


KOSSAN

 **DOSHIN**[®]
RUBBER ENGINEERING

“GO BEYOND LIMITS MAKE DREAMS REAL”





ESTABLISHED IN YEAR 1978

A subsidiary of



STRETCHING LIMITS • SINCE 1979



GO BEYOND LIMITS
MAKE DREAMS REALITY

VISION

“ To be the world class market leader in Engineering Rubber Products driven by technological advancement, people value and continual improvement to deliver long term and sustainable growth “

QUALITY
POLICY

“ We strive beyond customers’ quality requirements through continuous improvement plans with specific attention to technical excellence and innovation “

CERTIFICATIONS



QUALITY SYSTEM MANAGEMENT
 ISO 9001:2015



LABORATORY ACCREDITATION
 SKIM AKREDITASI MAKMAL MALAYSIA(SAMM)
 MS ISO / IEC 17025



SEISMIC ISOLATOR HDRB
 CE MARK CERTIFICATE
 CE 1835

QUALITY CERTIFICATION

QUALITY MANAGEMENT SYSTEM
Which Complies with the requirements of

ISO 9001:2015

For the following Scope:

Design development, Manufacture, Testing and Installation of Elastomeric bearings, Mechanical Pot Bearings, High Damping Rubber Bearings, Floating Slab Track Bearings , Steel and Rubber Expansion joints, Marine Fenders, Spherical Bearings, dampers and other Engineered Rubber Products and Metal Products for Bridges, Buildings, Railways, Tramways, Marine, Mining, Oil and Gas, Nuclear Plants and others Civil Engineering application.



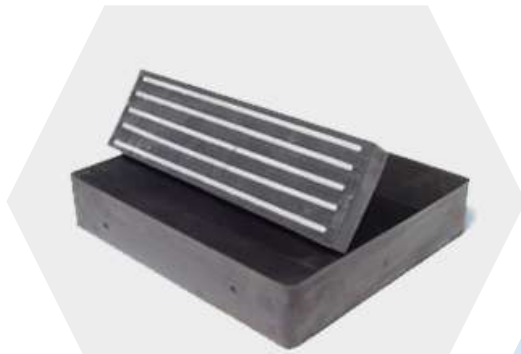
PRODUCTS



A SOLUTION FOR ENGINEERED RUBBER AND STEEL PRODUCTS FOR BRIDGES, BUILDINGS, RAILWAYS, MININGS, AND OTHER CIVIL ENGINEERING APPLICATIONS

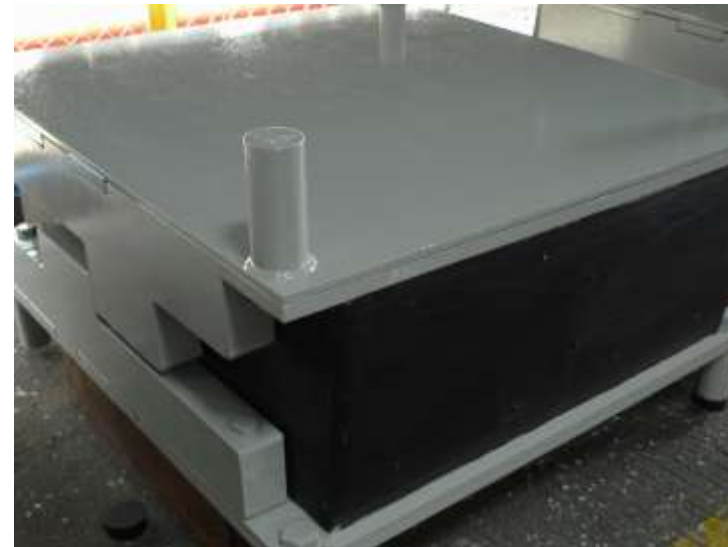
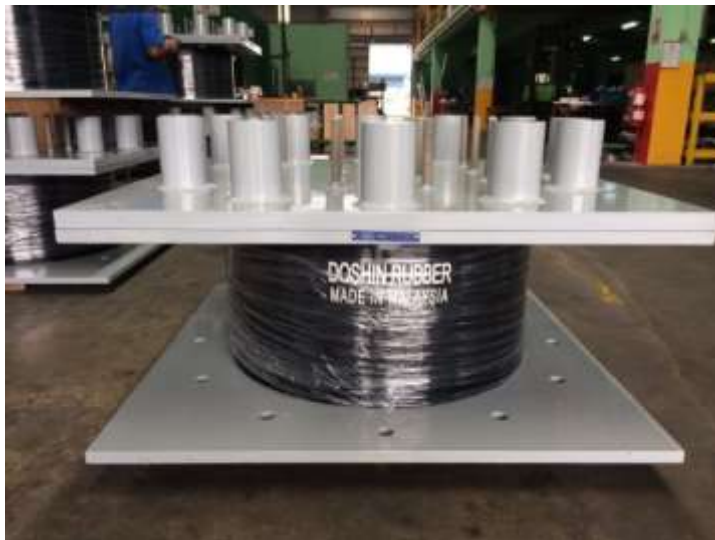
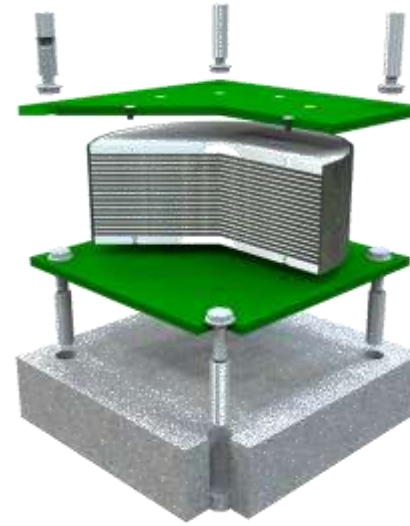
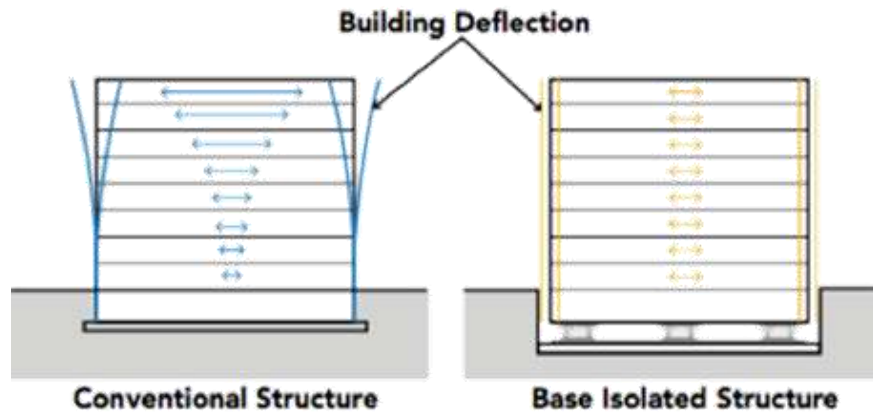
ELASTOMERIC BEARINGS

