

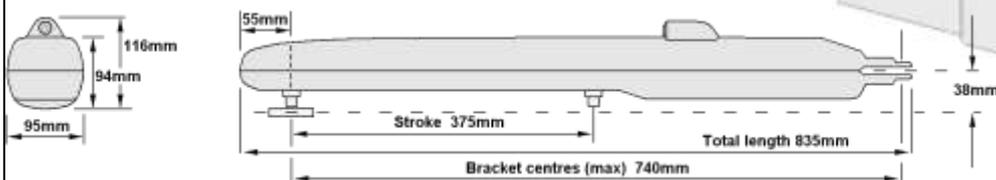
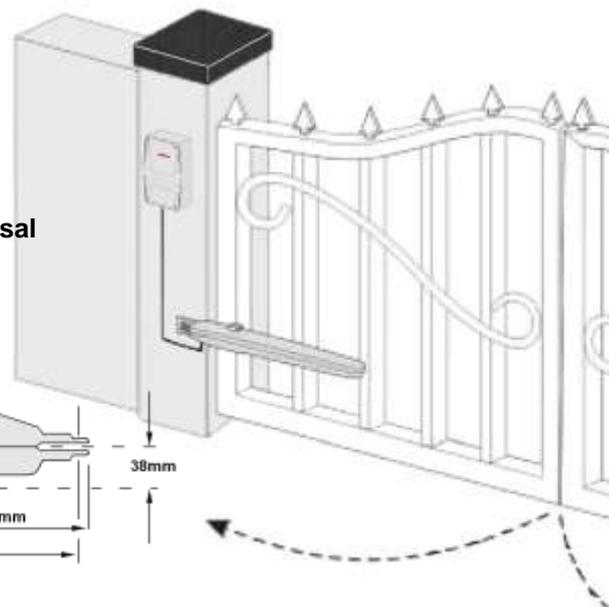
## AVANTI Installation manual

### Specifications

<b>Supply</b>	220-240Vac 50Hz
<b>Motor power</b>	60W 24Vdc
<b>Stroke</b>	320mm 120°
<b>Speed</b>	12-15 sec to 90°
<b>Torque</b>	300 N.m
<b>Gate max</b>	1.8m 250kg/leaf
<b>Env'l rating</b>	IP24 -25° to +50° C
<b>Motor dims</b>	835 x 116 x 95mm

### Features

- ✓ Soft start, soft stop
- ✓ One touch limit setting
- ✓ Encoder based timing
- ✓ Pressure sensitive reversal
- ✓ Rolling code remotes
- ✓ Battery backup option



### 1.0 Application

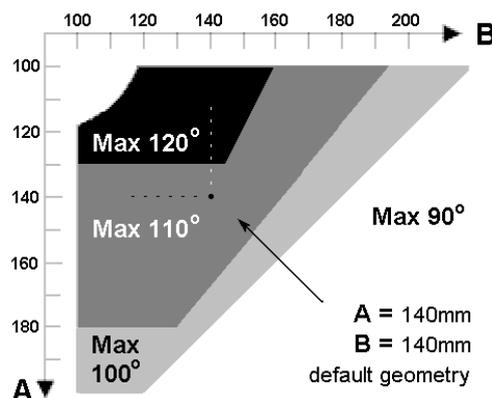
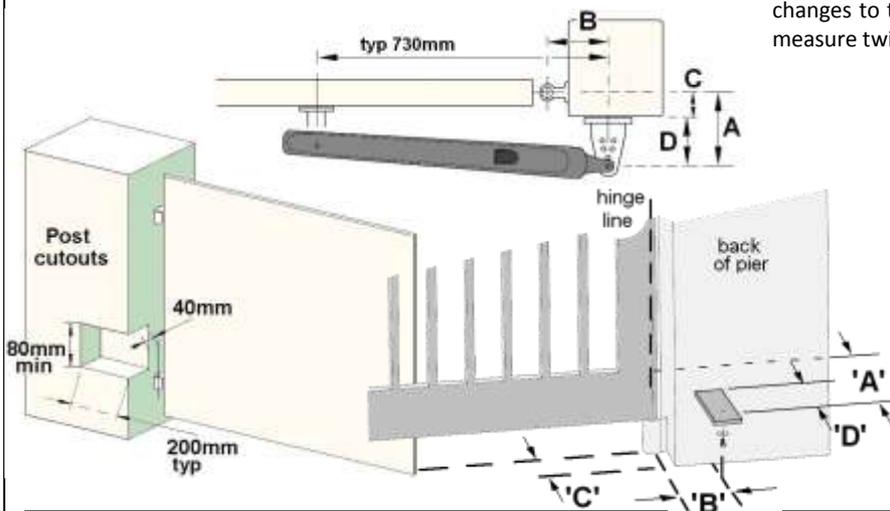
AVANTI double leaf swing gate sets are suitable for light to medium gates. Ram openers are best suited to wooden or steel posts where a good fixing can be ensured. Geometry is critical with ram openers due to the stroke length. Check 'A' and 'B' dimensions available. For gates not mounted on the back edge of the post, it is possible to provide cutouts.

A soft start function reduces gate jerking common with ram openers that can damage both gates and fixings. AVANTI's physical limits mean there is no need for gate closed stops. Read and observe the safety warnings before starting.

### 1.2 Post bracket fixing

Post brackets need very strong fixing bolts, or welding to a stable post. Fixings to brick are a weakness, particularly for boarded gates which are heavier and catch the wind. Gate bracket fixings are in shear, so are less critical.

Start by choosing a gate fixing rail that also provides a solid post mounting point (38mm higher). Measure the desired opening angle, then using the chart below, find the 'A' and 'C' dimensions. Fix the post bracket first. Only one of the 5 bracket's holes will be used, so there is some possibility for adjustment after fixing. Any changes to the post fixing holes later will only weaken fixings, so measure twice, fix once!



