



SPAFAX

Military Mirror Technology





Welcome to SPAFAX, the progressive name in automotive safety solutions for more than 80 years.

Incorporated in 1938, originally as a supplier of consumable commercial vehicle products, a pioneering approach to product research, development and manufacture rapidly established SPAFAX as a brand synonymous with quality and value, underpinned by exceptional customer service.

As the market-leader, with a network of subsidiary companies in the UK and throughout continental Europe, our innovative philosophy resulted in the introduction of the first SPAFAX shatterproof mirror in 1965, initiating an uninterrupted development programme which has continued through the decades.





The Unbreakable Mirror

Robust, rugged and constructed using self-extinguishing compounds, SPAFAX unbreakable mirrors offer unrivalled performance for military users and the security and emergency services.

As glass, acrylic and polished steel mirrors continue to be discounted as viable military options due to inferior performance, SPAFAX unbreakable mirrors are adopted as the obvious economical and safe choice by the world's military users and Original Equipment Manufacturers.

Remaining serviceable under the most severe operational conditions, including weapon recoil, ballistic detonation and even direct ballistic impact, a SPAFAX mirror will perform safely, economically and reliably.





The images show the entry and exit points on a Spafax VM100 unbreakable mirror made by two standard military issue 5.56mm bullets, fired from a distance of 40 feet.

The mirror continues to reflect a true and bright image and all components remain fully serviceable.



SPAFAX Mirror Lens

SPAFAX mirror lenses are manufactured from injection moulded optical grade polycarbonate and are guaranteed against breakage for ten years. Optically perfect and stable in all conditions, day or night, without distortion, SPAFAX lenses are unbreakable and safe to use. Outperforming glass, acrylic and steel lenses and offering unmatched longevity, our lenses will not discolour and yellow with the effect of ultraviolet rays present in sunlight. Each lens is sealed and protected by a special coating, which provides scratch resistance and will repel condensation and surface water.

Our lenses provide exceptional definition with a reflected image that is true and bright, exceeding the European minimum standard reflectivity by more than 100%. Our lenses won't break, shatter or splinter, ensuring the ultimate in safety for drivers, operators, pedestrians and service personnel.



SPAFAX Mirror Body

Our mirror bodies are produced by moulding specially toughened, UV stabilised low temperature polypropylene and are designed to minimise vibration and to cut down wind buffeting.

Unlike rigid metal or easily broken ABS plastic favoured by other commercial mirror manufacturers, our polypropylene bodies are flexible and are engineered to withstand the harshest operational conditions.



