range	max. 400m
Function upon impact	CS plume
Weight	approx. 173g



40 MM X 46, CS-P

The cartridge 40 mm x 46, CS-P is a highly effective irritant grenade. The projectile is equipped with a delay element which ignites the payload after a defined time producing a dense CS cloud. It is designed for outdoor applications but is also capable of penetrating plywood doors and double glazing windows.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Penetrates double glazing windows
- Training variant available
- Penetrates plywood doors

USE APPLICATIONS

- Law Enforcement

TECHNICAL DATA

Range	max. 350m
Delay time	approx. 1.5 s
Pyrotechnical composition weight	approx. 190g



40 MM X 46, SOUND & FLASH, DELAY 1.3 S

The cartridge 40 mm x 46, S&F, 1.3 s is a high performance tactical resource for both military and police applications. The projectile is equipped with a delay element which ignites the payload after a defined time. The payload produces a blinding flash and deafening noise level to daze and disorient the intended target. It is capable of penetrating plywood doors and double glazing windows.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Penetrates plywood doors
- Penetrates double glazing windows

USE APPLICATIONS

- Military Operations in Urban Terrain (MOUT)
- Hostage rescue
- Counter terrorist operations
- Law Enforcement

TECHNICAL DATA

Range	max. 100m
Delay time	approx. 1.3 s
Sound intensity	approx. 150dB
Light intensity	approx. 3 mcd



40 MM X 46, SOUND & FLASH, IMPACT FUZE

The 40 mm x 46, Sound & Flash, Impact Fuze is a high performance tactical resource for both military and law enforcement applications. The projectile is equipped with a mechanical impact fuze which ignites the payload upon impact producing a blinding flash and deafening noise level to daze and disorient the intended target. It is capable of penetrating plywood doors and double glazing windows.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Additional CS dust payload available
- Penetrates plywood doors
- Penetrates double glazing windows

USE APPLICATIONS

- Military Operations in Urban Terrain (MOUT)
- Hostage rescue
- Counter terrorist operations
- Law Enforcement

TECHNICAL DATA

Range	max. 400m
Ignition	Impact fuze
Sound intensity	approx. 150 dB
Light intensity	approx. 3 mcd



40 MM X 46, IMPULSE

The cartridge 40 mm x 46, CS, Impulse is a less than lethal ammunition designed as a last resort prior to life firing. It enables users to engage single targets with a high precision within a range of 10 to 50 meters. The projectile can also be equipped with an additional marker dye payload providing the capability to safely tag ringleaders, troublemakers or other offenders of interest.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Effect on target evaluated by independent institute
- Additional marker dye payload available

USE APPLICATIONS

- Crowd Riot Control (CRC)
- Law Enforcement

TECHNICAL DATA

Range of use	10m to 50m
Kinetic energy	approx. 150J
Weight of projectile	approx. 37g

VARIANTS

Impulse Marker



40 MM X 46, ILLUMINATION

The cartridge 40 mm x 46, Illumination is a highly effective device for area illumination and target visualization. The projectile is equipped with a delay element which ignites the illumination star after a defined time producing a strong illumination effect. The parachute attached to the illumination star provides a slow and steady descent over the burning time.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers

USE APPLICATIONS

- Area illumination
- Target visualization

TECHNICAL DATA

Altitude	>185 m
Delay time	approx. 4 s
Burning time	>30 s
Light intensity	>80,000 cd, <500 cd (IR-Variant)

VARIANTS

IR-Illumination



40 MM X 46, SMOKE, NT

The cartridge 40 mm x 46, CS, Smoke, NT is a high performance screening device for pinpoint smoke applications. The projectile is equipped with a delay element which ignites the NT smoke composition after a defined time producing a dense screening smoke maintained by a steady burning rate.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Dense NT screening smoke

USE APPLICATIONS

- Obscuring of troops and vehicles
- Interrupting line of sight
- Target marker

TECHNICAL DATA

Range	max. 400 m
Delay time	approx. 3 s
Emission time	>20 s



40 MM X 46, COLOURED SMOKE

The 40 mm x 46, Coloured Smoke is a highly effective signalling and marking device. The projectile is equipped with a delay element which ignites the payload after a defined time producing a clearly visible coloured smoke cloud marking a specific spot, such as landing zones or targets for air support.

