

# TURNSTAR



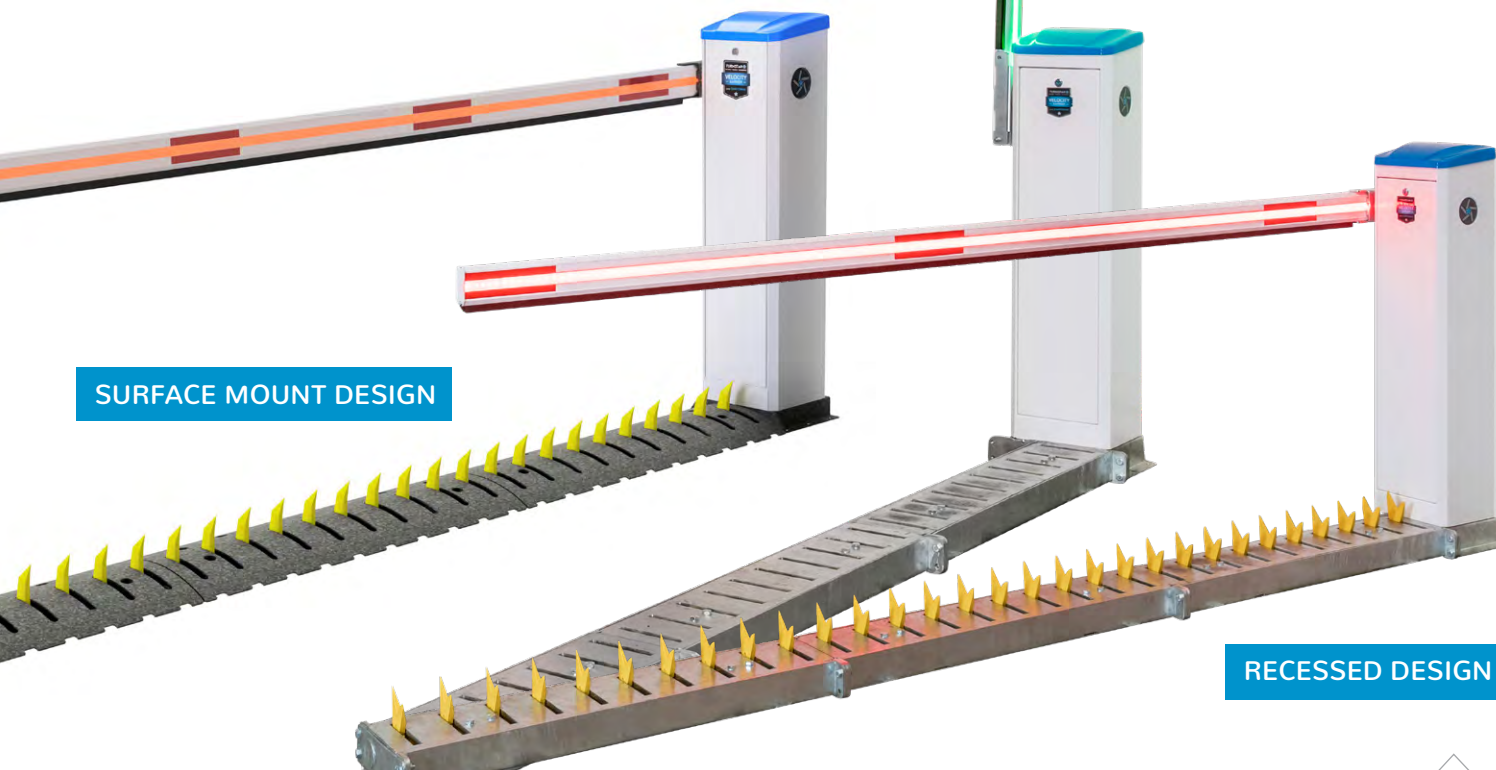
RELIABLE ★ DURABLE ★ GUARANTEED

NEW INTEGRATED  
OPTIC LED BARRIER ARM



## VELOCITY RAPTOR

AUTOMATIC TYRE SPIKE INDUSTRIAL  
VEHICLE BARRIER WITH SWIFTDRIIVE



SURFACE MOUNT DESIGN

RECESSED DESIGN

- Benefit from the reliability of the latest SwiftDrive® technology
- Secure vehicle access control solution together with a visual deterrent to any would be criminal
- High speed operation with low power consumption
- Integrated OPTIC LED light strip for maximum visibility, safety and aesthetics
- Break-away barrier arm system
- Built-in battery backup
- Compact cabinet design
- Counter balance compression springs
- Articulated arm kit fitted below barrier arm for maximum height clearance
- 100% duty cycle
- Unlimited number of daily operations

### APPLICATIONS

- Suited for applications requiring high volume access and high levels of security
- Used extensively in applications such as parkades, shopping malls, residential estates, office parks, toll gates, factories, warehouses and mines

### DESIGNED FOR

- Interior and exterior installations
- Severe operating conditions

### AVAILABLE CONFIGURATIONS

- With 3m, 3.5m, 4m, 4.5m, 5m, 5.5m and 6m octagonal barrier arm
- Articulated arm kit for low ceilings
- Recessed and surface mount spike rack design

### SECURITY RATING



ISO 9001:2015

# UNIQUE FEATURES OF THE VELOCITY VEHICLE BARRIER

## RELIABLE TECHNOLOGY

- 100% duty cycle – suitable for high volume applications
- Two SwiftDrive® brushless DC motors with planetary gearbox
  - High speed operation (a number of adjustable raise and lower speed settings)
  - Seamless precise speed control with dynamic braking and slow stop
  - Intelligent collision detection and mid cycle auto-reverse
  - Highly reliable, highly efficient and high power-to-volume ratio 100W motor
  - Large torque output over a vast speed range
  - Brushed DC motors are limited to a 10 000 hour life span (+/- 500 000 operations) as the brushes are always in contact with the rotor shaft, unlike brushless DC motors which do not have any brushes and do not have that limitation)
  - No worm gear which is prone to severe wear