### 1.1 Gate geometry

The post bracket position with respect to the hinge line sets the opening angle and speed. Dimensions A & B should be roughly equal and maximised to use the full stroke length. Short strokes are faster, but only for use on small gates. The chart shows large B increases opening angle, but again, only for very light gates.

Motors can be fixed at any height, but must be horizontal. The gate bracket should be fixed to the strongest horizontal rail. The post bracket is then fixed 38mm higher than the gate bracket, important for the opener to remain horizontal.

### 1.3 Gate bracket fixing

Bolt the gate bracket to the opener. Manual release the opener. Move the physical limit blocks to the end of travel. Pull the carriage to the fully open position (nose end). Position the gate in the closed position. Fix the opener to the pier. Hold it against the gate. Mark the bracket mounting holes on the gate.

Re-mark the holes 20mm closer to the gate post and drill two of the holes to 8mm. Fix the bracket. The other holes and fixings will be made after the setup procedure when you are confident the bracket is in the optimum position.

## 1.4 Setting limits of movement

There are two physical stops fitted to the underside of the body shell. Serrations prevent movement of the limit block. Operate the manual release then set the gate in the closed position. Move the closed limit block up against the opener gate mounting spigot, then tighten the limit block screw.

Move the gate to the fully open position. Adjust the open limit block as before, then tighten down. Repeat for the second leaf. Close the gates, then re-engage the manual release.

The control panel setup will adjust itself to the physical limits. It may be necessary to adjust the limits after a few runs.

## 2.2 Cabling

A typical installation requires the following cables. Conductor size is the minimum recommended based on current. Cable insulation must be suitable for the run. Underground cables and cable exposed to UV light must be rated accordingly. We recommend a pier to pier cable duct with a minimum diameter of 25mm.

	Type	details
<b>Supply</b>	2+E x >1mm <sup>2</sup>	230Vac armoured or ducted
<b>Motor</b>	3+E x 1.5mm <sup>2</sup>	24Vdc intermittent use
<b>Flasher</b>	2 x 0.5mm <sup>2</sup>	Alarm or data cable
<b>Photobeam</b>	4 x 0.22mm <sup>2</sup>	Alarm or data cable
<b>Safety edge</b>	2 x 0.22mm <sup>2</sup>	Alarm or data cable

Cabling to 24Vdc motors should be needs special attention due to higher currents. Motors are supplied with a 1m cord. The motor nearest the control panel may go direct. A junction box will be required for the far side motor. Make sure the connection is made well and insulated from the environment. This junction box may also be used to route accessory cables



Setting limit blocks



Cable entry

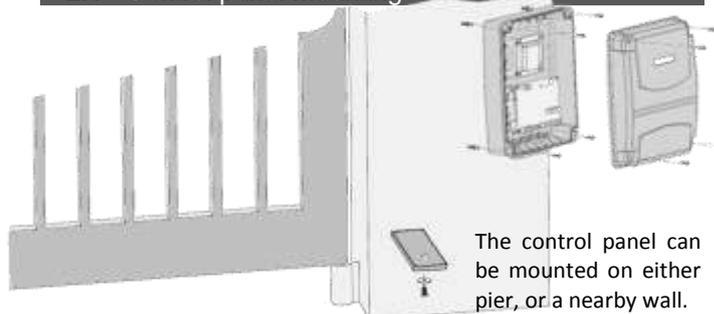


Manual release

## 2.3 Accessory wiring

A In most cases a single 8 core alarm cable is sufficient for accessory wiring (excludes motor & mains cables). For automation novices, we recommend the colour coded "universal wiring scheme". Refer to the control panel manual. For the provision of suitable wiring, ensure that each safety edge, photobeam, and control switch is connected back to the control panel by 8 core alarm cable, either individually or daisy chained.

## 2.1 Control panel mounting



The control panel can be mounted on either pier, or a nearby wall.

Wiring and programming is covered in another document. Mains cables should be protected in ducts or armoured sheathing. All other cables are ELV designated electrically safe.

When positioning the control panel, consider that DC motor cable length should be no longer than necessary.

## 3.0 User instructions

### Manual release

The AVANTI motor can be disengaged in the event of power failure. Insert the key into the pod on top of the opener and turn through 180 degrees. The gate can be moved freely. Return the gate to closed position before the next operation.

### Maintenance

The following points should be checked every 6 to 9 months. Grease all arm joints and the gate hinges. Ensure opener mounting bolts and physical limits are tight. Check cables are securely terminated. Operate each safety device in turn to check the correct reversal of direction. Check the gate reverses when it meets an obstacle in either direction.

### Safety warnings

Automatic gates can be hazardous. It is the operators responsibility of an automatic gate to be aware of, and provide adequate warning of hazards. All users should be given a hazard awareness briefing and user training for the automatic gate.



This manual is written for automation engineers aware of the construction and accident prevention rules in force. Only qualified persons may do installation or maintenance work on this installation. Keep the gate in good working order with regular checks on the safety devices fitted.

Operators should ensure people are clear of the gate during operation. Children must not be allowed to play on or near the gate, or be allowed to operate the gate. We recommended signs both sides of the gate to warning of risk of injury to pedestrians. Do not permit public access to the gate area.

## Forematic

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Stoke Row  
Henley RG9 5QW

### WARRANTY

3 year return to base warranty covers defective manufacture and material. The warranty does not cover accidental damage, misuse, or abnormal wear. Warranty is conditional on good installation, maintenance and service recommended in this manual. Warranty is void if subject of unauthorised modification or repair, or abnormal input voltage. This does not affect your statutory rights

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