



Standard Patents - NZ576 004 / AU2006907329 / AU2007901071

Dual Sliding Gate Mechanism (for automatic sliding gates)



Assembly & Installation Instruction **V5.2**

**standard 4/50-A alloy guide channel & armature kit
for the automation of telescopic sliding gates**

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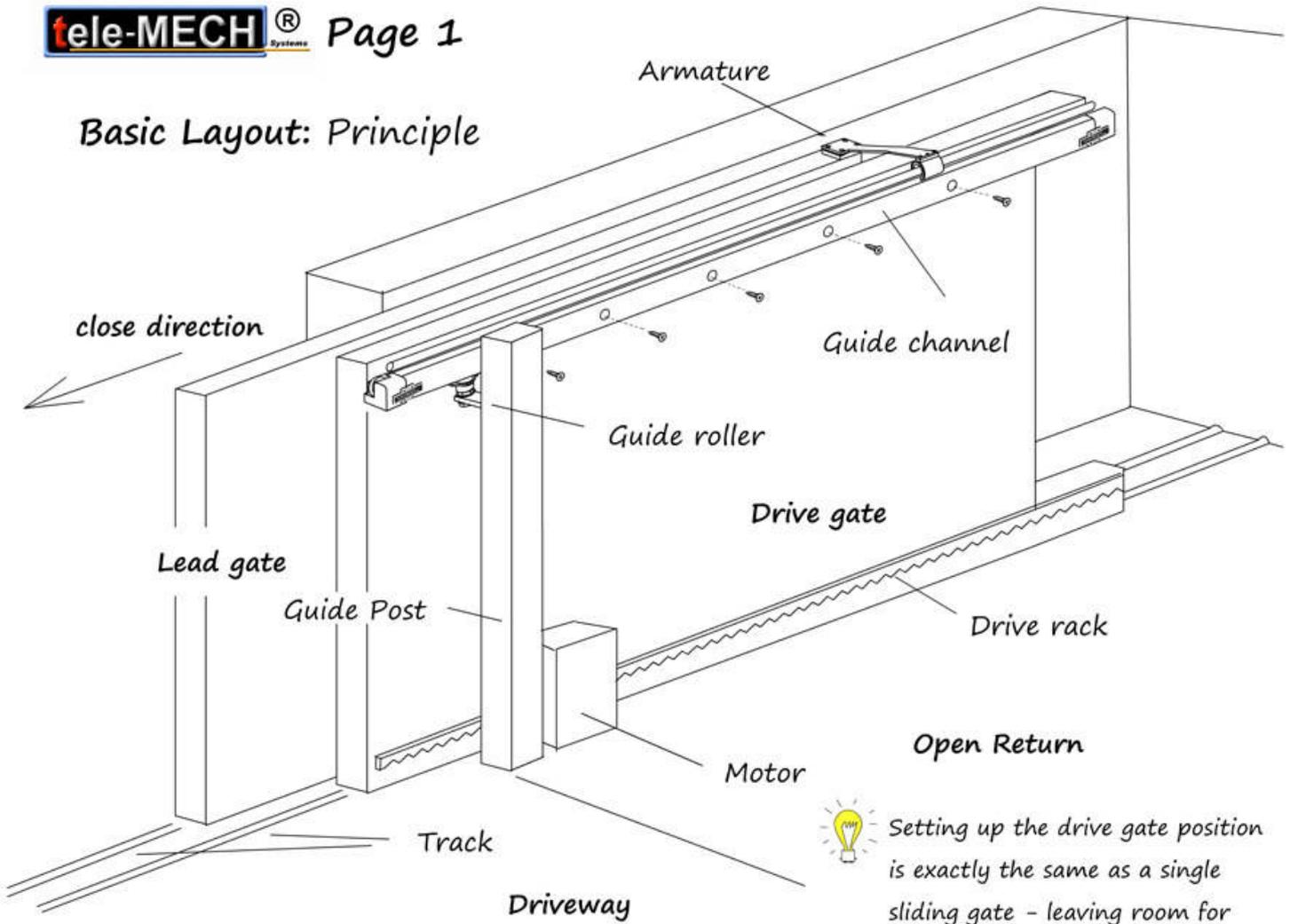
Alternative Attachments:

- page 14 ----- WC Armature plate for timber

Recommended for domestic use with individual gate panels between 40kg to 200kg with rack & pinion motor capable of soft start ramp and slow down to stop.

Gates travel twice as fast as standard single sliding gates, photoelectric safety beams or other obstacle detection devices should be a standard consideration when choosing this type of gate for your project.

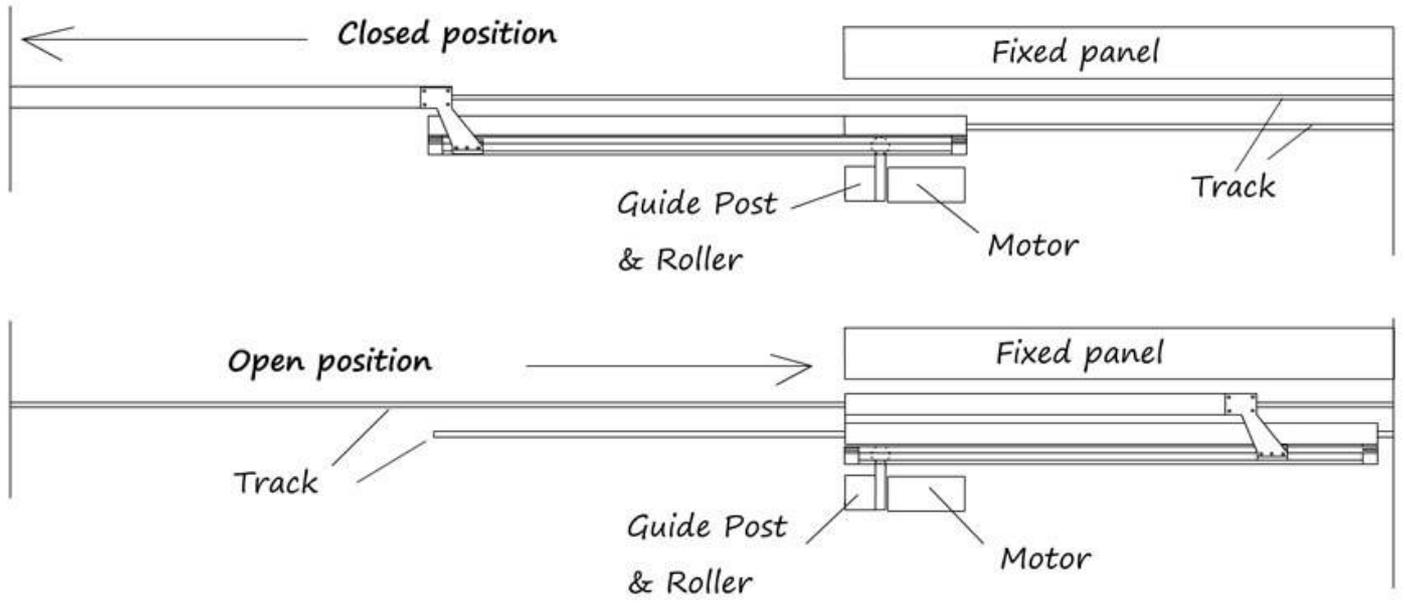
Basic Layout: Principle



Open Return

💡 Setting up the drive gate position is exactly the same as a single sliding gate - leaving room for the motor, drive rack and the guide post for your preferred automation equipment

Plan:



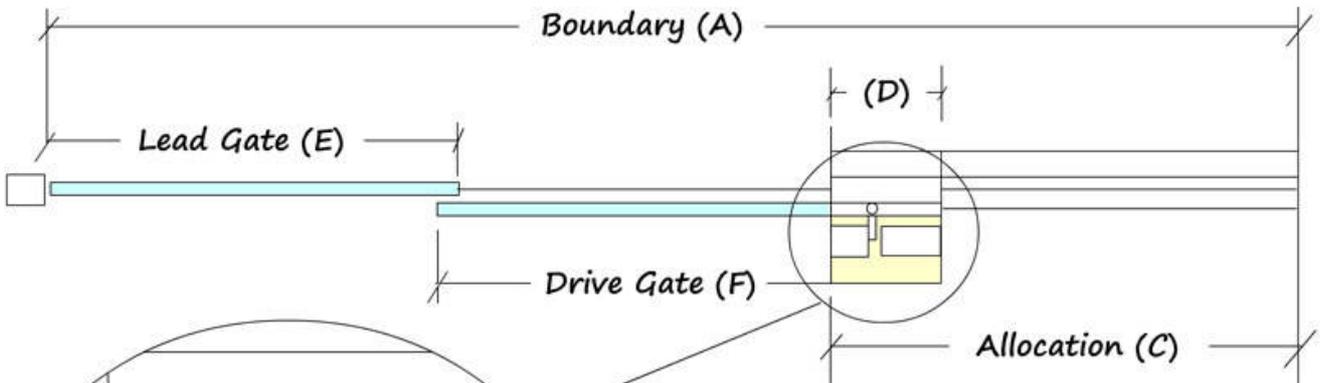
Area Division Table

With 50mm gate overlap

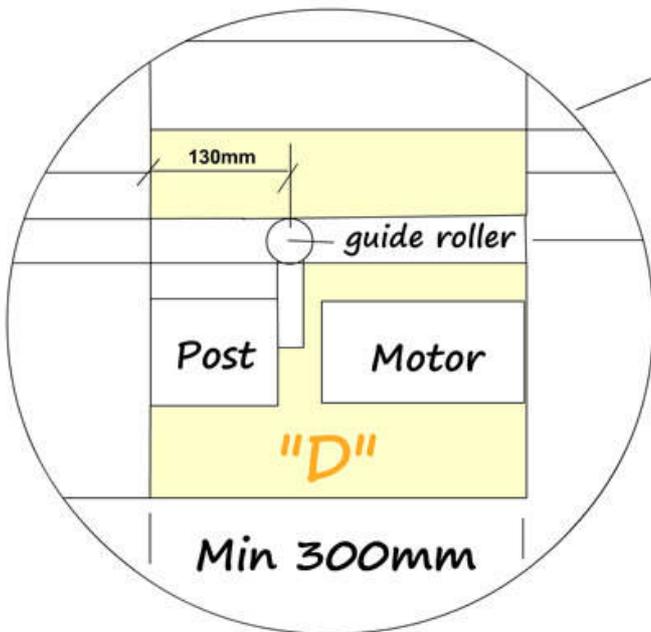
A		A = Boundary width	
E E = 1/2 of B + 50mm	50mm	# D = 300mm	C C = F + D Required telescopic allocation
	F F = 1/2 of B + 50mm		
B	2/3 of A - D or A - C Maximum driveway width		