CHARACTERISTICS

- REACH compliant
- Suitable for in service grenade launchers
- Five colours available

USE APPLICATIONS

- Signalling
- Area and target marking

TECHNICAL DATA

Range	max. 350m
Delay time	approx. 1.5 s
Emission time	approx. 30 s

VARIANTS

Blue, Green, Red, White and Yellow

40 MM HIGH VELOCITY

- 26 40mm x 53 HE-T, ESD, ABM, IM
- 27 40mm x 53 HEDP-T, ESD, ABM, IM
- 28 40mm x 53 HE-T, ESD, IM
- 29 40mm x 53 HEDP-T, ESD, IM
- 30 40mm x 53 Target Practice
- 31 40mm x 53 Drill



40 MM X 53 HE-T, ESD, ABM, IM

The 40 mm x 53 High Explosive Airburst cartridge with tracer (HE-T, ABM) is designed to engage soft targets in defilade. Its high accuracy is granted by Rheinmetall's patented, unique IM propulsion system. The airburst capability requires a Fire Control System (FCS) and an InfraRed Programming Unit (IR-PU).

CHARACTERISTICS

- Fully REACH compliant
- High accuracy and reliability
- Very good fragmentation performance
- Electronical and spin decay self-destruct
- NATO qualified
- IR signal not jammable

USE APPLICATIONS

- Engage soft targets in defilade (ABM)
- Repulsing an attack

TECHNICAL DATA

Max. range	2,200 m
Length	112 mm
Weight	385 g
Fragments	>1,500

VARIANTS

Optionally available w/o tracer element



40 MM X 53 HEDP-T, ESD, ABM, IM

The 40 mm x 53 High Explosive Dual Purpose cartridge with tracer (HEDP-T, ABM) combines airburst with penetration capability to engage lightly armored as well as targets in defilade. The functional reliability is $\geq 98\%$. The airburst capability requires a Fire Control System (FCS) and an InfraRed Programming Unit (IR-PU).

CHARACTERISTICS

- Fully REACH compliant
- High accuracy and reliability
- ≥ 70 mm penetration capability of RHA
- Electronical and spin decay self-destruct
- NATO qualified
- IR signal not jammable

USE APPLICATIONS

- Engage soft targets in defilade (ABM)
- Engaging lightly armored targets (like vehicles)
- Engaging soft targets

TECHNICAL DATA

Max. range	2,200 m
Length	112 mm
Weight	385 g
Fragments	$> 1,200$
Penetration RHA	≥ 70 mm

VARIANTS

Optionally available w/o tracer element



40 MM X 53 HE-T, ESD, IM

The 40 mm x 53 High Explosive cartridge with tracer (HE-T) is designed to engage soft targets. The Rheinmetall nose fuse combines several safety features: electronic self-destruct after predetermined time of flight, electronic spin decay self-destruct as well as redundant PD function, mechanical and electrical. Due to these features the dud rate of this ammunition type is <1%. The functional reliability is $\geq 98\%$.

CHARACTERISTICS

- Fully REACH compliant
- High accuracy and reliability
- Very good fragmentation performance
- Electrical and spin decay self-destruct
- NATO qualified

USE APPLICATIONS

- Engaging soft targets

TECHNICAL DATA

Max. range	2,200 m
Length	112 mm
Weight	385 g
Fragments	>1,500

VARIANTS

Optionally available w/o tracer element



40 MM X 53 HEDP-T, ESD, IM

The 40 mm x 53 High Explosive Dual Purpose cartridge with tracer (HEDP-T) is designed to engage lightly armored and soft targets. The Rheinmetall nose fuse combines several safety features: electronic self-destruct after predetermined time of flight, electronic spin decay self-destruct as well as redundant PD function, mechanical and electrical. Due to these features the dud rate of this ammunition type is <1%. The functional reliability is $\geq 98\%$. With the capability of armor-piercing it is possible to operate against soft targets inside buildings or lightly armored vehicles.

