**MOULDED RUBBER**

Moulded Rubber Products, Rubber Gaskets, and Rubber Marine Fenders. Tire Retreading Equipment, PTFE Teflon Sliding Moulded Rubber Products, Moulded Rubber, Shock Absorber Mountings, Moulded Rubber Products etc.



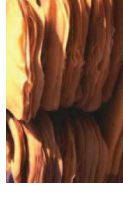
We offer master and final batches of rubber compounds with following polymer

1. Neoprene Rubber compounds Shore A 50° to 70° Hardness
2. Natural Rubber compounds Shore A 50° to 70° Hardness
3. EPDM
4. SBR

We have state of the art internal mixers to provide the right quality rubber compounds up to 3.0 Tons per day and all batches will be tested at in house laboratory on the following for consistency.

|| tests will be meeting ASTM requirements.

1. Rheometer
2. Mooney viscosity
3. Tensile strength
4. Elongation at break
5. Shore A hardness
6. Ozone resistance



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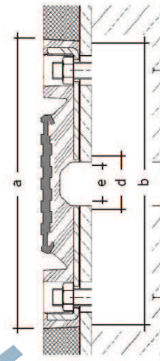
Moulded rubber expansion joint system designed to accommodate structure movements from 20 upto 200mm. Polymet PJ systems consists of steel reinforced moulded rubber joints.



Physical properties of the Neoprene/ Natural Rubber compound will meet the requirement as mentioned on the table.

#### Features

- Elasticity to move without cracking or transmitting unacceptable stresses to bridge deck.
- Sid resistance is achieved by the ribbed pattern on top of the neoprene/natural rubber cover.
- Maintenance free installation with drainage channel & long lasting components.
- Low profile with minimum open drainage channel to prevent debris build up and promotes smooth ride.

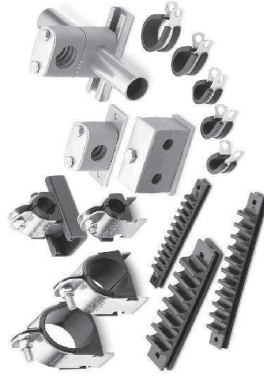


### PTFE Teflon pipe supports **POLYPORT**

In application as pipe supports, PTFE Slide Bearings are superior to conventional expansion plates, rollers and rocker arm type supports. PTFE Teflon pipe supports, accommodate expansion, contraction and other reciprocating motions of any structure that moves as a result of thermal expansion, seismic or differential forces. Laminated Bearings for pipe support applications must operate at high loads and low speeds, and these conditions are self-lubricating. Properties of PTFE are exposed to the full force of the load and the sliding motion. This force is self-lubricating. The principle reason why PTFE has proved to be so successful as a slide bearing material.

#### Advantages of PTFE Sliding Pipe Supports.

The simplicity of the bearing design and its ease of fabrication and installation make the unit cost efficient. The costs of a construction can be reduced by designing for expansion rather than strain. Coefficient of friction is low and constant. PTFE is inherently self-lubricating, while dirt particles are absorbed into the material. Only simple protection is required against the significant increases of dirt.



### Why use laminated elastomeric rubber bearings for Bridges and buildings?



A bridge basically consists of bridge deck supported by piers. In order to avoid damage by movements of thermal expansion, vertical movements leading to piers, bridge deck is provided with movement bearings. Bearings are used to reduce reaction forces and bending moment to within safety limits of structure. Neoprene as well as Natural Rubber highly elastic and sufficiently soft to accommodate these movements without transmitting harmful stress and also it is resistant to weathering and aging. Bridge bearings are devices for transferring loads and movements from deck to piers.

Pretread.com is direct manufacturer of Laminated Neoprene Bridge Bearings and Laminated Elastomeric Bearings. PTFE rubber bearings, expansion joints, high damping rubber bearing, expansion joints. PTFE sliding bearing, sliding bearings or ADAPTJOY (BS 7413) specifications for the first Bearings, Bridge Bearings, Bridge Bearing Pads, High Damping Bearing Pads are manufactured mostly in neoprene elastomeric compounds.

### Different Types of bearing cross sections EN 1337 - 3 - 2005

**Type A:** Laminated bearing fully covered with elastomer (neoprene or natural rubber) and one steel reinforcing plate.

**Type B:** Laminated bearing fully covered with elastomer (neoprene or natural rubber) and at least two steel reinforcing plates.