  - No proximity sensors or microswitches required for positioning

## DURABLE FEATURES

- Barrier arm and spikes are driven by two separate motors - no long linkages which are prone to failure
- Three stage interlinked opening and closing procedure - preventing mishaps where a vehicle drives underneath the barrier arm before the barrier arm is in the raised position and before the spikes have lowered fully
  - Opening procedure:  
The spikes lower, the barrier arm raises and the OPTIC LED barrier arm changes to green
  - Closing procedure:  
The OPTIC LED barrier arm changes to red, the barrier arm descends and then the spikes rise
- Spike raise input to force raise the spikes in the event of an emergency activation
- Embedded microcontroller
- Relay output for raised and lowered positions
- Integrated dual safety loop detector (one detector can also be allocated for free exit)
- 4.5A power supply – barrier is run from the power supply, not battery driven as batteries can become exhausted over time
- Built-in battery backup (7Ah) with battery protection
- Can operate with a solar powered system
- Slim, low profile cabinet (272mm x 256mm)
- Adjustable compression springs for barrier arm balancing – no tension springs used
- Easy change of handing – can be done effortlessly in under five minutes
- Wireway through centre of shaft for LED light strip or barrier arm impact detection safety edge
- Harmonic motion drive arm mechanism
- Mechanical locking in the secure position
- Spikes remain raised even if the barrier arm is forced up
- Effortless mechanical override for manual operation - release of barrier arm and spike to allow traffic to pass
- Sturdy octagonal barrier arm with integrated LED light strip, diffuser and red reflective tape
- Break-away barrier arm system
- Available in powder coated mild steel and 3Cr12 stainless steel, brushed 304 and 316 grade stainless steel
- Rack supplied in hot dip galvanised mild steel for ultimate longevity
- Recessed rack design with patented double sided spike, 80mm high
- Surface mount rack designed to withstand three times the load of a fully laden 8 ton truck
- Surface mount rack ultra low 55mm high and 360mm wide, with 80mm high spikes