CHARACTERISTICS

- Fully REACH compliant
- High accuracy and reliability
- ≥ 70 mm penetration capability of RHA
- Electrical and spin decay self-destruct
- NATO qualified

USE APPLICATIONS

- Engaging lightly armored targets (like vehicles)
- Engaging soft targets

TECHNICAL DATA

Max. range	2,200 m
Length	112 mm
Weight	385 g
Fragments	>1,200
Penetration	≥ 70 mm

VARIANTS

Optionally available w/o tracer element



40 MM X 53 TARGET PRACTICE

The 40 mm x 53 Target Practice ammunition is designed to train personnel handling ammunition, weapon and other related equipment (e.g. FCS) in different scenarios. Due to ballistically match with Rheinmetalls live ammunition the gunner gets the feeling where to aim to hit the target in combat operations.

CHARACTERISTICS

- Fully REACH compliant
- High accuracy
- Fully IM compliant – HC 1.4 S
- NATO qualified

USE APPLICATIONS

- Training ammunition/weapon handling
- Train as you fight

TECHNICAL DATA

Max. range	2,200 m
Length	112 mm
Weight	380 g
Impact signature	orange
Tracer	6 s

VARIANTS

- Target Practice, Target Practice Marker, Target Practice Marker Day/Night
- Optionally available w/o tracer element



40 MM X 53 DRILL

The 40 mm x 53 Drill cartridge is designed to train personnel handling ammunition as well as loading and unloading weapons.

CHARACTERISTICS

- Fully REACH compliant
- No explosives/completely inert
- All-aluminum
- Belted

USE APPLICATIONS

- Training ammunition/weapon handling

TECHNICAL DATA

Length	112 mm
Weight	370 g

SOUND & FLASH

- 34 1 Bang VANGUARD
- 35 2 Bang BTV-EL
- 36 6 Bang
- 37 7 Bang Propelled Charges
- 38 9 Bang
- 39 Training Body & Effect Charge



1 BANG VANGUARD

The 1 Bang VANGUARD is a high performance irritation device which produces blinding flash and deafening noise levels to daze and disorient intended targets. The Bottom Top Venting (BTV) system combined with the Extended Length (EL) body ensures a high degree of hand safety for the user.

CHARACTERISTICS

- High user safety (BTV-EL)
- High reliability
- 100% X-ray control
- Pressure compensation
- Low movement
- Water tightness 20m

USE APPLICATIONS

- Military Operations in Urban Terrain (MOUT)
- High risk arrest & hostage rescue
- Counter terrorist operations
- Littoral operations

TECHNICAL DATA

Dimensions	Ø42 x 132 mm
Weight	315 g
Delay	0.5 s or 1.5 s
Sound intensity	180 dB
Light intensity	15.5 Mio cd

VARIANTS

- Pull Pin/Twist-Pull Pin
- Training Variant



2 BANG BTV-EL

The 2 Bang BTV-EL is a high performance irritation device which produces blinding flash and deafening noise levels to daze and disorient intended targets. The Bottom Top Venting (BTV) system combined with the Extended Length (EL) body ensures a high degree of hand safety for the user.

CHARACTERISTICS

- High user safety (BTV-EL)
- High reliability
- 100% X-ray control
- Pressure compensation
- Low movement
- Water tightness 20m

USE APPLICATIONS

- Military Operations in Urban Terrain (MOUT)
- High risk arrest & hostage rescue
- Counter terrorist operations
- Littoral operations

TECHNICAL DATA

Dimensions	Ø42 x 132 mm
Weight	364 g
Delay	0.5 s or 1.5 s
Sound intensity	170 dB
Light intensity	8 Mio cd

VARIANTS

- Pull Pin/Twist-Pull Pin



6 BANG

The 6 Bang is a high performance irritation device which produces blinding flash and deafening noise levels to daze and disorient intended targets. The Bottom Venting (BV) system ensures a high degree of hand safety and the heavy steel body reduces the movement of the device.

