OLLARDS TURNSTILE GATES BARRIERS BLOCK

FRONTIER PITTS

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TERRA

RANGE OF HOSTILE VEHICLE MITIGATION

FOREWORD

The threat of terrorism is constantly changing across the UK and the globe, with vulnerable sites needing to constantly assess their risk of attack. Site owners and operators need to protect their assets, including property and people from vehicle borne attacks such as suicide missions or ram-raiding.

Since 2004, Frontier Pitts have used their experience and expertise to design and manufacture a premier portfolio of Hostile Vehicle Mitigation Security Products. These products include a range of Terra Gates, Terra Barriers, Terra Blockers and both rising and static Terra Bollards to suit any individual site requirement. All the Terra products have been successfully impact tested by an Independent Crash Laboratory, including TRL and MIRA, to the British PAS 68 and/or International IWA 14-1 specification.

Our constantly adapting program of research and development ensures Frontier Pitts can meet the requirements of any high security application, and has also enabled us to provide our clients integrated turnkey solutions. Frontier Pitts remain at the forefront of design and technology in the physical security market.

GATES

BARRIERS

BLOCKERS

BOLLARDS

PEDESTRIAN

GATES

Frontier Pitts manufacture a large portfolio of Hostile Vehicle Mitigation Sliding and Hinged/Swing Gates.

Our **HVM Sliding Cantilevered Gates** are available with two impact test ratings:

Terra Sliding Cantilevered Gate
PAS 68 7.5t @ 50mph

Terra G8
IWA 14 7.2t @ 40mph

A Cantilevered Gate the gateleaf is supported by a main bottom beam, which slides 100mm above the road surface. The balance is provided by a unique enclosed runback track, which enables the gate to be fully projected across the roadway without tipping.

The benefits of a Cantilevered Gate are:

- Reduced civils cost
- Ease of installation; no need for road closures
- Reduced maintenance; no track to keep clear

Our **HVM Hinged/Swing Gates** include:

Terra V Gate
PAS 68 7.5t @ 50mph (80kph)

Terra 180° Hinged Gate
IWA 14 7.2t @ 48kph (30mph)

Terra Swing Gate
PAS 68 7.5t @ 50mph (80kph)

HVM Hinged/Swing Gates are suitable for sites where Sliding Gates are not suitable due to lack of run back area.

09 Terra G8 Sliding Cantilevered Gate

11 Terra Sliding Cantilevered Gate

13 Terra 180° Hinged Gate

15 Terra V Gate

17 Terra Swing Gate

"We deliver more than just products from our UK HQ in Crawley, West Sussex"

Cardiff, Wales

TERRA G8 SLIDING CANTILEVERED GATE

The HVM Gate has been successfully impact tested to the International IWA 14 specification with 7.2t @ 64kph (40mph) with a maximum width 8000mm.

- IWA 14 Terra G8 Sliding Gate 7.2t @ 64kph (40mph)
- V/7200[N2A]/64/90:1.8

  Tested dimensions: *width 8000mm, height 3000mm*

SBD IWA 14 IMPACT TESTED PSSA Verification Scheme

BENEFITS & FEATURES

- Successfully impact tested to the International IWA 14 specification
- The Sleek Terra G8 can secure entrances of 8m plus, providing Counter Terrorist protection for wider entrances
- Minimal site penetration
- Variable heights available. Standard 2400mm. Maximum 5000mm
- Shallow foundation depths of only 500mm required.
- Heavy duty posts support the gate leaf
- Cantilevered Gate, no track or support across the roadway is required, therefore no roadway excavation required
- The balance is provided by a unique enclosed "run-back" which enables the gate to be fully projected across the roadway without tipping
- Electronic control motor drive unit, 100% duty rated
- Manual operation under power fail conditions
- Designed for ease of installation and maintenance
- Shallow Embedment Foundation depths of only 350mm required. Foundation Type B

OPERATING SPEED

- Typical operating speed of 250-500mm/second*, depending on configuration
- EFO (extra fast operation) available

OPTIONS

- UPS (Uninterrupted power supply) allows a number of operations in power failure mode
- Disengaging box - manual override
- 100/200mm Traffic Light System
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

- Vehicle detector loops
- Safety photocell beams
- Flashing beacons
- Audible alarm
- Safety Edge

CIVIL REQUIREMENTS

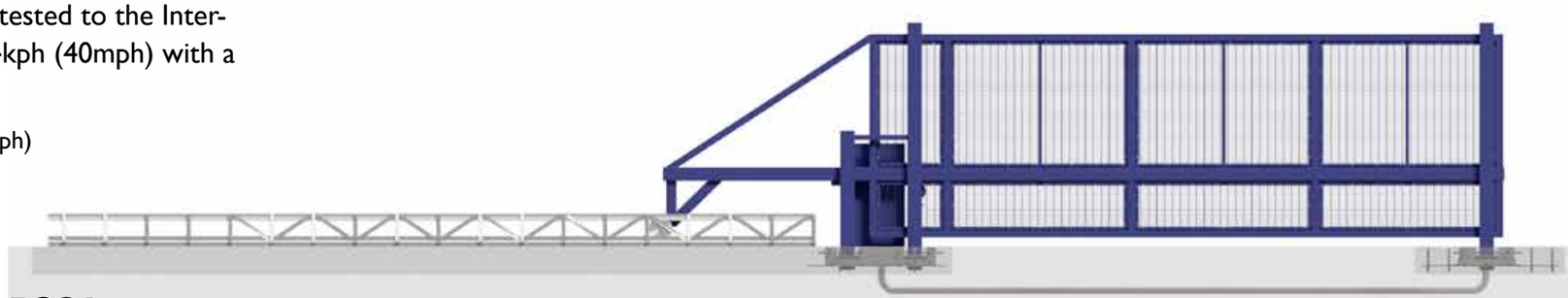
Gate base - L: 2000mm
W: 1600mm
D: 350mm

Receptor post foundations
L: 2000mm
W: 1600mm
D: 350mm

Note: Power and control wiring ducts may be required

ELECTRICAL REQUIREMENTS *

- Three Phase Supply



Applications: High Security sites, which require an HVM solution to secure occasional access points, out of hours security or remote locations with power supply restrictions.

