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HOWE X HOWE





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THERMITE®

Thermite is a compact, high-performance firefighting robot. It is an automated robot that has the ability to fight fires and respond to emergency situations, and is capable of dealing with advanced and dangerous fire situations that neither humans nor any other machine can handle with the same efficiency.

The Thermite was designed with the highest quality standards with a focus on durability and high endurance on a military base. This device has a long life span and low maintenance, thus reducing costs and ease of maintenance. It is the first responder and fight fires very effectively and keeps firefighters away at a safe distance in order to preserve safety. Their souls, it is their first line of attack and defense.

Thermite is recommended for:

01 fires in oil and gas fields, chemical and petrochemical facilities, Storage places such as petroleum tanks Petroleum and liquified gas refineries.

02 Fire hazardous materials and ammunition.

03 Nuclear reactors Aircraft and port accidents.

04 Heavy industry factories such as aluminum, iron and steel factories.

05 High-rise building and house fires.

06 Power plants, electricity and pipelines.

07 Forest fires and open areas where it is difficult to control the fire.

08 Marine tanker fires It can be used on board tankers, ships and boats in coastal and marine firefighting in general for its ease of transportation and control of its placement in various places.





TREAD BOLDLY

HOWE X HOWE

2022

FIREFIGHTING ROBOT

# THERMITE® RS3

## > CAPABLE OF OUTPUTTING 2,500 GPM FLOW RATE

The Thermite RS3 is a super-high volume, low center of gravity, wide chassis, industrial firefighting robot. The RS3 is remotely operated with a bellypack controller that provides high-definition video feedback for ultimate maneuverability in difficult conditions. The RS3's modular design and wider stance allows additional equipment to be incorporated, including a plow assembly and positive pressure ventilation (PPV) ventilator. Fabricated using industrial-grade steel reinforced rubber tracks, RS3 can navigate rugged terrain and withstand exposure to the extreme elements.

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**MAX FLOW  
RATE**  
2,500 GPM

**DIMENSIONS**  
L 120 IN  
W 65.5 IN  
H 64.75 IN





# THERMITE RS3

## FIREFIGHTING ROBOT

### SYSTEM

#### TRACKS

Industrial-grade  
belted rubber

#### WINCH

8,000 lb capacity

#### VIDEO SYSTEM

DTV (standard)  
FLIR thermal (optional)

#### POWER TRANSMISSION

Hydrostatic

#### TYPE

Independent propulsion

### MONITOR

#### MAKE & MODEL

Elkhart Brass Scorpion

#### MAX STREAM VERTICAL

+150 ft / 50 m

#### MAX STREAM HORIZONTAL

+300 ft / 100 m

#### MAX PSI/BARS

200 psi

#### FLOW

2,500 gpm

### DIMENSIONS

#### VEHICLE WEIGHT

+/- 3,500 lb depending  
on attachments

#### GROUND CLEARANCE

10 in

#### LENGTH

120 in

#### WIDTH

65.5 in

#### HEIGHT

64.75 in

### SYSTEM PERFORMANCE

#### RANGE

300 m environment  
dependent

#### SPEED

8 mph

#### MAX GRADE SLOPE

+50%

#### MAX SIDE SLOPE

35%

### ENGINE

#### MAKE & MODEL

Yanmar 3TNV88C

#### ENGINE DESCRIPTION

36.8 hp, diesel, 4 stroke, water cooled

#### FUEL CAPACITY

9 gal

### OPTIONAL ATTACHMENTS

- > Foam Nozzle
- > Foam Tank
- > Scene Lighting
- > PPV Ventilator
  - Max PPV Tilt: 35 degrees above horizontal
  - Flow: 9,200 cfm
- > Plow Assembly
  - Height: 13 in
  - Width: 65 in
- > Dimensions with Attachments
  - Length: 115 in
  - Width: 65.5 in
  - Height: 87.75 in

### FEATURES

- > 36.8 hp diesel engine
- > 2,500 gpm nozzle
- > Stand off range of over 300 m
- > Track and vehicle cooling sprayers
- > Up to 20 hr of runtime without refueling
- > High strength industrial-grade belted rubber tracks
- > Provides reconnaissance and situational awareness in high risk areas



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## > UNSURPASSED MOBILITY WITH MAXIMUM STANDOFF

Thermite RS1 is the most capable, durable and reliable firefighting robot on the market. The RS1 is remotely operated with a backpack controller that provides high-definition and infrared video in real-time, allowing the machine to traverse hazardous terrain with maximum control. Manufactured by leaders in robotic innovation, RS1 has the power to push vehicles from its path, the agility to climb stairs and the ability to output a maximum 1,250 gpm. Thermite is designed as an advanced tool to help operators combat fires safely and efficiently.

**MAX FLOW  
RATE**  
1,250 GPM

**DIMENSIONS**  
L 77.25 IN  
W 44 IN  
H 64 IN

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# THERMITE RSI

## FIREFIGHTING ROBOT

### SYSTEM

**TRACKS**  
Industrial-grade  
belted rubber

**POWER TRANSMISSION**  
Hydrostatic

**TYPE**  
Independent  
propulsion

**WINCH**  
5,000 lb capacity

**VIDEO SYSTEM**  
DTV (standard)  
FLIR thermal (optional)

### MONITOR

**MAKE & MODEL**  
Elkhart Brass Cobra

**MAX STREAM HORIZONTAL**  
+300 ft / 100 m

**FLOW**  
1,250 gpm

**MAX PSI/BARS**  
200 psi

**MAX STREAM VERTICAL**  
+150 ft / 50 m

### SYSTEM PERFORMANCE

**MAX GRADE SLOPE**  
+50%

**RANGE**  
300 m environment dependent

**MAX SIDE SLOPE**  
35%

**SPEED**  
6 mph

### ENGINE

**ENGINE DESCRIPTION**  
24 hp, diesel, 4 stroke, water cooled

**MAKE & MODEL**  
Kohler KDW1003

### DIMENSIONS

**LENGTH**  
77.25 in

**HEIGHT**  
64 in

**WIDTH**  
44 in

**GROUND  
CLEARANCE**  
8 in

**VEHICLE WEIGHT**  
+/- 1,600 lb

### FEATURES

- > 24 hp diesel engine
- > 1,250 gpm nozzle
- > Stand off range of over 300 m
- > Track and vehicle cooling sprayers
- > Up to 20 hrs of runtime without refueling
- > High strength construction grade tracks and road wheels
- > Provides reconnaissance and situational awareness in high risk areas
- > Optional attachments: foam nozzle and scene lighting



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FIREFIGHTING ROBOT

# THERMITE® EV2

## > NEXT GENERATION THERMITE® EV2 ALL-ELECTRIC FIREFIGHTING ROBOT

The Thermite® EV2 is an all-electric firefighting robot that provides real-time situational awareness with recording capabilities. Thermite EV2 safely and effectively targets fires with its modular design, including a multi-position nozzle and additional attachments. Instead of a traditional internal combustion engine, the Thermite EV2 is powered with the latest in high-capacity battery technology; and unlike these flammable fuel consuming engines, it does not require oxygen for power, enabling the firefighting robot to move farther into dangerous high-temperature oxygen deprived environments.

LEARN MORE:



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# THERMITE® EV2

ALL-ELECTRIC FIREFIGHTING ROBOT

## SYSTEM

### TRACKS

Industrial-grade  
belted rubber

### WINCH

8,000 lb capacity

### VIDEO SYSTEM

HD (standard)

### DRIVE SYSTEM

200-amp hour  
battery system  
Dual Electric Drive

## MONITOR

### MAKE & MODEL

Akron Brass  
DeckMaster

### MAX STREAM VERTICAL

+150 ft / 50 m

### MAX STREAM HORIZONTAL

+300 ft / 100 m

### MAX PSI/BARS

200 psi

### FLOW

1250 gpm (4800 lpm)

## DIMENSIONS

### VEHICLE WEIGHT

2,700 lb depending on  
attachments

### GROUND CLEARANCE

10 in

### LENGTH

113 in (plow and winch inc.)

### WIDTH

60.5 in

### HEIGHT

52 in w/ monitor stowed  
73 in w/monitor full extension

## OPTIONAL ATTACHMENTS

- › Foam Nozzle
- › Foam Tank
- › Scene Lighting
- › CAFS
- › Plow Assembly
  - Height: 13 in
  - Width: 65 in
- › Multisensor Day/night 360 deg.  
PTZ with CCTV and Thermal Zoom
- › FLIR Thermal

## FEATURES

- › 1,250 gpm nozzle
- › Stand off range of over 300 m
- › Track and vehicle cooling  
sprayers
- › Up to 20 hr of runtime
- › High strength industrial-grade  
belted rubber tracks
- › Provides reconnaissance and  
situational awareness in high  
risk areas

## SYSTEM PERFORMANCE

### RANGE

300 m environment  
dependent

### SPEED

8 mph

### MAX GRADE SLOPE

+50%

### MAX SIDE SLOPE

35%



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## > NEXT GENERATION THERMITE® EV1 ALL-ELECTRIC FIREFIGHTING ROBOT

The Thermite® EV1 is an all-electric firefighting robot that provides real-time situational awareness. Thermite EV1 safely and effectively targets fires with its modular design, including a multi-position nozzle and additional attachments. Instead of a traditional internal combustion engine, the Thermite EV1 is powered with the latest in high-capacity battery technology; and unlike these flammable fuel consuming engines, it does not require oxygen for power, enabling the firefighting robot to move farther into dangerous high-temperature oxygen deprived environments.