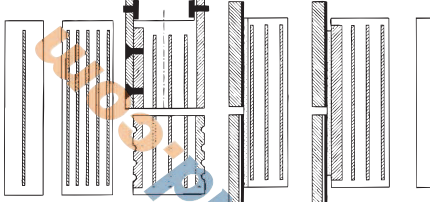
**Type C:** Laminated bearing with outer steel plates (profiled or allowing long). NOTE The elastomer must be fixed by using methods other methods can be used by agreement.

**Type D:** Type B with PTFE sheet bonded to the elastomer.

**Type E:** Type C with elastomer sheet bonded to the elastomer and steel.

**Type F:** Plain pad bearings and strip bearings.

NOTE: Features of the above types can be combined.



## Plain Elastomeric Bearing Pads

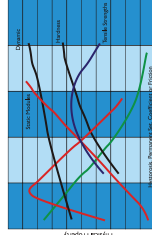
**POLYPAD**

Plain elastomeric bearing pads of various sizes are manufactured from 8 mm to 250 mm thickness as individually compression moulded.

Using a combination of VIRGIN NEOPRENE & POLY ISOPRENE rubber compound, our plain Neoprene Bearing Pad meets all the required performance requirements. Maximum permissible pressure applicable on rubber sheet will be 10% of the thickness.



These pads meet both specifications:  
EN 1337-2:2005  
ASTM D7121-06



### Uses:

Used in low load / low shear area of civil structures to provide cushion and transmit low level of force / structural expansions and vibrations.

**Note:** Please note that hand cut pads from commercially manufactured rubber sheet into smaller pad size will always damage the edges of pad which can develop into cracks under vertical load. To avoid this, we recommend that pads be manufactured by thermal application of precast beams. We strongly recommend using individually moulded pads for such application. During manufacturing process of pads, more volume of materials are highly compressed in the central area to give a higher modulus in compression.



## Plain and Laminated Elastomeric Bearings

**POLYBLOCK**



### Design Advantages of POLYMET LAMINATED ELASTOMERIC BEARINGS:

Elastomer is bonded with Mild Steel Sheets as Reinforcement.  
The bearing is covered on all sides by Elastomer as a seal.  
Mild Steel Sheets of A 36 used for reinforcement will not corrode in contact with elastomer.  
Complete system will be packed and delivered to site.  
Easy to install with no-site concreting.  
Standardized in UAE, India, Oman, Qatar, Kuwait, Bahrain, Saudi Arabia, etc.

### Some Advantages of POLYMET LAMINATED ELASTOMERIC BEARINGS:

Does not have any joints, hence can be custom manufactured for your requirements.  
Exhibit relatively high damping (GCC - 14)  
Can be used in high temperature environments up to 150°C.  
Can be used in low temperature environments down to -55°C.  
High compressive strength of 15 N/mm<sup>2</sup> (2200 PSI).  
Resistant to ageing, weathering, mildew and brine.  
Applied as a system in nominal thickness of 10 mm to 250 mm.  
Combination of both vertical load and horizontal movements with rotation.

### Design parameters allowed for POLYMET LAMINATED ELASTOMERIC BEARINGS when used as a bearing:

For DESIGN:

Designed in accordance with BS 5400 Part 9 and EN 1337-1: 2005 / Particular recommendations for design of laminated elastomeric bearings.  
Permissible bearing pressure for POLYMET LAMINATED ELASTOMERIC BEARINGS:  
Permissible bearing pressure for Laminated Bearings - for BS 5400: EN 1337-1: 2005 / AASHTO M 251 Allowable bearing pressure for Laminated Bearings - for BS 5400: EN 1337-1: 2005 / AASHTO M 251  
Permissible bearing pressure for Laminated Bearings - for BS 5400: EN 1337-1: 2005 / AASHTO M 251

Some practical aspects and considerations when using POLYMET LAMINATED ELASTOMERIC BEARINGS:  
The bearing should be used as a key between concrete and bearing.  
Recommend applying a high strength epoxy mortar on the bearing surface to ensure a key between concrete and bearing.  
Connections to isolating system should be made handle.