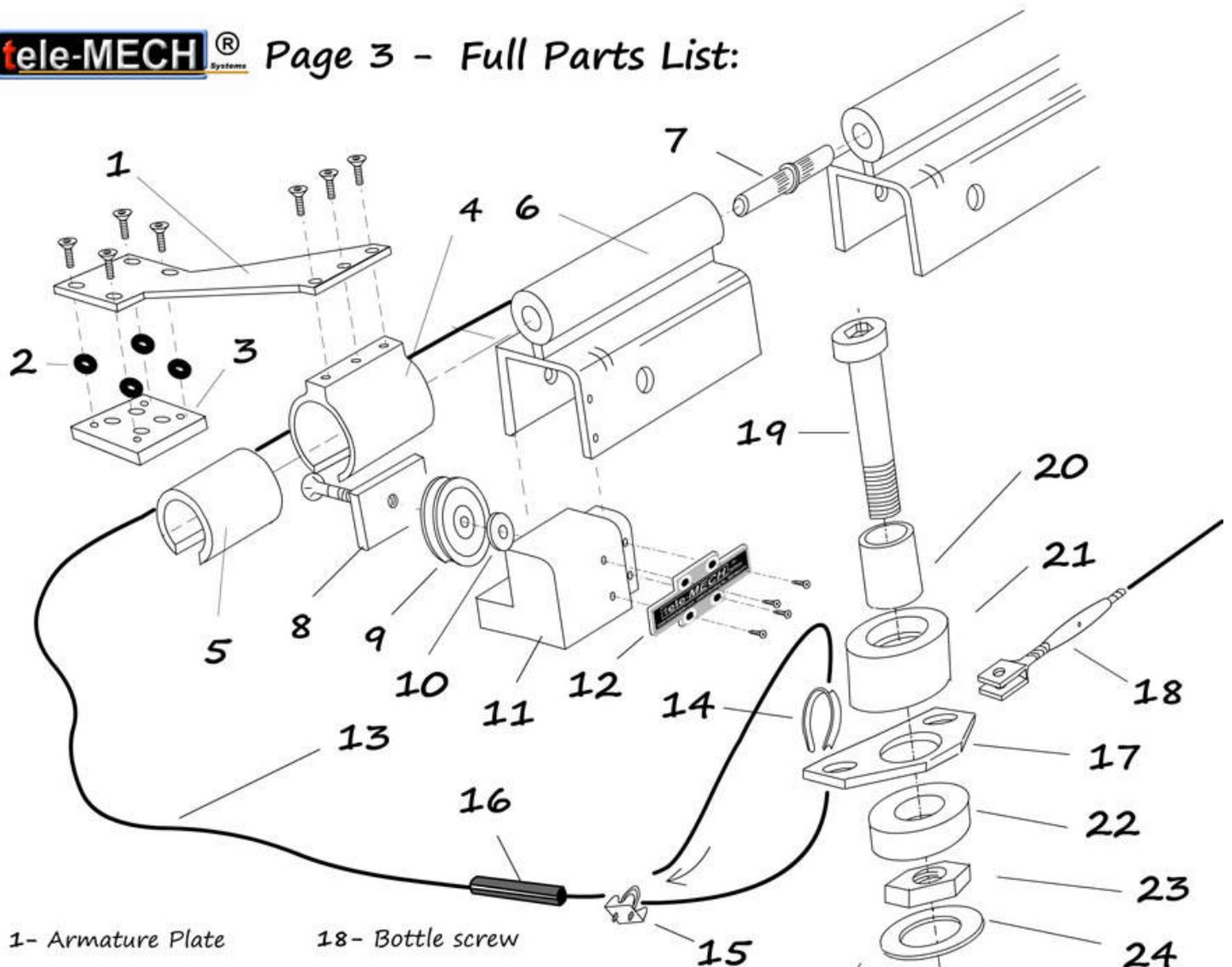
Simple calculation: divide the driveway opening by 2 and add 350mm and you will get the required stacking allocation space. (C)
 $300 + 50\text{mm overlap} = 350\text{mm}$



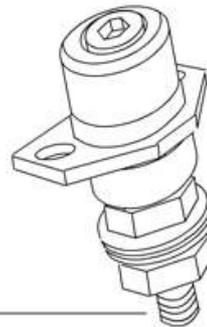
Both the lead gate (E) and the drive gate (F) should be exactly the same length "across the driveway" as they both move the same distance on a 1 to 1 basis,
 * For example - if the drive gate stops short of the opening by 100mm then the lead gate will stop short by 200mm
 Total loss of opening - 300mm
 You must re-divide from the short fall to achieve a parallel opened position - back to 100mm



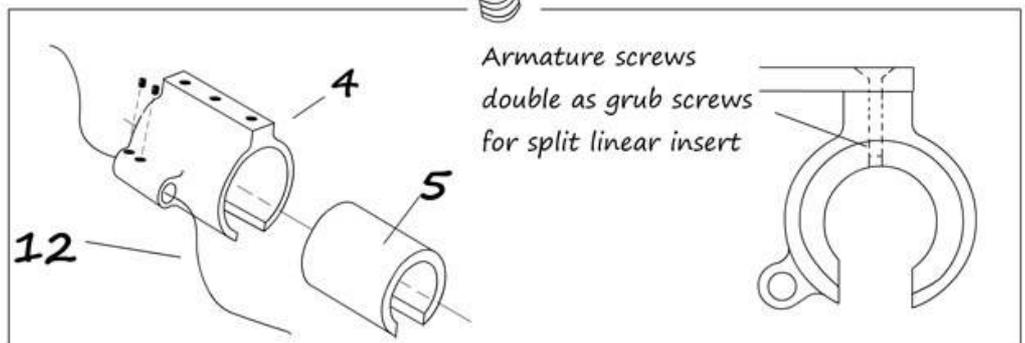
Area "D" can also be dependant on the dimensions of the chosen automation product.
 300mm is the recommended tail for the tele-Mech guide channel only.



- | | |
|------------------------|--------------------|
| 1- Armature Plate | 18- Bottle screw |
| 2- Suspension rings | 19- Centre Bolt |
| 3- Base Plate | 20- Inner sleeve |
| 4- Linear Slide | 21- Upper nylon |
| 5- Split Linear insert | 22- Lower nylon |
| 6- Guide Channel | 23- Upper lock nut |
| 7- Channel pin | 24- Upper washer |
| 8- Axil plate | 25- Lower washer |
| 9- Bearing Pulley | 26- Lower lock nut |
| 10- Pulley spacer | |
| 11- End Pulley Block | |
| 12- Drilling Template | |
| 13- Drive Cable | |
| 14- M3 Thimble | |
| 15- Cable clamp | |
| 16- Heat Shrink | |
| 17- Cable Mount | |



Assembled guide roller
parts 17 - 26

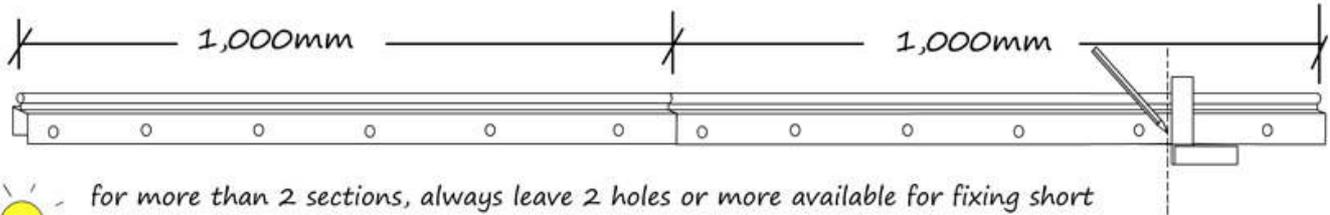


Armature screws
double as grub screws
for split linear insert

Channel Prep: 1

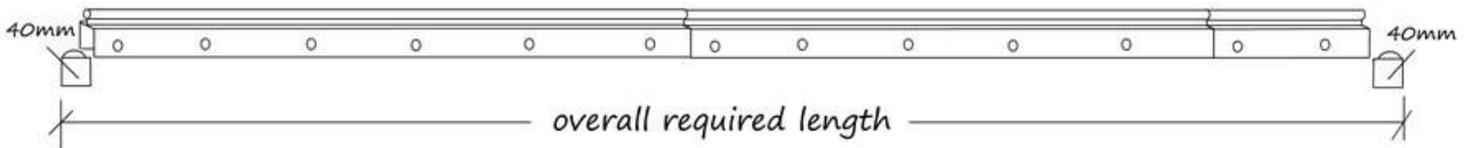
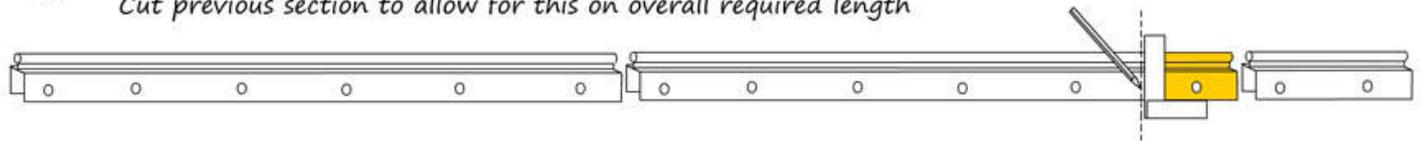
Preparing 4/50-A Guide channel

Place channel sections end to end and note mounting hole positions and length required before cutting - Mark & cut to desired length according to division table, minus the pulley blocks which are 40mm on each end.



for more than 2 sections, always leave 2 holes or more available for fixing short lengths of guide channel to gate.