* *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

TERRA SLIDING CANTILEVERED GATE

The HVM Gate has been successfully impact tested to the British PAS 68 specification with 7.5t @ 50mph (80kph) with a maximum width of 6000mm.

- PAS 68 Terra Sliding Cantilevered Gate 7.5t @ 50mph (80kph)
- V/7500[N3]/80/90:1.5/0.0

  Tested dimensions: *width 4500mm, height 3000mm*

BENEFITS & FEATURES

- Successfully impact tested to PAS 68
- Minimal site penetration
- Variable heights available. Standard 2400mm. Maximum 5000mm
- Shallow foundation depths of only 500mm required.
- Heavy duty posts support the gate leaf
- Cantilevered Gate, no track or support across the roadway is required, therefore no roadway excavation required
- The balance is provided by a unique enclosed "run-back" which enables the gate to be fully projected across the roadway without tipping
- Electronic control motor drive unit, 100% duty rated
- Manual operation under power fail conditions
- Designed for ease of installation and maintenance
- Shallow Embedment Foundation depths of only 400mm required. Foundation Type B

OPERATING SPEED

- Typical operating speed of 250-500mm/second*, depending on configuration
- EFO (extra fast operation) available

OPTIONS

- UPS (Uninterrupted power supply) allows a number of operations in power failure mode
- Disengaging box - manual override
- 100/200mm Traffic Light System
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

- Vehicle detector loops
- Safety photocell beams
- Flashing beacons
- Audible alarm
- Safety Edge

CIVIL REQUIREMENTS

Gate base - L: 4000mm
W: 2000mm
D: 280mm

Receptor post foundations
L: 4000mm
W: 2000mm
D: 280mm

Note: Power and control wiring ducts may be required

ELECTRICAL REQUIREMENTS *

- Three Phase Supply

Applications: High Security sites, which require an HVM solution to secure occasional access points, out of hours security or remote locations with power supply restrictions.

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TERRA V GATE

The HVM Bi-parting/Folding Gate has been successfully impact tested to the British PAS 68 specification with 7.5t @ 50mph (80kph) with a maximum width of 9000mm.

- PAS 68 Terra V Gate 7.5t @ 50mph (80kph)
- V/7500[N3]/80/90:0.0/0.0

  Tested dimensions: *width 4000mm, height 3000mm*

BENEFITS & FEATURES

- Successfully impact tested to PAS 68
- Zero penetration
- Fully functional after impact
- Variable heights available. Standard 3000mm. Maximum 5000mm
- Shallow foundation depths of only 340mm required
- Bi-parting pair of hinged gate leaves with Heavy Duty Crash Impact Beam
- Heavy duty posts support the gate leaf
- Secured at a shallow angle of only 135 degrees
- Designed for ease of installation and maintenance
- Hinged Gate leaves can be automated with our range of Trojan Actuators or Gate Back Actuators
- Shallow foundation depths of only 340mm required. Foundation Type B

TROJAN ACTUATOR

- Designed to automate larger, heavier gates
- 100% duty rating – designed for continuous operation
- Underground and surface mounted models available

GATE BACK ACTUATOR

- A powerful yet compact motive unit which provides a solution for automating single leaf hinged gate (up to 5m)
- 100% duty rating – designed for continuous operation

OPTIONS

- Accumulator or manual hand pump allow a number of operations in power failure mode
- In event of Power Failure options of Fail safe (remain in raised position) or Fail secure (remain in lowered position)
- 100/200mm Traffic Light System
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

- Vehicle detector loops
- Safety photocell beams
- Flashing beacons
- Audible alarm
- Safety Edge

CIVIL REQUIREMENTS

Gate base - L: 4000mm
W: 2000mm
D: 280mm

Receptor post foundations
L: 4000mm
W: 2000mm
D: 280mm

Note: Power and control wiring ducts may be required

ELECTRICAL REQUIREMENTS *

- Dependent on automation

Applications: High Security sites which require equipment that meets a higher level of PAS 68 specification and have a lack of runback area for sliding gate.

* *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

TERRA SWING GATE

The manual HVM Swing Gate has been successfully impact tested to the British PAS 68 specification with 7.5t @ 50mph (80kph). Maximum width of 6000mm.

- PAS 68 Terra Swing Gate 7.5t @ 50mph (80kph)
- V/7500[N3]/80/90:0.0/25.0

  Tested dimensions: *width 3500mm, crash beam height 720mm*

BENEFITS & FEATURES

- Successfully impact tested to PAS 68
- Zero penetration
- Shallow foundation depths of only 350mm required
- Manual swing gate with integrated crash beam
- Ideal for remote locations on sites where there is power supply restrictions
- Designed for ease of installation and maintenance
- Shallow foundation depths of only 350mm required. Foundation Type B

CIVIL REQUIREMENTS

Gate base - L: 4000mm
W: 1750mm
D: 444mm

Receptor post foundations
L: 4000mm
W: 1750mm
D: 444mm

Applications: High Security sites which require PAS 68 equipment at a location with no power supply, height restriction or lack of runback area for sliding gate.