To design, produce, and test to meet BS, EN, AS, AASHTO and other international specs

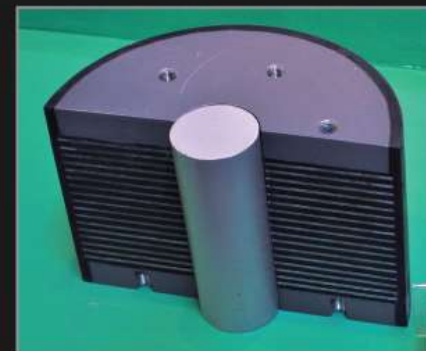
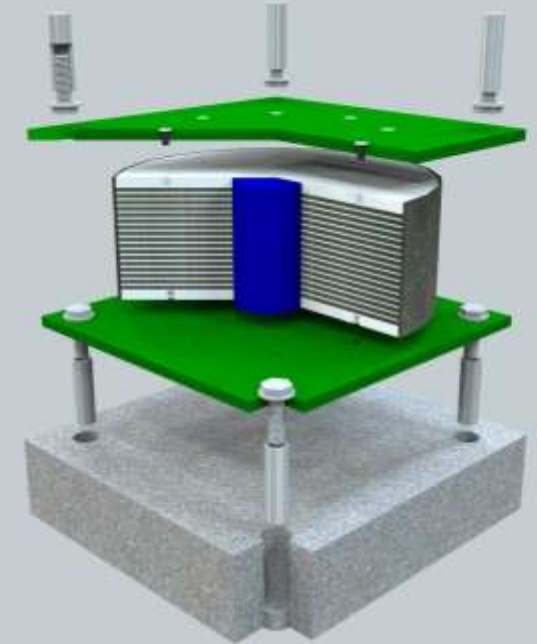
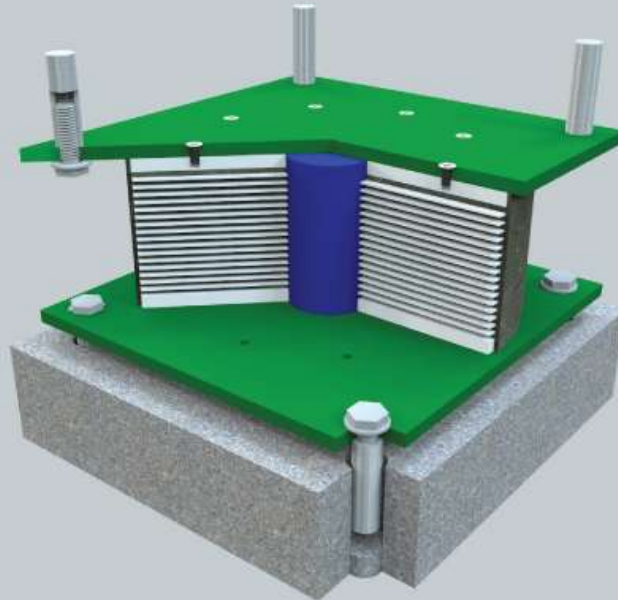
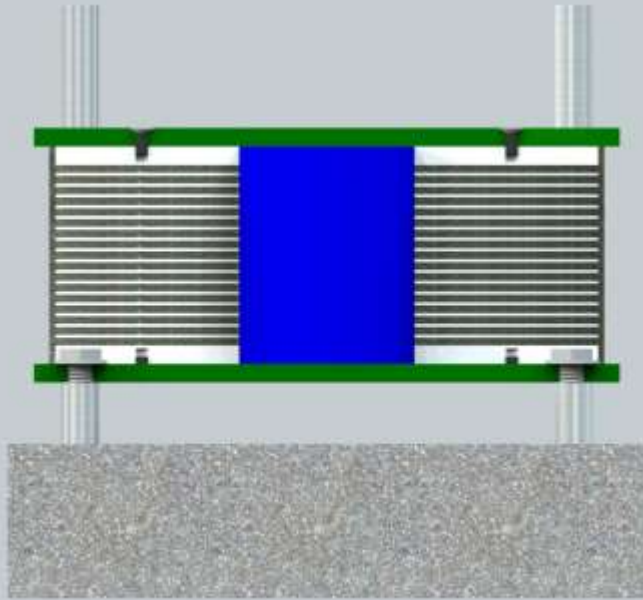


