GATE SAFETY BY DESIGN

Stopping sliding gate over-travel

RISK ASSESSMENT

Risk assessment is key to stop gates over travelling and below are some pointers but design and construction of the gate is the first place to start. By eliminating the safety and construction risks from the gate design in the first instance will make for an inherently safer system that will also require less additional or safety features fitted on the gate when being commissioned.

Ideally the gate should be supported between two goal post type supports or at least 2 hanging / suspension posts. This style of design will prevent the gate falling flat due to one component such as the roller breaking and causing a serious injury to anyone near the gate.

Limit switches and their associated actuators or flags are probably the most common way that sliding gates are given their fully open and closed positions. These rely on the flags being positioned in the correct place, but importantly they must be secure to prevent them falling off because of vibration or physical contact.

RECOMMENDATION

We would recommend not just relying on the grub screw biting into the racking, but to fit an extra Tek screw or similar to give a much more solid fixing that will guarantee that the flag cannot fall off the gate. If the flag does come off, the limit switch will not be activated and the gate will over travel and will then be totally reliant on a strong physical stop.

PLEASE make sure that the physical stop in both opening and closing direction do the job properly. If using the end plates on sliders that have internal rollers or wheels in the running tube do not use screws to hold the end covers in place as these can easily be broken if the gate is running at full power. Weld the end plates to ensure they are strong enough to hold them securely in place. Make sure that channels that have support rollers running in them have strong end caps that again are welded in place. Consider if there is any possibility that the gate rollers could over or underride the end stops, and then make sure they cannot. ideally the roller wants to fill enough of the channel to prevent movement.

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After determining the desired travel distance fit the racking so it stops just after the limit switch would activate. This way if the limit failed the gate would lose drive after this point and then would not be able to be over travel when the motor was running. 'No rack, No drive'.

Of course, this would have no effect if the gate was in manual release, so it is not a substitute for strong physical end stops

CONSTRUCTION

Make sure that the construction of your gate is not going to be the reason for a gate falling accident.

Ensure you are fully aware of all the risks with the Gate Safe Installer training. If you own a gate and have questions about the gate over travelling you can find an installer in your area here: **https://gate-safe.org/find-installers/installers-postcode/**

If you have any questions or would like to discuss gate safety further, please email us at **info@gate-safe.org** or call us on **01303 840117**.