LEARN MORE:



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## THERMITE® EV1

ALL-ELECTRIC FIREFIGHTING ROBOT

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firesales@howeandhowe.com **INFO**



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### SYSTEM

**TRACKS**  
Industrial-grade  
belted rubber

**WINCH**  
5,000 lb capacity

**VIDEO SYSTEM**  
HD (standard)

**DRIVE SYSTEM**  
200-amp hour  
battery system  
Dual Electric Drive

### MONITOR

**MAKE & MODEL**  
Elkhart Brass Cobra

**MAX STREAM VERTICAL**  
+150 ft / 50 m

**MAX STREAM HORIZONTAL**  
+300 ft / 100 m

**MAX PSI/BARS**  
200 psi / 13 bar

**FLOW**  
1250 gpm

### DIMENSIONS

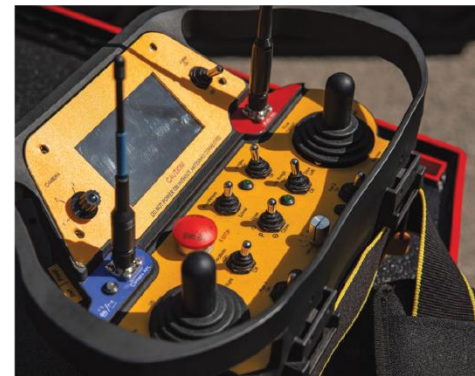
**VEHICLE WEIGHT**  
1,550 lb / 703 kg  
depending on attachments

**GROUND CLEARANCE**  
6 in / 17.8 cm

**LENGTH**  
75 in / 190.5 cm

**WIDTH**  
38 in / 96.5 cm

**HEIGHT**  
43 in / 109.2 cm (top of halo)  
51 in / 129.5 cm (top of antenna)



### FEATURES

- 1,250 gpm nozzle
- Stand off range of over 300 m
- Track and vehicle cooling sprayers
- Up to 20 hr of runtime
- High strength industrial-grade belted rubber tracks
- Provides reconnaissance and situational awareness in high risk areas

### SYSTEM PERFORMANCE

**RANGE**  
300 m environment  
dependent

**SPEED**  
5 mph /  
8 kph

**MAX GRADE SLOPE**  
+50%

**MAX SIDE SLOPE**  
35%



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# SWAT-BOT™ EV2

## > NEXT GENERATION SWAT-BOT™ EV2 MOBILE BALLISTIC SHIELD

In 2012, Howe & Howe created SWAT-BOT™, a highly mobile, ballistic shield, tracked robot designed to protect an 8 person team from direct gunfire allowing operators a safer, more protected offensive movement. This robot provides effective defensive & offensive abilities in active shooter scenarios, hostage, and standoff situations. After reengineering its original design, SWAT-BOT is now all-electric & utilizes some of the same technologies that are in the unmanned ground vehicles used by the U.S. Army & Thermo® firefighting robots.

[HOWEANDHOWE.COM](https://howeandhowe.com)

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# SWAT-BOT™

## SYSTEM

### TRACKS

Industrial-grade  
Belted rubber

### WINCH

8,000 lb capacity

### UTILITY TOOLS

Door breacher  
Dragon tail

### DRIVE SYSTEM

200-amp hour battery system  
Dual Electric Drive

## DIMENSIONS

### BASE HEIGHT

47 in / 78 in  
119 cm / 198 cm  
(shield deployed)

### BASE WIDTH

60.5 in / 116 in  
154 cm / 294 cm  
(shield deployed)

### BASE LENGTH

97 in / 246 cm

### WEIGHT

3700 lbs / 1680 kg

## ELECTRONICS

### RADIO CONTROL

Handheld control  
w/Picatinny rail mount

### LOUDSPEAKER

## LIGHTING

- › Front
- › Side
- › Emergency flasher, dual color
- › Spotlight

## BALLISTICS OPTIONS

- › Ultra high hard steel nose
- › Three ballistic glass windows
- › Collapsible ballistic shield
  - NIJ 3
  - NIJ 4

## VIDEO/CAMERA OPTIONS

- › Video system options
  - M10 PTZ HD Color/Thermal

## SYSTEM PERFORMANCE

### REMOTE RANGE

300 m / 984 ft  
(environment dependent)

### SPEED

8 mph / 13 kph

### MAX GRADE SLOPE

+50%

### MAX SIDE SLOPE

35%



# Press News & Global Awards

## Press News & Global Awards

The Howe & Howe team have been selected two years in a row for the innovative products they make. The Thermite® RS3 won a Popular Science 2020/2021 Best of What's New Award for "tackling the toughest blazes."

[The top 100 new technologies of 2021 | Popular Science \(popsci.com\)](https://www.popsci.com/top-100-new-technologies-2021/)

### \* Social Media

- <https://www.facebook.com/188236245889/posts/10159582187000890/>
- <https://www.facebook.com/188236245889/posts/10159459660630890/>
- <https://www.instagram.com/p/CW54Z9fNhM4/>
- <https://twitter.com/Textron/status/1468326450877112327>
- <https://twitter.com/smartercreative/status/1467903415904870404>



Abu Dhabi Civil Defence Authority won the International Best Practice award at the Excellence in Fire and Emergency Awards 2021

هيئة أبوظبي للدفاع المدني  
ABU DHABI CIVIL DEFENCE  
AUTHORITY



- <https://www.fire-magazine.com/excellence-in-fire-emergency-awards-winners-2021>
- <https://www.albayan.ae/uae/news/2021-12-08-1.4318451>
- <https://www.instagram.com/p/CXN1AGkhi5a/>
- <https://www.instagram.com/p/CXN1YIzFc-P/>
- [https://twitter.com/FIRE\\_Editor/status/1466798415992569861?s=20](https://twitter.com/FIRE_Editor/status/1466798415992569861?s=20)
- <https://www.instagram.com/p/CIF4km-hLKI/?igshid=ZmRIMzRkMDU%3D>



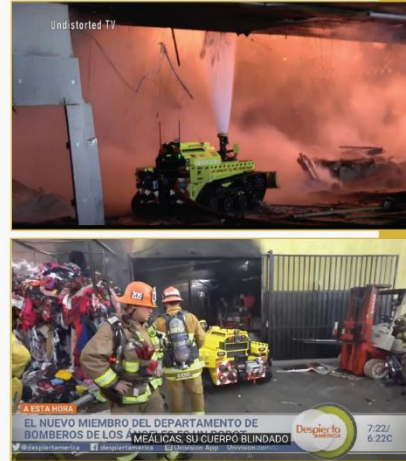


## Global Press News

- <https://www.intelligentliving.co/thermite-rs3-americas-first-firefighting-robot/>
- <https://www.lafd.org/news/lafd-debuts-rs3-first-robotic-firefighting-vehicle-united-states>
- <https://edition.cnn.com/2020/10/21/business/first-firefighting-robot-in-america-lafd-trnd/index.html>
- <https://www.lafd.org/news/lafd-debuts-rs3-first-robotic-firefighting-vehicle-united-states>
- <https://newatlas.com/robotics/us-first-firefighting-robot-la>

## Coverage of some of the accidents involving thermite

- <https://www.youtube.com/watch?v=2Hl603r6BTA>
- <https://www.youtube.com/watch?v=lrc2ykFRSiQ>
- <https://www.youtube.com/watch?v=DW4cauOMw1k>
- [https://www.youtube.com/watch?v=7IYi2onX\\_nc](https://www.youtube.com/watch?v=7IYi2onX_nc)
- <https://www.youtube.com/watch?v=PEF0WhRJAJo>
- <https://www.youtube.com/watch?v=r6xJur4bOScG>



## Local Press News

Press release from the Abu Dhabi Civil Defense Authority website and social media platforms

- [18 Affiliates proficient in using the firefighting robot for Abu Dhabi Civil Defense \(adcd.ae\)](https://adcd.ae/en/18-Affiliates-proficient-in-using-the-firefighting-robot-for-Abu-Dhabi-Civil-Defense)



## Instagram

- [https://www.instagram.com/tv/CKjaS8ihA4P/?utm\\_source=ig\\_web\\_copy\\_link](https://www.instagram.com/tv/CKjaS8ihA4P/?utm_source=ig_web_copy_link)
- [https://www.instagram.com/p/CLQ\\_V1UhKIY/?utm\\_source=ig\\_web\\_copy\\_link](https://www.instagram.com/p/CLQ_V1UhKIY/?utm_source=ig_web_copy_link)
- [https://www.instagram.com/p/CKd0BZ5BJKW/?utm\\_source=ig\\_web\\_copy\\_link](https://www.instagram.com/p/CKd0BZ5BJKW/?utm_source=ig_web_copy_link)

## Twitter

- <https://twitter.com/adcd997/status/1360870425706823682?s=20>

## Local Press News

Press release from the Ministry of Interior website and social media platforms

- <https://www.moi.gov.ae/ar/media.center/News/2764416.aspx>

## Instagram

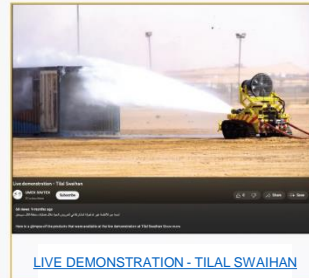
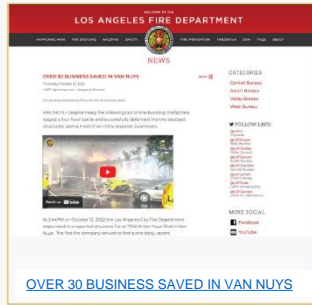
- [https://www.instagram.com/p/BmF4qM5hmmn/?utm\\_source=ig\\_share\\_sheet&igshid=12fid2nl4heq9&r=wa1](https://www.instagram.com/p/BmF4qM5hmmn/?utm_source=ig_share_sheet&igshid=12fid2nl4heq9&r=wa1)
- [https://www.instagram.com/tv/CMfPNrqhCM1/?utm\\_source=ig\\_web\\_copy\\_link](https://www.instagram.com/tv/CMfPNrqhCM1/?utm_source=ig_web_copy_link)