Cut previous section to allow for this on overall required length

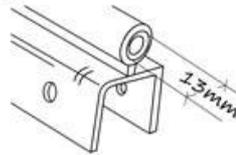
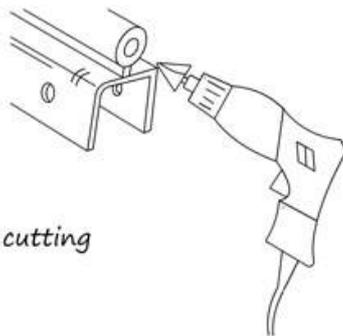


Connecting sections:

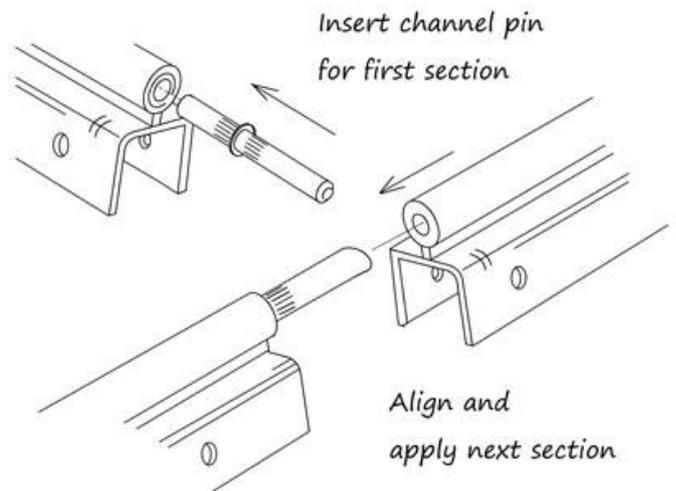


File off rough edges after cutting

Countersink centre hole



After cutting channel remove all rough edges, clean centre hole and countersink to 13 mm or more before inserting channel pin



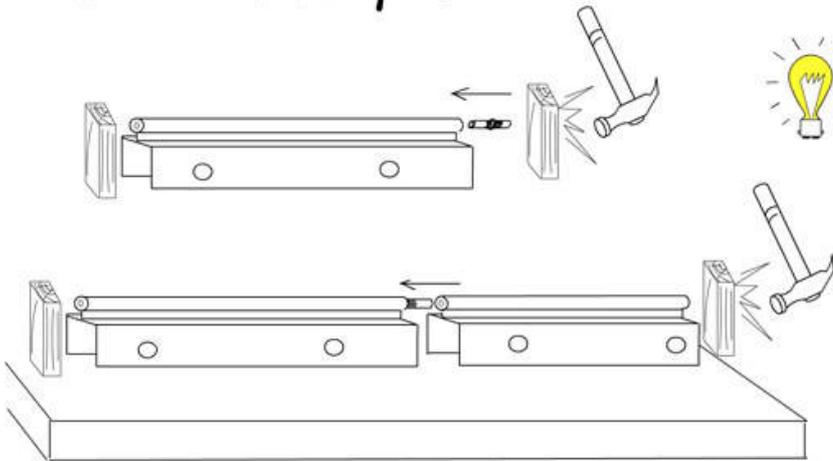
Insert channel pin for first section

Align and apply next section

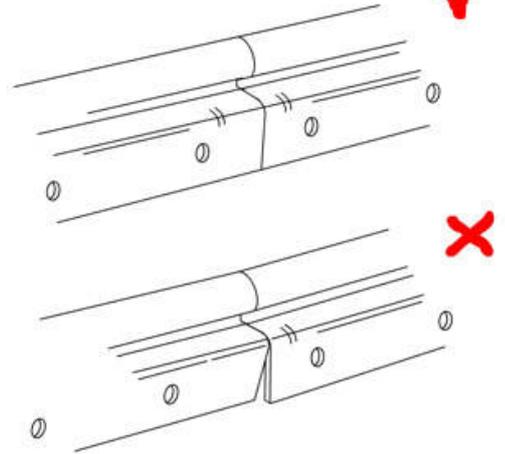
If powder coating these sections, do not connect until after the powder coating process.

* Only for mill finished items and not advised with anodised version

Channel Prep: 2

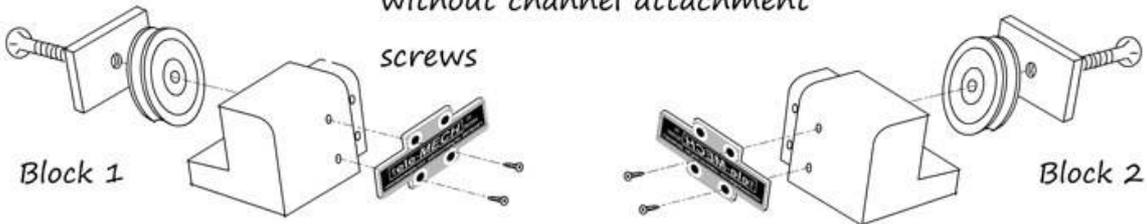


Place on flat surface so the channel walls are in perfect alignment and use a soft hammer or section of wood as not to damage the joining surfaces



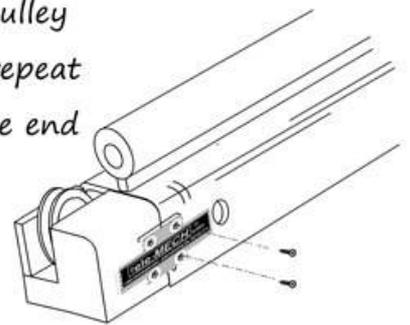
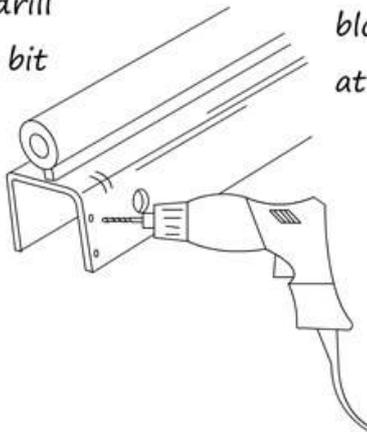
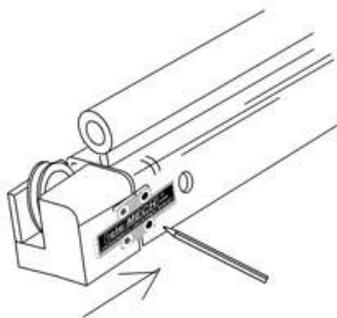
The channel pins have been designed as a permanent join and to prevent twisting, once inserted, they are difficult to remove or adjust if incorrectly aligned
 - Pay special attention to this step!

Installing Pulley Blocks: Assemble pulley blocks without channel attachment screws