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BARRIERS

Frontier Pitts manufacture a large portfolio of Hostile Vehicle Mitigation Automatic and Manual Barriers.

Our **HVM Barriers** include:

Compact Terra Barrier
PAS 68 3.5t @ 30mph

Terra 180° Swing Gate
IWA 14 7.2t @ 48kph (30mph)

Terra Ultimate Barrier
PAS 68 7.5t @ 50mph

The Compact Terra Barrier is designed to look like a standard car park barrier whilst being able to withstand an impact by 3.5t travelling at 30mph. The Compact Terra Barrier provides subtle HVM protection without highlighting the sites high security nature.

The Terra Ultimate Barrier provides the Ultimate line of defence from a Hostile Vehicle, mitigating against a higher level of PAS 68 specification at 7.5t @ 50mph
The Terra 180° Swing Barrier is our manual bi-directional HVM solution.

17 Compact Terra Barrier

19 Terra Ultimate Barrier

21 Terra 180° Swing Gate

“ We deliver more than just products from our UK HQ in Crawley, West Sussex ”

Bristol, England

COMPACT TERRA BARRIER

The HVM Barrier has been successfully impact tested to PAS 68 with 3.5t @ 30mph (48kph). Looks can be deceiving! The impact tested Drop Arm Barrier that looks like a standard car park barrier, hydraulically powered for reliability & strength. Maximum boom length 6000mm

- PAS 68 Compact Terra Barrier 3.5t @ 30mph
- V Drop Arm Gate 3500[N1]/48/90:1.5/0.0
  Tested dimensions: *width 4000mm*

BENEFITS & FEATURES

- Successfully impact tested to PAS 68
- Aesthetically pleasing security that does not highlight valuable assets
- Aluminium boom with the latest PST (Perimeter Security Technology)
- Lower folding skirt as standard
- Designed for ease of installation and maintenance
- Hydraulically operated, three phase supply
- Instantly reversible, 100% duty rated motor
- Shallow foundation depths of only 500mm required. Foundation Type C

OPERATING SPEED

- Typical speeds of 5-12 seconds* depending on configuration.
- EFO (extra fast operation) available

OPTIONS

- Accumulator or manual hand pump allow a number of operations in power failure mode
- In event of Power Failure options of Fail safe (remain in raised position) or Fail secure (remain in lowered position)
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

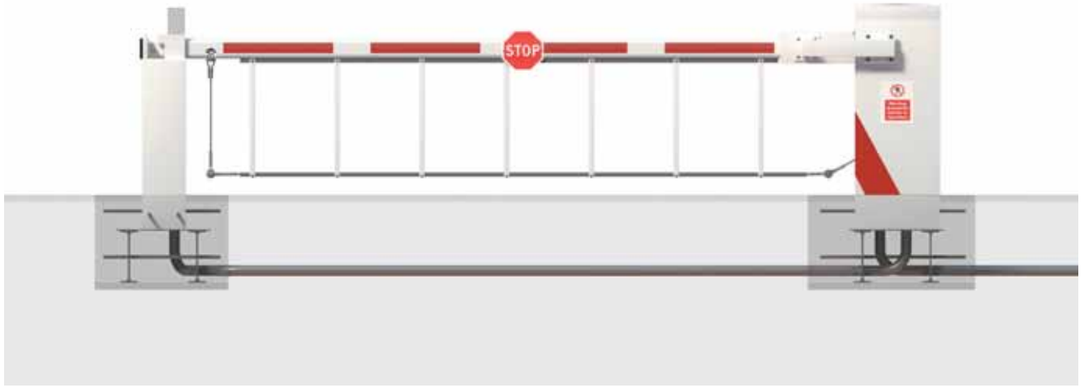
- Vehicle detector loops
- Safety photocell beams

CIVIL REQUIREMENTS

- Barrier cabinet size – L:522mm x W:472mm x H:1145mm
- Barrier base - L:1500mm x W:1000mm x D:500mm
  End rest base – L:1200mm x W:800mm x D:500mm
  (**Note:** Power and control wiring ducts may be required)

ELECTRICAL REQUIREMENTS *

- 6 amp, 5 wire, three phase and neutral or 10 amp, 3 wire single phase



Applications: Sites that require a subtle security solution with the PAS 68 specification.

* *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

TERRA ULTIMATE BARRIER

The HVM Barrier has been successfully impact tested to the British PAS 68 specification with 7.5t @ 50mph (80kph). The Ultimate Defence.