## Twitter

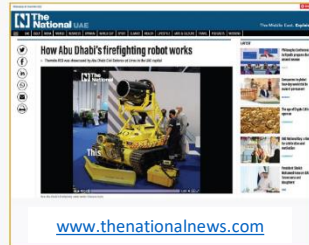
- <https://twitter.com/moiuae/status/1026036045371125760?s=19>







## Various Press News



## For more information about the Thermite robotic firefighting robot

### Please Visit

WWW.HOWEANDHOWE.COM  
ALQUDRA-GLOBAL.COM

### YouTube Channel

THERMITE RS3 ROBOTIC FIREFIGHTING-AR1  
THERMITE™ FIREFIGHTING ROBOT  
THERMITE RS3 ROBOTIC FIREFIGHTING  
THERMITE@RS3-EN

### Social Media Channels

HOWE AND HOWE / INSTAGRAM  
INSTAGRAM  
FACEBOOK  
X  
LINKEDIN

### Contact

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## Various Press News





## WHY HEN

### DESIGNED SCIENTIFICALLY

Designed by fire service veterans and scientists, using advanced fluid mechanics.

### SUPERIOR SUPPRESSION

Large droplets, wide coverage and long reach for efficient water mapping.

### INCREASED SAFETY

With products like Turbo, HEN increase safety and ergonomics for firefighters.

### WIDELY ADOPTED

Trusted by dozens of fire departments, US military and industrial fire departments.

## Contact Us for more details

Email:  
sales@alqudra-global.com

Website :  
www.alqudra-global.com

## HEN a better way to fight fire



Now offering  
**TURBO back pressure increaser**  
Bundle it with popular  
**BLADE nozzle and HYDRO shutoff**

info@alqudra-global.com



## HEN **TURBO**

### WORLD'S FIRST HOSE BACK PRESSURE INCREASER

- Increases hose stiffness and handling.
- Reduces dangerous hose and nozzle whip.
- Knocks out kinks and reduces overall hoseline kinking.
- Improves performance on all hoseline construction packages.

#### AVAILABLE SIZES

25PSI-1.5"NH, 25PSI-1.5"NPSH  
25PSI-2.5"NH, 25PSI-2.5"NPSH

## HEN **HYDRO**

### HIGH DURABILITY SHUTOFF WITH GATE-BALL VALVE

- Easier opening and closing.
- Provides improved stream distance and shape when partially closed.
- Large hand bale opening provides improved control.
- All aluminum construction reduces weight and improves balance.

#### AVAILABLE SIZES

HYDRO 100 SERIES: 1" WATERWAY  
HYDRO 138 SERIES: 1 3/8" WATERWAY  
HYDRO 200 SERIES: 2" WATERWAY

## HEN **BLADE**

### WORLD'S FIRST ADJUSTABLE SMOOTHBORE NOZZLE

- Large droplet size.
- Go from a solid tight stream to a solid in-line blade pattern.
- Quarter-turn stream adjustment optimized for ergonomics.
- Delivering Coverage, Cooling and Contraction of Gasses.

#### AVAILABLE SIZES

20GPM@100PSI, 45GPM@100PSI,  
95GPM@100PSI, 160GPM@50PSI,  
185GPM@50PSI, 265GPM@50PSI





## A better way to fight fire

### HEN BLADE- NOZZLES

Adjustable SmoothBore Nozzle



Adjustable SmoothBore nozzle that allows you to go from a solid tight stream to a solid in-line blade pattern

- Solid tight pattern and solid blade pattern
- Optimized placement and droplet size
- Aluminum alloy body for maximum durability
- NFPA compliant

Available in following sizes:

20GPM@100PSI, 45GPM@100PSI, 95GPM@100PSI, 160GPM@50PSI, 185GPM@50PSI and 265GPM@50PSI

High durability shutoff with gate-ball valve, ergonomically designed for superior flow

### HEN HYDRO - SHUTOFFS

Gate-Ball valve shutoff

- Lightweight ergonomic design.
- Maximize stream efficiency in baled down operations.
- Aluminum alloy body and gate-ball valve for maximum durability
- NFPA compliant

Available in following sizes:

Hydro 100 series: 1" waterway  
Hydro 138 series: 1 3/8" waterway  
Hydro 200 series: 2" waterway





HEN

# BLADE 20

## Combination Smoothbore Nozzle



### Overview

The HEN BLADE combination smoothbore nozzle redefines fire attack by combining the reach and penetration of a traditional smoothbore with the versatility of an in-line blade pattern. With a simple quarter turn, firefighters can transition from a tight solid stream to a wide, high-impact blade stream, delivering large water droplets for maximum efficiency, improved cooling, and enhanced control.

### Specifications

	IMPERIAL	METRIC
Target Flow	20 gpm	75 lpm
Target Pressure	100 psi	7 bar
Blade Pattern Angle	22°	22°
Weight	1 lb	0.45 kg
Length	5.0 in.	127 mm
Width	2.5 in.	64 mm

### Coverage

WIDTH	REACH
10'	25'
8'	20'
6'	15'
4'	10'
2'	5'

### Features

- Quarter-turn from wide blade pattern to solid tight pattern
- Hard-coat anodized aluminum construction
- Available with 1" NH and 1" NPSH threads
- Full-time swivel
- NFPA 1960/1964 compliant
- 5-Year Warranty

### Flow Rates

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
50 (3.4)	14 (54)
75 (5.2)	17 (66)
100 (6.9)	20 (76)
125 (8.6)	22 (85)
150 (10.3)	25 (93)



For any questions or inquiries:  
info@alqudra-global.com



HEN

# BLADE 45

## Combination Smoothbore Nozzle



### Overview

The HEN BLADE combination smoothbore nozzle redefines fire attack by combining the reach and penetration of a traditional smoothbore with the versatility of an in-line blade pattern. With a simple quarter turn, firefighters can transition from a tight solid stream to a wide, high-impact blade stream, delivering large water droplets for maximum efficiency, improved cooling, and enhanced control.

### Specifications

	IMPERIAL	METRIC
Target Flow	45 gpm	170 lpm
Target Pressure	100 psi	7 bar
Blade Pattern Angle	22°	22°
Weight	1 lb	0.45 kg
Length	5.5 in.	140 mm
Width	2.5 in.	64 mm

### Coverage

WIDTH	REACH
10'	25'
8'	20'
6'	15'
4'	10'
2'	5'

### Features

- Quarter-turn from wide blade pattern to solid tight pattern
- Hard-coat anodized aluminum construction
- Available with 1" NH, 1" NPSH, 1.5" NH, & 1.5" NPSH threads
- Full-time swivel
- NFPA 1960/1964 compliant
- 5-Year Warranty

### Flow Rates

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
50 (3.4)	32 (121)
75 (5.2)	39 (149)
100 (6.9)	45 (172)
125 (8.6)	51 (192)
150 (10.3)	56 (210)



For any questions or inquiries:  
info@alqudra-global.com

HEN

# BLADE 95

## Combination Smoothbore Nozzle



### Overview

The HEN BLADE combination smoothbore nozzle redefines fire attack by combining the reach and penetration of a traditional smoothbore with the versatility of an in-line blade pattern. With a simple quarter turn, firefighters can transition from a tight solid stream to a wide, high-impact blade stream, delivering large water droplets for maximum efficiency, improved cooling, and enhanced control.

### Specifications

	IMPERIAL	METRIC
Target Flow	95 gpm	350 lpm
Target Pressure	100 psi	7 bar
Blade Pattern Angle	22°	22°
Weight	1.2 lb	0.54 kg
Length	5.7 in.	145 mm
Width	2.7 in.	69 mm

### Coverage

WIDTH	REACH
10'	25'
8'	20'
6'	15'
4'	10'
2'	5'

### Features

- Quarter-turn from wide blade pattern to solid tight pattern
- Hard-coat anodized aluminum construction
- Available with 1.5" NH and 1.5" NPSH threads
- Full-time swivel
- NFPA 1960/1964 compliant
- 5-Year Warranty

### Flow Rates

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
50 (3.4)	67 (253)
75 (5.2)	82 (310)
100 (6.9)	95 (358)
125 (8.6)	106 (400)
150 (10.3)	116 (438)



For any questions or inquiries:  
info@alqudra-global.com



HEN

# BLADE 160

## Combination Smoothbore Nozzle



### Overview

The HEN BLADE combination smoothbore nozzle redefines fire attack by combining the reach and penetration of a traditional smoothbore with the versatility of an in-line blade pattern. With a simple quarter turn, firefighters can transition from a tight solid stream to a wide, high-impact blade stream, delivering large water droplets for maximum efficiency, improved cooling, and enhanced control.