## Temporary Bearing

**POLYTEMP**



MADE IN UAE  
UAE  
UAE

POLYMET - TETON TEMPORARY BEARING (PTFE Sliding system) consists of PTFE finished plate or mating (sliding surfaces) are specially designed, manufactured and assembled against project requirements.

Used in bridge structures, railway structures to provide cushion and transmit level of force / structural expansions and vibrations.

### Design

Design based on AREMA Chapter 15.

### Types

PTFE Sliding with PTFE

Guided Sliding with PTFE

## Disk Bearing

**POLYDISK**



Polyether Urethane polymer disk confined between two plates providing high vertical load capacity and horizontal rotation. Vertical forces of up to 30 MPa with high rotation of 0.05° radius.

### Uses

Used in bridge structures, railway structures to provide cushion and transmit level of force / structural expansions and vibrations.

### Design

Design based on AREMA Chapter 15.

### Types

PTFE Sliding with PTFE

Guided Sliding with PTFE



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## POT Bearing

# POTYPOT

POTYPOT POT BEARINGS can be used in steel or concrete structures. These low friction bearings are particularly useful to transmit large vertical loads while accommodating large movements and rotations in any direction (where applicable) provide minimum eccentricity of the load and high bearing capacity. They can also be accommodated simultaneously.

Their design advantages make them ideal for use in a wide range of structures e.g. bridges, pipelines, power stations, offshore platforms etc. The POTYPOT bearings are designed to meet on design efficiency, versatility and economy.

### STANDARD TYPES

#### 1.1 Fixed Bearings

Fixed POTYPOT bearings consist of a steel piston fixed closely inside a steel cylinder. Within this cylinder is trapped a Neoprene pad attracting very little eccentricity of load, thus ensuring that the bearing can resist vertical and horizontal loads, as well as rotations about any horizontal axis.

#### 1.2 Expansion Bearings (Sliding Guided / Free Sliding)

The Sliding Guided and Free Sliding bearings are designed to transmit large vertical loads, but with the addition of a steel slide plate fixed with stainless steel, which slides on rollers. This allows the bearing to move vertically into the cylinder or plate piston. In the case of the [SG] bearings, guides are provided to ensure the bearing remains aligned. These are fixed with stainless steel and slide against low-friction materials.



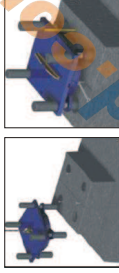
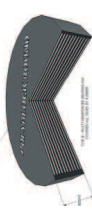
## Plain and Laminated Elastomeric Bearings

# POTYPOT

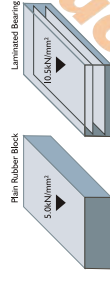
Circular elastomeric bearings are manufactured using the same process for rectangular bearings, but Circular bearings can vary in plan. They are suitable for use in curved and large leaved bridges as they could accommodate movement and rotations in multiple directions.

### Advantages of Pretread Bearings Offer

solutions for large or sophisticated bearings, also carry out custom designs for special bearings or features, such as seismic, to accommodate any special design requirements according to EN 1337-3, 5.2005 or AASHTO revisions. Short delivery times from our factory in UAE due to integrated in-house design and manufacturing capabilities. We have a dedicated team of an international specialist, to design and optimize durable solutions.



## Difference between a plain rubber block and laminated elastomeric bearings



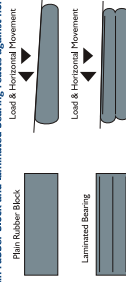
The capacity of plain rubber block to carry vertical load increases as the number of laminations and steel inserts increases.

### How a plain rubber block and laminated bearing reacts against vertical load.



Plain rubber block, under vertical load compressed down where as a laminated bearing bridge with each lamination bearing most of the vertical load.

### How a plain rubber block and laminated bearing reacts against horizontal load.







# Technical Specification of Laminated Elastomeric Bearing Type B Round meeting EN 1337-3:2005

[illegible]

Allowance and loads are for information only bearing size chosen against load has to be checked with design calculations