HIGH DAMPING RUBBER BEARINGS

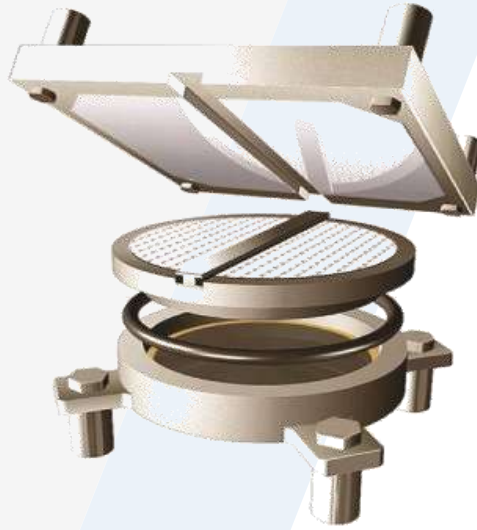
Design & Produce UHDRB with damping ratio up to 24%



LEAD RUBBER BEARINGS



MECHANICAL POT BEARINGS



Design, Fabricate, Testing and Install POT BEARINGS up to vertical load 50,000 KN



SPHERICAL BEARINGS



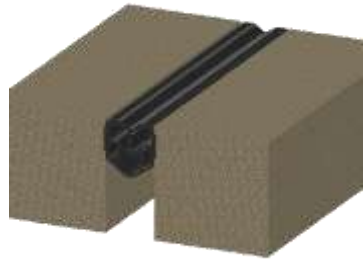
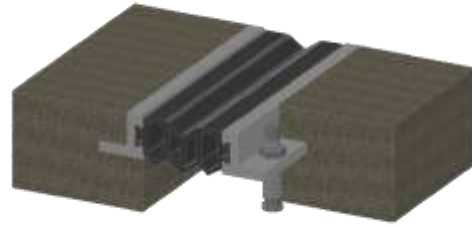
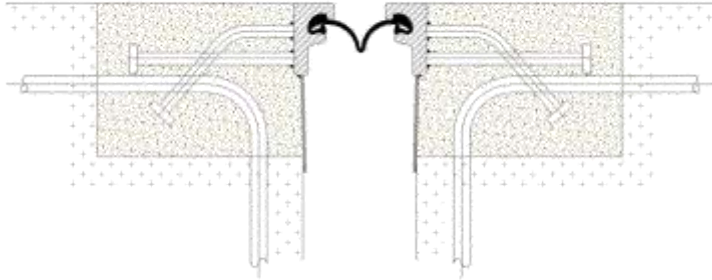
Doshin Spherical bearings are designed for very high vertical, horizontal and lateral loads and where large rotational structural displacements need to be accommodated.



EXPANSION JOINTS AND SEALS

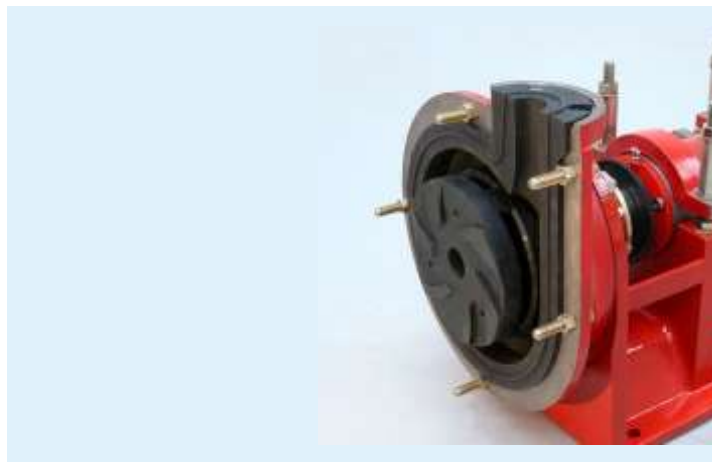
TYPES OF JOINTS:

1. Elastomer Expansion Joints
2. Modular Joints (3 DOF)
3. Finger Joint (DFJ)
4. Compression Seals

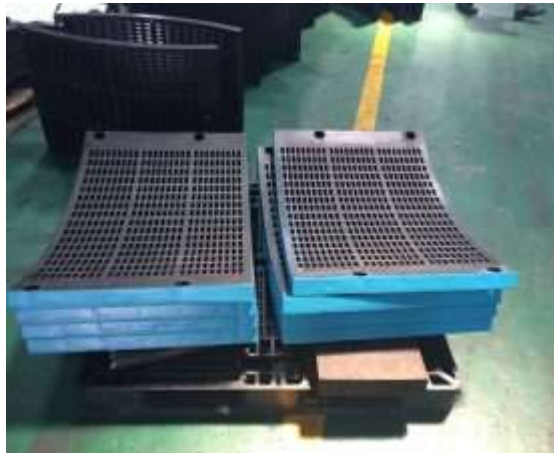


MINING RUBBER PRODUCTS

Superior wear resistant rubber compound formulation

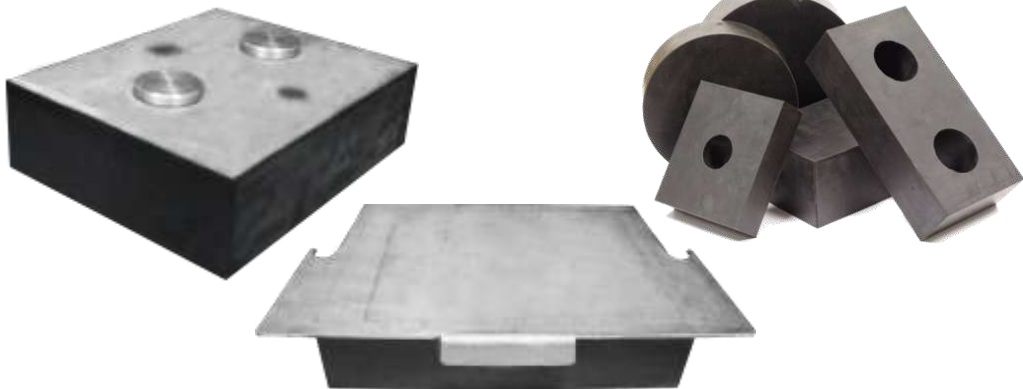


MINING RUBBER PRODUCTS



RAILWAY RUBBER PRODUCTS

- A proven mass-spring system for achieving very high levels of noise & vibration isolation
- Floating slab track (FST), rubber wedge, rail fastening



TRAMWAY & LIGHT RAIL

Special formulated electrical Insulated rubber technology Electrical resistivity ground-level power supply (APS 3) and Static Charging System (SRS) for Alstom's Trams



APS is a service-proven power system for tramways which supplies electricity through a third rail at ground level and eliminates the need for catenaries, thus preserving the aesthetics of city center and guaranteeing maximum safety.





MARINE DOCK FENDERS



- To perform as bumper to protect the hull and bearing facility from damages



- To perform as a shock absorber on the bearing operation

MANUFACTURING FACILITIES





MANUFACTURING FACILITIES – MIXING

- ❖ Mixing capacity up to 2000 tons compound per month
- ❖ Farrell Chronos Richardan mixing 80L & 160L
- ❖ ST rotor variable speed
- ❖ Temperature control
- ❖ Chronos auto material feeding system



MANUFACTURING FACILITIES



VARIOUS MOULDING MACHINES FROM
500 TONS TO 2000 TONS



INJECTION TO FENDER AT
1500KG/HR



3 UNITS GEAR PUMP EXTRUDER
1500KG/HR



2000 TONS CLAMPING MACHINE
3.5M X 3.5M X 3.0M DAYLIGHT



1200 TONS COMPRESSION PRESS
1.2M X 2.2M



SHEETING PREFORM MACHINE

MANUFACTURING FACILITIES



CNC



2000 TONS COMPRESSION MACHINE
1.2M X 3.2M



2000 TONS COMPRESSION MACHINE
3.5M X 3.5M X 3M



2000 TONS COMPRESSION MACHINE
1.5M X 3.5M



2000 TONS COMPRESSION MACHINE
2.2M X 2.2M



1800 TONS HYDRAULIC BUILT
INTO AUTOCLAVE FOR CURING

E-LAB TESTING & RESEARCH CENTER

CERTIFIED TO ISO/IEC 17025



Innovating the best testing machines with our well trained engineers for engineered rubber solution

E-LAB TESTING & RESEARCH CENTER

Schedule
No: SAMM 372



MS ISO/IEC 17025
TESTING
SAMM NO. 372



Quality
ISO 9001
SAI GLOBAL

This laboratory accredited under Skim Akreditasi Makmal Malaysia (SAMM) meets the requirements of MS ISO-IEC 17025:2005 General requirements for competence of testing and calibration laboratories. This Malaysian Standards is identical with ISO-IEC 17025:2005 published by the International Organization for Standardization (ISO)





E-LAB TESTING & RESEARCH CENTER

FIELD OF TESTING : MECHANICAL

Scope of Accreditation:

Product: Laminated Elastomeric Bearings, Elastomeric Bearing Pads and Strips

Type of Test	Test Method
<p>SHEAR STIFFNESS</p> <p>#Single Shear</p> 	<p>AS 5100. 4 [Appendix D4]</p> <p>BS 5400 – 9.2 [Appendix A]</p> <p>AASHTO Sec. 18 [Clause 18.7.4.5.8]</p> <p>EN 1337-3 [Annex F]</p>
<p>#Double Shear</p> 	<p>TfNSW B281 [Clause 4.5]</p> <p>TfNSW B280 [Clause 4.5]</p> <p>BS 6177 [Clause 9.5]</p>