- PAS 68 Terra Ultimate Barrier 7.5t @ 50mph
- V/7500[N3]/80/90:5.3/2.0
  Tested dimensions: *width 4500mm, crash beam height 1050mm*

SBD PAS 68 BSI IMPACT TESTED PSSA Verification Scheme

BENEFITS & FEATURES

- Successfully impact tested to PAS 68 and K12
- Stopped 7.5t @ 50mph. The Ultimate Solution
- Vehicle stopped within the aperture
- Lower folding skirt as standard
- Designed for ease of installation and maintenance
- Hydraulically driven, three phase supply
- Instantly reversible, 100% duty rated motor
- Shallow foundation embedment depths of only 400mm required. Foundation Type B

OPERATING SPEED

- Typical speeds of 12-18 seconds* depending on configuration
- EFO (extra fast operation) available

OPTIONS

- Accumulator or manual hand pump allow a number of operations in power failure mode
- In event of Power Failure options of Fail safe (remain in raised position) or Fail secure (remain in lowered position)
- High Security Cabinet
- Can be interfaced to any access control systems
- Traffic light system

SAFETY

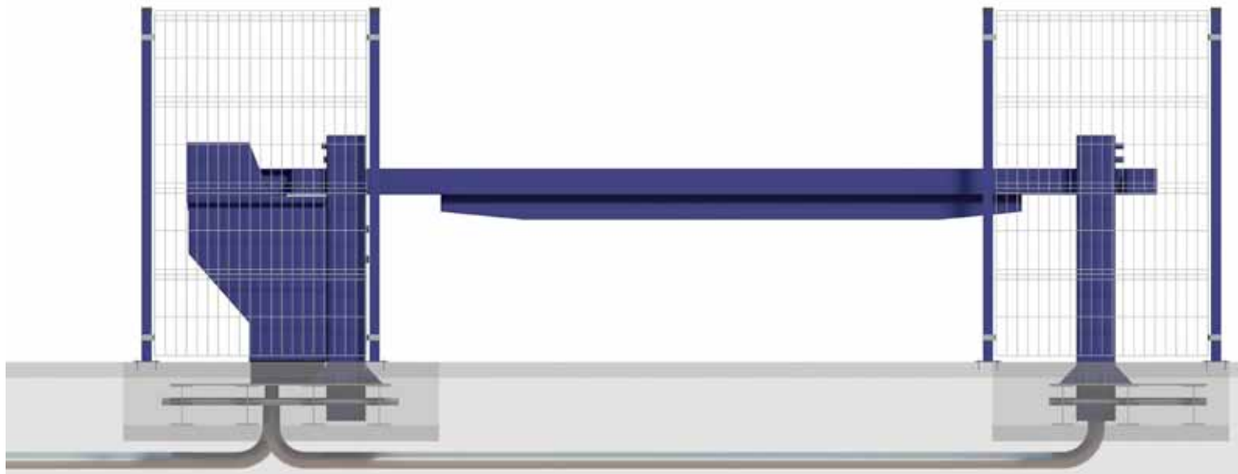
- Vehicle detector loops
- Safety photocell beams

CIVIL REQUIREMENTS

- Barrier cabinet size – L:980mm x W:1400mm x H:1055mm
- Barrier base - L:2800mm x W:2040mm x D:400mm
  End rest base – L:2800mm x W:1540mm x D:400mm
  (**Note:** Power and control wiring ducts may be required)

ELECTRICAL REQUIREMENTS *

- 10 amp, 5 wire, 400V, 50Hz, Three phase and neutral supply



Applications: The ULTIMATE PAS 68 drop arm barrier from Frontier Pitts. Successfully impact tested against a range of different energies. The Ultimate Solution.

* *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

TERRA 180° SWING BARRIER

The manual bi-directional HVM Swing Barrier has been successfully impact tested to the International IWA 14 specification with 7.2t @ 48kph (30mph). Maximum width 6000mm.

- IWA 14 Terra 180° Swing Gate 7.2t @ 48kph
- V/7200[N2A]/48/80:1.7

  Tested dimensions: *width 3500mm, crash beam height 1000mm*

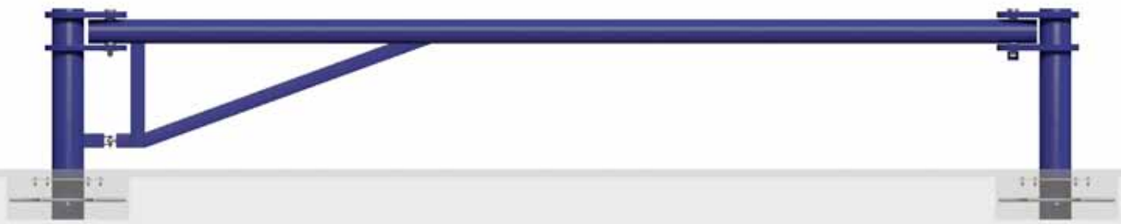
BENEFITS & FEATURES

- Successfully impact tested to the new International IWA 14-1 specification
- The Bi-directional, Lightweight HVM Gate which is easy to install and easy to operate
- Sleek design includes an impact beam which can be opened in either direction depending on site requirements
- The ideal solution for access points which need to be secured with occasional access, out of hours security, or remote locations with power supply restrictions
- Anti-tamper locking mechanism
- Secure apertures up to 6000mm
- Shallow foundation embedment depths of only 350mm required. Foundation Type B

CIVIL REQUIREMENTS

Gate base - L: 1600mm
W: 1200mm
D: 350mm

Receptor post foundations
L: 1600mm
W: 1200mm
D: 350mm



Applications: High Security sites, which require an HVM solution to secure occasional access points, out of hours security or remote locations with power supply restrictions. Also ideal for sites with height restrictions or lack of runback area required by sliding gates

BLOCKERS

Frontier Pitts manufacture a large portfolio of Hostile Vehicle Mitigation hydraulically driven Terra Blockers:

Terra Shallow Blocker MkII
IWA 14 7.2t @ 80kph (50mph)

Terra Blocker
PAS 68 7.5t @ 50mph (80kph)

Terra Blocker
PAS 68 7.5t @ 30mph (48kph)

Road Blockers offer high security sites an impact-resistant barrier to Hostile Vehicles and Ram-raiding. Such installations include Government sites, Embassies, Airports and Utility sites.

