GATE SAFETY BY DESIGN

Mind the gap(s)

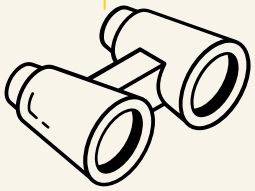
Gate Safety by Design™

While we have previously looked in detail at the role that finger trap guards can play in mitigating the risk of injury due to the gap between the post and the hang stile of a swing gate, in this issue we take a look at the potential dangers associated with gaps in general.

IMPORTANCE OF ADDRESSING GAPS

When installing a gate or reviewing an existing installation during regular maintenance, it is crucial to consider the significance of any gaps created within and around the gate.

These gaps can represent serious dragging, shearing, or drawing-in risks and must be addressed.



GAP WATCH

Gaps over 100mm should be eliminated from the gate design as follows:

- Swing Gates: Reduce the gap between the gate and the gate post.
- Sliding Gates: Eliminate the gap between the sliding gate and its support posts to mitigate the drawing-in risk.
- Under the Gate: Gaps under the gate should be less than 100mm to prevent crushing risks during operation. Large gaps also provide entry opportunities, undermining security.
- Between the Pales of the Gate: Gaps should be 100mm or less to avoid entrapment risks.

ENTRAPMENT AND SHEARING RISKS

In settings where there could be a risk of entrapment, crushing, or shearing above the gate, such as underground car parks with distinct ceilings, installers need to protect against scenarios where someone climbing over the gate could be squeezed into a tight space if the gate begins to move.

REDUCING GAPS

On a swing or bi-folding installation, reducing gaps between the gate hang stile and the hang post are a dangerous crushing risk if the gap reduces when the gate is in operation. Gaps cannot reduce by more than 20% of the original opening to a minimum of 25mm for example an 80mm gap between the post and gate should only reduce by 16mm (20% of 80mm). When considering safety on the cycle of a gate operation, with sliding gates the focus tends to be fixated on the opening end rather than what is happening at the rear end. Persons sited near the rear of the gate can feasibly be hit or drawn into the gate, so measures must be taken to prevent anyone from coming into contact with the gate by fencing off the entire run back when it is in the open phase. This also represents a cost-effective solution.

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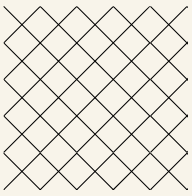

TAPERING GAPS

Wire mesh is frequently employed to effectively 'fence off' high risk areas, such as the run back on a sliding gate. Be aware that some mesh featuring for example a diamond pattern where the gap tapers at the top and bottom, can create a shearing / cutting / entrapment risk if someone tries to scale it. The mesh effectively remains 'static' while the gate is moving offering no 'give' and therefore posing an additional safety hazard. Tapering gaps are often created through the design of the gate, pretty shapes or wording within the design can all create additional risks which will require protective measures if they are not removed in the design stage.

MORE INFOMATION

For more information please visit the Gate Safe website **www.gate-safe.org** to book an online training course.