SPAFAX Mirror Clamp

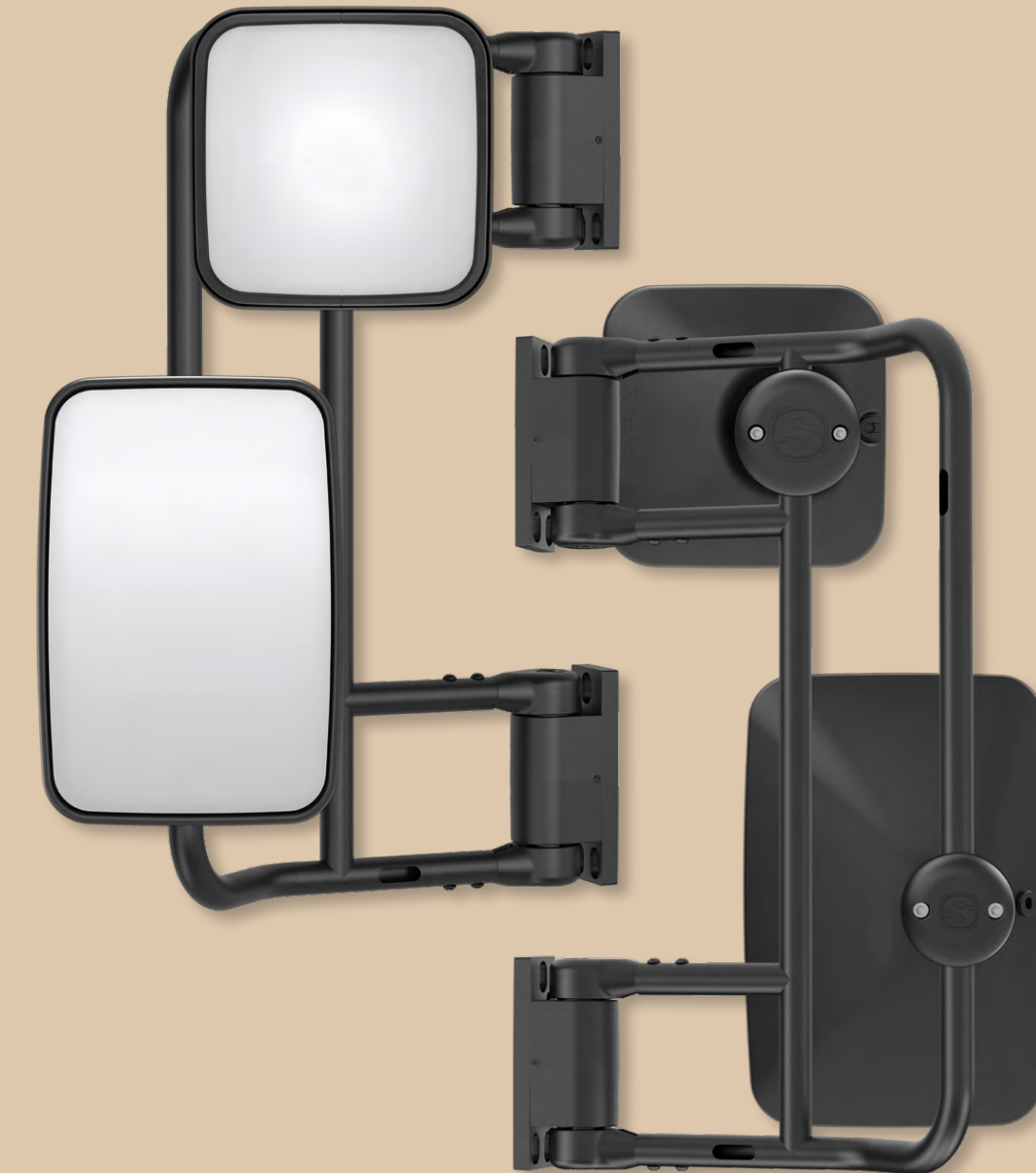
The SPAFAX patented mounting clamp, in keeping with all SPAFAX components, is designed and manufactured for longevity and ease of use, ensuring rapid attachment to the widest possible variety of vehicles and equipment.

Moulded in UV stabilised GRP nylon, the clamp secures mounting arms with diameters ranging in size from 10mm to an industry-leading 46mm. They will also fit 22.5mm square arms. Once mounted, our clamps can be tilted between to 20° and will rotate through 360° (excluding motorised variants).



SPAFAX Mirror Assemblies

With infinitely adjustable hub angles and tube configurations, with options for wiring and connectors of all types (standard to MIL-SPEC), we specialize in designing bespoke solutions configured for optimum vision, performance and safety.



SPAFAX MIRRORS

VM1R Series

Lens Size: 305 x 205mm (12" x 8")



VM2 Series

Lens Size: 205 x 150mm (8" x 6")



VM3 Series

Lens Size: 207 x 146mm (8.1" x 5.74")



VM4 Series

Lens Size: 200 x 200mm (7.8" x 7.8")



VM5 Series

Lens Size: 196 x 296mm (7.71" x 11.65")



VM100 Series

Lens Size: 383 x 183mm (15" x 7.2")