CHARACTERISTICS

- Long effect duration
- 100% X-ray control
- High reliability
- Reduced movement of grenade
- High user safety
- Train as you fight

USE APPLICATIONS

- Military Operations in Urban Terrain (MOUT)
- High risk arrest & hostage rescue
- Counter terrorist operations
- Training

TECHNICAL DATA

Dimensions	Ø40 x 112 mm
Weight	563 g
Delay	1.0 s
Sound intensity	165 dB
Light intensity	4 Mio cd

VARIANTS

- 150 dB training version
- Pull Pin/Twist-Pull Pin



7 BANG PROPELLED CHARGES

The 7 Bang is a high performance distraction device which produces blinding flash and deafening noise levels to daze and disorient intended targets. Seven effect charges eject from the top of the canister in a peripheral dispersion with a radius of up to 20 m.

CHARACTERISTICS

- 100% X-ray control
- High reliability
- Peripheral dispersion
- Propelled charges
- Radius up to 20 m

USE APPLICATIONS

- High risk arrest & hostage rescue
- Riot control
- Usage in snow/deserts
- Usage in bigger rooms
- Counter terrorist operations

TECHNICAL DATA

Dimensions	Ø 60 x 135 mm
Weight	264 g
Delay	1.5 s
Sound intensity	160 dB
Light intensity	2.0 Mio cd

VARIANTS

- Pull Pin/Twist-Pull Pin



9 BANG

The 9 Bang is a high performance irritation device which produces blinding flash and deafening noise levels to daze and disorient intended targets. It provides a long effect duration and is available in steel or aluminium version.

CHARACTERISTICS

- Longest effect duration
- 100% X-ray control
- High reliability
- Reduced movement of grenade (Steel)
- Less weight for soldier (Aluminum)

USE APPLICATIONS

- Military Operations in Urban Terrain (MOUT)
- High risk arrest & hostage rescue
- Counter terrorist operations

TECHNICAL DATA

Dimensions	Ø40 x 112 mm
Weight	330g/725 g
Delay	0.5 s or 1.5 s
Sound intensity	165 dB
Light intensity	2.5 Mio cd

VARIANTS

- Pull Pin/Twist-Pull Pin
- Aluminum/Steel



TRAINING BODY & EFFECT CHARGE

The Sound & Flash Training System is a realistic, low cost training variant. A re-usable body, identical in shape and weight to the operational items, is fitted with a one-time use training capsule. It produces a single reduced flash and noise level.

CHARACTERISTICS

- Train as you fight
- Identical in shape to operational items
- Reusable body
- Low cost training

USE APPLICATIONS

- Training

TECHNICAL DATA

Dimensions	Ø42 x 132 mm
Weight	67 g + 267 g
Delay	0.5, 1.0 or 1.5 s
Sound intensity	150 dB
Light intensity	0.5 Mio cd

VARIANTS

- Ø40 x 112 body
- Pull Pin/Twist-Pull Pin

COMBAT HAND GRENADES

- 42 Hand Grenade 85
- 43 Hand Grenade 86
- 44 Expandable 08/Cutting Charge
- 45 Blast Enhanced Hand Grenade
- 46 Air Burst Hand Grenade – SHGR 07



HAND GRENADE 85

The Hand Grenade 85 is the perfect solution in form, fit and function. This Hand Grenade version guarantees either a perfect fragment performance/distribution and an effective blast for indoor battles.

CHARACTERISTICS

- Effective fragmentation and pressure performance for battles in an urban area
- Available with twist and pull fuze
- Delay time adjustable to customers request
- High safety standard

USE APPLICATIONS

- Close quarter battles and open battle field

TECHNICAL DATA

Dimensions	Ø 54 (57) x 96 mm
Weight (Offensive or fragmentation)	180 g or 340 g
Standard Delay (+63°C to -46°C)	3.0 s - 5.5 s
Effective fragmentation	15 m
Effective blast	Up to room size of 40 m ³

VARIANTS

Fragmentation Hand Grenade 85 (SplHGr 85)/Offensive Hand Grenade 85 (OffHGr 85); Training version available



HAND GRENADE 86

The Hand Grenade 86 is a lightweight Hand Grenade system with high safety features and a perfect performance for close quarter battle. This Hand Grenade lightens the soldier's load and reduces the probability of hazard to the operator.