### Specifications

	IMPERIAL	METRIC
Target Flow	160 gpm	650 lpm
Target Pressure	50 psi	4 bar
Blade Pattern Angle	22°	22°
Weight	1.7 lb	0.77 kg
Length	6.6 in.	168 mm
Width	3.2 in.	81 mm

### Coverage

WIDTH	REACH
19'	50'
16'	40'
12'	30'
8'	20'
4'	10'

### Features

- Quarter-turn from wide blade pattern to solid tight pattern
- Hard-coat anodized aluminum construction
- Available with 1.5" NH and 1.5" NPSH threads
- Full-time swivel
- NFPA 1960/1964 compliant
- 5-Year Warranty

### Flow Rates

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
30 (2.1)	124 (470)
40 (2.8)	143 (543)
50 (3.4)	160 (607)
60 (4.1)	176 (665)
70 (4.8)	190 (719)



For any questions or inquiries:  
info@alqudra-global.com

HEN

# BLADE 185

## Combination Smoothbore Nozzle



### Overview

The HEN BLADE combination smoothbore nozzle redefines fire attack by combining the reach and penetration of a traditional smoothbore with the versatility of an in-line blade pattern. With a simple quarter turn, firefighters can transition from a tight solid stream to a wide, high-impact blade stream, delivering large water droplets for maximum efficiency, improved cooling, and enhanced control.

### Specifications

	IMPERIAL	METRIC
Target Flow	185 gpm	750 lpm
Target Pressure	50 psi	4 bar
Blade Pattern Angle	22°	22°
Weight	1.7 lb	0.77 kg
Length	6.6 in.	168 mm
Width	3.2 in.	81 mm

### Coverage

WIDTH	REACH
19'	50'
16'	40'
12'	30'
8'	20'
4'	10'

### Features

- Quarter-turn from wide blade pattern to solid tight pattern
- Hard-coat anodized aluminum construction
- Available with 1.5" NH and 1.5" NPSH threads
- Full-time swivel
- NFPA 1960/1964 compliant
- 5-Year Warranty

### Flow Rates

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
30 (2.1)	143 (541)
40 (2.8)	165 (625)
50 (3.4)	185 (698)
60 (4.1)	202 (765)
70 (4.8)	218 (826)



For any questions or inquiries:  
info@alqudra-global.com



**HEN**

# **BLADE 265** Combination Smoothbore Nozzle



## **Overview**

The HEN BLADE combination smoothbore nozzle redefines fire attack by combining the reach and penetration of a traditional smoothbore with the versatility of an in-line blade pattern. With a simple quarter turn, firefighters can transition from a tight solid stream to a wide, high-impact blade stream, delivering large water droplets for maximum efficiency, improved cooling, and enhanced control.

## **Specifications**

	IMPERIAL	METRIC
Target Flow	265 gpm	1075 lpm
Target Pressure	50 psi	4 bar
Blade Pattern Angle	22°	22°
Weight	1.9 lb	0.86 kg
Length	7.0 in.	178 mm
Width	3.4 in.	86 mm

## **Coverage**

WIDTH	REACH
19'	50'
16'	40'
12'	30'
8'	20'
4'	10'

## **Features**

- Quarter-turn from wide blade pattern to solid tight pattern
- Hard-coat anodized aluminum construction
- Available with 1.5" NH, 1.5" NPSH, 2.5" NH, & 2.5" NPSH threads
- Full-time swivel
- NFPA 1960/1964 compliant
- 5-Year Warranty

## **Flow Rates**

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
30 (2.1)	205 (776)
40 (2.8)	237 (896)
50 (3.4)	265 (1002)
60 (4.1)	290 (1098)
70 (4.8)	313 (1186)



For any questions or inquiries:  
[info@alqudra-global.com](mailto:info@alqudra-global.com)

HEN

# HYDRO 100 Shutoff



## Overview

HYDRO shutoff with 1-inch waterway. High durability shutoff with full-ball valve, designed for superior flow performance while minimizing resistance and enhancing firefighter control. The HYDRO shutoff provides superior flow with less waterway turbulence.

## Features

- Gate-ball design maintains stream quality when baled-down
- Lightweight
- Hard-coat anodized aluminum body and all-metal ball
- Inlet Threads: 1" NH, 1" NPSH, 1.5" NH, and 1.5" NPSH
- Outlet Threads: 1" NH, 1" NPSH, 1.5" NH, and 1.5" NPSH
- Full-time swivel
- NFPA 1964 compliant
- 5 Year Warranty
- Pistol grip available

## Specifications

	IMPERIAL	METRIC
Waterway Size	1.00 in.	25 mm
Rated Pressure	200 psi	14 bar
Weight (1" / 1.5" thread)	1.2 / 1.3 lbs	0.54 / 0.59 kg
Length (1" / 1.5" thread)	4.7 / 4.7 in.	119 / 119 mm
Width (1" / 1.5" thread)	3.5 / 3.5 in.	89 / 89 mm
Height (1" / 1.5" thread)	4.1 / 4.4 in.	105 / 112 mm





HEN

# HYDRO 138

## Shutoff



### Overview

HYDRO shutoff with 1.375 inch waterway. High durability shutoff with full-ball valve, designed for superior flow performance while minimizing resistance and enhancing firefighter control. The HYDRO shutoff provides superior flow with less waterway turbulence.

### Features

- Gate-ball design maintains stream quality when baled-down
- Lightweight
- Hard-coat anodized aluminum body and all-metal ball
- Inlet Threads: 1.5" NH, 1.5" NPSH, 2.5" NH, and 2.5" NPSH
- Outlet Threads: 1.5" NH, and 1.5" NPSH
- Full-time swivel
- NFPA 1964 compliant
- 5 Year Warranty
- Pistol grip available

### Specifications

	IMPERIAL	METRIC
Waterway Size	1.375 in.	35 mm
Rated Pressure	200 psi	14 bar
Weight (1.5" / 2.5" thread)	1.9 / 2.3 lbs	0.88 / 1.04 kg
Length (1.5" / 2.5" thread)	5.4 / 5.4 in.	137 / 137 mm
Width (1.5" / 2.5" thread)	4.2 / 4.2 in.	107 / 107 mm
Height (1.5" / 2.5" thread)	4.9 / 5.4 in.	124 / 137 mm



HEN

# HYDRO 200 Shutoff



## Overview

HYDRO shutoff with 2 inch waterway. High durability shutoff with full-ball valve, designed for superior flow performance while minimizing resistance and enhancing firefighter control. The HYDRO shutoff provides superior flow with less waterway turbulence.

## Features

- Gate-ball design maintains stream quality when baled-down
- Lightweight
- Hard-coat anodized aluminum body and all-metal ball
- Inlet Threads: 1.5" NH, 1.5" NPSH, 2.5" NH, and 2.5" NPSH
- Outlet Threads: 1.5" NH, and 1.5" NPSH
- Full-time swivel
- NFPA 1964 compliant
- 5 Year Warranty
- Pistol grip available

## Specifications

	IMPERIAL	METRIC
Waterway Size	2 in.	51 mm
Rated Pressure	200 psi	14 bar
Weight (1.5" / 2.5" thread)	1.9 / 3.6 in.	0.88 / 1.6 kg
Length (1.5" / 2.5" thread)	5.4 / 5.9 in.	137 / 150 mm
Width (1.5" / 2.5" thread)	4.2 / 4.7 in.	107 / 119 mm
Height (1.5" / 2.5" thread)	4.9 / 5.4 in.	124 / 137 mm





HEN

# TURBO 1.5"

## Back Pressure Increaser



### Overview

The TURBO 1.5" increases the back pressure by an additional 25-30 PSI in the handline stretch for 150-185 GPM nozzles.

Turbocharge the performance of 1.75-inch hose when using a 50 PSI nozzle pressure yielding impressive benefits across all essential metrics, from higher pressure hose to premium low-pressure hose design.

Streamline essential members and handline fire stream development tasks on the fire ground, enhancing suppression and safety.

### Features

- Increase hose pressure by 25-30 PSI with 150-185 GPM nozzles
- Increase hose stiffness and handling
- Reduce dangerous hose and nozzle whip
- Hard-coat anodized aluminum construction
- Available with 1" NH and 1" NPSH threads
- NFPA 1960/1964 compliant
- 5-Year Warranty

### Specifications

	IMPERIAL	METRIC
Rated Pressure	200 psi	14 bar
Weight	0.54 lb	0.24 kg
Length	2.4 in.	60 mm
Width	2.5 in.	64 mm
Height	2.5 in.	64 mm

### Pressure Drop at Given Flow Rate

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
22 (1.5)	150 (568)
25 (1.7)	160 (606)
28 (1.9)	170 (644)
31 (2.1)	180 (681)
35 (2.4)	190 (719)

HEN

# TURBO 2.5"

## Back Pressure Increaser



### Overview

The TURBO 2.5" increases the back pressure by an additional 25-30 PSI in the handline stretch for 250-275 GPM nozzles.

Turbocharge the performance of 2.5-inch hose when using a 50 PSI nozzle pressure yielding impressive benefits across all essential metrics, from higher pressure hose to premium low-pressure hose design.

Streamline essential members and handline fire stream development tasks on the fire ground, enhancing suppression and safety.

### Features

- Increase hose pressure by 25-30 PSI with 250-275 GPM nozzles
- Increase hose stiffness and handling
- Reduce dangerous hose and nozzle whip
- Inlet Threads: 2.5" NH, and 2.5" NPSH
- Outlet Threads: 2.5" NH, and 2.5" NPSH
- NFPA 1964 compliant
- 5 Year Warranty

### Specifications

	IMPERIAL	METRIC
Rated Pressure	200 psi	14 bar
Weight	1.55 lb	0.70 kg
Length	3.4 in.	87 mm
Width	3.7 in.	94 mm
Height	3.7 in.	94 mm

### Pressure Drop at Given Flow Rate

PRESSURE PSI (BAR)	FLOW RATE GPM (LPM)
22 (1.5)	245 (927)
24 (1.7)	255 (965)
26 (1.8)	265 (1003)
28 (1.9)	275 (1041)
30 (2.1)	285 (1079)



# THE TURTLE FIRE SYSTEM

## EV NOZZLE



The Turtle Fire System was founded in response to the growing concern of electric vehicle fires and the need for a simple, safe, and effective water delivery system.