TECHNICAL DETAILS

MODEL	DESCRIPTION	RADIUS	FITTING Ø	CLASS	NATO Storage Number (Cage Code K8220)
VM1R	UNBREAKABLE MIRROR	1200mm	16 - 32mm	II	2540-99-168-6857
VM1RH	UNBREAKABLE MIRROR HEATED 12V / 24V	1200mm	16 - 32mm	II	2540-99-257-6285
VM1RM	UNBREAKABLE MIRROR MOTORISED 12V / 24V	1200mm	16 - 32mm	II	2540-99-758-7589
VM2	UNBREAKABLE MIRROR	1500mm	10 - 32mm	II / III	2540-99-666-4847
VM2H	UNBREAKABLE MIRROR HEATED 12V / 24V	1500mm	10 - 32mm	II / III	2540-99-320-0187
VM3	UNBREAKABLE MIRROR	600mm	10 - 32mm	IV / V	2540-99-866-2287
VM3H	UNBREAKABLE MIRROR HEATED 12V / 24V	600mm	10 - 32mm	IV / V	2540-99-933-4569
VM4	WIDE ANGLE UNBREAKABLE MIRROR	300mm	16 - 46mm	IV / V	2540-99-377-5650
VM4H	WIDE ANGLE UNBREAKABLE MIRROR HEATED 24V	300mm	16 - 46mm	IV / V	2540-99-151-7005
VM4M	WIDE ANGLE UNBREAKABLE MIRROR MOTORISED 24V	300mm	16 - 46mm	IV / V	2540-99-226-0968
VM5	WIDE ANGLE UNBREAKABLE MIRROR	300mm	16 - 32mm	V / VI	2540-99-753-3058
VM5H	WIDE ANGLE UNBREAKABLE MIRROR HEATED 12V / 24V	300mm	16 - 32mm	V / VI	—
VM100	UNBREAKABLE MIRROR	1600mm	16 - 32mm	II	2540-99-852-5383
VM100H	UNBREAKABLE MIRROR HEATED 24V	1600mm	16 - 32mm	II	2540-99-834-8503

The NATO part numbers shown are specific to SPAFAX products. Most of the 2,540 mirrors registered under NATO can be directly replaced with SPAFAX mirrors.

SPAFAX HEAVY DUTY MIRROR ARMS

Our high-performance, super-lightweight, fuel-efficient MA22 Series arms offer a variety of superior mounting solutions.

With infinitely adjustable hub angles and tube configurations, with options for wiring and connectors of all types (standard to MIL-SPEC), we specialise in designing bespoke solutions configured for optimum vision, performance and safety.