The Road Blocker Top Plate can be finished with Frontier Pitts Lifetime Paint; an anti-skid resistant treatment which has been fully tested under laboratory conditions for at least 12 months.

29 Terra Shallow Blocker Mk2

31 Terra Blocker

We deliver more than just products from our UK HQ in Crawley, West Sussex

Birmingham, England

TERRA SHALLOW BLOCKER MK2

The blocker successfully impact tested to the latest IWA 14 specification with 7.2t @ 80kph (50mph), resulting in zero penetration. The Shallow Blocker remained fully functional after impact.

- Shallow Foundation Depths of 3000mm - Type B
- Widths up to 4000mm, securing apertures of 5800mm
  Tested dimensions: *width 3000mm, lift height 1000mm*

SBD IWA 14 IMPACT TESTED PSSA Verification Scheme

BENEFITS & FEATURES

- Impact tested to the International IWA 14 with 7.2t @ 80kph (50mph) – resulting in zero penetration
- Shallow blocker, ideal for inner city sites. Foundation type B of only 300mm required
- Designed for ease of installation and maintenance
- Hydraulically operated, three phase supply
- Lifetime Paint; Anti skid resistant coating on top plate
- Instantly reversible, 100% duty rated motor
- Concertina safety skirt to prevent potential trapping areas
- Control cabinet recommended to be installed within 10 metres of unit
- Traffic light system

OPERATING SPEED

- Typical speeds of 4-6 seconds *
- EFO (extra fast operation) in up to 1 second

OPTIONS

- Accumulator or manual hand pump allow a number of operations in power failure mode
- In event of Power Failure options of Fail safe (remain in raised position) or Fail secure (remain in lowered position)
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

- Vehicle detector loops
- Safety photocell beams

CIVIL REQUIREMENTS

- Shallow depths of 300mm
  (**Note:** Power and control wiring ducts may be required)
- Control Cabinet Foundation
  L:600mm x W:900mm x D:300mm

ELECTRICAL REQUIREMENTS **

- Three Phase Supply

Applications: High Security sites which require equipment that meets a higher level of PAS 68 specification.

* *Depending on configuration*

** *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

TERRA BLOCKER

The HVM Blocker has been successfully impact tested to PAS 68 with 7.5t @ 30mph resulting in zero penetration, and 7.5t @ 50mph. Widths up to 5000mm, securing apertures of 7400mm.

- PAS 68 Terra Blocker 7.5t @ 30mph V/7500[N2]/48/90:0.0/0.0
  Tested dimensions: *width 3000mm, lift height 810mm*
- PAS 68 Terra Blocker 7.5t @ 50mph V/7500[N3]/80/90:4.0/25.0
  Tested dimensions: *width 2500mm, lift height 1100mm*

SBD PAS 68 PSSA Verification Scheme

DIFFERENT MODELS

- PAS 68 Terra Blocker MkII 7.5t @ 30mph
- Zero Penetration
- V Road Blocker 7500[N2]/48/90:0.0/0.0
  Tested dimensions: *width 3000mm, lift height 810mm*
- PAS 68 Terra Blocker MkII 7.5t @ 50mph
- V Road Blocker 7500[N3]/80/90:4.0/25.0
  Tested dimensions: *width 2500mm, lift height 1100mm*
- K12 L3 Terra Blocker: 6.8t American Truck at 80kph (50mph)
- Zero Penetration
  Tested dimensions: *width 2500mm, lift height 810mm*

BENEFITS & FEATURES

- Successfully impact tested to PAS 68 and K12
- Lifetime Paint; Anti skid resistant coating on top plate
- Designed for ease of installation and maintenance
- Hydraulically operated, three phase supply
- Instantly reversible, 100% duty rated motor
- Control cabinet recommended to be installed within 10 metres of unit
- Traffic light system

OPERATING SPEED

- Typical speeds of 4-6 seconds *
- EFO (extra fast operation) in up to 1 second

OPTIONS

- Accumulator or manual hand pump allow a number of operations in power failure mode
- In event of Power Failure options of Fail safe (remain in raised position) or Fail secure (remain in lowered position)
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

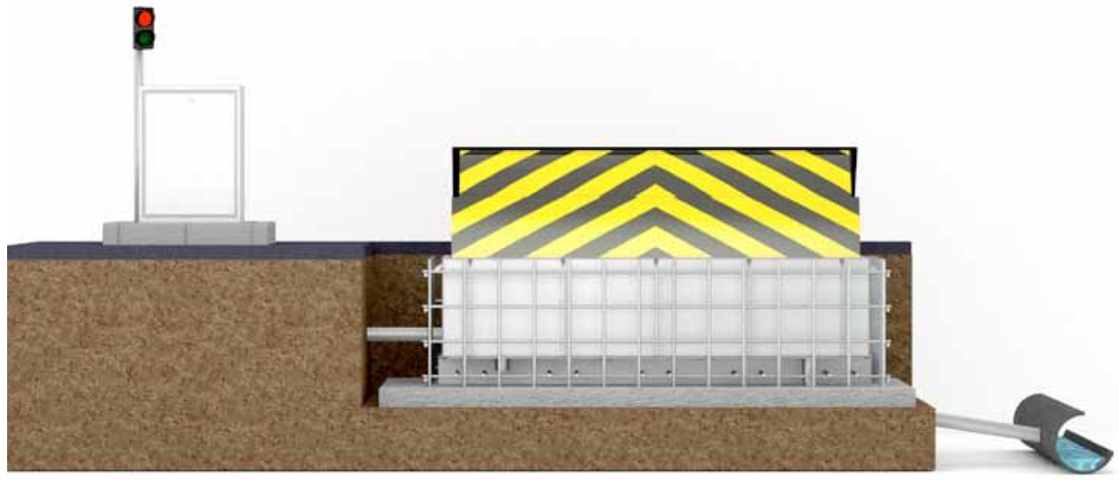
- Vehicle detector loops
- Safety photocell beams