Type of Test	Test Method
<p>COMPRESSION QUALITY ASSURANCE TEST</p>  	<p>AS 5100. 4 [Appendix D2]</p> <p>BS 5400 – 9.2 [7.2 b) 2) i)]</p> <p>AASHTO Sec. 18 [Clause 18.7.4.5.6]</p> <p>EN 1337 – 3 [Annex H – Level 2]</p> <p>BS 6177 [Clause 9.3]</p>
<p>COMPRESSION STIFFNESS</p>  	<p>AS 5100. 4 [Appendix D3]</p> <p>BS 5400 – 9.2 [7.2 b) 2) ii)]</p> <p>EN 1337 – 3 [Annex H – Level 1]</p> <p>BS 6177 [Clause 9.6]</p> <p>TfNSW B281 [Clause 4.4]</p> <p>TfNSW B280 [Clause 4.4]</p>

E-LAB TESTING & RESEARCH CENTER

Product: SEISMIC ISOLATORS

Type of Test	Test Method
COMPRESSION QUALITY ASSURANCE TEST 	EN 15129 [Clause 8.2.1.2.6]
COMPRESSION STIFFNESS 	BSEN 15129 [Clause 8.2.1.2.8]
HORIZONTAL CAPACITY 	BSEN 15129 [Clause 8.2.1.2.7]

Notes:

HDRB : High Damping Rubber Bearing

LRB : Lead Rubber Bearing

NRB : Natural Rubber Bearing

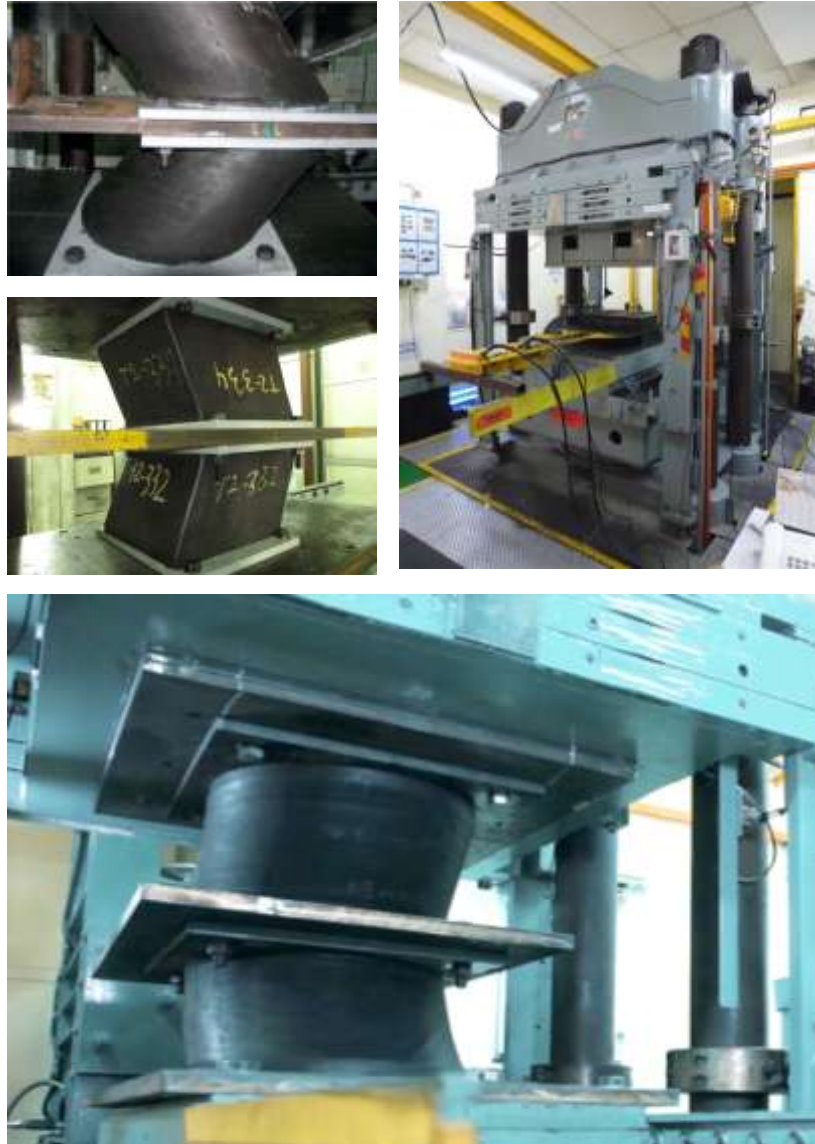
Product: STRUCTURAL BEARINGS

(SPHERICAL BEARINGS AND MECHANICAL POT BEARINGS)

Type of Test	Test Method
COMPRESSION STIFFNESS 	BSEN 1337 – 5 [Annex B] BS 5400 – 9.2 [7.2 b) 2) i)]
LOAD TEST 	BS 5400 – 9.2 [7.2 b) 1)] AASHTO Sec. 18 [Clause 18.7.2.5] AASHTO Sec. 18 [Clause 18.7.2.6] AASHTO Sec. 18 [Clause 18.7.2.9]
FRICTION TEST 	AASHTO Sec. 18 [Clause 18.7.2.7]
ROTATION TEST 	AASHTO Sec. 18 [Clause 18.7.2.4]