MA22-023-01-4-T6



MA22-024-01-4-T6



MA22-039-01-4-T6



MA22-045-01-4-T6



MA22-051-01-4-T6



MA22-057-01-4-T6



MA22-062-01-4-T6



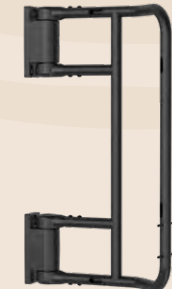
MA22-065-01-4-T6



MA22-079-01-4-T6



MA22-080-01-4-T6



MA22-090-01-4-T6



MA22-098-01-4-T6



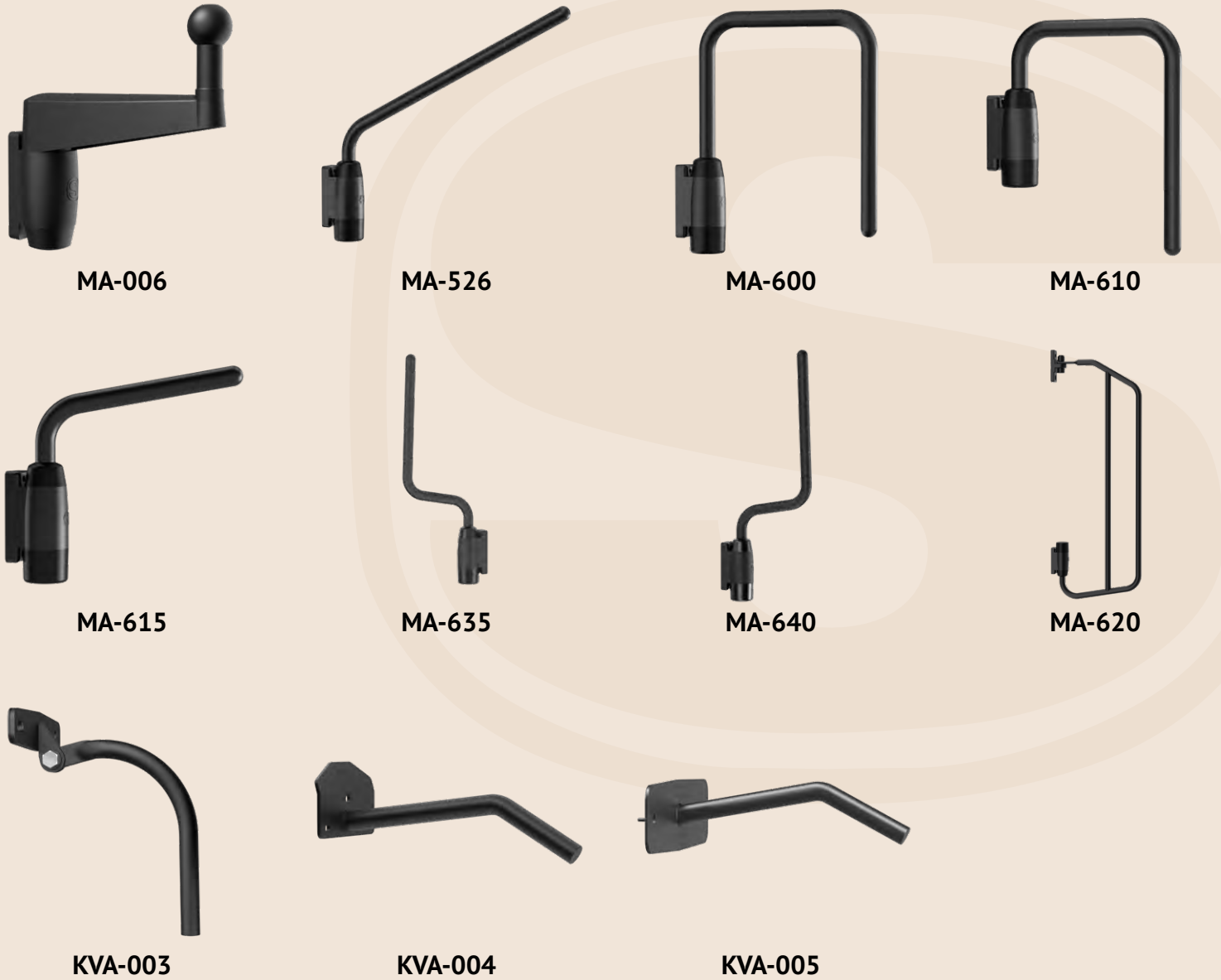
TECHNICAL DETAILS

MODEL	THROW	HEIGHT	DIAMETER	MATERIAL
MA22-023-01-4-T6	361mm	417mm	Ø 22mm	Aluminium
MA22-024-01-4-T6	361mm	567mm	Ø 22mm	Aluminium
MA22-045-01-4-T6	300mm	403mm	Ø 22mm	Aluminium
MA22-039-01-4-T6	235mm	400mm	Ø 22mm	Aluminium
MA22-051-01-4-T6	361mm	709mm	Ø 22mm	Aluminium
MA22-057-01-4-T6	235mm	603mm	Ø 22mm	Aluminium
MA22-062-01-4-T6	361mm	604mm	Ø 22mm	Aluminium
MA22-065-01-4-T6	235mm	603mm	Ø 22mm	Aluminium
MA22-079-01-4-T6	332mm	566mm	Ø 22mm	Aluminium
MA22-080-01-4-T6	332mm	566mm	Ø 22mm	Aluminium
MA22-090-01-4-T6	332mm	566mm	Ø 22mm	Aluminium
MA22-098-01-4-T6	311mm	603mm	Ø 22mm	Aluminium

SPAFAX MEDIUM DUTY MIRROR ARMS

Our medium duty arms offer a wide range of indexable solutions, providing robust and secure mirror and camera mountings for almost all vehicles, even at high speeds.

Our KVA arms are designed for use with our VM5 mirror, for secure Class V kerb view applications.