CIVIL REQUIREMENTS

- Based on a 3000mm width blocker L:2200mm x W:4000mm x D:935mm
  (**Note:** Power and control wiring ducts required)
- Control Cabinet Foundation L:600mm x W:900mm x D:300mm

ELECTRICAL REQUIREMENTS **

- Three Phase Supply



Applications: Sites that require high security PAS 68 barricades.

* *Depending on configuration*

** *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

BOLLARDS

Frontier Pitts manufacture a large portfolio of hydraulically driven Rising and Static/Fixed Hostile Vehicle Mitigation Bollards:

Hydraulically Driven
Rising Terra Bollards:

Terra Universal Bollard
IWA 14 7.2t @ 80kph (50mph)

Terra Quantum Bollard
PAS 68 7.5t @ 30mph (50kph)

Static Terra Bollards:

Static Terra Jupiter Bollards
PAS 68 7.5t @ 50mph (80kph)

Static Terra Mars Bollards
PAS 68 7.5t @ 40mph (64kph)

Static Terra Neptune Bollards
PAS 68 7.5t @ 40mph (64kph)

Static Terra Venus Bollards
PAS 68 7.5t @ 30mph (50kph)

Terra Planters

Bollards are designed to offer an impact-resistant barrier to vehicle access, whilst allowing access to pedestrians. Such installations range from Crowded Place venues such as shopping centres and complexes, stadiums, sport centres, promenades, airports and ports.

Static Bollards can also be installed alongside a perimeter fence line to create a HVM line of defence.

“ We deliver more than just products from our UK HQ in Crawley, West Sussex ”

Edinburgh, Scotland

TERRA UNIVERSAL BOLLARDS

The HVM Bollard has been successfully impact tested to the International IWA 14 specification with 7.2t @ 80kph (50mph). The easy glide Bollard is fully automatic and hydraulically driven. Interchangeable sleeves to match static Terra Bollards.

- IWA 14 Terra Universal Bollard 7.2t @ 80kph
- V/7200[N2A]/48/80:1.7

Tested dimensions: *width 3500mm, crash beam height 1000mm*

BENEFITS & FEATURES

- Successfully impact tested to IWA14
- Easy glide, hydraulically driven
- Outstanding 360° Hostile Vehicle Mitigation protection from the threat of VBIED's (vehicle borne improvised explosive devices)
- Designed to complement our Planet range of Static Bollard heights and diameters; interchangeable sleeves are fitted to the inner bollard core, creating a versatile and stylish perimeter protection solution.
- 30% less steel than its predecessor with a visibly reduced footprint & attractive hexagonal plate
- Designed for ease of installation with a simple fabric mesh pocket.
- Designed for ease of maintenance
- Instantly reversible, 100% duty rated motor
- Control cabinet recommended to be installed within 10 metres of unit
- Traffic light system

OPERATING SPEED

- Typical speeds of 4-6 seconds *
- EFO (extra fast operation) in up to 3 second

OPTIONS

- Accumulator or manual hand pump allow a number of operations in power failure mode
- In event of Power Failure options of Fail safe (remain in raised position) or Fail secure (remain in lowered position)
- High Security Cabinet
- Can be interfaced to any access control systems

SAFETY

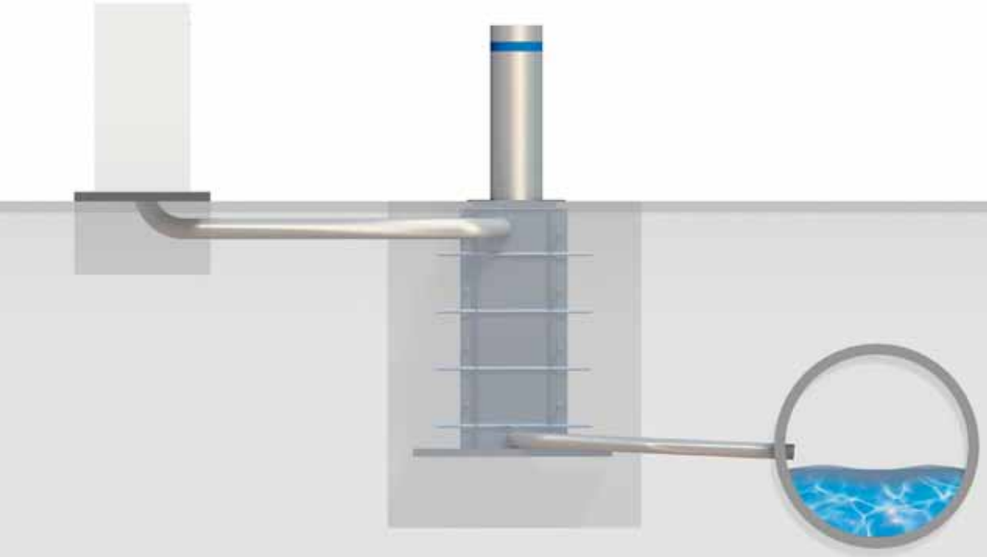
- Vehicle detector loops
- Safety photocell beams

