

## **SCISSORS LIFTS with RIDERS**

Industrial scissors lifts have been used to position/transfer/convey material and/or personnel in commercial applications for over 50 years. ANSI MH29.1 – *Safety Requirements for Industrial Scissors Lifts* is clear about this and includes the appropriate safety precautions to protect riders that operate the lift from the lift platform, including such safety devices as handrails, gates, snap chains, and throw-over bridges.

Where confusion has crept in is the misunderstanding of scissors lifts and the subsequent misapplication of inappropriate equipment safety codes by local inspectors and other authorities having jurisdiction (AHJ). The safety codes most commonly misapplied are ASME A17.1 (National Elevator Code), ANSI A92.3 (Manually Propelled Aerial Platforms), and ANSI A92.6 (Self-Propelled Elevating Work Platforms). Industrial scissors lifts designed to meet ANSI MH29.1 are not subject to these codes for the following reasons:

### ASME A17.1

1. Unlike elevators, scissors lifts are free-standing and typically manufactured & installed as a completely assembled, drop-in unit that requires no assembly & receives no structural integrity from the surrounding building structure
2. Unlike elevators, scissors lifts are self-stabilizing and do not require external guide rails or pulley systems to ensure platform & load stability. In fact, the ASME A17.1 committee has formally stated in its published interpretation to Inquiry 86-46 concerning the application of the elevator code to industrial scissors lifts that “since the equipment does not move in rails, it is not an elevator”.
3. Unlike elevators, scissors lifts with riders employ constant-pressure push button stations which the operator must press and hold, forcing the operator to be in complete control of the lift throughout its vertical travel
4. ANSI MH29.1 recognizes that elevators are used for completely different applications than industrial scissors lifts and specifically excludes equipment designed to meet A17.1 from the scope of MH29.1

### ANSI A92.3 / A92.6

1. Unlike aerial lifts, industrial scissors lifts do not have the potential to be rented, leased, or operated by the general public
2. Unlike aerial lifts, scissors lifts which are moved from one location to another with a rider on the lift are not “steerable” (unrestricted movement) from the lift – but rather are restricted to pre-determined path via. tracks, rails, grooves, etc.

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3. Unlike aerial lifts, industrial scissors lifts which do have unrestricted (steerable) lateral movement are not allowed to have riders during that lateral movement, but can only be accessed by riders once the lift is made stationary (wheel locks, etc.)
4. ANSI MH29.1 recognizes that mobile aerial lifts are used for different applications than industrial scissors lifts and specifically excludes equipment designed to meet ANSI A92 from the scope of MH29.1

So – when it comes to riders on the lift, scissors lift applications which fall OUTSIDE the design consideration of ANSI MH29.1 and NOT considered to be “Industrial Scissors Lifts” are:

1. Scissors lifts operated by the general public
2. Scissors lifts designed to transport handicapped people
3. Steerable scissors lifts which have unrestricted lateral movement while a rider is on the lift platform (raised or lowered)
4. Scissors lifts used to transport people between fixed elevations using Call/Send (push and release) operator controls and/or vertical platform guides/rails

Of course, there are some states (California being one) where lift inspectors are more difficult to convince and/or state codes are written more strictly as to prohibit riders on scissors lifts traveling more than 60” between fixed elevations – regardless of the types of controls used – without classifying the lift as an elevator under ASNI A17.1. Make sure your customers are aware of this risk whenever the application & location warrants.

Otherwise, it is good design practice and likely to meet with increased approval by local inspectors if the following design features are included in every MH29.1 scissors table designed to carry riders as described in this document:

1. Code-compliant guardrail system around the perimeter of the working platform
2. Personnel access gates with gate status switches so as to prevent lift movement should a gate be in any other position than fully closed
3. Non-skid walking surface – either tread plate deck material, or epoxy grit finish
4. Constant pressure (press-and-hold, “dead-man”) operator pushbutton controls on the platform
5. Manual lowering valve located at ground level – to lower the platform in the event of an emergency (power outage, rider incapable of operating lift, etc)
6. A method to lock/brake a mobile lift in a stationary position (motor brake, wheel locks, floor locks, etc.)
7. In applications where operators/riders are expected to perform work over an open, unguarded edge of the lift (due to size/orientation of the work) – the work platform should have a means to secure/anchor workers using a safety harness