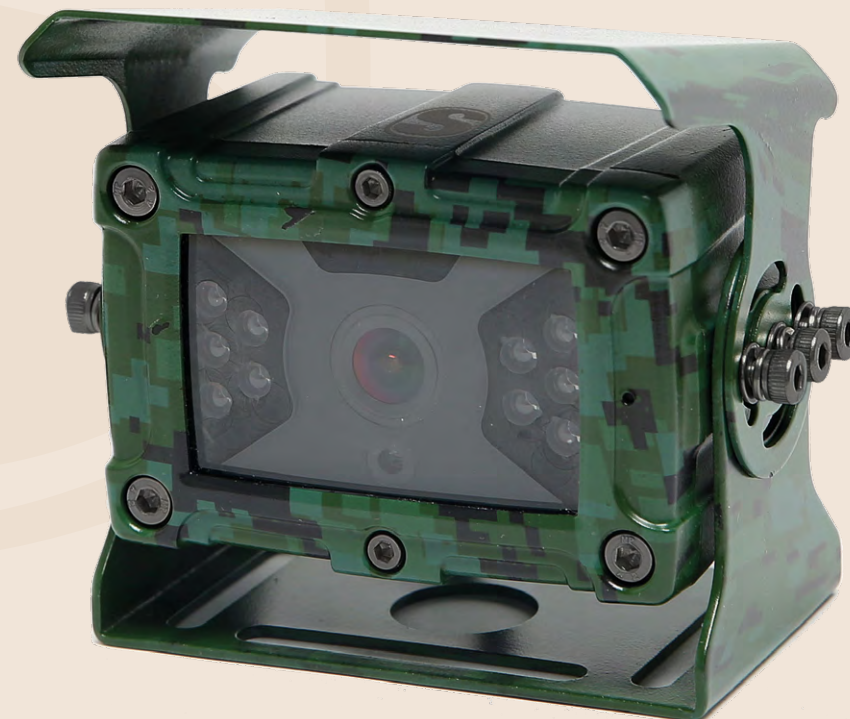
TECHNICAL DETAILS

MODEL	THROW	HEIGHT	DIAMETER	MATERIAL
MA-006	138mm	131.2mm	Ø 24mm	Mild Steel
MA-526	263mm	181mm	Ø 16mm	Mild Steel
MA-600	215mm	270mm	Ø 16mm	Mild Steel
MA-610	160mm	216mm	Ø 16mm	Mild Steel
MA-615	176mm	108mm	Ø 16mm	Mild Steel
MA-635	108mm (5° L/H)	368mm	Ø 16mm	Mild Steel
MA-640	108mm (5° R/H)	368mm	Ø 16mm	Mild Steel
MA-620	215mm	540mm	Ø 16mm	Mild Steel
KVA-003	214° to 64.8°		Ø 16mm	Mild Steel
KVA-004	130mm at 97° and 74mm at 38°		Ø 16mm	Mild Steel
KVA-005	130mm at 10° and 80mm at 38°		Ø 16mm	Mild Steel

SPAFAX CAMERA SYSTEMS

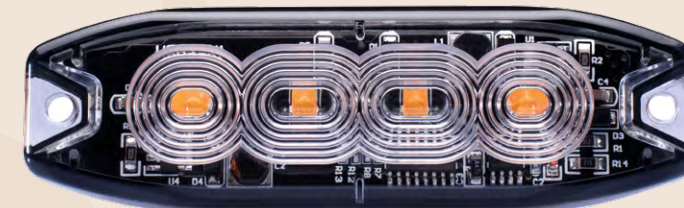
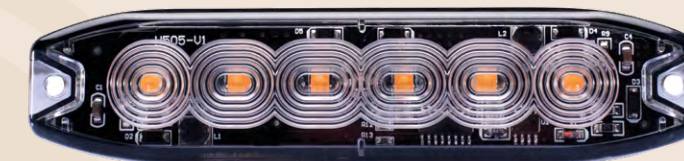
SPAFAX camera systems provide military users with robust, proven vision solutions for defence and tactical vehicles. Our economical tailored systems inspire operator confidence, whilst delivering essential vision, safety and protection for all personnel.

A choice of wired and wireless systems, waterproofed to IP69K are available and with impact-resistant and explosion-proof options, performance and safety are assured.



SPAFAX LIGHTING & AUDIO SYSTEMS

A pioneering commitment to visual safety and product quality has always been at the very core of our business, resulting in our unsurpassed knowledge of unbreakable mirrors. Our Safety Lighting Systems, embracing warning beacons, directional LEDs and lamps further extends the choice of SPAFAX rugged, high-performance, quality visual warning products.



Our compact universal, self-adjusting SMART Alarms incorporate self-resonating circuitry, which measures the ambient noise and automatically adjusts the sound accordingly.

Our popular configurations include verbal warning, white sound and night-silent options. Sealed against dust and moisture to IP67 and vibration resistant, our R10 certified alarms provide quality and rugged performance.



**Unbreakable
Mirrors**

**Retroviseur
Incassable**

**Unzerbrechliche
spiegel**

**Espejo Retrovisor
Irrompible**

**Specchio
Infrangibile**

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