Its unique design and operation allows for applications beyond EV fires, such as internal combustion engine fires, cooling fuel storage tanks, deep-seated fires, exposure protection, hazmat incidents and more.

### VOLUME

Full spectrum nozzle capable of effectively delivering 75 to 500+ GPM and anywhere in between.

### SAFE

Once deployed, the Turtle Fire System operates unmanned, reducing exposure to fire and harmful toxic gasses.

### EFFECTIVE

Low-profile design easily deployed under a vehicle to deliver copious amounts of water directly onto an EV battery case.

### DURABLE

Made in the USA of 100% welded American steel. Its strength is reinforced by its patent pending dome shape.

### SIMPLE

Able to be assembled and deployed rapidly with minimal manpower.

### FORCE MULTIPLIER

The Turtle Fire System enables departments to repurpose manpower and do more with less.



The Turtle Fire System is the first full spectrum EV nozzle capable of quickly adapting to the demands of the fireground. Its flow pattern is equipped to accommodate both low- and high-profile vehicles and the while deployed flow rate can be adjusted from 75 to 500+ GPM to address water availability and the varying stages of thermal runaway.







Every feature of the Turtle Fire System was designed to allow for quick and safe deployment using tactics already familiar to the fire service.

## TURTLE FIRE SYSTEM Specifications



- 1 Patent pending dome shape and hole placement allows for full coverage of EV battery case.
- 2 Hole sizes emit a column of water which allows for rapid heat absorption and permits the passing of debris.
- 3 Slide plate allows for maneuverability across various surfaces.
- 4 A carabiner can be attached to the front loop to assist with deployment.

- 5 Pike poles can utilize the side handles to push or reposition the Turtle Fire System.
- 6 Cam and groove connection allows for quick assembly and includes a secondary lock as an added safety measure.
- 7 Powder coated steel pipe provides leverage for deployment, added heat barrier for the hose, and ensures that water flow is maintained should the tires fail causing the vehicle to drop.



# MINI TURTLE FIRE SYSTEM EV NOZZLE



The Mini TURTLE™ Fire System offers the same key benefits of our original nozzle but in a more compact form.

At 33% smaller and supplied with two 1½" pipes, the Mini Turtle Fire System has been optimized for the following scenarios:

- Ferries and tunnels operating with limited pump pressures
- A standpipe in a parking structure to accommodate a gated wye for a handline
- Limited water supply
- Engine storage restrictions

## VOLUME

Capable of effectively delivering low to high flows up to 300+ GPM.

## SAFE

Once deployed, the Mini Turtle nozzle operates unmanned, reducing exposure to fire and harmful toxic gasses.

## EFFECTIVE

At only 2.5" high, the Mini Turtle is easily deployed under a low-profile electric vehicle.

## DURABLE

Made of welded steel. Its strength is reinforced by its patented dome shape.

## SIMPLE

Able to be assembled and deployed rapidly with minimal manpower.

## FORCE MULTIPLIER

Enables departments to repurpose manpower and do more with less.



## Operating Pressures

Hose Size	Pump PSI		
	100	125	150
Hose Size	GPM		
	250	285	315
	320	350	380
100' of 2½"	343	375	410




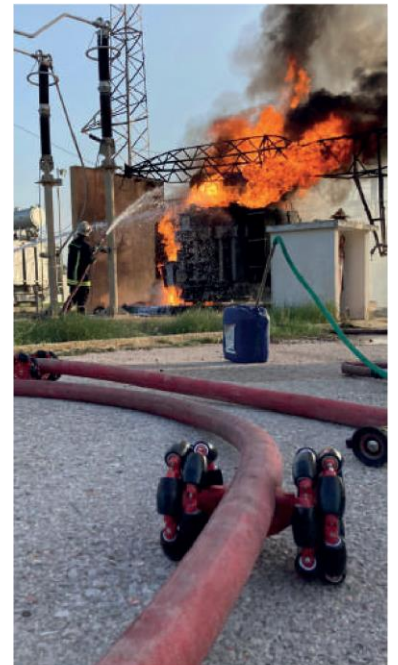
# HOSE-PULL®

## Operation and technical support device

**HOSE-PULL®** is an adaptable and very robust technical support tool. The device assists personnel on the field by significantly improving the mobility of a large and long hose lays. With their omnidirectional wheels, it can move all over different types of surface. By reducing hoseline ground friction, it eases their movements on the fireground areas and reduces physical stress while handling it.

### HOSE-PULL® highlights

-  Simplifying fireground hose lay movements
-  Adaptable to different types of surface
-  Large weight capacity
-  Quick set up (less than 5 sec)
-  Fully engineered, manufactured, and assembled at our workshop
-  Minimal maintenance required (high pressure water washing)
-  Adaptable to different hose line diameters
-  Easy, safe and fast assembly through the two-in-one system Slic Pins™ (composed of an axle and a pin)





## FEATURES

PARAMETER	DESCRIPTION
<b>Cradle + Wheels materials</b>	PA66 GF-30
<b>Component materials</b>	Stainless steel 304
<b>Diameter</b>	Up to 70 mm (approx. 2 3/4 inches) Up to 110 mm (approx. 4 1/2 inches)
<b>Max Temperature</b>	80°C (176°F)
<b>Min Temperature</b>	- 20°C (-4°F)
<b>Wheels colors</b>	Red / Black
<b>Cradle colors</b>	Red / Black
<b>Warranty</b>	1-year parts and labour



## ACCESSORIES & OPTIONS

**HOSE-PULL double format by adding a cradle using a connecting ring**



- Polymer made dual cradleModularity for -
- Adaptable to different hose line sizes
- Available diameters:  
70 mm (2 3/4 inches)  
110 mm (4 1/2 inches)

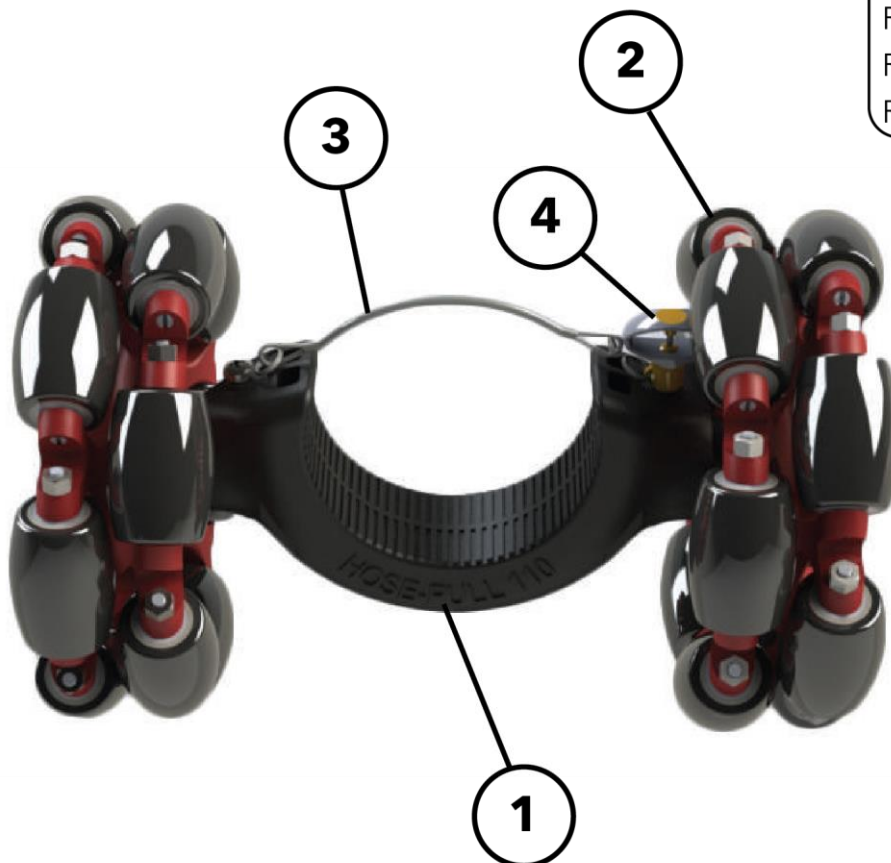
## Simple HOSE-PULL®

**HOSE-PULL®** is made of a polymer cradle and two omnidirectional wheels allowing it to maneuver on different types of surface.