## GUARANTEED MANUFACTURED TO LAST

- 24 month guarantee

# TECHNICAL SPECIFICATIONS

INPUT VOLTAGE	100V – 240V AC $\pm$ 10% at 50Hz / 60Hz			
DRIVE	SwiftDrive®			
MOTOR DETAIL	BLDC, 24V DC, 100W (two units)			
GEARBOX	Planetary			
MOTOR POWER SUPPLY	27.6 V DC, 4.5A, 120W			
DUTY CYCLE	100% - rated for continuous non-stop operation			
BARRIER ARM LENGTH	3m, 3.5m, 4m, 4.5m, 5m, 5.5m and 6m			
OPENING SPEED	3m - 2.8 seconds	4m - 3.7 seconds	5m - 4.2 seconds	6m - 4.7 seconds
CABINET WEIGHT	80kg			
RECESSED DESIGN	41kg per metre			
SURFACE MOUNT DESIGN	38kg per metre			
BARRIER ARM DETAIL	86mm x 43mm, 1.5mm wall thickness, powder coated white aluminium with red reflective tape and integrated RGB LED			
BARRIER ARM WEIGHT	1.45kg per metre			
MANUAL OVERRIDE	Secure internal easy-pull lever arm			
OPERATING TEMPERATURE	-15°C to +60°C			
POWER FAILURE OPERATION	Two 12V 7Ah batteries			
COLLISION DETECTION	Motor embedded hall sensors			
SAFETY CONTROL	Dual channel safety loop detector and input for any external sensor			
SYSTEMS INTEGRATION	<ul style="list-style-type: none"> <li>Integrates with all access control, ticketing and time &amp; attendance systems</li> <li>Triggered through a normally open dry contact</li> <li>Free exit loop feature built-in as standard</li> </ul>			
RELAY OUTPUTS	Open and closed relay outputs			
CABINET FINISH	<ul style="list-style-type: none"> <li>Mild steel with UV resistant exterior grade powder coat</li> <li>3Cr12 stainless steel with UV resistant exterior grade powder coat <math>\infty</math> *</li> <li>304 grade brushed stainless steel</li> <li>316 grade brushed stainless steel *</li> </ul> <p><math>\infty</math> A variety of colours are available on request            * Suitable for corrosive environments</p>			

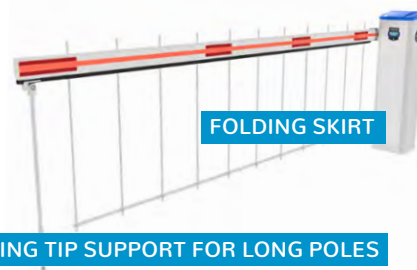
## ACCESSORIES

SAFETY	<ul style="list-style-type: none"> <li>Dual channel loop detector (integrated as standard)</li> <li>Infrared beam transmitter and receiver kit (10m range)</li> <li>Photoelectric, diffuse sensor (3m range) - non-invasive</li> </ul>
OPTIONAL EXTRAS	<ul style="list-style-type: none"> <li>High security Mul-T-Lock for the barrier door</li> <li>Traffic light (LED type)</li> <li>Flashing/Solid courtesy light fitted on cabinet (activated when barrier is in use)</li> <li>Single or double pushbutton in plastic housing</li> <li>One button or three button remote control transmitter and receiver</li> <li>Card drop box (intelligent and unintelligent types)</li> <li>Reader and camera mounting boxes (special designs to customer specifications)</li> <li>Car and car/truck goosenecks with optional weather cowls</li> </ul>
BARRIER ARM ACCESSORIES	<ul style="list-style-type: none"> <li>Articulated arm kit (folding arm kit) for low ceilings (fitted under the barrier arm for maximum height clearance)</li> <li>Folding skirt</li> <li>Folding tip support for long poles</li> </ul>
BARRIER ARM EXTRA	<ul style="list-style-type: none"> <li>Extended arm holder for high wind environments</li> <li>Arm joiner for easy shipping</li> <li>Barrier arm monitoring limit switch (to alert control room if the barrier arm has been dislodged)</li> </ul>