# Technical Specification of Laminated Elastomeric Bearing Type B Round meeting EN 1337-3-2005

| $\delta$<br>[mm] | $\nu$ MHz | $h$<br>[mm] | Displacement<br>$\pm 4$ , [mm] | Rotation<br>(1°) | Test<br>rod<br>thickness<br>[mm] | Weight<br>[kg] |
|------------------|-----------|-------------|--------------------------------|------------------|----------------------------------|----------------|
| 600              | 4,238     | 15.0        | 30                             | 2.0              | 20                               | Kg 28.2        |
| 600              | 4,238     | 15.0        | 30                             | 14.0             | 20                               | Kg 41.5        |
| 600              | 4,238     | 15.0        | 30                             | 24.5             | 20                               | Kg 46.8        |
| 600              | 4,238     | 15.0        | 30                             | 35.0             | 20                               | Kg 52.1        |
| 600              | 4,238     | 15.0        | 30                             | 45.5             | 20                               | Kg 57.4        |
| 600              | 4,238     | 15.0        | 30                             | 56.0             | 20                               | Kg 62.7        |
| 600              | 4,238     | 15.0        | 30                             | 66.5             | 20                               | Kg 68.0        |
| 600              | 4,238     | 15.0        | 30                             | 77.0             | 20                               | Kg 73.3        |
| 600              | 4,238     | 15.0        | 30                             | 87.5             | 20                               | Kg 78.6        |
| 600              | 4,238     | 15.0        | 30                             | 98.0             | 20                               | Kg 83.9        |
| 600              | 4,238     | 15.0        | 30                             | 108.5            | 20                               | Kg 89.2        |
| 600              | 4,238     | 15.0        | 30                             | 119.0            | 20                               | Kg 94.5        |
| 600              | 4,238     | 15.0        | 30                             | 129.5            | 20                               | Kg 99.8        |
| 600              | 4,238     | 15.0        | 30                             | 140.0            | 20                               | Kg 105.1       |
| 600              | 4,238     | 15.0        | 30                             | 150.5            | 20                               | Kg 110.4       |
| 600              | 4,238     | 15.0        | 30                             | 161.0            | 20                               | Kg 115.7       |
| 600              | 4,238     | 15.0        | 30                             | 171.5            | 20                               | Kg 121.0       |
| 600              | 4,238     | 15.0        | 30                             | 182.0            | 20                               | Kg 126.3       |
| 600              | 4,238     | 15.0        | 30                             | 192.5            | 20                               | Kg 131.6       |
| 600              | 4,238     | 15.0        | 30                             | 203.0            | 20                               | Kg 136.9       |
| 600              | 4,238     | 15.0        | 30                             | 213.5            | 20                               | Kg 142.2       |
| 600              | 4,238     | 15.0        | 30                             | 224.0            | 20                               | Kg 147.5       |
| 600              | 4,238     | 15.0        | 30                             | 234.5            | 20                               | Kg 152.8       |
| 600              | 4,238     | 15.0        | 30                             | 245.0            | 20                               | Kg 158.1       |
| 600              | 4,238     | 15.0        | 30                             | 255.5            | 20                               | Kg 163.4       |
| 600              | 4,238     | 15.0        | 30                             | 266.0            | 20                               | Kg 168.7       |
| 600              | 4,238     | 15.0        | 30                             | 276.5            | 20                               | Kg 174.0       |
| 600              | 4,238     | 15.0        | 30                             | 287.0            | 20                               | Kg 179.3       |
| 600              | 4,238     | 15.0        | 30                             | 297.5            | 20                               | Kg 184.6       |
| 600              | 4,238     | 15.0        | 30                             | 308.0            | 20                               | Kg 189.9       |
| 600              | 4,238     | 15.0        | 30                             | 318.5            | 20                               | Kg 195.2       |
| 600              | 4,238     | 15.0        | 30                             | 329.0            | 20                               | Kg 200.5       |
| 600              | 4,238     | 15.0        | 30                             | 339.5            | 20                               | Kg 205.8       |
| 600              | 4,238     | 15.0        | 30                             | 350.0            | 20                               | Kg 211.1       |
| 600              | 4,238     | 15.0        | 30                             | 360.5            | 20                               | Kg 216.4       |
| 600              | 4,238     | 15.0        | 30                             | 371.0            | 20                               | Kg 221.7       |
| 600              | 4,238     | 15.0        | 30                             | 381.5            | 20                               | Kg 227.0       |
| 600              | 4,238     | 15.0        | 30                             | 392.0            | 20                               | Kg 232.3       |
| 600              | 4,238     | 15.0        | 30                             | 402.5            | 20                               | Kg 237.6       |
| 600              | 4,238     | 15.0        | 30                             | 413.0            | 20                               | Kg 242.9       |
| 600              | 4,238     | 15.0        | 30                             | 423.5            | 20                               | Kg 248.2       |
| 600              | 4,238     | 15.0        | 30                             | 434.0            | 20                               | Kg 253.5       |
| 600              | 4,238     | 15.0        | 30                             | 444.5            | 20                               | Kg 258.8       |
| 600              | 4,238     | 15.0        | 30                             | 455.0            | 20                               | Kg 264.1       |
| 600              | 4,238     | 15.0        | 30                             | 465.5            | 20                               | Kg 269.4       |
| 600              | 4,238     | 15.0        | 30                             | 476.0            | 20                               | Kg 274.7       |
| 600              | 4,238     | 15.0        | 30                             | 486.5            | 20                               | Kg 280.0       |
| 600              | 4,238     | 15.0        | 30                             | 497.0            | 20                               | Kg 285.3       |
| 600              | 4,238     | 15.0        | 30                             | 507.5            | 20                               | Kg 290.6       |
| 600              | 4,238     | 15.0        | 30                             | 518.0            | 20                               | Kg 295.9       |
| 600              | 4,238     | 15.0        | 30                             | 528.5            | 20                               | Kg 301.2       |
| 600              | 4,238     | 15.0        | 30                             | 539.0            | 20                               | Kg 306.5       |
| 600              | 4,238     | 15.0        | 30                             | 549.5            | 20                               | Kg 311.8       |
| 600              | 4,238     | 15.0        | 30                             | 560.0            | 20                               | Kg 317.1       |
| 600              | 4,238     | 15.0        | 30                             | 570.5            | 20                               | Kg 322.4       |
| 600              | 4,238     | 15.0        | 30                             | 581.0            | 20                               | Kg 327.7       |
| 600              | 4,238     | 15.0        | 30                             | 591.5            | 20                               | Kg 333.0       |
| 600              | 4,238     | 15.0        | 30                             | 602.0            | 20                               | Kg 338.3       |
| 600              | 4,238     | 15.0        | 30                             | 612.5            | 20                               | Kg             |