CHARACTERISTICS

- Effective Fragmentation and pressure performance in close quarter battle
- Reduced safety distance
- Delay time adjustable to customers request
- High safety standard

USE APPLICATIONS

- Close quarter battles

TECHNICAL DATA

Dimensions	Ø44 x 77 mm
Weight (Fragmentation or offensive)	180g or 106g
Standard Delay (+63°C to -46°C)	1.0s–2.0s or 2.0s–4.0s
Effective fragmentation	10m (SplHGr 86)/5m (ShockMax)
Effective blast	Up to room size of 40 m ³

VARIANTS

Fragmentation Hand Grenade 86 (SplHGr 86)/ShockMax/
Offensive Hand Grenade 86 (OffHGr 86); Training version
available



EXPANDABLE 08/CUTTING CHARGE

The expandable 08 is a modular offensive grenade which provides the user blast effect options for different operation areas. The cutting charge in combination with an expandable 08 module is a perfect system for demolition and breaching actions.

CHARACTERISTICS

- High and adjustable blast performance
- High penetration performance with the cutting charge
- Available with twist and pull fuze
- Delay time adjustable to customers request
- High safety standard

USE APPLICATIONS

- Close quarter battles, bunkers and caves
- Demolition of sensitive goods and breaching actions

TECHNICAL DATA

Dimensions (with 3 explosive modules)	Ø 56 x 163
Weight (with 3 explosive modules)	440 g
Standard Delay (+63°C to -46°C)	3.0 s - 5.5 s
Effective blast	Up to 40 m ³ room size/1 module; 80 m ³ room size/2 modules; 200 m ³ room size/3 modules
Penetration effect	>15 mm armor steel

VARIANTS

Usable with different numbers of explosive modules;
Training version available



BLAST ENHANCED HAND GRENADE

The Blast Enhanced is an excellent offensive Hand Grenade with enhanced pressure effects for effective actions in big rooms, bunker and cave systems.

CHARACTERISTICS

- High and long lasting blast performance
- Small dimensions compared to the performance
- Available with twist and pull fuze
- Delay time adjustable to customers request
- High safety standard

USE APPLICATIONS

- Operation in urban areas, bunkers and caves

TECHNICAL DATA

Dimensions	Ø585 x 123 mm
Weight	393 g
Standard Delay (+63°C to -46°C)	3.0 s - 5.5 s
Effective blast	Up to 200 m ³ room size



AIR BURST HAND GRENADE – SHGR 07

The air burst Hand Grenade “SHGR 07” is an unique combat Hand Grenade with an excellent performance and high safety features.

The detonation height of 1.5 to 2.0m ensures a perfect incapacitation level within a radius of 4 m against a protected target as well as targets behind a cover, barricade or a low wall.

CHARACTERISTICS

- Detonation height of 1.5 to 2.0 m
- Maximum incapacitation at 4 m radius
- Easy change from air burst to ground burst
- Shape of body direct the fragments in a downward dispersion pattern
- High safety standard

USE APPLICATIONS

- Defeat of soft targets in defilade

TECHNICAL DATA

Dimensions	Ø69x130 mm
Weight	462 g
Standard Delay (+63°C to -46°C)	3.0 s to 5.5 s
Effective fragmentation	5 m (Air Burst); 20 m (Ground Burst)

VARIANTS

Training version available

SIGNALLING & ILLUMINATION

50 Mithras

51 Trip Flare



MITHRAS

MITHRAS is a family of hand fired rockets with a wide variety of effects which can be fired up to ranges of 300m, 600m and 1000m. The base of the system is a modular rocket which carries different payloads. All variants of the MITHRAS family operate with one ignition system, therefore, the handling of the rocket family is very easy to train.

