

Commercial Tender Specifications

In-Pit Rollers

Design Notes

Where possible, pool covers should be positioned where starting blocks are not present, or removeable. This will significantly aid the daily operation of covers, saving time and energy.

Allowing additional roller 'runout' (roller extends past cover) is essential for convenient operation. This can be maximised by using staggered rollers, For In-Pit, Wall and Ceiling mounted rollers, staggering can be achieved at the same end of the pool.

Roller Tube

All Sunbather Pool Cover Rollers are constructed from 6060-T5 Aluminium, anodised to a minimum depth of 15µm (microns).

Rollers must be of suitable diameter to prevent excessive creasing whilst coiling. For commercial pool covers minimum roller sizes of Ø150mm or Ø200mm are to be considered. For ramp covers and bathing cover sections roller diameters of minimum Ø114mm may be considered.

Roller design must limit deflection to no greater than one three hundredth of its length with internal bending stress no greater than 27.5 MPa (safety factor 4.0).

Bungs

All Ø150mm or Ø200mm bungs are constructed of glass filled nylon, insert moulded with ferrules for coupling with shafts and handwheels.

Shafts

Austenitic stainless-steel bar of minimum grade SAE 304 (ASTM 276) is to be used.

For indoor environments electropolishing of shafts is highly recommended to combat stress corrosion cracking, evident in high chloride environments.

Bearings

Bearings for all commercial rollers are to include stainless-steel ball bearings.

Pillow block and flange mounted bearing housings and inserts are to be constructed from corrosion resistant SAE 304 stainless-steel. Further corrosion inhibiting treatment is recommended for indoor pool centres.

Radial ball bearings inserted in mobile roller end-frames are to be constructed from corrosion resistant SAE 440C grade stainless steel or greater.



 **1800 228 437**

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In-Pit Rollers

Below-ground rollers, mounted to 12-milimeter thick anodised 5083 aluminium legs, in-pit rollers are available in two sizes. For covers up to 25-metres rollers have a 400-millimeter centreline height above ground level. For covers over 25-metres, up to 50-metres a centreline height of 475-millimeters is required. Each frame is secured to the floor using M10 chemical anchors.

Standard In-Pit Rollers are mechanically driven by a the Aqua Valey, using a right-angle-drive and actuated driveshaft. An external gearbox is coupled at the end of each roller with a further 5:1 reduction. All shafts must be of SAE 304 stainless-steel as a minimum requirement.

Roller pits should be staggered to allow adequate roller runout for each cover, these should extend 500-millimeters past the required edge of the cover. For linear installations a cover gap of 326-millimeters is essential to allow for drive mechanisms, with zero roller runout on each cover.

Tubular motor variants are also available for covers up 25-metres, with minimum cover gaps of 210-millimeters for inline installations.

In-Pit Lids (Treadplate)

Commercial In-Pit Lid frames are pit coverings for below ground rollers, each job is created to a custom size ranging between 1800-2400-millimetres in length. Lightweight, durable and corrosion resistant aluminium treadplate is used as the surface and is suitable for foot traffic. Both aluminium lid and frame are to be anodised to 25µm (microns).

A rebated concrete structure must be provided on each installation, with a width of 447-millimetres and depth between 80-100-millimetres. A central pit opening of 315-millimetres is to run along the entire length. Rebate does not extend around pit ends. Lid frames are secured at twelve points to the rebate using dual-compound fixing plugs, rated to a minimum loading of 1.10- kilonewtons.

Lids are installed in a linear arrangement, with gaps no greater than 5-millimeters between each lid or its supporting frame. Frame angles are blocked up to ensure lid is level with finished concourse floor level (FFL). A caulking gap of 6-millimetres is required around the entire perimeter of the lid frame (by others).

Once installed on active construction sites or if wheeled equipment is required on the concourse. Pit coverings must be protected with track-mats of an appropriate rating for complete span and machinery utilised.

Colour

Clear Anodised Aluminium

Custom Anodising POA

Warranty

10 Year – End frames, Roller Tube, Shaft & Bungs

5 Year – Treadplate Lid & Frames

3 Year – Gas Struts

1 Year – Accessories & Installation

Please see full warranty information – <https://sunbather.com.au/support/warranty/>



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