ARM JOINER

EXTENDED ARM HOLDER

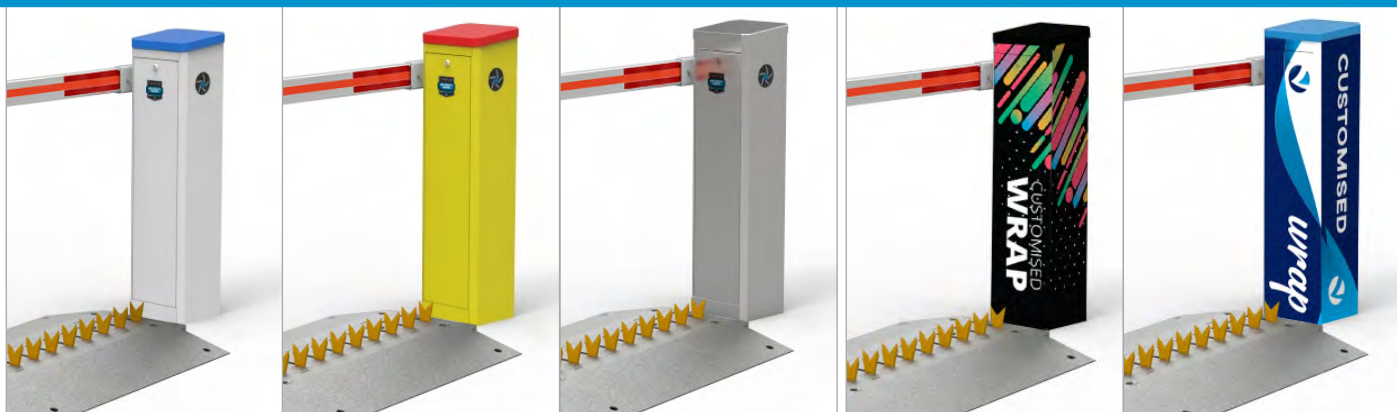


FOLDING SKIRT

FOLDING TIP SUPPORT FOR LONG POLES

## COLOUR EXAMPLES

## BRANDED



WHITE / BLUE

YELLOW / RED

STAINLESS STEEL

WRAPPED FINISH

FULL RAL COLOUR RANGE IS AVAILABLE

CUSTOMISED WITH YOUR BRANDING

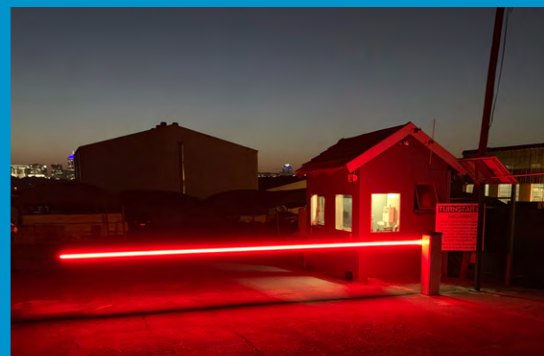
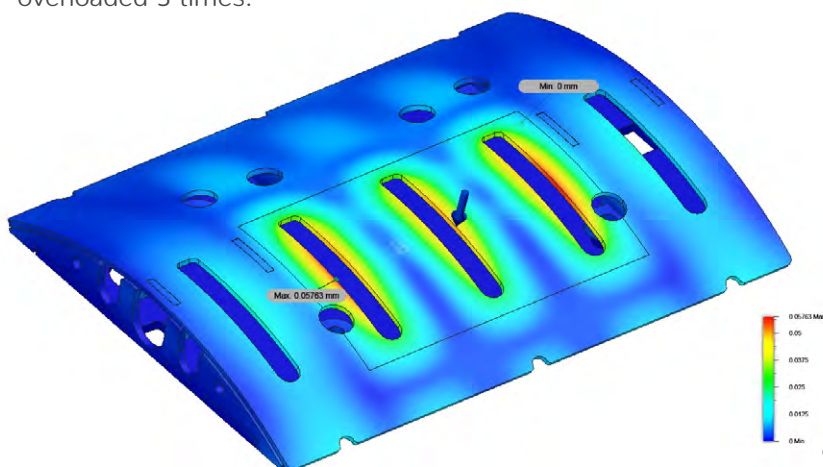


## THE VELOCITY RAPTOR RANGE

### SURFACE MOUNT DESIGN - FINITE ELEMENT ANALYSIS

The lowest profile spike barrier available on the South African market and offers the narrowest width ramp - minimising the possibility of damage to the undercarriage of authorised vehicles.

