

# TORNADO™

## TURNSTILES



**TECHNICAL BROCHURE**  
(3-ARM, 4-ARM, 5-ARM) SINGLES & DOUBLES

**BoomGate**  
**Systems** (PTY) LTD

Reg.No. 98/23505/07 Engineering Access Control





### MARKET LEADER:

- BGS best selling turnstile.
- Used for reliability, ultra high traffic flow, virtually no maintenance.
- Exported worldwide.

### APPLICATIONS:

- 1** To control high volumes at high risk areas.
- 2** Most suitable: mining, industrial and stadia.
- 3** Suitable for exterior and interior or any abnormal conditions.

### CONFIGURATIONS:

- 3-arm (120°)
- 4-arm (90°)
- 5-arm (75°)
- Single or Double
- Mild powder coated
- Mild steel galvanised
- SABS Standards
- Stainless steel 304
- Stainless steel 316

## SPECIAL FEATURES TO THE TORNADO™ RANGE:

- Unique “keyless square shaft®” design.
- This new design in our shaft is what sets us apart.
- No base bearing.
- Rotor returns to original position after every rotation.
- No 45° locking (except in our mantrap range) even in the event of a power failure.
- 4 x absorbing rubbers are fitted between mechanisms and rotor.
- Modular 11 pin programmable logic with LED indicators.
- Control panel comes standard with 12V and 24V DC output.
- Mechanical key override for both directions.
- Solenoids are rated 100% duty cycle for trouble free operations.
- Case hardened locking mechanism.
- Maintenance free mechanism.
- Our rotor has 28 U arms (lesser models have 24).
- Reader boxes are welded to frame.
- Shallow top channel for easy access.
- Factory tested recorded serial numbers.
- Quiet locking and unlocking mechanism.
- Manufacturers warranty
  - **7 year mechanical warranty - first in S.A.**
  - **1 year electrical warranty**
- Zinc plated mechanism for corrosive protection.
- Mechanism comes with a dust cover for extra protection, noise reduction.
- Draw wires are supplied to reader boxes.



## DID YOU KNOW:

- Your turnstile comes with a 7 year mechanical warranty, the first in S.A. That is how confident we are in our product.
- You will not pay for any mechanical component in your 7 year warranty period.
- BGS has been manufacturing turnstiles for 16 years.
- Our customers range from world renowned blue chip corporations to small single user.
- BGS turnstiles are supplied complete with control panel. The control panel is suitable for battery back up. Batteries are not included. Need 2 x 7.5 amp/hour. Battery back up option comes standard on all our models at no extra cost.
- The control panel also has a 12V output for LED indicators.
- All the welding on turnstile rotor and frames are done by robots to ensure high quality and consistency throughout the production process.
- All mechanical components are die cast, CNC machined and laser cut to the highest precision and quality.
- Turnstile comes standard with reader boxes with draw wires.

## TECHNICAL SPECIFICATIONS:

### ELECTRICAL REQUIREMENTS:

<b>Power:</b>	220V AC $\pm$ 5%
<b>Frequency:</b>	50Hz
<b>Power Consumption:</b>	50W for single turnstile and 100W for double turnstile
<b>Logic Voltage:</b>	24V DC, 12V available on request
<b>Solenoids Voltage:</b>	24V DC, 12V available on request
<b>Turnstile Dimensions:</b>	<b>Single:</b> 1405mm wide x 2135mm high <b>Double:</b> 2155mm wide x 2135mm high
<b>Rotor turning radius:</b>	R = 590mm
<b>Rotor arm configurations:</b>	• 3-arm = 120° • 4-arm = 90° • 5-arm = 72°
<b>Rotor arms:</b>	Single full height = 32mm x 138mm U Bend, 130mm apart Double full height = 32mm x 138mm U Bend, 158mm apart
<b>Weight:</b>	Single full height turnstile 4-arm = 180kg Double full height turnstile 4-arm = 275kg
<b>Modular design:</b>	The turnstile can be disassembled for easy transport. A disassembled turnstile can pass through a standard door.
<b>Export:</b>	Turnstile can be disassembled and packed into purpose made pallets for export. Materials are treated for export.