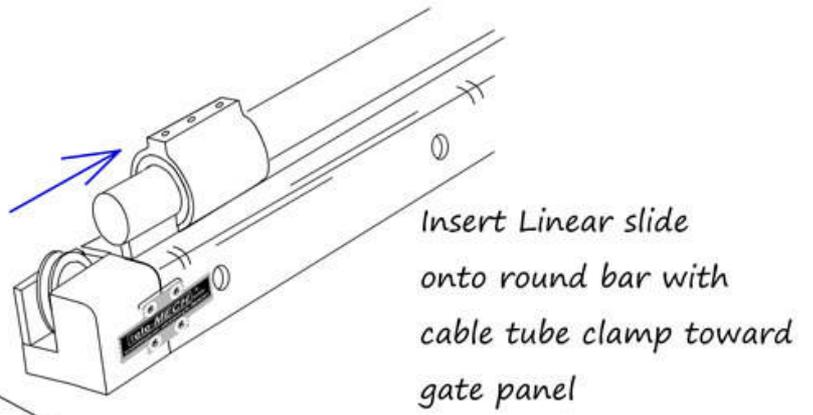


Mark and drill with 5mm bit

Attach pulley block - repeat at opposite end

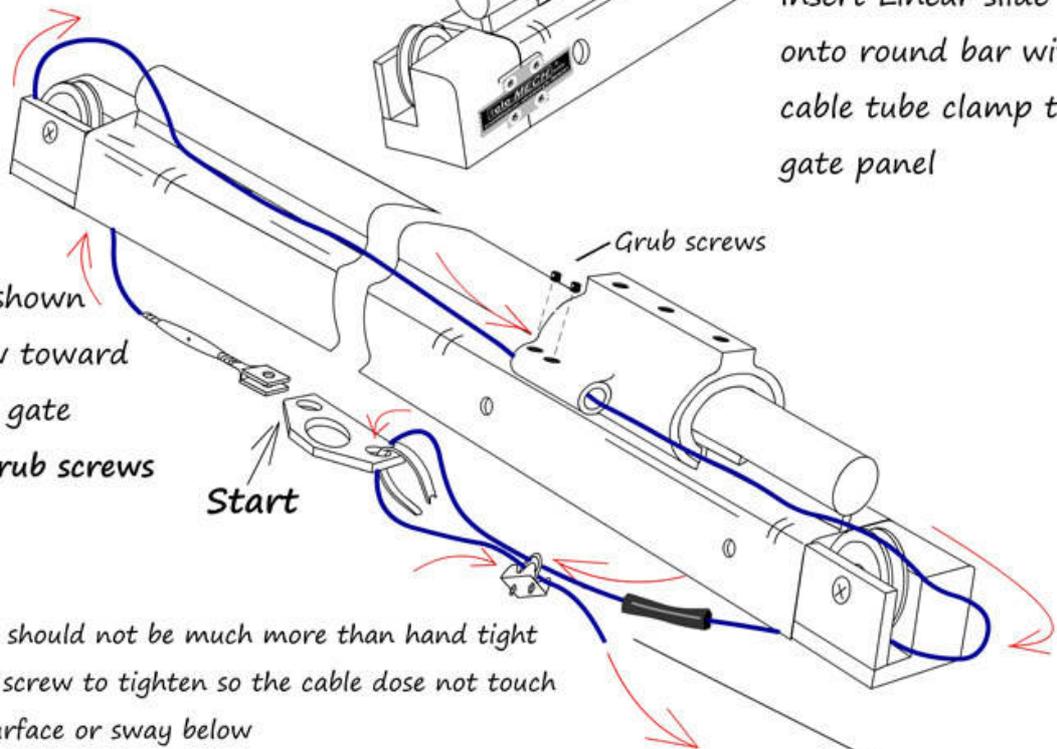


Rigging:



Insert Linear slide onto round bar with cable tube clamp toward gate panel

Thread cable as shown with bottle screw toward the rear of drive gate
Do not tighten grub screws at this stage

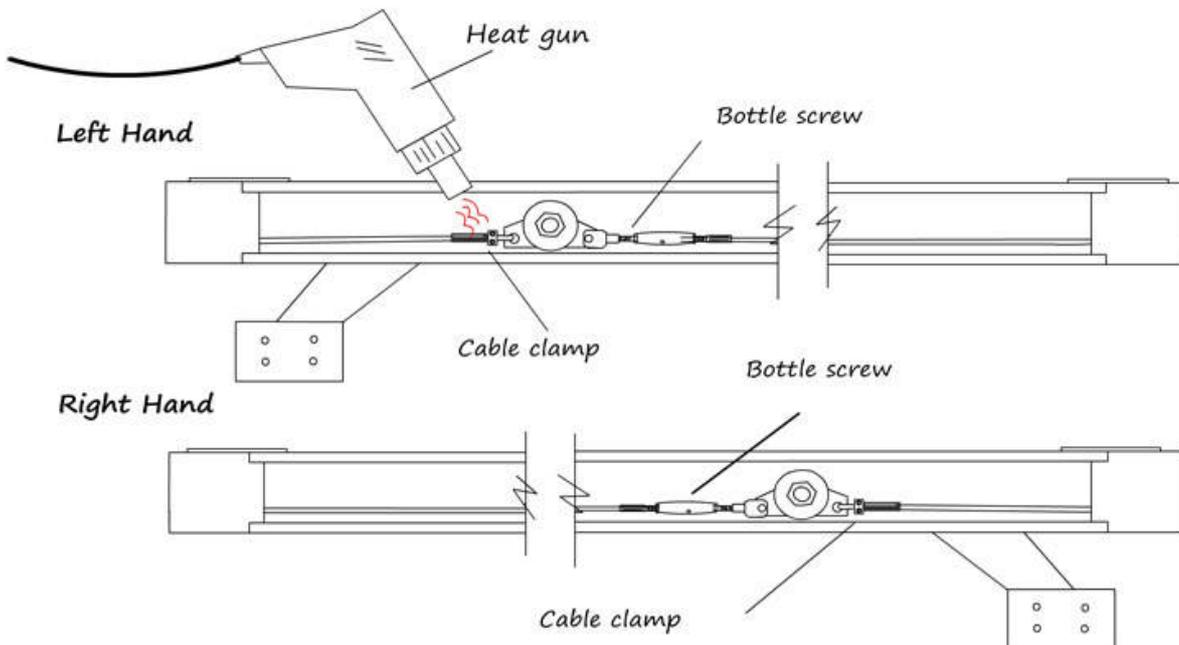


 Cable tension should not be much more than hand tight use the bottle screw to tighten so the cable dose not touch the channel surface or sway below

* If the cable is too tight it will fray and break under load

Pull hand tight

Cut off excess cable approx. 30 to 40mm from cable clamp, move heatshrink over free end and activate with heat gun



Left Hand

Heat gun

Bottle screw

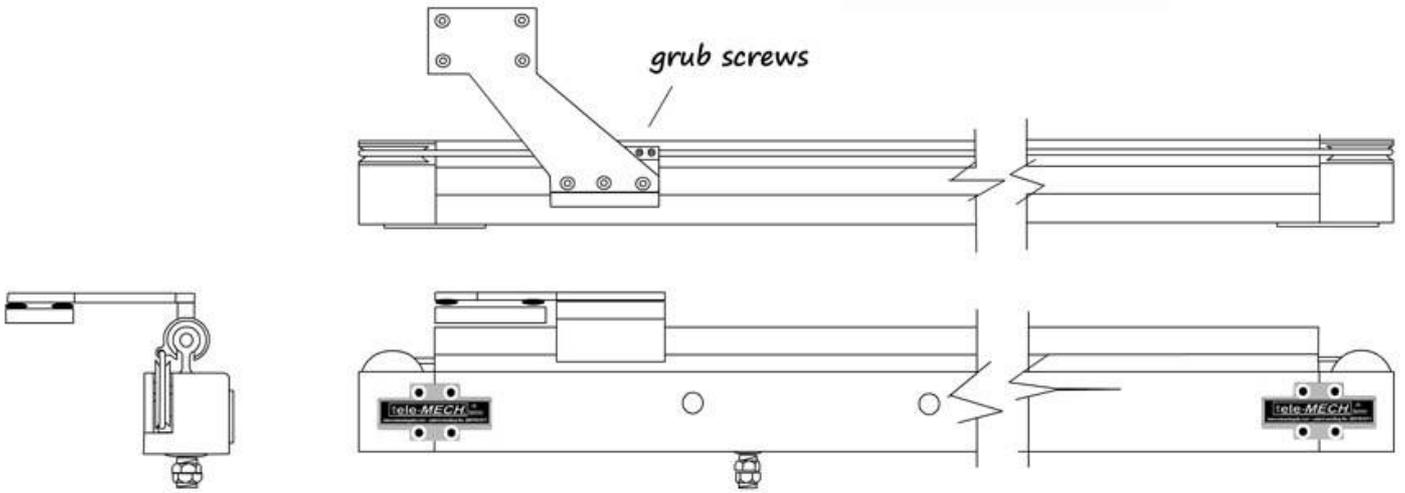
Cable clamp

Bottle screw

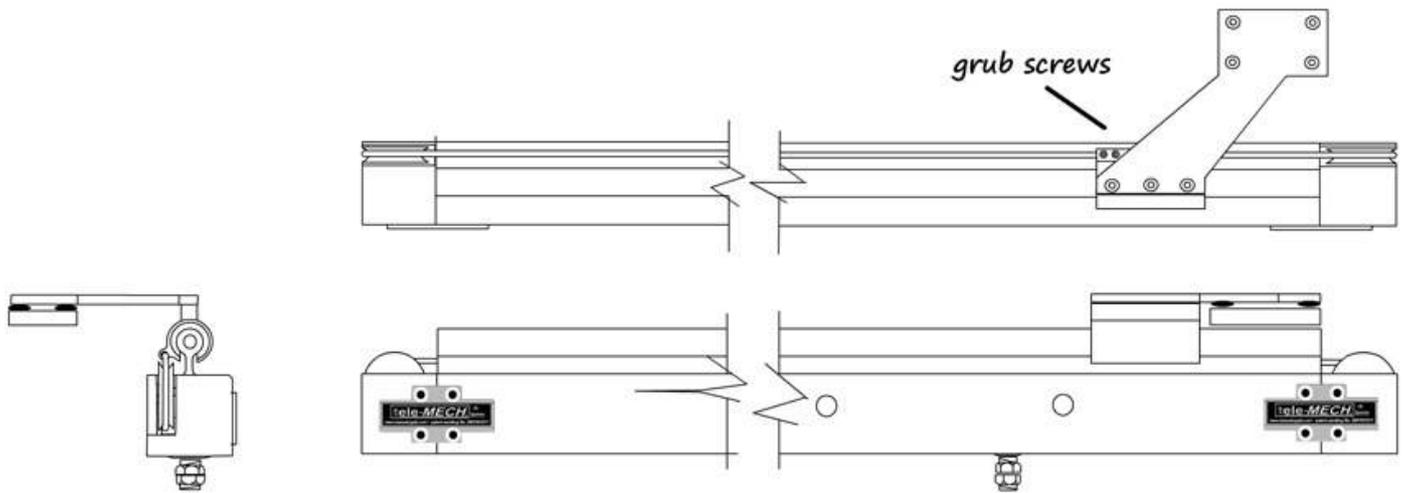
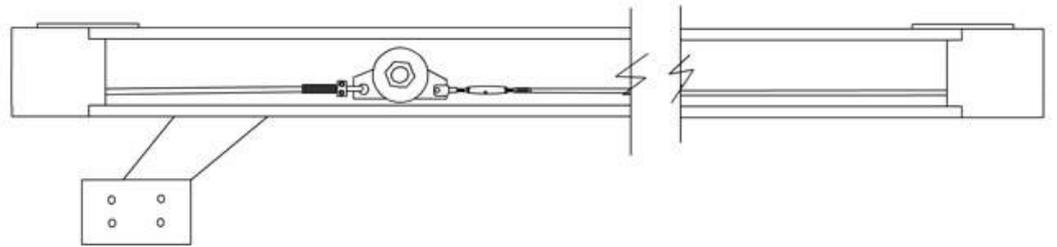
Right Hand