Designed to withstand the load effects of a fully laden 8 ton truck, overloaded 3 times.



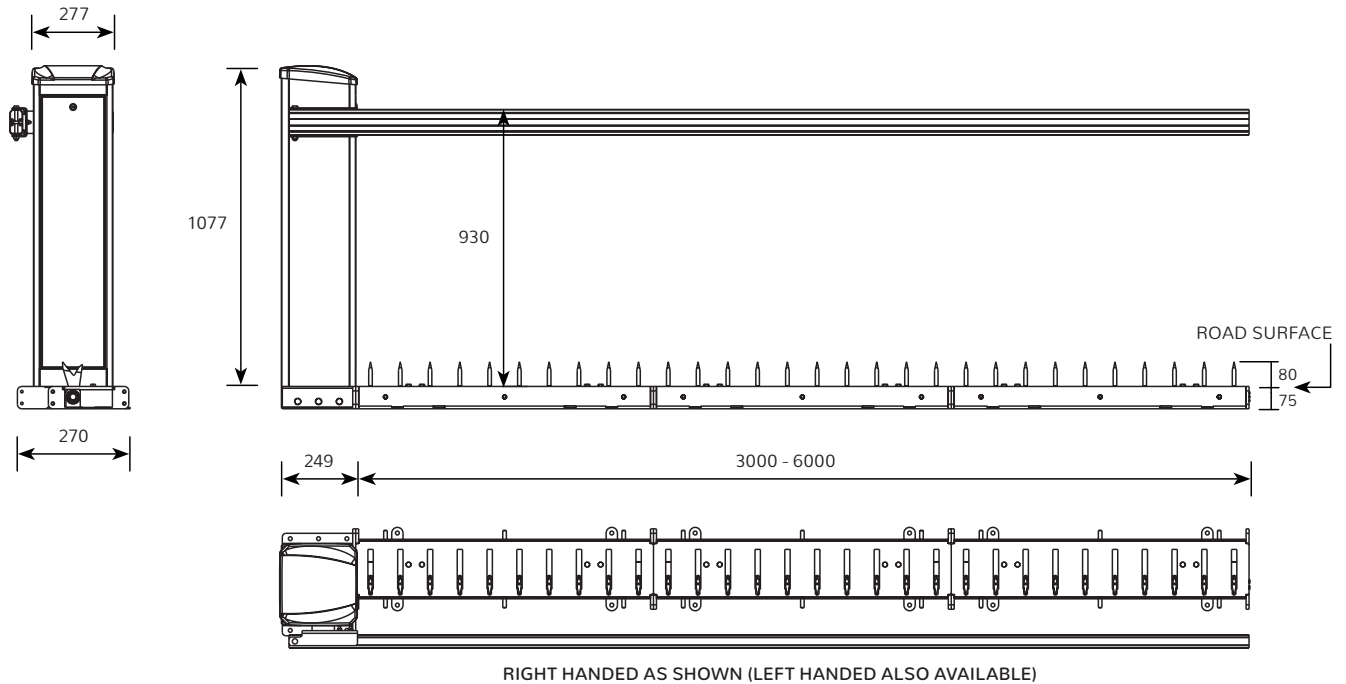
**FIT & FORGET**



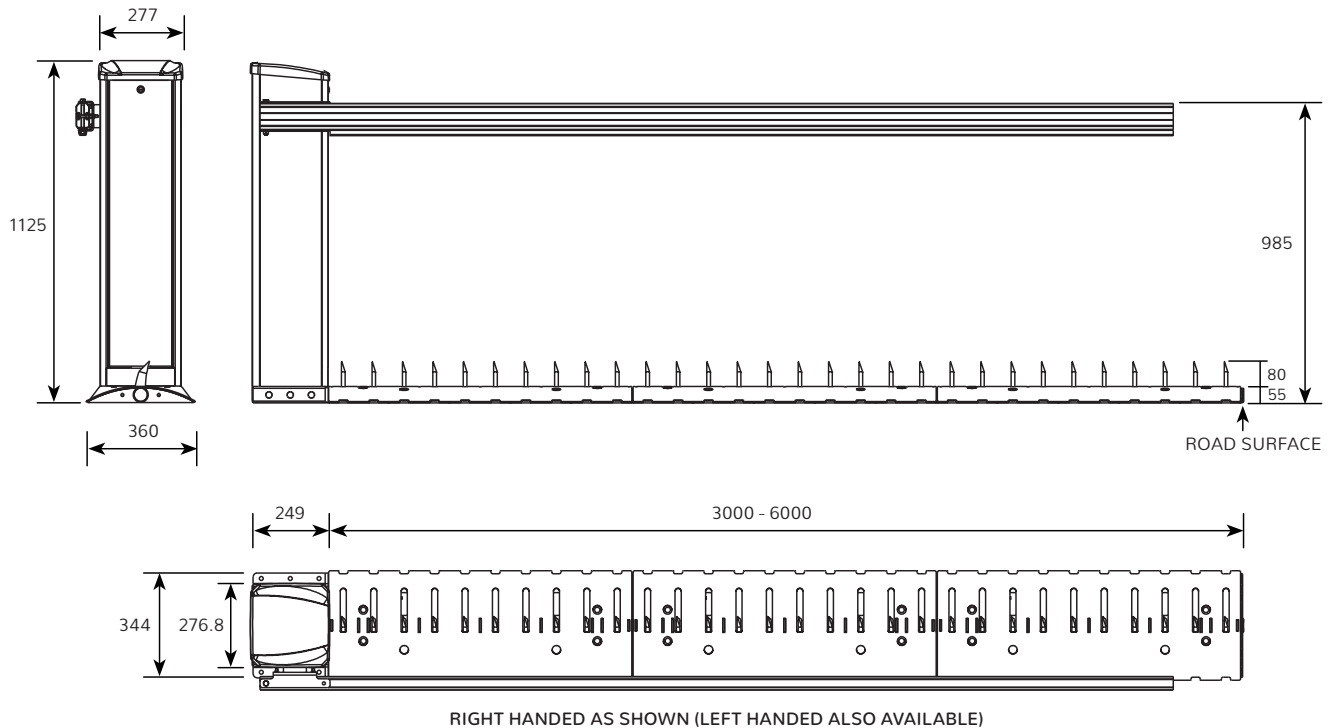
**RECESSED DESIGN**  
With patented double spike

# VELOCITY RAPTOR VEHICLE BARRIER RANGE

## RECESSED DESIGN



## SURFACE MOUNT DESIGN



© Turnstar Systems

**TURNSTAR**   
**RELIABLE + DURABLE + GUARANTEED**

info@turnstar.co.za | www.turnstar.co.za  
 Turnstar Systems (Pty) Ltd  
 Reg No: 2012/100536/07 | Established in 1990

 TurnstarSA

 TurnstarSystems

### JOHANNESBURG HEAD OFFICE AND FACTORY

+27 (0)11 786 1633  
 18 6<sup>th</sup> Street, Wynberg,  
 Sandton, Johannesburg,  
 South Africa, 2090

### WESTERN CAPE BRANCH

+27 (0)21 981 3043  
 +27 (0)82 417 7408  
 Unit 9 Elect Park, 13 Teejay  
 Road, Brackenfell, Cape Town,  
 South Africa, 7560

### KWAZULU NATAL BRANCH

+27 (0)32 947 0391  
 +27(0)76 589 3410  
 Unit 5 - 7 Amatuli Industrial Park,  
 5 - 7 Eagle Road, Shaka's Head,  
 Umhlali, Kwazulu-Natal,  
 South Africa, 4420



ISO 9001:2015