### SYSTEM COMPATIBILITY:

Boomgate Systems turnstiles are compatible with any access control, time and attendance system or ticketing system. Only requires a n/o voltage free input trigger set for half a second.

## SECURITY LEVEL RATING:

TYPE	TORNADO	LOW	MEDIUM	HIGH	ULTRA SECURE
3-ARM	SINGLE				X
3-ARM	DOUBLE		X		
4-ARM	SINGLE				X
4-ARM	DOUBLE		X		
5-ARM	SINGLE				X
5-ARM	DOUBLE		X		

## AVAILABLE OPTIONS:

### **Single/Dual Direction Rotation:**

Electronic control in one direction and mechanical in opposite direction.  
Electronically controlled in both directions.  
Mechanical control in both directions by means of key lock.

### **Power Locking Options:**

Fail secure  
Fail safe

### **Fire Evacuation Option:**

Rotor will free turn when input is triggered. (It is not recommended to use a turnstile for emergency evacuation).

### **Battery Back Up:**

Battery back up comes standard with all our turnstiles.  
Batteries not included. Requires 2 x 7aH batteries to be connected in series. A third battery can be added for 12V back up.

### **Indication LED:**

The turnstile can be fitted with red/green walking man to indicate go or stop.

### **Card reader brackets:**

The turnstile comes standard with card reader brackets.  
105mm wide and 140mm long welded to turnstile frame.  
Can remove brackets on request.

### **Accessories available on request:**

Bigger reader boxes, rain covers, push buttons, coin acceptors for paid access control, random search selectors.

### **Canopies available on request:**

Boomgate Systems has standard ranges of canopies available for the single full height turnstile and double full height turnstile. We manufacture on request.

### **Material options:**

Mild steel powder coated with textured exterior UV resistant powder.  
Mild steel hot dip galvanised.  
Mild steel hot dip galvanised and powder coated.  
304 stainless steel brushed.  
316 stainless steel brushed for extreme conditions.  
Standard colours are blue hammertone.