### FEATURES

DN70 weight	4,43 Kg (9,77 lbs)
DN110 weight	4,59 Kg (10,12 lbs)
DN70 color	Red
DN110 color	Black
Rims colors	Black / Red
Ref UGAP	2716089
Ref Gallin	G090062



### NOMENCLATURE

<b>1</b>	Cradle
<b>2</b>	Wheel
<b>3</b>	Stainless steel retention cable
<b>4</b>	Locking mechanism

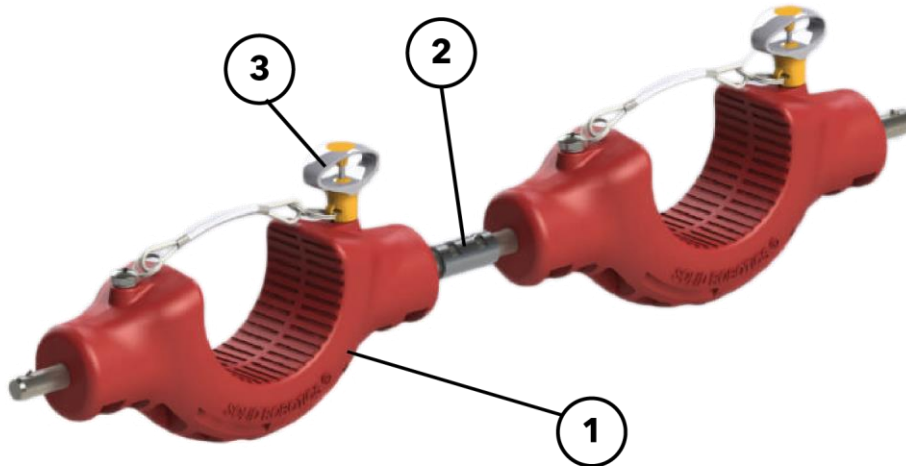


## OPTIONS

### Double HOSE-PULL®

From the single HOSE-PULL model base, cradles can be twinned through a connecting ring.

#### • Double cradle model with connecting ring



#### COMPONENTS

1	Cradle
2	Connecting ring
3	Locking mechanism

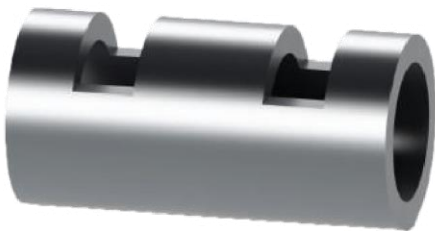
#### • Black DN110 simple cradle (110mm (4 ½ inches))



#### • Red DN70 simple cradle (70mm (2 ¾ inches))



#### • Connecting ring



#### • Engineered polymer fixed dual cradle



Weight: 5,09 g

DN 70 or DN 110



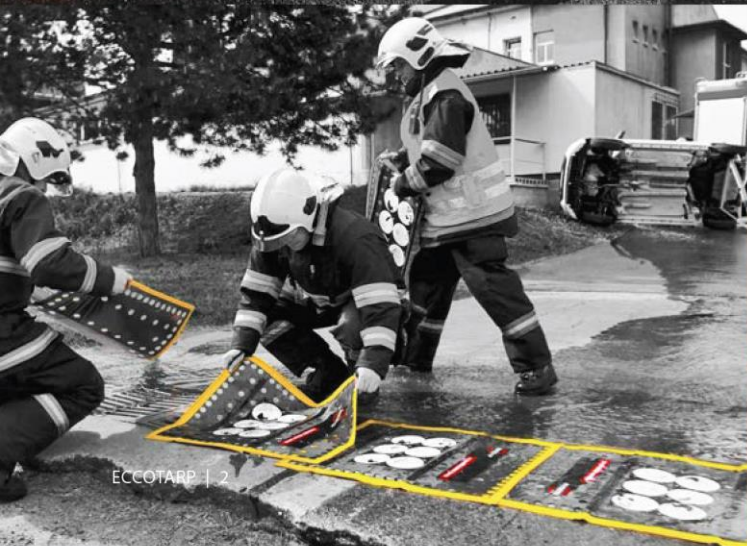
Foldable products  
for protection of persons,  
subjects and environment

**Catalogue  
of products**





We pay maximum time and attention to developing and testing our products. We solve construction details, design, we cooperate with fire brigades in development, we test products during real interventions...







Videos from tests and real situations:





# Rollers for fire hoses

Backsaver ET-Roller 7 Electric  
Roller for fire hoses up to  
6 inch powered by Milwaukee  
batteries



ET-Roller 6 Electric Roller for  
fire hoses up to 4 inch powered by  
18 V Milwaukee aku batteries

Backsaver ET-Roller 7 Electric  
Roller for fire hoses up to  
6 inch powered by Milwaukee  
batteries

# Portable collapsible spill bunds



Collapsible spill  
bund ECCOTARP



Collapsible Spill  
Bund UNIQUE



Collapsible Spill  
Bund CARGO



Collapsible spill  
bund DECON





Collapsible spill bund RAIL



Collapsible spill bund ANTISTATIC

# Large collapsible folding pools



Large Surface  
Folding Pool LARGE



Large Surface Folding  
Pool HEAVY DUTY



Collapsible Electric Car  
Quarantine Container

Temperature  
alarm



# Emergency containers



Emergency container  
EC 01 and EC 02



Collapsible Flexible  
Utility Tray FASTER

# High capacity tank



High capacity tank with  
collapsible structure



Collapsible containment  
tank

# Drain covers



Magnetic Drain  
Cover MDC



Foldable Drain  
Cover FDC



Nitrile drain  
cover NDC



# Dispenser Carts



Foldable Dispenser  
Cart SDC 03 Plus



Metal Sorbent Dispenser  
Cart SDC 05

# Protective screens



Magnetic ET Flexi protective  
screen for door frames



ET Flexi protective  
screen with structure  
for fixing to desktop

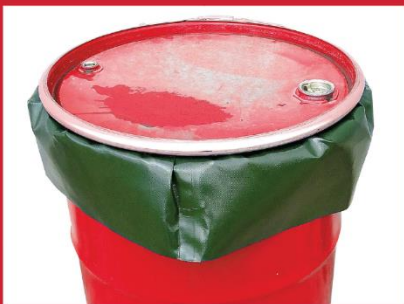
# Others



Folding drip collection  
tray with exchangeable  
absorbent lining



Industrial Folding  
Funnel IFF



Impermeable emergency  
barrel insert



Facade drainage slot



Decontamination  
foot floor mats



Floor ET Barrier







scan for more details

Do you really know  
all the products from  
ECCOTARP?

**SFP**



# Fire Safety Bio Gel - Product - Summary



## Fire protection "SF+Bio" is a unique means of fire prevention for materials with porous surface.



Impregnation "SF+Bio" is a ready-to-use polymer suspension of a balanced composition of fire retardant, binder and functional additives.

It is used to prevent fire and fire spread in case of fire, as well as to protect the treated material from harmful agents (fungi, insects and their larvae).

- 1) «SF+Bio» composition is fire and explosion safe;
- 2) Non-toxic;
- 3) According to the degree of impact on the human body belong to IV class of hazard (low-hazardous substances) according to GOST 12.1.007-76;
- 4) Does not give efflorescence or salt streaks on the surface of the treated material;
- 5) Does not change the structure of the treated material;
- 6) Does not interfere with air exchange;
- 7) Does not interfere with gluing, painting or other subsequent processing;
- 8) Harmless during processing and further use;
- 9) Treated materials are harmless to humans and animals;
- 10) Low consumption of 1 liter per 7-12 m<sup>2</sup>.

### The principle of action of fire-bio-protective impregnation "SF+Bio":

As a result of treatment with fire-bio-protective impregnation, the material becomes weakly flammable, which allows it to resist the effects of flame and high temperatures during a fire. If the operating conditions are observed, the validity of the composition is not less than 5 years.

# Fire Safety Bio Gel Barrier - Product - Summary



## Innovative Heat Resistant Gel Barrier «SF+Bio Gel Barrier».



"SF+Bio Gel Barrier" is an aqueous gel composition that includes an aqueous absorbent material consisting of blends of copolymers, block copolymers, water and target additives. Refers to A composition for creating heat resistant protection and the process of retarding or extinguishing a fire using an aqueous gel solution.

**Intended:** To protect a surface from heat damage or prevent ignition.

### "SF+Bio Gel Barrier":

- 1) It has high fire and heat resistance;
- 2) Non-toxic (safe for humans and animals);
- 3) Biodegradable;
- 4) No secondary damage to materials from exposure to the Gel;
- 5) Ability to hold for a long time on inclined and horizontal surfaces.

### Principle of Action:

Forms a continuous layer of aqueous Gel composition on the surface to be protected. Due to its structure and physico-chemical data it is retained on inclined, horizontal surfaces for a long time.

Cohesion of Gel with the surface of the object, reduces the temperature of the object below the burning temperature of the object, thereby blocking the spread and damping of fire.

Acts as an improved method for extinguishing Class A and B fires.

### Ecology:

Once in the soil, the gel-like substance helps the soil recover from fire by maintaining a higher level of soil moisture content for extended periods of time.

# Fire Safety Bio Gel Barrier - Product - Usage

## Scope of application:

### - Oil & Gas Industry:

SF+Bio Gel Barrier Application Example:

Protection of Oil Storage and Fuel and Lubricant Storage Facilities;

In the event of a fuel tank fire, SF+Bio Gel Barrier is applied to adjacent fuel tanks.

SF+Bio Gel Barrier is applied to the adjacent fuel tanks.

The main task of the Gel is to contain the heating of neighboring tanks,

to prevent heating and ignition until the main fire is finally

extinguishing the main fire. Once the fire has been extinguished.

fire "SF + Bio Gel Barrier" is easily washed off with water from the surface of the protected object. It does not require special disposal.

### - Automotive industry:

Example of the use of "SF+Bio Gel Barrier":

In order to avoid the consequences (see photo below) of fire,

melting, smoldering, you should spray Gel

on nearby objects. The Gel will contain

the temperature until the main firefighting forces arrive.

### - Railroad:

Using a fire extinguisher, spray "Stop Fire Barrier Gel" on panels, partitions in the compartments between cars.

"Stop Fire Barrier Gel" will keep the temperature down during evacuation and the arrival of the main firefighting force.