Cable clamp

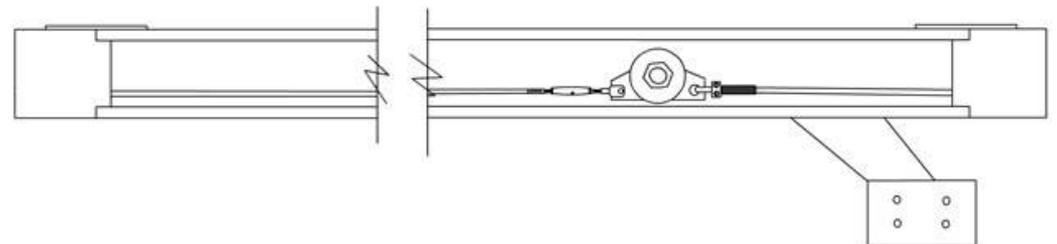
Assembled:



Left Hand

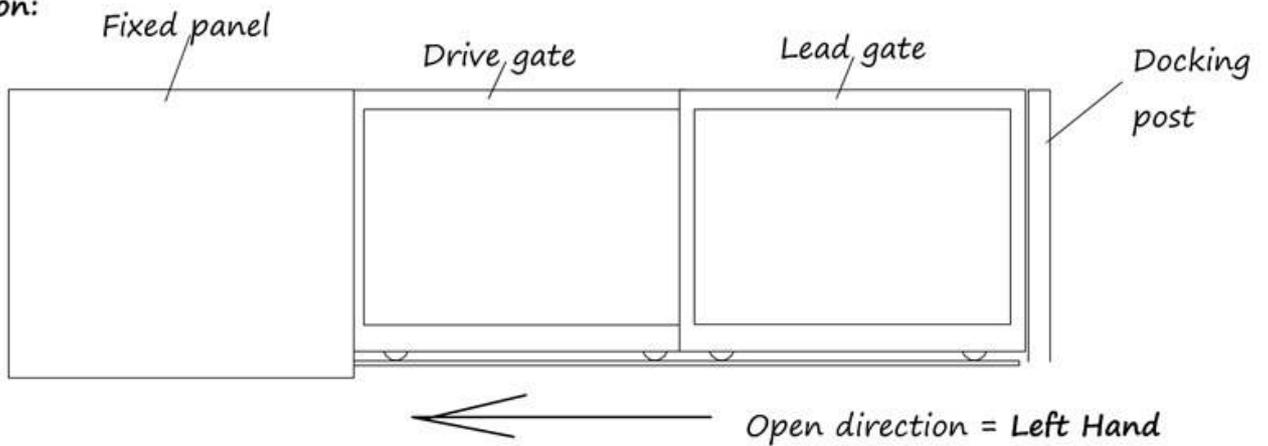


Right Hand

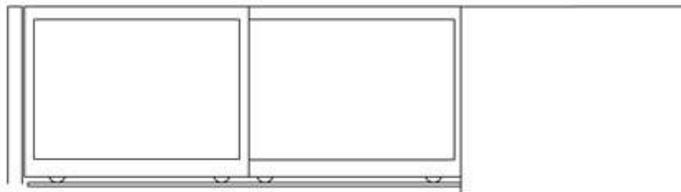
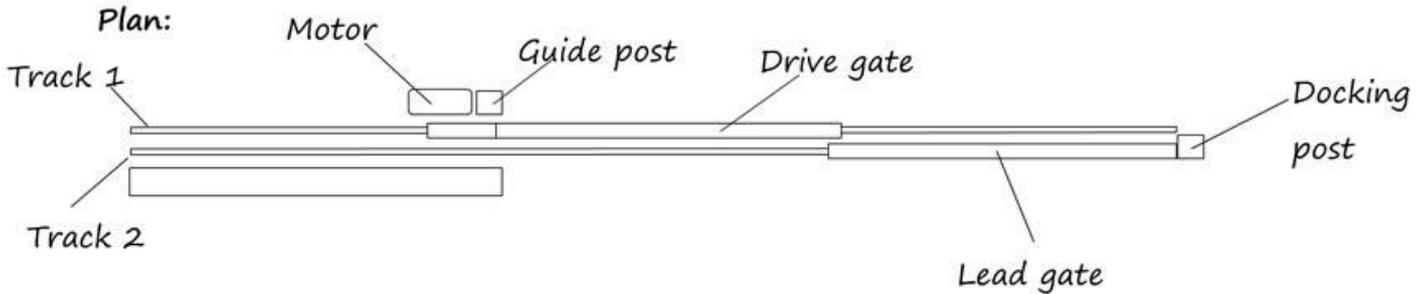


Site preparation:(standard layout)

Elevation:



Plan:

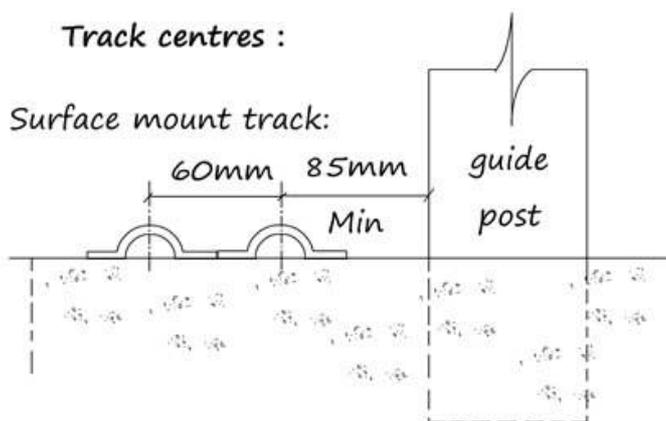


Left or right hand armature kits according to direction of movement ... viewed from front of property

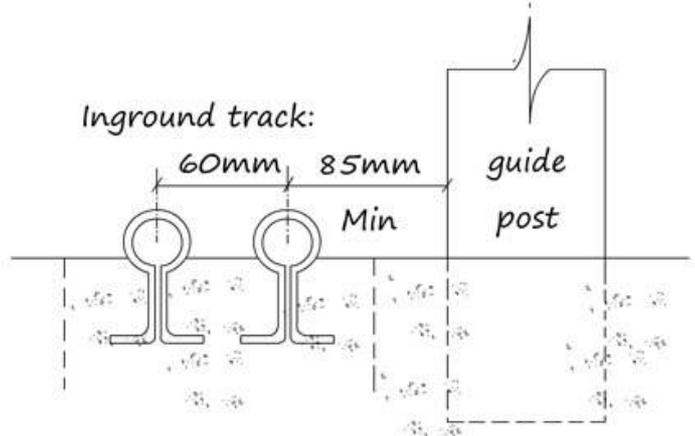
Open direction = Right Hand

Track centres :

Surface mount track:

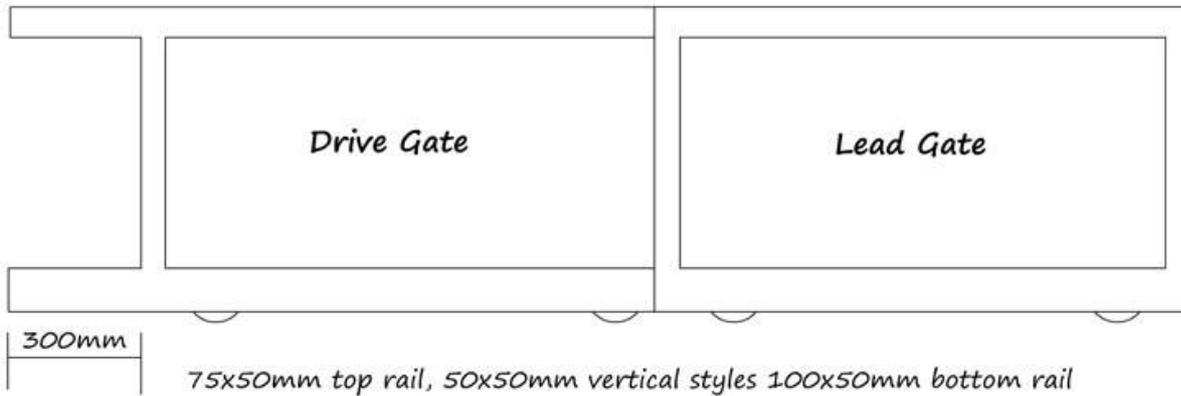


Inground track:

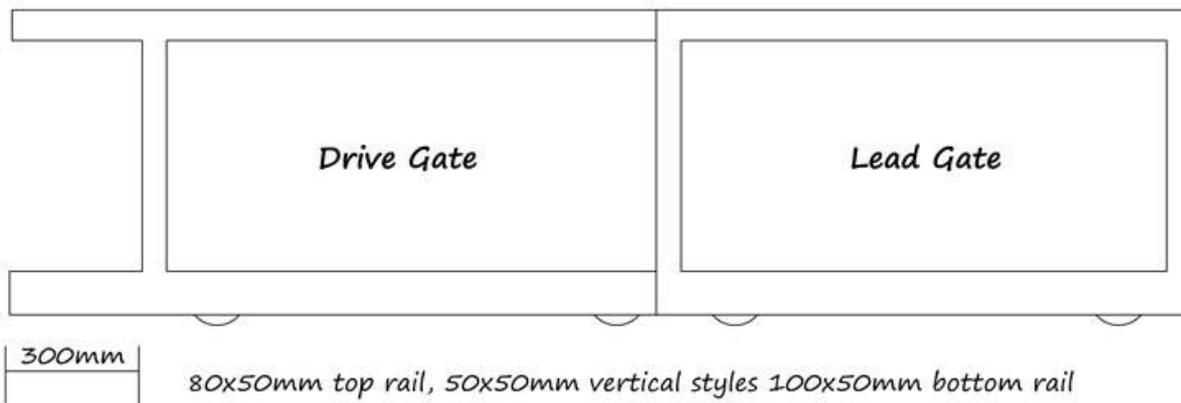


Frame Recommendations :

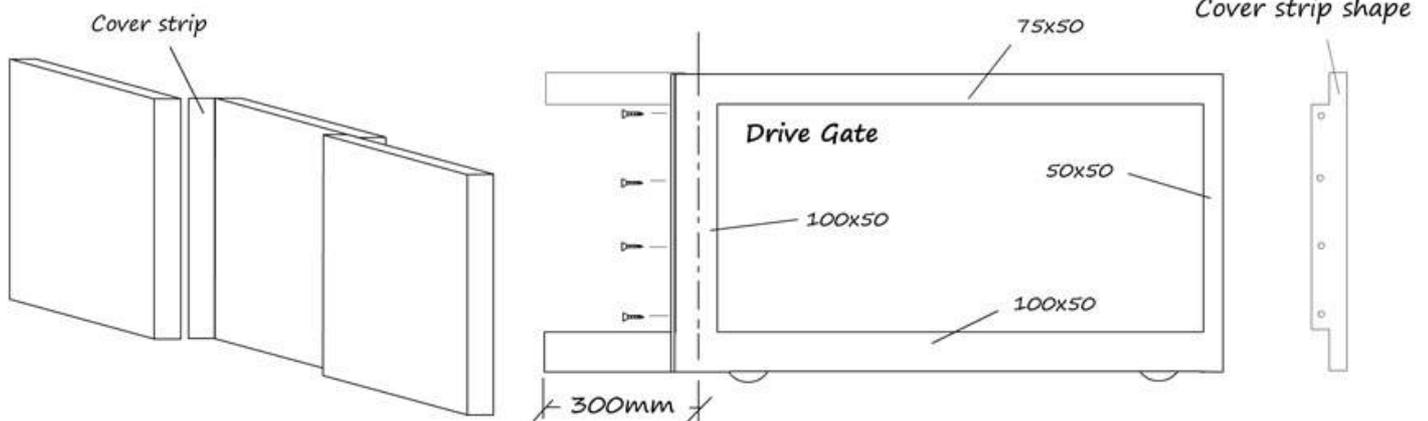
Steel frames:



Aluminium frames: min. 3mm recommended to increase weight.

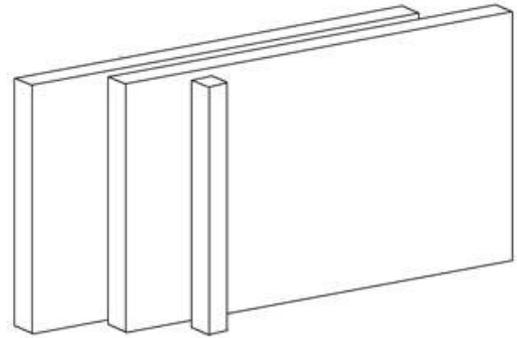
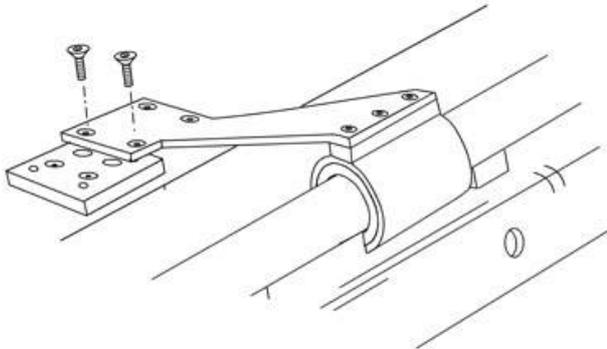


Closing cover strip: 💡 A cover strip between the fixed panel and the drive gate may be added to the frames to fill the space left by the lead gate when closed. Make the back style of the drive gate 50mm longer then fix the appropriate sized plate to cover.



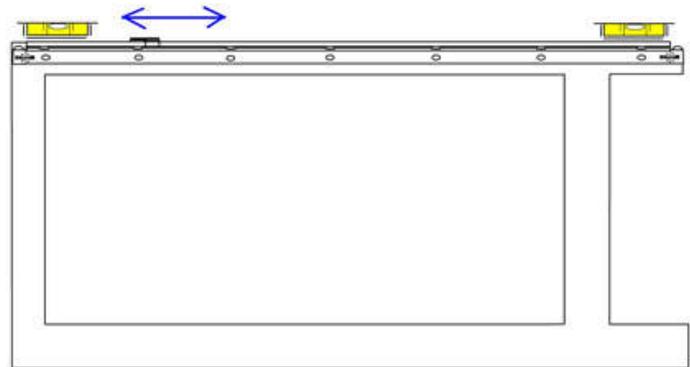
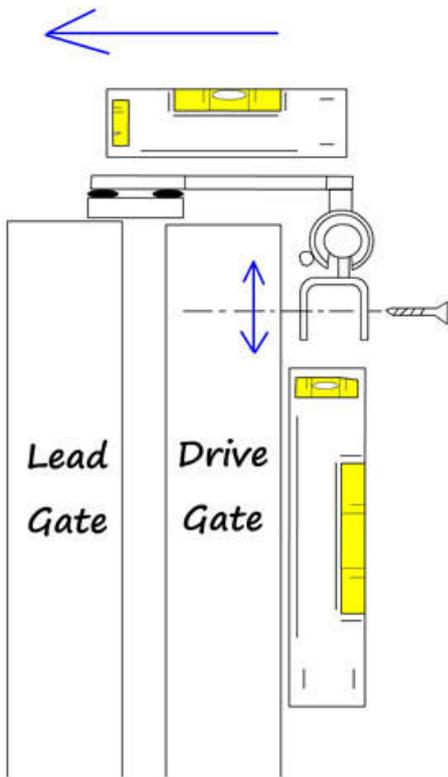
Installation: Guide channel

Attach Armature
and base plate to one side

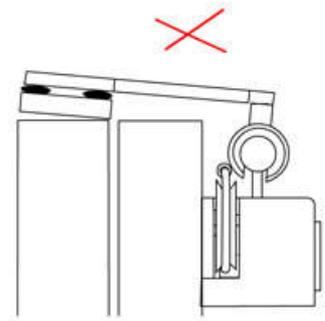
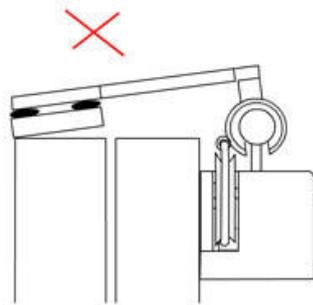
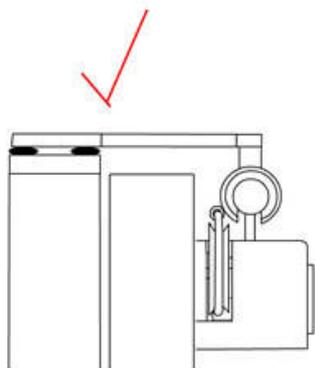


Place gates on tracks
in plumb position

Attach guide channel to drive gate using the armature
plate to set the level along entire length..
Slide armature back & forth keeping both
gates level to check smooth movement

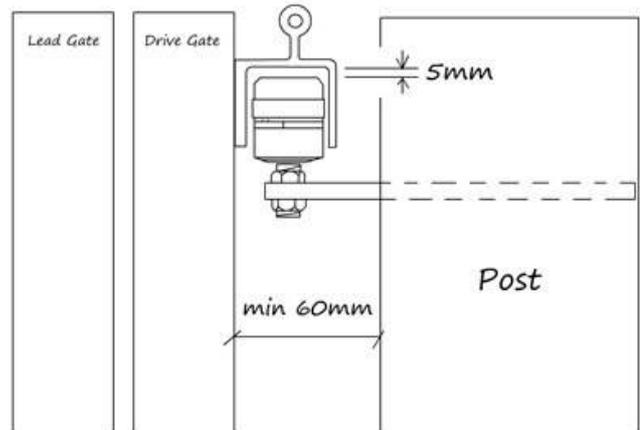
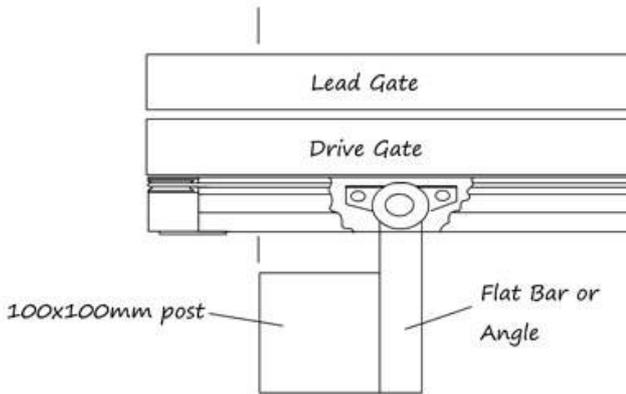


Attach one end of the guide channel
using the armature plate as a guide,
then slide to opposite end and attach
the other (linear slide and armature
will slide freely on cable if the
grub screws are not tightened.)