CIVIL REQUIREMENTS

- L:1200mm x W:1200mm x D:1515mm
  (**Note:** Power and control wiring ducts may be required)
- Control Cabinet Foundation
  L:800mm x W:800mm x D:300mm

ELECTRICAL REQUIREMENTS **

- Three Phase Supply



Applications: Sites that require high security anti ram protection from potential hostile vehicles whilst allowing free access/passage by pedestrians. Ideal solution for crowded place venues.

* *Depending on configuration*

** *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

TERRA QUANTUM BOLLARD

The Innovative Side Folding HVM Bollard has been successfully impact tested to PAS 68 with 7.5t @ 30mph.

- PAS 68 Terra Quantum Bollard 7.5t @ 30mph
- V/7500[N2]/48/90:0.0/0.0

Tested dimensions: *lift height 925mm*

BENEFITS & FEATURES

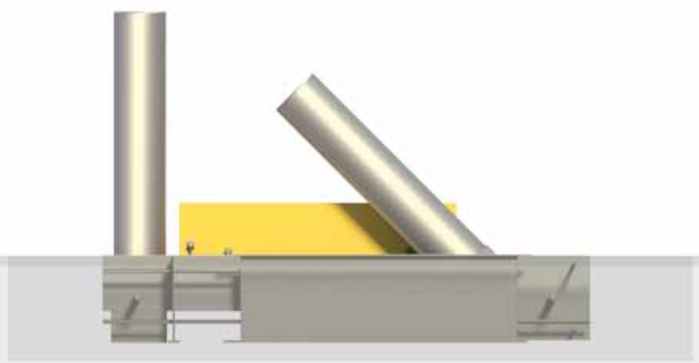
- The Terra Quantum Bollard Innovative Direction of Travel - Side Folding Bollard uniquely raises and lowers.
- The Retractable Bollard is twinned with a static unit and is manually operated.
- Each bollard has a manual hydraulic power unit including hydraulic reservoir, manual hand pump and manual release valve within the bollard enclosure.
- Bollard lid has a gas strut and handle to assist with lifting and a mechanical lock.
- The bollard has a padlockable locking pin within the bollard enclosure.
- 2no. Terra Quantum Bollards back to back form a 4m clear aperture.
- The Terra Quantum Bollard can be retrofitted into an existing line of PAS 68 static bollards to provide an HVM access point.

FINISH OPTIONS

- Polyester Powder Coated
- Stainless Steel Clad

CIVIL REQUIREMENTS

- L:2350mm x W:1000mm x D:300mm
  (**Note:** Power and control wiring ducts may be required)
- Control Cabinet Foundation
  L:800mm x W:800mm x D:300mm



Applications: Sites with limited foundation depths that require a PAS 68 restriction on vehicle access whilst allowing free passage by pedestrians

* *Depending on configuration*

** *This is subject to a risk assessment to ensure the automatic equipment complies to BS EN 12453*

JUPITER STATIC BOLLARD

The Terra Jupiter Bollard has been successfully impact tested to the British PAS 68 specification stopping 7.5t @ 50mph (80kph). Polyester Powder Coated as standard, with a range of sleeves available, including stainless steel finishes.

STANDARD BOLLARD

- V/7500[N3]/80/90:10.5/11.1
- **Foundation Type C - Embedment:** 500mm
- **Height above ground:** 1080mm *(tested)*
- **Diameter:** 273mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel Removable

NEPTUNE STATIC BOLLARD

The Terra Neptune Bollard has been successfully impact tested to the British PAS 68 specification stopping 7.5t @ 40mph (80kph). The Shallow Depth version, with an embedment depth of only 230mm, has been successfully impact tested as a single bollard, stopping 7.5t @ 40mph. Polyester Powder Coated as standard, with a range of sleeves available, including stainless steel finishes.

STANDARD BOLLARD

- V/7500[N2]/64/90:3.3/0.0
- **Foundation Type C Embedment:** 500mm
- **Diameter:** 273mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel Removable

SHALLOW BOLLARD

- V/7500[N2]/64/90:0.0/0.0
- **'Biscuit' Foundation Type B Embedment:** 500mm
- **Height above ground:** 1000mm
- **Diameter:** 273mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel

MARS STATIC BOLLARD

The Terra Mars Bollard has been successfully impact tested to the British PAS 68 specification stopping 7.5t @ 40mph (80kph). The Shallow Depth version, with an embedment depth of only 230mm, has been successfully impact tested as a single bollard, stopping 7.5t @ 40mph. Polyester Powder Coated as standard, with a range of sleeves available, including stainless steel finishes.