Above sizes and loads are for information only bearing size chosen against load has to be rechecked with design calculations



# Technical Specification of Laminated Elastomeric Bearing Type B meeting EN 1337-3:2005

| $\delta$      | $\kappa$      | $b$      | $\gamma$ [°]  | $\eta$ [mm] | $\Delta$ [mm] | Reaction over $\delta$ (°) | Reaction over $\kappa$ (°) | Total thickness [mm] | Weight [kg]   |
|---------------|---------------|----------|---------------|-------------|---------------|----------------------------|----------------------------|----------------------|---------------|
| $\kappa$ [mm] | $\kappa$ [mm] | $b$ [mm] | $\gamma$ [mm] | $\eta$ [mm] | $\Delta$ [mm] | $\delta$ [mm]              | $\kappa$ [mm]              | $\delta$ [mm]        | $\kappa$ [mm] |
| 100           | 100           | 100      | 100           | 10.0        | 14            | 7.0                        | 4.0                        | 6.0                  | 10            |
| 100           | 100           | 100      | 100           | 10.0        | 14            | 7.0                        | 4.0                        | 6.0                  | 10            |
| 100           | 100           | 100      | 100           | 10.0        | 21            | 10.5                       | 8.0                        | 9.0                  | 15            |
| 100           | 100           | 100      | 100           | 10.0        | 21            | 10.5                       | 8.0                        | 9.0                  | 15            |
| 100           | 100           | 100      | 100           | 10.0        | 35            | 16.3                       | 16.0                       | 15.0                 | 25            |
| 100           | 100           | 100      | 100           | 10.0        | 35            | 16.3                       | 16.0                       | 15.0                 | 25            |
| 100           | 100           | 100      | 100           | 10.0        | 42            | 18.0                       | 20.0                       | 18.0                 | 30            |
| 100           | 100           | 100      | 100           | 10.0        | 42            | 18.0                       | 20.0                       | 18.0                 | 30            |
| 100           | 150           | 150      | 150           | 10.0        | 14            | 7.0                        | 4.0                        | 6.0                  | 10            |
| 100           | 150           | 150      | 150           | 10.0        | 21            | 10.5                       | 8.0                        | 9.0                  | 15            |
| 100           | 150           | 150      | 150           | 10.0        | 21            | 10.5                       | 8.0                        | 9.0                  | 15            |
| 100           | 150           | 150      | 150           | 10.0        | 35            | 16.3                       | 16.0                       | 15.0                 | 25            |
| 100           | 150           | 150      | 150           | 10.0        | 35            | 16.3                       | 16.0                       | 15.0                 | 25            |
| 100           | 150           | 150      | 150           | 10.0        | 42            | 18.0                       | 20.0                       | 18.0                 | 30            |
| 100           | 150           | 150      | 150           | 10.0        | 42            | 18.0                       | 20.0                       | 18.0                 | 30            |
| 150           | 200           | 300      | 100           | 10.0        | 14            | 7.0                        | 3.0                        | 3.0                  | 10            |
| 150           | 200           | 300      | 100           | 10.0        | 21            | 10.5                       | 3.0                        | 3.0                  | 15            |
| 150           | 200           | 300      | 100           | 10.0        | 21            | 10.5                       | 3.0                        | 3.0                  | 15            |
| 150           | 200           | 300      | 100           | 10.0        | 35            | 16.3                       | 12.0                       | 12.0                 | 25            |
| 150           | 200           | 300      | 100           | 10.0        | 35            | 16.3                       | 12.0                       | 12.0                 | 25            |
| 150           | 200           | 300      | 100           | 10.0        | 42            | 17.5                       | 15.0                       | 15.0                 | 30            |