BEARING SHEAR STIFFNESS TEST



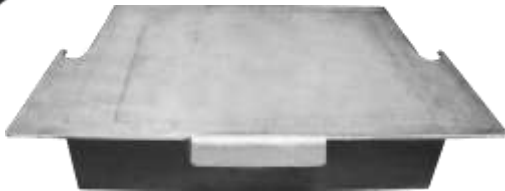
TEST SYSTEM WITH LARGE CAPACITY



COMBINED COMPRESSION & SHEAR TEST



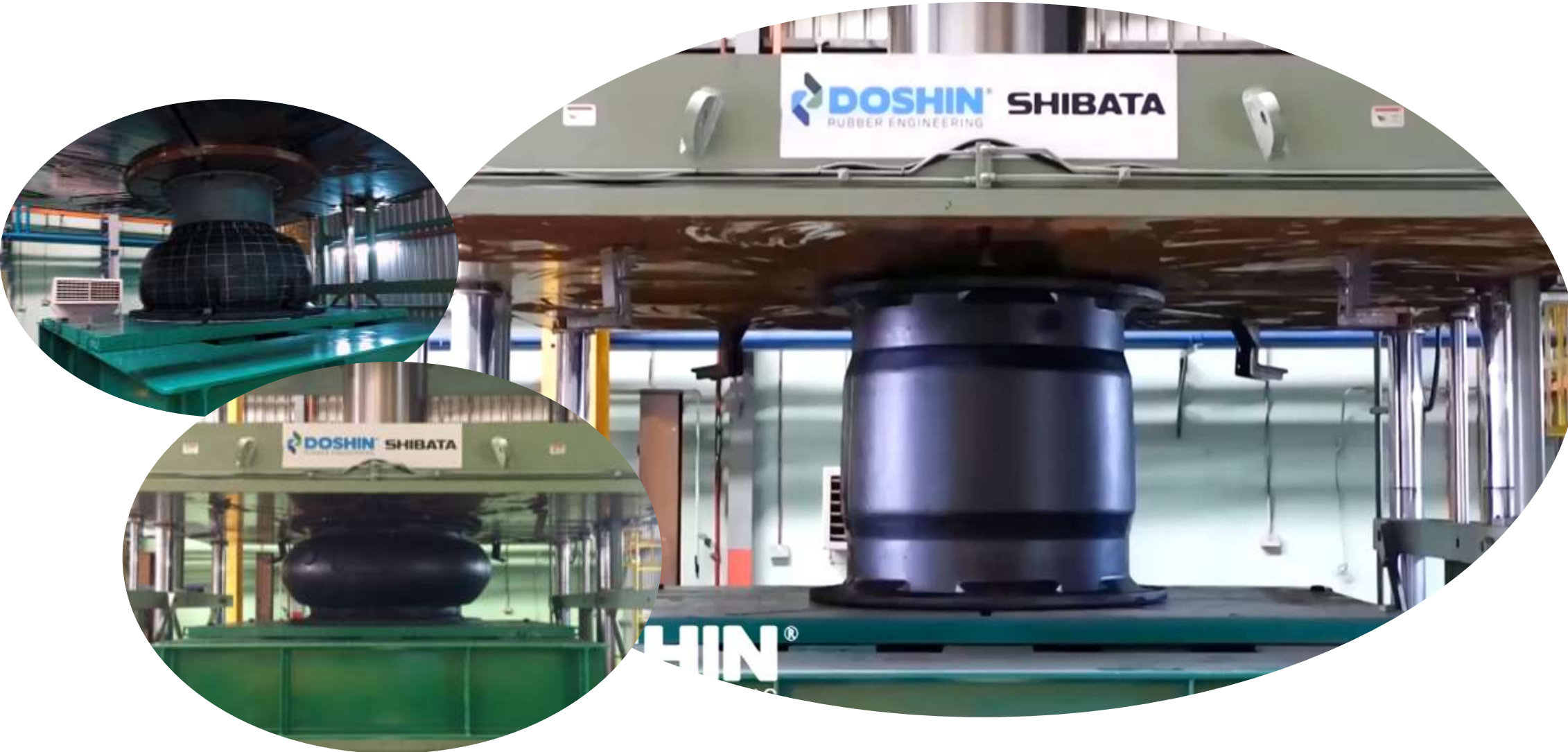
RUBBER SPRING TEST



FENDERS COMPRESSION TEST



FENDER ENERGY ABSORPTION & REACTION FORCE TEST



RUBBER ENGINEERING & DEVELOPMENT CENTER

A. RUBBER MATERIAL TESTING

- ✓ Tensile Properties Test
- ✓ Hardness Test (ASTM Shore A, JIS Shore A, IRHD)
- ✓ Hot Air Heat Aging Test
- ✓ Compression Set Test
- ✓ Ozone Resistance Test
- ✓ Quadruple Shear Test
- ✓ ISO/DIN Abrasion Resistance Test
- ✓ Low Temperature Brittleness Test
- ✓ Density/SG Test
- ✓ Rheology Test
- ✓ Tear Resistance Test (Trouser and Crescent)
- ✓ Fluid/Oil Immersion Test.
- ✓ Rebound Resilience Test

B. PRODUCT / PART PERFORMANCE TESTING

- ✓ Static Compression/Load Deflection test
- ✓ Dynamic Spring Rate Test
- ✓ Durability/Endurance/Life Test
- ✓ Adhesion Strength Test