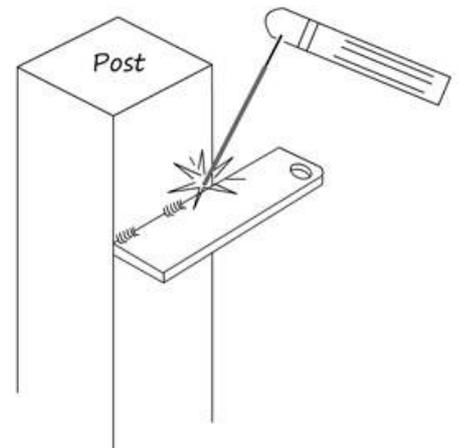
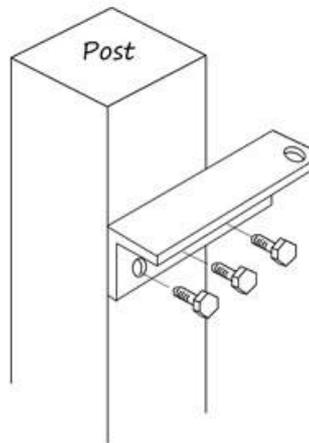
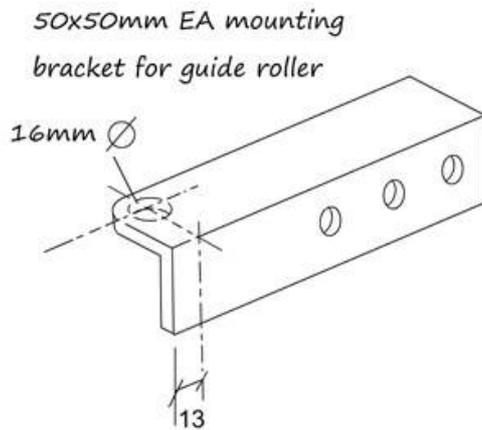
Guide Roller Installation:

Fabricating and installing a bracket for the guide roller is exactly the same as a standard, single sliding gate - dependant on the final position of the guide post being sure to leave enough room for the guide channel and the automation drive rack



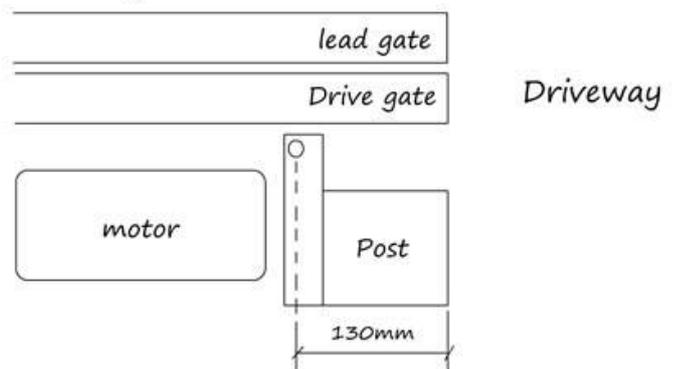
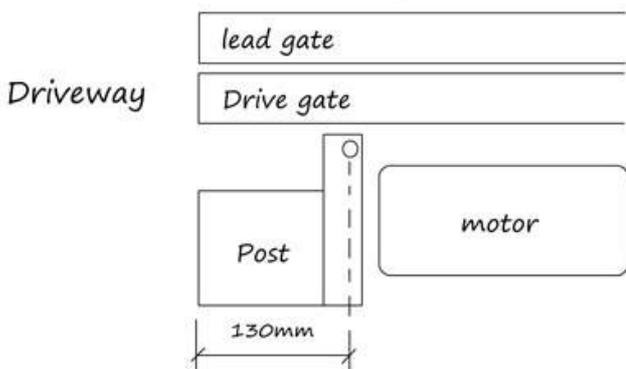
💡 Best method - fabricate out of angle and bolt to post - "tech screws" not recommended

Or welded flat bar



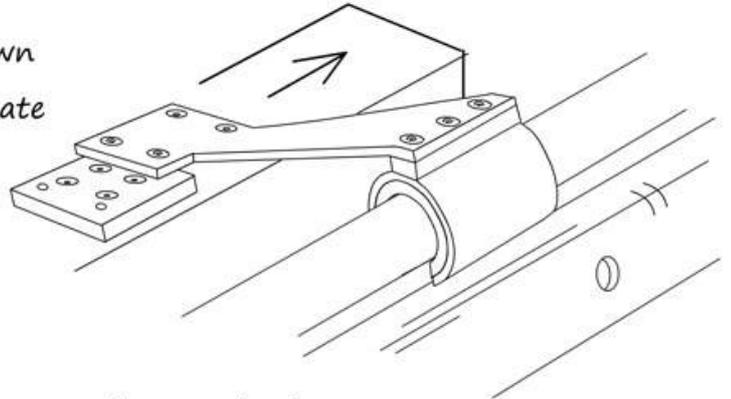
Left Hand

Right Hand



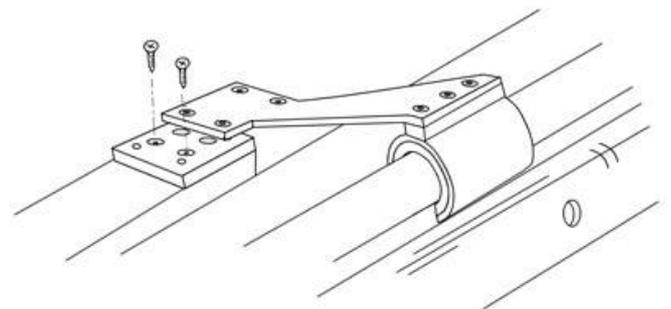
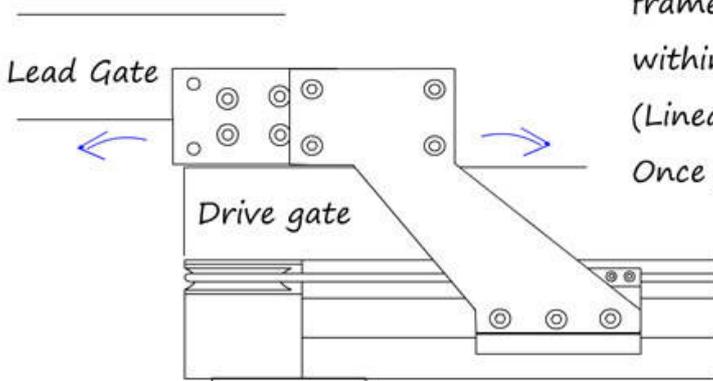
Attaching Lead Gate - Setting armature:

With base plate still in offset position as shown
slide armature toward the end of the lead gate

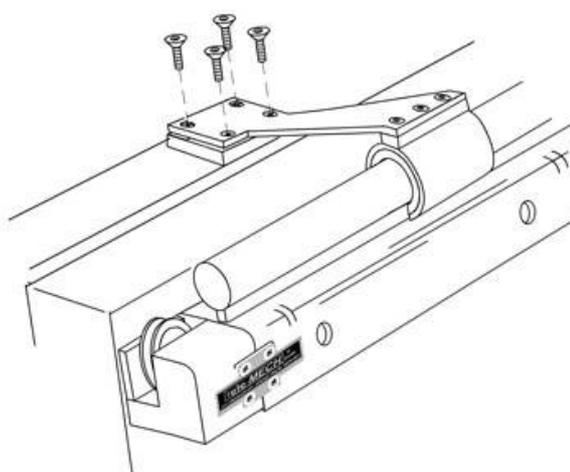
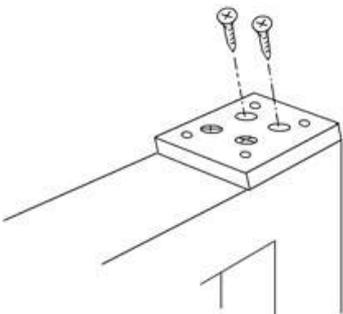


Gate frame and/or base plate may or may not be completely square to the guide channel and linear slide so this method is best to ensure freedom of movement.