### - Military industry;

### - Shipbuilding.

### Production:

1) Capacity of one unit 1,000 liters per day, the ability to quickly scale up production to the required volume.

2) Filling line for finished products (plastic containers).

3) Equipment for the production of self-adhesive stickers (label), with laser cutting.



# Fire Safety Bio Gel Barrier - Product - Usage

**Composition "SF+Bio"** for extinguishing forest, steppe and peat fires, is able not only to highly effectively resist the spread and development of forest fires, but also contributes to the rapid recovery of fertile layer and forest after the fire!



**The innovative composition is non-toxic!** does not contain any hazardous substances in its formulation.

It does not contain Chlorine, Fluorine and Bromine.

**Work on extinguishing a large fire with the help of "SF+Bio", can be divided into the following stages:**

1) Localization of the fire, i.e. elimination of the possibility of a new spread of the fire (creation of barrier strips with the help of fire-fighting equipment and aviation).

2) Elimination of the fire, i.e. extinguishing the fire (with the help of knapsack and mechanical fire extinguishing means).

Features of SF+Bio use are ease of application, effectiveness of extinguishing and further absence of reignition of fire.





# NFPT

NANO FIRE PROTECTION TECHNOLOGY



NFPT  
NANO FIRE PROTECTION TECHNOLOGY

## Global Vision - 360° Fire Safety for a Safer, Smarter Nation

01

### FROM SPARK TO SUPPRESSION: A FULL-SPECTRUM FIRE RESPONSE

360° Fire Safety Solutions combine unique patented technologies to manage fire emergencies from the moment of ignition to full-scale suppression — even in complex environments like oil fields.

**With smart detection and instant and scalable response, this system anticipates and neutralizes threats before escalation, supporting the UAE's drive for innovation-led infrastructure and public safety.**

02

### ECO-ENGINEERED SAFETY FOR A SUSTAINABLE FUTURE Global Vision

Aligned with UAE Vision 2030's sustainability goals, these systems use eco-friendly, non-toxic extinguishing agents that are safe even for human skin. By minimizing water usage and avoiding corrosive damage, they not only protect infrastructure and the environment but also save lives in critical moments. Ideal for both urban and industrial settings, they are a key asset in building safer, greener smart cities.

03

### NATIONAL RESILIENCE THROUGH OPERATIONAL CONTINUITY

The economic impact of fire-related incidents can be catastrophic, especially across vital sectors such as logistics, energy, and tourism. 360° solutions are designed to protect not just lives and property, but also business operations and national assets. By embedding these systems into critical infrastructure, the UAE builds resilience, attracts global investment, and reinforces its position as a leader in innovation and safety.



# Nano Capsules

## TECHNOLOGY

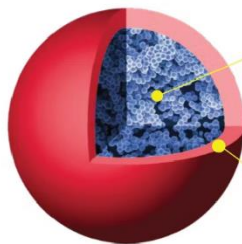


- The polymer microcapsule shells contain a highly effective extinguishing agent.
- Size of microcapsules: 700-1300 micrometers.
- NFPT technology utilizes polymer matrixes filled with microcapsules containing highly volatile extinguishing liquids.
- In the event of overheating, sparking, or flames (sources of ignition), the microcapsules are destroyed and a gaseous extinguisher is released into the atmosphere.
- Generally, the opening should take place at temperatures between 110°C and 150°C.
- There are many advantages to this technology, including its high efficiency, versatility, ease of use, ability to extinguish fires of all classes with the least amount of fire-extinguishing liquid, and complete safety for both people and the environment.

# Nano Capsules



## MICROCAPSULE FILLED WITH EXTINGUISHER



HIGHLY EFFECTIVE, VERY VOLATILE  
GASIFICATION OF LIQUID (NOVAC 1230)  
FIRE EXTINGUISHER  
FK-5-1-12

POLYMER SHELL (-50 +70C°)

### EXTRAORDINARY MERITS OF NFPT CHEMISTRY SCIENTISTS



The capsules are filled with  
fire extinguishing  
composition



Microcapsule shell  
durability



Design temperature  
Microcapsule triggering



Design and development of a  
bonding material that provides  
strength, flexibility, and stability  
to BAST products..

## Nano Capsules - Products - Sticker



### BAST STICKERS

NAME OF THE PRODUCT	SIZE, MM	MAX. PROTECTED VOLUME	RESPONSE TEMPERATURE
BAST Sticker-10	100x25x2	10 litres	120 ± 5 °C
BAST Sticker-20	100x50x2	20 litres	120 ± 5 °C
BAST Sticker-30	100x100x2	30 litres	120 ± 5 °C
BAST Sticker-Socket	20x30x2	0.5 litres	120 ± 5 °C



## Nano Capsules - Products - Cord



### BAST CORD



Using a cord filled with microcapsules and granules, this technology provides protection for large objects with a volume up to 2 000 litres based on the production of fire protection plates.

- In this method, fires are extinguished through reactive impulse extinguishing and as close as possible to potential dangers.
- The material maintains the operability of electronic systems, does not damage equipment, is dielectric, and is able to operate in humid, hot, and smokey conditions.
- Despite its autonomy, this tool can be used in conjunction with smart signalling and triggering devices that are compatible with the corresponding software.



# Nano Capsules - Products - Paint



## BAST PAINT

**A wide range of surfaces can be painted with microcapsules, including plastic, wood, metal, rubber, and even textiles**



Where to use?

- Protection against fire in small closed spaces, such as:
- Control cabinets
- False floors
- Dropped ceilings
- Boat engine compartments
- Electric vehicle battery compartment
- Server rooms
- Storage with explosive or valuable products
- Electronic devices
- Heavy-duty appliances

# Nano Capsules - Products - Application



## APPLICATION AREAS OF BAST PRODUCTS

### Civil Defence



### Construction



### Electric Vehicles



### Healthcare



### Hospitality



### Military & Defence



### Logistics & Transportation



### Telecommunications



### Oil & Gas



# Nano Capsules - Products - Certificates



## CERTIFICATES



# Nano Capsules - Products - Certificates




## CERTIFICATES







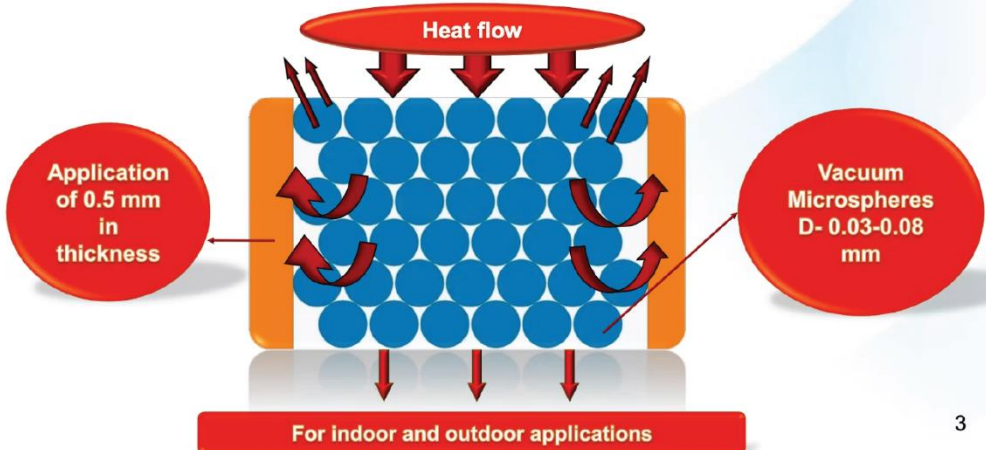
## Liquid Thermal and Fire insulation - Product - Summary



**Innovative Centre**  
Implementation. Expertise. Training.

### Energy-efficient TSM Ceramic Material

**TSM Ceramic** represents liquid ultra-fine thermal insulation material. It consists of microscopic ceramic vacuum microspheres (0.03-0.08 mm in diameter), which are in a liquid composition, similar to the paint. Elastic coating is formed after drying. About 20 layers of vacuum microspheres are in the layer of 0.5 mm in thickness. They create thermal barrier and prevent transmission of heat flow.






3

## Liquid Thermal and Fire insulation - Product - Advantages




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Implementation. Expertise. Training.

### Advantages of TSM Ceramic Material

 <p><b>HEAT SAVING</b> Heat flow reflection <b>60-70%</b>. Cutting expenses on heat of a building by <b>30%</b>.</p>	 <p><b>COLD PROTECTION</b> Material reduces penetration of cold air inside by up to <b>45%</b>.</p>
 <p><b>NOISE INSULATION</b> Layer of 0.6 mm in thickness reduces noise level by 2 decibels.</p>	 <p><b>WATERPROOFING</b> Latex in material provides it with low water permeability, less than 0.03 grams per cubic centimetres.</p>
 <p><b>ECOLOGICAL SAFETY</b> TSM Ceramic is an ecologically pure material: it does not contain any poisonous or harmful substances.</p>	 <p><b>FIRE SAFETY</b> TSM Ceramic is a fire resistant material, it enables slowing down the flame spread.</p>




## Liquid Thermal and Fire insulation - Product - Advantages




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### Advantages of TSM Ceramic Material




**ANTICORROSIVE MATERIAL**  
Insulating the covered surface from water and air, it eliminates external corrosion.




**COLOUR MATCHING**  
It can be painted with any colour, for any interior.




**APPLICATION ON HOT SURFACES**  
Material is used at the temperature from **+5 to +150 C°**.



**EASE OF HANDLING**  
It is applied with a painting brush or an airless spray.




**OPERATING LIFE**  
Warranty is 30 years. Service life is **over 30 years**.



**COST EFFECTIVENESS**  
Reduction of working hours thanks to high speed and simplicity of material application. Reduction of repair expenses. Saving of thermal energy. Space saving.