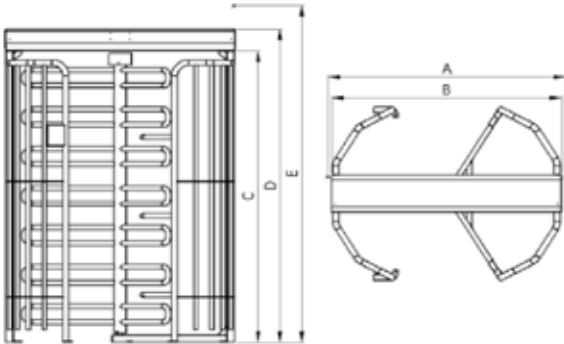


# TORNADO™ TURNSTILES RANGE



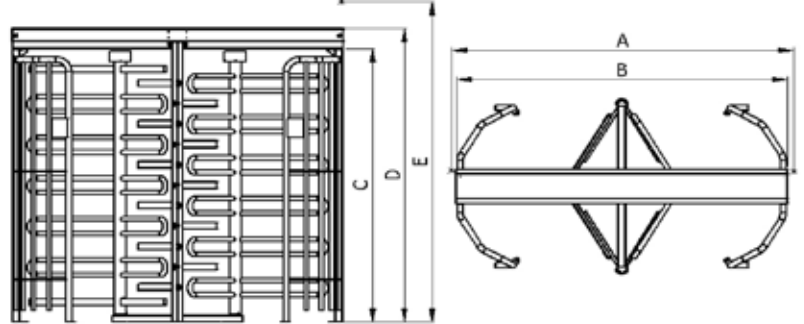
## TORNADO SINGLE

### 3ARM SINGLE TORNADO

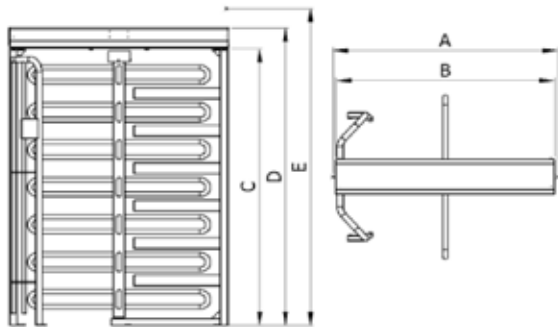


## TORNADO DOUBLE

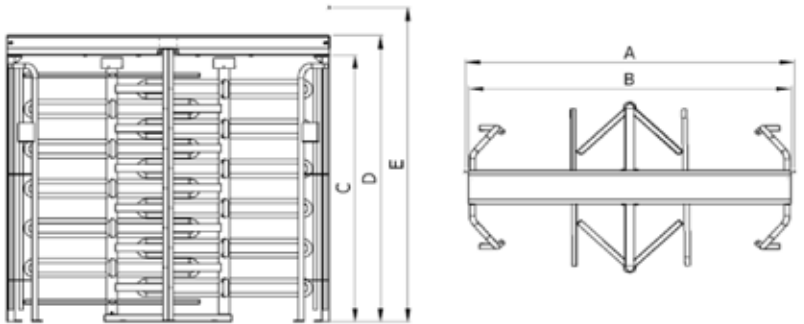
### 3ARM DOUBLE TORNADO



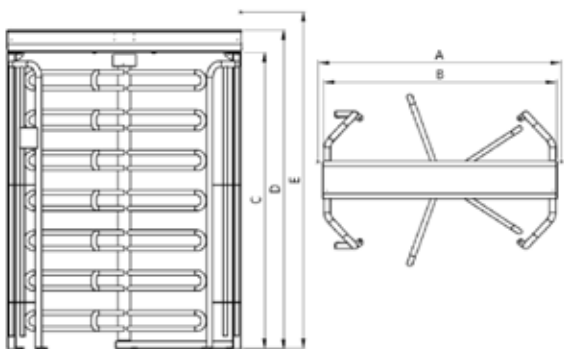
### 4ARM SINGLE TORNADO



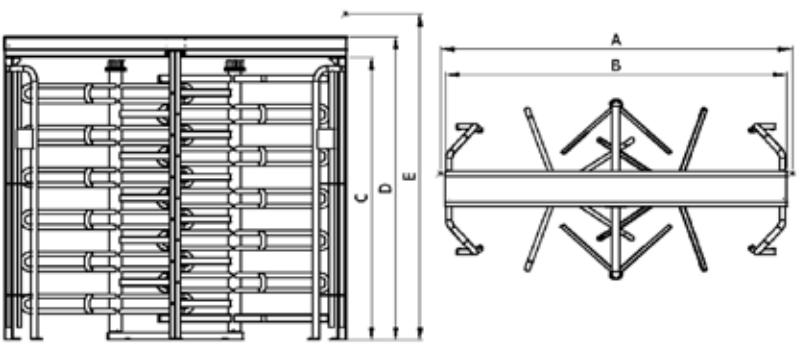
### 4ARM DOUBLE TORNADO



### 5ARM SINGLE TORNADO



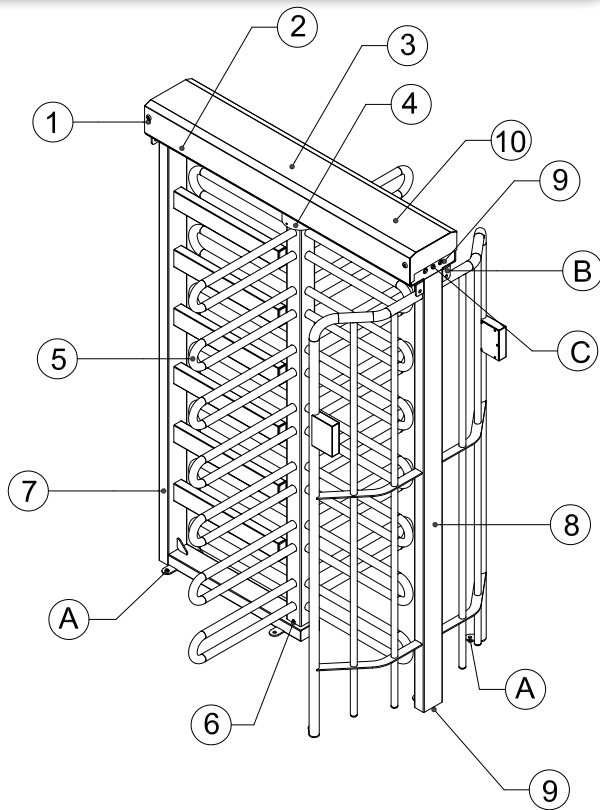
### 5ARM DOUBLE TORNADO



A	Recommended Opening Width	1430 mm	A	Recommended Opening Width	2180 mm
B	Turnstile Width	1405 mm	B	Turnstile Width	2155 mm
C	Headroom	1990 mm	C	Headroom	1990 mm
D	Turnstile Height	2135 mm	D	Turnstile Height	2135 mm
E	Recommended Opening Height	2250 mm	E	Recommended Opening Height	2250 mm

Due to continuous improvement, products and design are subject to change without notice.

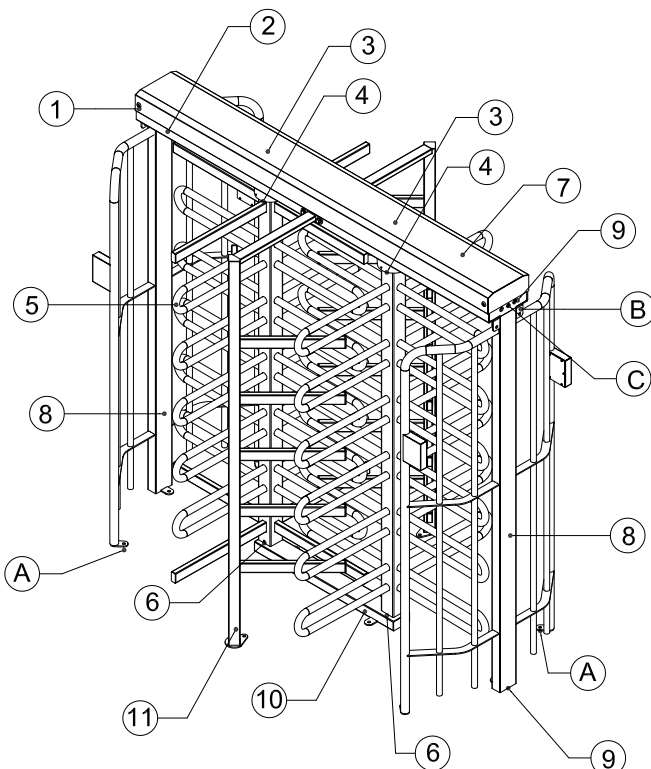
## TORNADO™ 4-ARM SINGLE



- 1 Lockable top channel cover c/w 2 x locks
- 2 Top channel
- 3 New design mechanism c/w