CHARACTERISTICS

- Simple and safe handling (STANAG 4497)
- Low recoil and low smoke signature
- Commonality (one ignition for all systems)

USE APPLICATIONS

- Illumination
- Signalling
- Screening

TECHNICAL DATA

Range	300 m
Dimensions	Ø45 x 350 mm
Weight	500 g
Burning time	>27 s
Light intensity	>150,000 cd

VARIANTS

Effects: Illumination/IR-Illumination, Signalling Flares and Coloured Smoke

Ranges: 300m, 600m, 1000m



TRIP FLARE

The FLAR GRD ILUM TRIP Signal Kit can be used for warning- and illumination purposes. Different flares can be applied employing the same mechanical base element of the trip flare. Once the ignition unit has been set up, the effects can be changed depending on whether it is day or night or when the tactical situation has changed.

CHARACTERISTICS

- High safety due to separated pyrotechnic & ignition system
- Installation material included
- Ignition system reusable for training purposes

USE APPLICATIONS

- Warning for areal & camp protection
- Illumination

TECHNICAL DATA

Dimensions (Flare)	Ø35.5 x 105 mm
Dimensions (ignition unit)	115 x 90 x 52 mm
Total weight	450 g
Light intensity	80,000 cd
Burning time	43 s

VARIANTS

- Illumination/IR-Illumination
- NATO Green/Desert (Sand Colour)

SMOKE

- 54 Smoke Hand Grenade 74 mm, 80 s, KM
- 55 Smoke Hand Grenade 44 mm, 80 s, NT
- 56 Hand Grenade Screening RP SPIRKO
- 57 Signalling Coloured Smoke Grenades



SMOKE HAND GRENADE, 74 MM, 80 S, KM

The KM Smoke is a high performance Smoke Hand Grenade. It is designed to assist armed forces in temporarily obscuring the line-of-sight of enemy forces and can also blockade the opponents escape route. With an emission time of approximately 80 seconds an effective and long lasting smoke protection is created.

CHARACTERISTICS

- High function reliability
- Less-toxic smoke
- Ideal for humid climates
- Progressive and dense smoke
- Long effect duration

USE APPLICATIONS

- Interrupting the line-of-sight
- Increasing survivability by invisibility
- Training purposes

TECHNICAL DATA

Dimensions	Ø74 x 149 mm
Weight	810 g
Delay	1.5 s
Emission time	80 s



SMOKE HAND GRENADE, 44 MM, 80 S, NT

The NT Smoke is a high performance Smoke Hand Grenade. It is designed to assist armed forces in temporarily obscuring the line-of-sight of enemy forces and can also blockade the opponents escape route. With an emission time of approximately 80 seconds an effective and long lasting smoke protection is created.

CHARACTERISTICS

- High function reliability
- Small body dimensions
- Easy user handling
- Progressive and dense smoke
- Pressed without body shell, no residues
- Long effect duration

USE APPLICATIONS

- Interrupting the line-of-sight
- Increasing survivability by invisibility

TECHNICAL DATA

Dimensions	Ø44 x 112 mm
Weight	330 g
Delay	1.5 s
Emission time	80 s

VARIANTS

Pull-Pin



HAND GRENADE SCREENING RP SPIRKO

The SPIRKO red phosphor smoke Hand Grenade provides a rapid reaction invisibility.

In less than one second after burst the SPIRKO generates a smoke screen which is effective against visual sight and aiming equipment, night-vision devices, laser range finders and also sensor operating in the near IR-spectrum for a short time.

CHARACTERISTICS

- Effective smoke protection within 1 s
- Smoke screen dimensions approx. 10 x 2.5 m
- Min. 25 s smoke duration
- High safety standard

USE APPLICATIONS

- Spontaneously interrupting the line of sight

TECHNICAL DATA

Dimensions	Ø62 x 132 mm
Weight	380 g
Delay (+63°C to -46°C)	2.5 s to 4.5 s
Effective Smoke	1 s
Smoke duration	min. 25 s



COLOURED SMOKE GRENADES

The GREN HND Ø63.5 SMK Smoke Grenades are used to generate brilliant coloured smoke signals. Their bright, recognizable colours can be used for example to mark drop zones and to indicate wind direction. Available in a variety of colours, initiated with a fly-off lever ignition system the grenade is easy and reliable to use.