## Liquid Thermal and Fire insulation - Product - Usage







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### Application of TSM Ceramic in the field of heat power engineering

**TSM Ceramic is widely used in the field of heat power engineering**

- Pipelines of thermal heating systems
- Steam pipes and gas pipes
- Systems of air conditioning
- Pipes with cold water (for prevention of condensation)
- Steam boilers
- Isolation valves
- Containers and tanks

## Liquid Thermal and Fire insulation - Product - Usage



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**Objects where TSM  
Ceramic materials were  
applied**



Krasnoyarsk, "Kras mash" - heat  
insulation of heat transport system




Krasnoyarsk, "Europe" Business  
Centre - heat insulation of pipelines








## Liquid Thermal and Fire insulation - Product - Usage





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**Objects of petroleum industry with  
application of TSM Ceramic materials**

**TSM Ceramic** is used successfully for heat insulation of containers and gas receivers.







Achinsk, "ROSNEFT"  
Heat insulation of petroleum storage containers



## Liquid Thermal and Fire insulation - Product - Usage



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**Objects of petroleum industry with  
application of TSM Ceramic materials**

**TSM Ceramic** is used for heat insulation of oil and gas pipes of above ground and subsurface lining.








## Liquid Thermal and Fire insulation - Product - Certificates



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**Certificates**




EC Declaration of Conformity No. JIC02250  
 Conformity Certificate No. POCC RU.AE95.H01852  
 Fire Certificate No. № C-RU.ПБ24.B.00354  
 Hygienic Certificate – No.77.01.03.570.П.0650800808  
 Hygienic Certificate No. 34.77.03.570.П.0038280906  
 Hygienic Certificate No. 77.ТУ.05.576.П.0001000907  
 Russian Technical Expertise Centre CTO-CA-03-002-2009  
 Russian Building Certification.  
 TO-H00025-07 Belorussian National Institute Of Intellectual  
 Property TC 05.0046.10  
 Experimental Centre "All-Union Scientific Research Institute of  
 Hydro mechanization of Sanitary-engineering and Special  
 Construction Works" No. 270-1-09  
 Russian Technical Supervision Service "Centre of Laboratory  
 Analysis and Technical Metrology" T3 2007  
 State Unitary Enterprise "Moscow Scientific Research and Project  
 Institute of Housing Services" T3 2009  
 Institute for Scientific Research of Building Constructions T3 2005




**TSM Ceramic IS RECOMMENDED BY:**  
 FUND OF HOUSING AND PUBLIC UTILITIES REFORMING, MINISTRY OF HOUSING AND PUBLIC UTILITIES OF  
 MOSCOW REGION, RUSSIAN RAILWAYS, GAZPROM, ROSNEFT', RUSSIAN TECHNICAL SUPERVISION SERVICE  
 , UNION OF ARCHITECTS OF RUSSIA, UNION OF PUBLIC ENTERPRISES OF RUSSIA , UNION OF BUILDERS.



## AEVEX Aerospace Company Overview 2025



### TRANSFORMING MISSION SUCCESS WITH DATA-DRIVEN SOLUTIONS

AEVEX is a trusted partner delivering advanced airborne, maritime, and ground-based intelligence solutions—providing operational flexibility and ensuring mission data remains customer-owned for global defense, government, and commercial operations.



**670+** EMPLOYEES, **7** OFFICE LOCATIONS



**40+** YEARS DELIVERING COMPLEX SOLUTIONS



**5,000+** UNMANNED, **125+** MANNED PLATFORMS DEVELOPED/OPERATED



**124+** PERSONNEL IN EUCOM, AFRICOM, CENTCOM, & SOUTHCOM

#### Recent News:

[Top 100 Drone Defense Companies in 2025 - The Defense Post](#)

[The Mysterious Phoenix Ghost Drones of the Ukraine War - Forbes](#)



## ADVANCED AEROSPACE SOLUTIONS



### AVIATION SOLUTIONS

Design-Build-Fly solutions to deliver complex aircraft platforms with full engineering, modification, integration, and certification support



### UNMANNED SYSTEMS

Cutting-edge unmanned systems and services from loitering munitions to unmanned surface vehicles and counter-UAS services



### GLOBAL SOLUTIONS

Full-service flight operations and mission support for a variety of manned and unmanned operations executed across the globe



### TECHNOLOGY PRODUCTS

Innovative technologies to support airborne operations, from special modifications to mission software to position, navigation, and timing



### MISSION CONTROL & DATA SECURITY

Vessels can be controlled beyond line-of-sight via Starlink, while all mission data belongs to the customer and can be securely stored offboard, ensuring no data remains onboard.

## PROVEN PERFORMANCE SUPPORTING THE NATION'S MOST SENSITIVE OPERATIONS

## AEVEX MISSION FOCUSED, TRUSTED PARTNER



### PROVEN PERFORMANCE CUSTOMIZED SOLUTIONS



Development, operations, and sustainment of:

- Fixed wing
- Rotary wing
- Group 1-4 UAS
- Loitering munitions
- Unmanned surface vehicles



- Thousands of Group 1-4 unmanned platforms rapidly developed for DoD and Industry (Threat Replicators)
- Special-mission modifications and integrations for hundreds of mid-size and large jet platforms
- Sustained ISR mission support for operations in AFRICOM, CENTCOM, and SOUTHCOM



## PROVEN, ELITE PERFORMANCE SUPPORTING THE NATION'S MOST SENSITIVE ISR OPERATIONS



- 650+ full-time aviation & intelligence professionals
- HW & SW engineering teams



- 1.9 million operational hours overseas
- Over 18 aerial platforms



- Staff deployed & operating in more than 20 countries
- In-House Deployment Team



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# AUTONOMOUS USVs



SPECS	MAKO	MAKO LT	AQUILA
Range	287 nm (531.5 km)	287 nm (531.5 km)	609 nm (1,127.8 km)
Maximum Speed	43.4 knots (80.4 km/h)	34.7 knots (64.2 km/h)	34.7 knots (64.2 km/h)
Payload Capacity	200 lbs (90.7 kg)	100 lbs (45.35 kg)	1000 lbs. (453.5 kg)
Endurance	22.5 hrs.	30 hrs.	132 hrs.
Length/Width	136"L / 49.5" W	110"L / 46"W10"/46"	18.4 ft L / 7.4 ft W
Weight (wet)	895 lbs. (405 kg)	455 lbs. (206 kg)	4295 lbs. (1948 kg)
Fuel Capacity	56 gallons	27 gallons	264 gallons

Infil-Exfil | Logistics  
ISR | Kinetic Payloads  
FPV Kit | Mesh Network  
BLOS Comms | Radar

CONFIGURABLE  
ON DEMAND







M A K O L I T E





www.aevex.com

DESIGNED FOR MODERN WAR.  
AVAILABLE IMMEDIATELY  
FOR ALLIES AND PARTNERS.



# ATLAS

## PERFORMANCE

- 86 min loiter
- 160 km range
- 67 kts (77.1 mph) cruise speed
- 87 kts (100.1 mph) dash speed

## SPECS

- 55 in/139.7 cm length
- 75.5 in/191.8 cm width
- 34 lbs/15.4 kg max wt.

## PAYLOAD

- 7.5 lbs (3.4 kg) max wt.
- Kinetic
- Visual/ISR

## CONFIGURATION\*

- Mesh Networking
- Swarm Autonomy
- A-PNT using Visual Navigation



- ✓ Lightweight
- ✓ Man Portable
- ✓ Multi-Launch Capabilities

- ✓ Anti-Armor Javelin Warhead
- ✓ Modular Architecture
- ✓ Scalable & Cost Effective







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MULTIPLE STAKEHOLDERS.  
ONE TEAM.



# DISRUPTOR

## PERFORMANCE

- 5-8 hr. endurance
- 600 km (carburetor)
- 1300 km (EFI)

## SPECIFICATIONS

- 83.9 kg max takeoff
- 3.08m length
- 4.8m wingspan
- 32.66 kg empty weight

## PAYLOAD

- 22.6 kg payload
- MOSA aligned design allows for user defined payloads including ISR, EW and Lethal (frag or penetrator)

## LAUNCHER

- Pneumatic launcher
- Vehicle launched option
- Rocket-Aided Take-Off



**The Group 3 Disruptor** is a runway independent, threat replica aircraft, launched pneumatically or via rocket assisted takeoff (RATO). The airframe is comprised of lightweight carbon fiber and composite materials to achieve an optimal strength-to-weight ratio.



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COMBAT TESTED.  
AVAILABLE IMMEDIATELY  
FOR ALLIES AND PARTNERS.

# DOMINATOR

## PERFORMANCE

- 4.6 hrs - 11.7 hrs endurance\*
- 579 km - 1196 km range\*

## SPECS

- 3.07m length
- 4.8m wingspan
- 55.79 kg empty weight
- 92.9 kg - 102 kg MTOW\*\*

## PAYLOAD

- 18.1 kg payload
- Frag or penetrator
- Optional ISR

## CONFIGURATION

- Mesh radio
- Hardened GNSS Solution
- Visual Navigation
- Alternate PNT

\* Carburetor vs. EFI  
\*\* Pneumatic vs. RATO



- ✓ Visual Based Navigation
- ✓ Alternate PNT
- ✓ Autonomous Operation

- ✓ Small Operational Footprint
- ✓ Configurable Payloads
- ✓ Open Architecture







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