Certified to : ISO/IEC 17025

SCOPE OF KOSSAN AND
DOSHIN LABORATORY
TEST & MEASUREMENT
CAPABILITIES



PROJECTS REFERENCE



SEISMIC ISOLATOR

High Damping Rubber Bearing, Lead Rubber Bearing & Natural Rubber Bearing

- Metrobus Alto De Sao Joao, Portugal
- Hospital Las Higueras III Etapa, Chile
- Hospital Arakaki, Peru Hospital Cascas, Peru
- Clinica Materno Infantil, Peru
- Jorge Chavez International Airport, Peru
- Edmundo Escomel Hospital, Peru
- Clinica Aviva, Peru
- Hospital Matucana, Peru
- Ampliacion Edificio Maria Nieves Bustamante UCSP, Peru
- Campus UTEC Fase II, Peru
- Alto Molino, Peru
- Hospital Chulucana, Peru
- Hospital Caraz, Peru
- Puente Ancaylla, Peru
- Maranura Bridge, Peru
- Hospital Pomabamba, Peru
- Hospital Del Salvador, Chile
- Hospital Claudio Vicuna, Chile
- Hospital Marga Marga, Chile
- Servicio Medicio Legal, Chile
- Red Hospitalaria Maule, Chile
- Hospital Sótero Del Río, Chile
- Hospital Buin Paine, Chile
- San Lazaro Hospital, Philippines
- San Vicente De Paul Church, Philippines
- Laoag By-Pass Bridge, Philippines
- De La Salle Lipa Mabini Building, Philippines
- Dong Thap Bridge, Vietnam
- Retrofitting, Bayint Naung Bridge, Yangon, Myanmar
- Temburong CC3 Package, Brunei
- Cikampek 2 Elevated (Japek II), Jakarta
- Wika Tower, Indonesia
- University Indonesia Hospital, Indonesia
- Penang Second Bridge Project, Malaysia
- KVMRT Line 2, Malaysia

..... and numerous other remarkable projects.

PROJECTS REFERENCE



100% tested to AS5100, RMS B281, RMS B280, RTA 280



STRUCTURAL BEARING

Elastomer Laminated Bearings, Mechanical Pot Bearing & Spherical Bearing

- Freyssinet, Australia
- Australia Project, Australia
- Waikato Expressway Tamahere - Hamilton section
- Waikato Falls (Kaimanawa Rd)
- Waitara Station
- Walkerston Bypass Bridge
- Warringah Freeway Upgrade
- Watland Street to Sports Drive
- Waurm Ponds Duplication
- WDRC Bundi Road Bridge
- West Gate Tunnel Project
- Western Australia's largest road project – WA Gateway
- Wungong Rail Bridge
- Wye River Bridge
- Wyndham Road Campbell Bridge
- Yeppen Lagoon Bridge
- PJ573 Wamban Creek
- PJ620 Iron Creek
- PJ621 Tamworth Bridge Renewal
- Sunbury Road Upgrade
- Towrang Bridge Over Wollondilly River
- Tamworth Bridge
- Teemangum Street Bridge
- Thalaba & Fosterton Bridge
- Tillegra and Summer Hill Bridges
- Townsville Ring Road Stage 5
- Spring Creek
- T2E project
- South Expressway Duplication
- South Rd Superway
- Trackstar Station
- Waeger Constructions
- VLCC Jetty 2, Port of Fujairah, UAE
- RA166, Jahra Road, Kuwait
- Metro Ho Chi Minh Line 1, Vietnam
- Pescara Point Bridge, New Zealand
- 5th Mekong River Crossing Bridge, Thailand
- Intersection Road in Chiang Rai, Thailand
- Manila LRT 1 Cavite Extension Project, Philippines
- Construction of Bypass & Diversion Roads, Philippines
- Tampines Expressway, Singapore
- Cileunyi Intersection & Tol Gate Section 1, Indonesia

PROJECTS REFERENCE



100% tested to AS5100, RMS B281, RMS B280, RTA 280



STRUCTURAL BEARING

Elastomer Laminated Bearings, Mechanical Pot Bearing & Spherical Bearing

- Overpass Kemang B Project, Indonesia
- Box Girder Overpass Kemang, Indonesia
- Cisumdawu Toll Road Project Phase III, Indonesia
- Marina Cove, Johor Bahru, Malaysia
- Rapid Transit System Link (RTS Link), Malaysia & Singapore
- Razak City Apartment, Kuala Lumpur, Malaysia
- KVMRT2-Conlay Station, Kuala Lumpur, Malaysia
- BBCC Parcel 2, Kuala Lumpur, Malaysia
- LRT3, Klang Valley, Malaysia
- Klang Valley Mass Rapid Transit, Malaysia
- KVMRT, SBK Line 1, Malaysia
- SUKE Highway, Ampang, Malaysia
- DUKE Phase 2 – Tun Razak Link, Malaysia
- LRT, Malaysia
- Sungai Gombak – Jalan Kuching, Malaysia
- KLJ Line LRT Aesthetic Guideway Envelope, Malaysia
- KI Eco City, Malaysia
- Sunway Velocity Link Bridge, Kuala Lumpur, Malaysia
- Eko Cheras, Kuala Lumpur, Malaysia
- Rawang Bypass-Elevated Structure, Malaysia
- New Clover Leaf, Cyberjaya, Sepang, Malaysia
- U-Turn Setia Eco Glades, Cyberjaya, Malaysia
- Proposed Design & Build for The Remedial Works, Ampang, Malaysia
- First Penang Bridge, Malaysia
- Bayan Lepas Expressway, Penang, Malaysia
- Drawbridge, Kuala Terengganu, Malaysia
- Tanjung Lumpur Kuantan, Pahang, Malaysia
- Laluan B49 Persiaran Mokhtar Dahari, Selangor, Malaysia
- Jambatan Batang Sadong, Samarahan Bridge, Sarawak, Malaysia
- Marudi Bridge Over Batang Baram, Miri, Malaysia
- Sarawak Coastal Road, Sarawak, Malaysia
- Sungai Lingga Bridge & Approach Road, Sarawak, Malaysia
- Second Kuching-Samarahan Trunk Road, Sarawak, Malaysia
- Long Lama Bridge, Miri, Malaysia
- Sg Bintangor Bridge at Jalan Ajibah Abol, Kuching, Sarawak, Malaysia