| 150           | 200           | 300      | 100           | 10.0        | 42            | 17.5                       | 15.0                       | 15.0                 | 30            |
| 150           | 200           | 300      | 100           | 10.0        | 45            | 23.3                       | 21.0                       | 21.0                 | 45            |
| 150           | 200           | 300      | 100           | 10.0        | 45            | 23.3                       | 21.0                       | 21.0                 | 45            |
| 200           | 250           | 625      | 12.5          | 19          | 9.1           | 3.0                        | 2.5                        | 13                   | 10            |
| 200           | 250           | 625      | 12.5          | 30          | 14.7          | 6.0                        | 5.0                        | 21                   | 15            |
| 200           | 250           | 625      | 12.5          | 41          | 20.3          | 9.0                        | 7.5                        | 29                   | 20            |
| 200           | 250           | 625      | 12.5          | 41          | 20.3          | 9.0                        | 7.5                        | 29                   | 20            |
| 200           | 250           | 625      | 12.5          | 52          | 25.9          | 12.0                       | 10.0                       | 37                   | 25            |
| 200           | 250           | 625      | 12.5          | 52          | 25.9          | 12.0                       | 10.0                       | 37                   | 25            |
| 200           | 250           | 625      | 12.5          | 74          | 33.2          | 18.0                       | 15.0                       | 53                   | 30            |
| 200           | 250           | 625      | 12.5          | 74          | 33.2          | 18.0                       | 15.0                       | 53                   | 30            |
| 200           | 250           | 625      | 12.5          | 85          | 36            | 21.0                       | 17.5                       | 61                   | 35            |
| 200           | 250           | 625      | 12.5          | 85          | 36            | 21.0                       | 17.5                       | 61                   | 35            |
| 200           | 300           | 750      | 12.5          | 19          | 9.1           | 3.0                        | 2.5                        | 13                   | 10            |
| 200           | 300           | 750      | 12.5          | 30          | 14.7          | 6.0                        | 5.0                        | 21                   | 15            |
| 200           | 300           | 750      | 12.5          | 41          | 20.3          | 9.0                        | 7.5                        | 29                   | 20            |
| 200           | 300           | 750      | 12.5          | 52          | 25.9          | 12.0                       | 10.0                       | 37                   | 25            |
| 200           | 300           | 750      | 12.5          | 52          | 25.9          | 12.0                       | 10.0                       | 37                   | 25            |
| 200           | 300           | 750      | 12.5          | 63          | 30.1          | 14.0                       | 11.5                       | 44                   | 30            |
| 200           | 300           | 750      | 12.5          | 63          | 30.1          | 14.0                       | 11.5                       | 44                   | 30            |
| 200           | 300           | 750      | 12.5          | 74          | 33.2          | 18.0                       | 15.0                       | 53                   | 35            |
| 200           | 300           | 750      | 12.5          | 74          | 33.2          | 18.0                       | 15.0                       | 53                   | 35            |
| 200           | 300           | 750      | 12.5          | 85          | 36            | 21.0                       | 17.5                       | 61                   | 40            |
| 200           | 300           | 750      | 12.5          | 85          | 36            | 21.0                       | 17.5                       | 61                   | 40            |

Alcohol consumption and trade are the information only. Variation in the response across food has to be reflected with design calculations.