CHARACTERISTICS

- Long and intensively evolving coloured signal of 60 seconds
- Smoke generated is classed as “less-toxic”
- Grenade simple and safe to use

USE APPLICATIONS

- Marking targets or drop/safe zones
- Ground-to-ground or ground-to-air signalling
- Indicating wind direction

TECHNICAL DATA

Dimensions	Ø63.5 x 135 mm
Weight	315 g
Burning time	60 s
Delay	2.0 s

VARIANTS

Yellow, green, red, blue, white, violet, orange

TRAINING

60 Simulator Battle Sound



SIMULATOR BATTLE SOUND

SIM SND FRIC IGN is used for battlefield simulation and training. It is ignited by striking the friction head on the friction surface on top of the safety cap. The Simulator Sound has been designed to be extremely safe to use – it has a two stage safety fuze, clear indication of ignition, little to no debris from detonation and a handle that remains intact after detonation.

CHARACTERISTICS

- Highest user safety in handling
- No dangerous fragments or parts
- Bio-degradable

USE APPLICATIONS

- Simulation
- Training

TECHNICAL DATA

Dimensions	Ø23 x 160 mm
Weight	65 g
Ignition	Friction ignition
Delay	5 – 9 s

VARIANTS

130 dB (at 10 m)/145 dB (at 10 m)/
Electric Ignition 145 dB (at 10 m)

CROWD & RIOT CONTROL

- 64 40 mm x123 Irritant Cartridge
- 65 40 mm x123, Sound & Flash, 4
- 66 Irritant Device 24 g CS



40 MM X 123 IRRITANT CARTRIDGE

The 40x123 IRRT CS8 Cartridge consists of an aluminium case which contains a propellant charge and a projectile. The cartridge is designed to be fired from all standard 40 mm LV grenade launchers during riot control situations. 8 containers are ejected from the projectile during flight, each of them generating CS irritant.

CHARACTERISTICS

- Wide spread distribution of 8 CS irritant containers
- Low risk of injuries due to very low kinetic energy of the payloads
- No throwback of payloads to the forces

USE APPLICATIONS

- Crowd & Riot Control (CRC)
- Training

TECHNICAL DATA

Dimensions	Ø40x123 mm
Weight	200 g
Emission time	22.5 s

VARIANTS

- 30–60 m CS/30–60 m Training
- 60–90 m CS/60–90 m Training
- 120–150 m CS/120–150 m Training



40 MM X 123, SOUND & FLASH, 4

The 40x123 mm SND 4 Cartridge is designed to be fired from all standard LV grenade launchers for use in riot control situations. The cartridge can be used as a warning shot fired in the proximity of rioting crowds.

CHARACTERISTICS

- Four sound & flash payload containers
- Very low kinetic energy of the expended payloads
- Low risk of injuries
- Sound pressure ≥ 150 dB at 2 m

USE APPLICATIONS

- Crowd & Riot Control (CRC)
- Training

TECHNICAL DATA

Range	60–90 m
Dimensions	Ø40 x 123 mm
Weight	167 g

VARIANTS

4 Bang



IRRITANT DEVICE 24 G CS

Irritant Grenade GREN HND CS24 g FOL with fly-off lever is designed for the use in anti-riot and crowd control situations, giving a dispersal of either CS or white smoke for training.

CHARACTERISTICS

- Burning time of 20s with emission of approx. 24 g CS
- Available as normal irritant grenade or with polystyrene cover
- Training grenades are available
- Fly-off-lever with twist/pull pin

USE APPLICATIONS

- Crowd & Riot Control (CRC)
- Training

TECHNICAL DATA

Dimensions	Ø 50 x 136 mm
Weight	300 g
Irritant	24 g CS
Burning time	20 s
Delay	2.0 s

VARIANTS

CS/Training (White Smoke)

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