  - a. 7 year warranty
  - b. Unique keyless square shaft™
  - c. Suspended rotor
  - d. Dust cover
- 4 Rotor cupling c/w 4 x shock absorbing rubbers
- 5 Rotor with 28 x 32mm diameter u bends  
130mm apart.
- 6 Rotor centre guide
- 7 L-frame
- 8 Side frame c/w 2 x reader boxes  
105mm (w) x 40mm (l) welded to frame.
- 9 Cable entry
- 10 Control Panel.

- A Floor mounting lugs x 7  
 B Side wall mounting lugs x 4  
 C 2 x 16mm kick bolt

## TORNADO™ 4-ARM DOUBLE



- 1 Lockable top channel cover c/w 2 x locks
- 2 Top channel
- 3 New design mechanism c/w
  - a. 7 year warranty
  - b. Unique keyless square shaft™
  - c. Suspended rotor
  - d. Dust cover
- 4 Rotor cupling c/w 4 x shock absorbing rubbers
- 5 Rotor with 24 x 32mm diameter u bends  
158mm apart.
- 6 Rotor centre guide
- 7 Control Panel
- 8 Side frame c/w 2 x reader boxes  
105mm (w) x 140mm (l) welded to frame
- 9 Cable entry
- 10 Rotor Centre Guide Rail

- A Floor mounting lugs x 12  
 B Side wall mounting lugs x 4  
 C 2 x 16mm kick bolt



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