

## JD RAIL ADVAN-BRIDGE™ LEVEL CROSSINGS

### Product Versions

JD Rail Advan-Bridge™ modular level crossings are manufactured with advanced composite materials for a fast-fit, fast-removal, re-usable, fully insulated rail level crossing solution.

Tier	Product	Vehicle Class <sup>1</sup>	Vehicle Traffic Type <sup>1</sup>	Typical Description <sup>1</sup>	Recommended Traffic <sup>2</sup>	Examples <sup>3</sup>
6	Pedestrian	NA	NA	Personal	Cart, Wheelchair, Pram, Bicycle	
5	Provisional	NA	NA	Non-Permanent Use	Speed restricted	
4	Agriculture	Class 1 - 2	Light – Medium Vehicles	Short Towing +5.5m 3 Axle Groups	Sedan, Wagon, 4wd, Utility, Light Van, Bicycle, Motorcycle, Trailer, Caravan, Boat,	
3	Shire	Class 1 - 9	Heavy Vehicles	Six Axle Articulated Long 11.5m to 19.0m 6 Axles, 3+ Axle Groups, 7+ Axles, 3 Axle Groups	Large Vehicle, Bus, Rigid Vehicle, Trailer	
2	Highway	Class 1 - 12	Long Vehicles Road Trains	Large Combination Over 33.0m 7+ axles, 7+ axle groups	Triple Road Train, Heavy Truck, Three Trailers	
1	Mining	NA	Heavy Industrial	Heavy Plant 250T – 500T	HaulPak E.g. CAT785C	

<sup>1</sup> Based on Austroads Vehicle Classification System. Reference: Asset and Network Information – Jan 2002. Drawing No: 0293-009.

<sup>2</sup> Based mainly on aforementioned Austroads Vehicle Classification System and annotated for relative purposes only.

<sup>3</sup> Used for depictive purposes only. Not to scale.

**Advan-Bridge™ Level Crossings - Key Features and Benefits**

FEATURE	BENEFIT
<b>Modular Design</b>	<ul style="list-style-type: none"> <li>• Transportable</li> <li>• Individual panel sections may be removed and reinserted for maintenance [profiling, grinding, tamping], repair, inspection, cleaning,</li> <li>• For use in temporary applications</li> <li>• Quick removal/install of panels for track maintenance</li> <li>• Allows for staged road-traffic flow during replacement and maintenance</li> <li>• Simple installation hence lowered man / plant / materials usage.</li> <li>• Panels are interchangeable and may be rotated or transposed and reinstalled.</li> <li>• More cost effective and logistics during pre-installation shipping due to stackable storage</li> <li>• 100% fast drainage at all times.</li> <li>• Fast lead times to universal, modular, pre-cast build</li> </ul>
<b>External Steel Frame Border – C-Channel</b>	<ul style="list-style-type: none"> <li>• Advanced strength</li> <li>• Reliability</li> <li>• Robustness</li> </ul>
<b>Internal Skeletal Frame</b>	<ul style="list-style-type: none"> <li>• Long Lifecycle</li> <li>• Provides protection of concrete surface and vertices</li> </ul>
<b>Precast Concrete</b>	<ul style="list-style-type: none"> <li>• Advanced strength</li> <li>• Reliability &amp; Robustness</li> <li>• Long Lifecycle</li> </ul>
<b>Lock Down System</b>	<ul style="list-style-type: none"> <li>• Ensures a smooth, even, level, flat surface structure for road vehicle transition.</li> <li>• Redundancy</li> <li>• Reliability &amp; Robustness</li> </ul>
<b>Sleeper Saddle / Locator Pin System</b>	<ul style="list-style-type: none"> <li>• No movement or possibility of structures protruding from level crossing surface</li> <li>• Allows for simple installation with minimal use of tools and no use of specialist tools.</li> <li>• No drilling or mechanical penetration of railway sleepers.</li> <li>• Vibrations are kept to a minimum: lowered noise, less wear and tear.</li> <li>• No direct force on rail [mechanically insulated from rail]</li> <li>• No drilling into sleepers</li> <li>• No attaching to rail fixtures</li> <li>• No Bolts or Clamps onto the rail</li> </ul>

	<ul style="list-style-type: none"> <li>• Crossing panels move with track geometry thus allowing downward forces to distribute evenly and safely and panel sections to remain even. This also drastically lowers stress on rail and the risk of component failure.</li> </ul>
<b>SL Anchors [lifting lugs]</b>	<ul style="list-style-type: none"> <li>• Allows for easy lifting of panel sections during logistics, installation, removal, and maintenance.</li> <li>• Restricts possible damage of panel surface when transporting</li> <li>• Logistics friendly due to increased portability</li> <li>• Safety</li> </ul>
<b>Advan-Force™ Road Block</b>	<ul style="list-style-type: none"> <li>• Impact buffer zone for smooth transition into crossing upon approach.</li> <li>• Impact buffer zone for smooth transition into road surface upon exit.</li> <li>• Mechanically independent of level crossing panels.</li> <li>• Outer panels of crossing are removed and installed with ease with no disturbing of road surface.</li> <li>• Acts as a additional barrier for waste and muck intrusion.</li> <li>• Improves life expectancy of crossing.</li> </ul>
<b>Advan-Wall™ Baffle Plate</b>	<ul style="list-style-type: none"> <li>• Muck intrusion barrier. Extra level of redundancy applied by lock down system to ensure that saddles / panels / sleepers do not lift from intrusion of waste.</li> <li>• Ensures saddles remain in position during maintenance hence no realignment of saddles is necessary.</li> </ul>
<b>Advanced Industrial Rubber Insulation</b>	<ul style="list-style-type: none"> <li>• Electrically insulates from rail</li> <li>• Mechanically insulated from rail</li> <li>• No concrete to concrete contact</li> <li>• No concrete to steel contact</li> <li>• No steel to steel contact</li> <li>• Made from recycled rubber and high</li> <li>• No rubber is exposed to the outer surfaces of level crossing</li> </ul>
<b>Sleeper spacing &amp; type</b>	<ul style="list-style-type: none"> <li>• 600mm spacing designed for maximum mechanical strength due to best possible weight distribution.</li> <li>• Provisional crossing caters for any sleeper spacing.</li> </ul>
<b>Misc</b>	<ul style="list-style-type: none"> <li>• Being a niche producer, JD Rail is able to provide customised features based on specific requirements.</li> </ul>

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