Align the base plate to the very end of the lead gate frame and move the armature plate back & forth within the linear inserts tolerance to find centre.
(Linear insert has a tolerance of approx. 0.5mm)
Once you feel you have centre position - attach



Remove armature plate and install
the other two fasteners

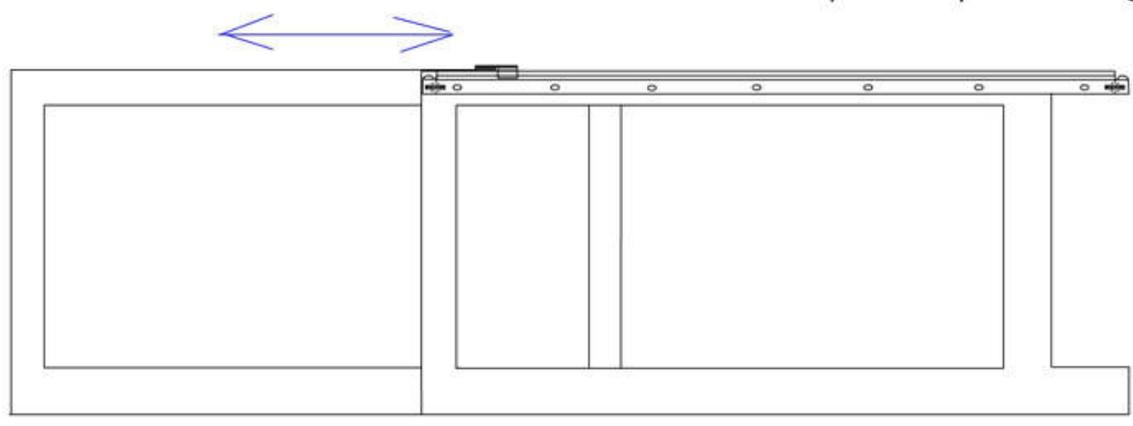


Screw armature plate down
on to base plate (BY HAND)
you may need to adjust this
tension to allow for track
levels

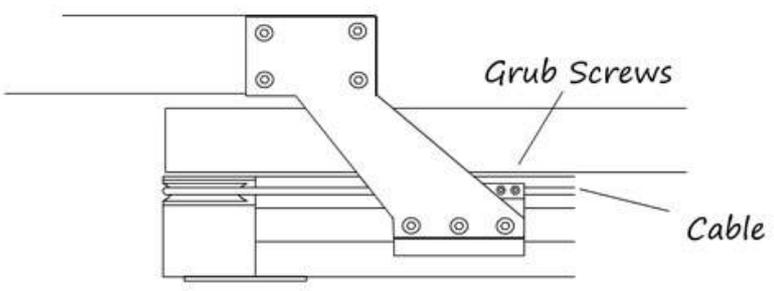
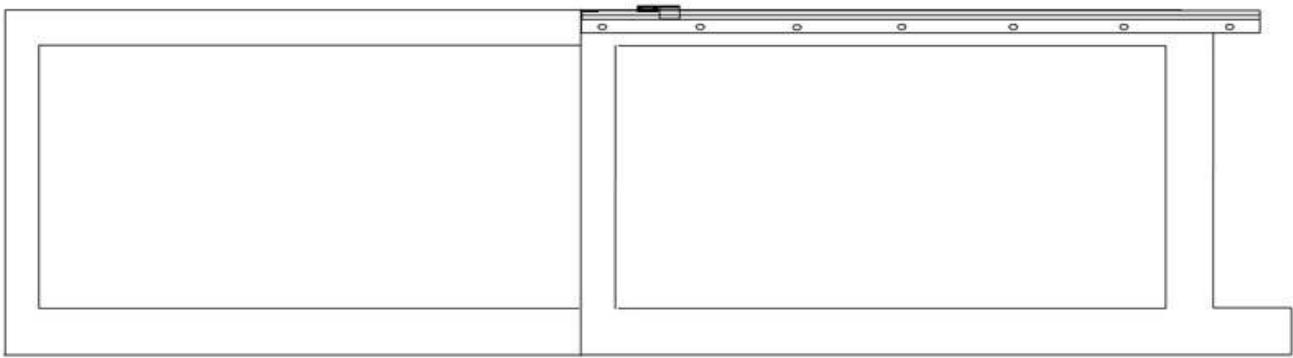
Less pressure - more tolerance
More pressure - less tolerance

Testing & Cable fixing:

Move lead gate back & forth without fixing to cable, panel should move freely and smooth - if not - adjust the tension on armature plate suspension rings.



Close gates fully and tighten cable grub screws lightly

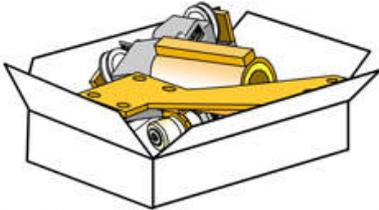


Test again by pushing from the front of the lead gate and back
Also try pulling the drive gate and back.
Gates should move together, smoothly, without binding

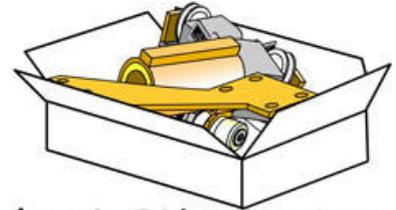
Installation is now complete and ready for automation equipment
Tighten grub screws tightly once automation limits have been set.

Standard Kits:

All Armature kits are left or right hand dependant - LH = Left Hand- RH = Right Hand



4/50A LH armature kit



4/50A RH armature kit

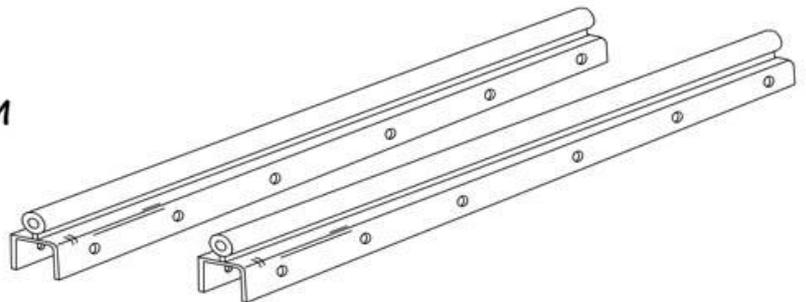
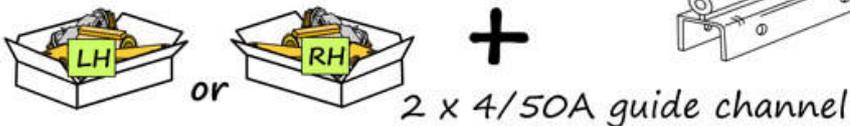
Guide channel - the same for both directions - standard 1M length in anodized aluminium

* Mill finish lengths available upon request for powder coating purposes to match gate colour if required

3 standard kits available: 2M - 3M & 4M

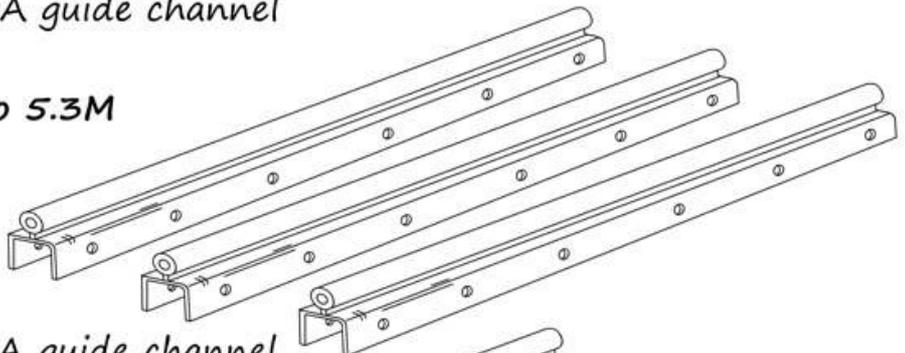
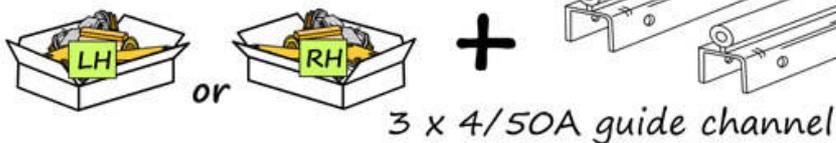
2M - 4/50A - for gates up to 3.3M

2M - 4/50A armature kit



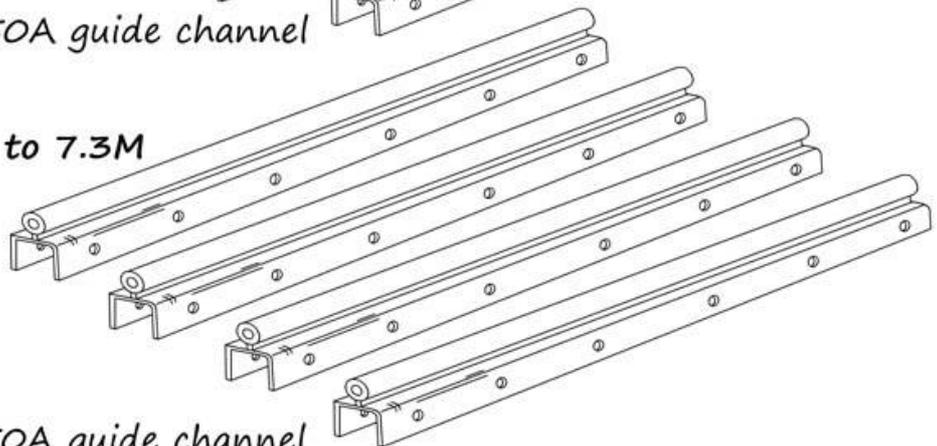
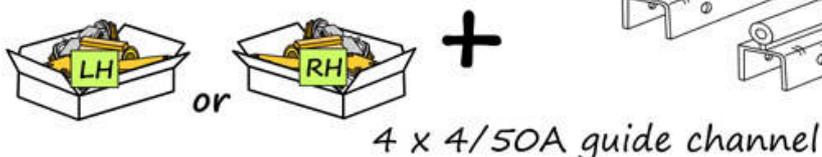
3M - 4/50A - for gates up to 5.3M

3M - 4/50A armature kit



4M - 4/50A - for gates up to 7.3M

4M - 4/50A armature kit



Armature plate for external timber cladding and 75x75mm SHS gate frames

Track Centres with 4/50WC armature:
with 50x75mm frames