..... and numerous other remarkable projects.

PROJECTS REFERENCE



100% tested to AS5100, RMS B281, RMS B280, RTA 280



AUSTRALIA & NEW ZEALAND PROJECTS

Elastomeric Laminated Bearings, Bearing Strips and Elastomeric Bearings

We are proud to have successfully supplied to over 1,000 projects across Australia and New Zealand.
Here are some of the projects:

- Melville Ford Bridge
- Memorial AVE
- Metconnx- structures South
- MGI Koolan Island Top Deck
- Molonglo
- Morley Ellenbrook Line
- MRL BR5413 Over Yandi Rail
- Mt. Crosby Bridge
- Murray
- Newcastle Inner City Bypass
- North Western Packerham
- Oakey Ck Bridge
- OH2K
- O'Keefe Street Velobridge
- Olive Downs Rail Package
- ONSLOW IRON ORE
- Ozwide 3 Bridges
- Pacific Highway Upgrade
- Parkes Bypass- Newell Highway Upgrade
- Parkes Way Widening Six Mile Creek
- Parramatta Light Rail Stage 1
- Patrick Access Ramp D
- PDR Archer River Crossing Bridge
- PJ622 Sapphire to Woolgoolga
- PJ676 Cooroy to Curragh
- PJ677 Toowoomba OCR
- Plenty River Bridge
- PMU-Burleigh to Palm Beach
- Prospect Highway
- QR Beranjondo Timber Bridges
- Ranford Pier
- RAOUL
- Reed Creek Bridge
- Rockhampton Ring Road
- RRL-E Boundary Rd
- RRL-E Project - Armstrong Rd
- SH8 Beaumont Bridge
- Sherrington's Bridge
- Shipper Drive to Helensvale Road
- Singleton Rail Bridge

..... and numerous other remarkable projects.

PROJECTS REFERENCE



**100% tested to AS5100, RMS
B281, RMS B280, RTA 280**



EXPANSION JOINT

Elastomeric Expansion Joints, Modular Joints & Finger Joints

- Makkah Haram, Jeddah, Saudi Arabia – Elastomeric Expansion Joints
- Central Expressway Project (CEP), Colombo, Sri Lanka – Elastomeric Expansion Joints & With Upturn
- Lebuhraya Pan Borneo, Sabah, Malaysia – Elastomeric Expansion Joints & Modular Joints
- Marudi Bridge Over Batang Baram, Sarawak, Malaysia – Elastomeric Expansion Joints & Finger Joints
- Bridge Rural Access Sector Project (BRIRAP), Papua New Guinea – Finger Joints
- Pan Borneo Highway, Sarawak, Malaysia – Elastomeric Expansion Joint & Finger Joint
- Long Lama Bridge, Miri, Malaysia – Finger Joints & Mechanical Pot Bearings
- Drawbridge, Kuala Terengganu, Malaysia – Finger Joints & Mechanical Pot Bearings
- SUKE Highway, Ampang, Malaysia – Elastomeric Expansion Joints, Elastomeric Laminated Bearings & Mechanical Pot Bearing
- Bayan Lepas Expressway, Penang, Malaysia – Elastomeric Expansion Joints, Elastomeric Laminated Bearing & Mechanical Pot Bearings
- Retrofitting, Bayint Naung Bridge, Yangon, Myanmar – Modular Joints & Finger Joints, HDRB & Mechanical Pot Bearings

MARINE DOCK FENDERS

- Semen Indonesia, Makassar, Indonesia – Marine Dock Fenders
- Palembang Indocement, Indonesia – Marine Dock Fenders
- Pangkalan Susu, Power Plant, Medan, Indonesia – Marine Dock Fenders
- VLCC Jetty 2, Port of Fujairah, UAE – Marine Dock Fenders & Mechanical Pot Bearings
- Tanjung Lumpur, Kuantan, Pahang – Marine Dock Fenders, Elastomeric Laminated Bearings & Mechanical Pot Bearings

RAIL & TRANSIT

Tramway & Light Rail

- Alstom, worldwide – Railway & Transit
- Special Rubber for Tramway System, Brazil, France, Sydney Dubai & Others – Electrical Insulation Rubber Product for Power Supply
- High Speed Train Rubber Isolators, China – Rail Track Isolation

**100% tested to AS5100, RMS B281,
RMS B280, RTA 280**

PROJECTS REFERENCE



For More Project References
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A subsidiary of

KOSSAN

STRETCHING LIMITS • SINCE 1979

www.doshinrubber.com

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