STANDARD BOLLARD

- V/7500[N2]/64/90:4.0/16.7
- **Foundation Type C**
  Embedment: 500mm
- **Height above ground:** 1000mm
- **Diameter:** 219mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel Removable

SHALLOW BOLLARD

- V/7500[N2]/48/90:1.71/0.0
- **'Biscuit' Foundation Type B**
  Embedment: 230mm
- **Height above ground:** 1050mm
- **Diameter:** 219mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel

VENUS STATIC BOLLARD

The Terra Venus Bollard has been successfully impact tested to the British PAS 68 specification stopping 7.5t @ 30mph (48kph). The Shallow Depth version, with an embedment depth of only 300mm, has been successfully impact tested stopping 7.5t @ 30mph. Polyester Powder Coated as standard, with a range of sleeves available, including stainless steel finishes.

STANDARD BOLLARD

- V/7500[N2]/48/90:0.0/0.0
- **Foundation Type C**
  Embedment: 500mm
- **Height above ground:** 1000mmø
- **Diameter:** 219mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel Removable

SHALLOW BOLLARD

- V/7500[N2]/48/90:3.3/0.0
- **Foundation Type B**
  Embedment: 230mm
- **Height above ground:** 1050mmø
- **Diameter:** 219mmø
- **Finish:** Polyester Powder Coated
- **Options:** Range of Aesthetic Sleeves, including stainless steel

TERRA PLANTERS

The New Innovative PAS 68 Terra Planter is another HVM World first to protect against potential VBIED attack.

- Aesthetically pleasing street furniture which is proven to physically mitigate hostile vehicles
- Architecturally reduces the visual threat
- Decorative infill within a line of HVM Static Bollards
- Can be installed as a single unit on the corner of buildings
- Can also be used as an infill between HVM impact tested Terra products.
- Ideal for sites that require a single shallow depth PAS 68/IWA 14 HVM unit to defend from HVM whilst allowing free pedestrian access
- Granite or Stainless Steel finishes available

Applications: An aesthetically pleasing alternative to static bollard sleeves.

PEDESTRIAN

Frontier Pitts have produced a Pedestrian Turnstile to the highest possible standards and this has been recognised by by both the Governments **Centre for the Protection of National Infrastructure** (CPNI) and the **Loss Prevention Certification Board** (LPCB).

CPNI®
Centre for the Protection of National Infrastructure

Centre for the Protection of National Infrastructure

The CPNI licence products that are recognised to be of the highest standards and appropriate for use with the Government's national infrastructure projects.

www.cpni.gov.uk

please contact the CPNI for full details

Loss Prevention Certification Board

The LPCB is widely recognised as an independent reference for all fire and security safety experts. Their testing laboratories and approvals services together with their leading team of highly qualified expert scientists and engineers, guides us all impeccably towards a qualified framework.

www.redbooklive.com

The Terra Diamond Turnstile is Approved for UK Government Use (please contact CPNI) and the only officially approved Turnstile to LPS1175.

The Terra Diamond Turnstile completes our Anti-Terra Portfolio with a high security pedestrian access control system.

The High Security Turnstiles successfully resisted an intensive attack test program in accordance with LPS 1175: Issue 6.1. Under the category of Building Fabric, this involved a series of attacks each lasting 10 minutes using a wide array of hand tools and battery powered tools. (NB. CPNI SR3 attack time 5minutes).

Please see overleaf for the Terra Diamond Turnstile full specification.

10 mins
Tested using bodily physical force and a wide selection of attack options.

Belfast, Northern Ireland

TERRA DIAMOND TURNSTILE

Frontier Pitts is proud to be the first company to achieve LPS1175 Issue 6.1 for the full height Terra Diamond Turnstile Security Rating 3 & 4.

The Terra Diamond Turnstiles are the only turnstiles* currently on the market that are approved to

- Certified to LPS 1175: Issue 6.1
- LPS 1175 Security Rating 3 & 4
- Certification No. 1059a/01 & 1059a/02

BENEFITS & FEATURES

- The Terra Diamond Turnstiles are Approved for Government Use, please contact CPNI. Security Rating 3.
- The Terra Diamond Turnstiles are the only turnstiles currently on the market that are approved to LPS 1175 Security Ratings 3 and 4 *

DESIGN FEATURES

- Heavy duty, high security turnstile (Red book listed)
- Anti-return solenoid lock
- CPNI Base - 5 minute attack time - approved for Government use, please contact CPNI
- LPS1175 Security ratings 3 & 4 - 10 minute attack time (certification No. 1059a/01 & 1059a/02)
- Power locking bolt - provides turnstile lock down
- Turnstile seeks next lock position so users cannot become trapped within the unit
- Designed and proven to withstand a considerable degree of physical attack
- Extra high security with a full CPNI approved fence line integration
- Infilled rotor arms prevent climbing and items being passed through the turnstile
- Installed in many Nuclear and Utility sites both nationally and internationally
- Fail secure - turnstile will remain secure during power failure

CONSTRUCTION

- **Cage:** Fully welded steel cage backed with high security sheet steel forms a short walkway.
- Columns are used to mount card readers etc.
- **Canopy:** Metal canopy with anti-drip guttering, with reinforced high security lid, which lifts off for access
- **Rotor:** 90° High-strength sheet steel blades. (Grade 4 has additional reinforcing for increased resistance to attack)

OPTIONS

- Can be interfaced to any access control systems
- Manual release handle
- LED walkway lighting

CIVIL REQUIREMENTS

- L:1260mm x W:1600mm x D:300mm
  (**Note:** Power and control wiring ducts to be incorporated into foundations)

ELECTRICAL REQUIREMENTS **

- **230v 50hz** - Single phase supply

Applications: Sites that require protection from a potential intensive attack.

* *Correct at time of print*

* *Depending on configuration*

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