# Technical Specification of Laminated Elastomeric Bearing Type B meeting EN 1337-3:2005

| $\lambda$ | $b$ | $\varphi$ | $\eta$ | $N(\text{mm})$ | $b_0(\text{mm})$ | $\Delta$ | Ratio<br>over $\alpha$<br>(%) | Ratio<br>over $\beta$<br>(%) | Total<br>core<br>thickness<br>[mm] | Weight<br>[g] |
|-----------|-----|-----------|--------|----------------|------------------|----------|-------------------------------|------------------------------|------------------------------------|---------------|
| 200       | 400 | 1000      | 12.5   | 19             | 9.1              | 3.0      | 1.2                           | 13                           | Kg 5.0                             | 13            |
| 200       | 400 | 1000      | 12.5   | 30             | 14.7             | 6.0      | 2.4                           | 21                           | Kg 6.6                             | 21            |
| 200       | 400 | 1000      | 12.5   | 41             | 20.3             | 7.5      | 3.6                           | 29                           | Kg 8.3                             | 29            |
| 200       | 400 | 1000      | 12.5   | 53             | 25.9             | 10.0     | 4.8                           | 37                           | Kg 10.0                            | 37            |
| 200       | 400 | 1000      | 12.5   | 63             | 31.5             | 11.5     | 6.0                           | 45                           | Kg 11.7                            | 45            |
| 200       | 400 | 1000      | 12.5   | 75             | 37.1             | 12.0     | 7.2                           | 53                           | Kg 13.4                            | 53            |
| 200       | 400 | 1000      | 12.5   | 85             | 42.8             | 12.5     | 8.4                           | 61                           | Kg 15.1                            | 61            |
| 200       | 400 | 1000      | 12.5   | 96             | 48.4             | 13.0     | 9.6                           | 69                           | Kg 16.8                            | 69            |
| 200       | 400 | 1000      | 12.5   | 108            | 54.0             | 13.5     | 10.8                          | 77                           | Kg 18.5                            | 77            |
| 200       | 400 | 1000      | 12.5   | 119            | 59.7             | 14.0     | 12.0                          | 85                           | Kg 20.2                            | 85            |
| 200       | 400 | 1000      | 12.5   | 130            | 65.4             | 14.5     | 13.2                          | 93                           | Kg 21.9                            | 93            |
| 200       | 400 | 1000      | 12.5   | 141            | 71.1             | 15.0     | 14.4                          | 101                          | Kg 23.6                            | 101           |
| 200       | 400 | 1000      | 12.5   | 152            | 76.8             | 15.5     | 15.6                          | 109                          | Kg 25.3                            | 109           |
| 200       | 400 | 1000      | 12.5   | 163            | 82.5             | 16.0     | 16.8                          | 117                          | Kg 27.0                            | 117           |
| 200       | 400 | 1000      | 12.5   | 174            | 88.2             | 16.5     | 18.0                          | 125                          | Kg 28.7                            | 125           |
| 200       | 400 | 1000      | 12.5   | 185            | 93.9             | 17.0     | 19.2                          | 133                          | Kg 30.4                            | 133           |
| 200       | 400 | 1000      | 12.5   | 196            | 99.6             | 17.5     | 20.4                          | 141                          | Kg 32.1                            | 141           |
| 200       | 400 | 1000      | 12.5   | 207            | 105.3            | 18.0     | 21.6                          | 149                          | Kg 33.8                            | 149           |
| 200       | 400 | 1000      | 12.5   | 218            | 111.0            | 18.5     | 22.8                          | 157                          | Kg 35.5                            | 157           |
| 200       | 400 | 1000      | 12.5   | 229            | 116.7            | 19.0     | 24.0                          | 165                          | Kg 37.2                            | 165           |
| 200       | 400 | 1000      | 12.5   | 240            | 122.4            | 19.5     | 25.2                          | 173                          | Kg 38.9                            | 173           |
| 200       | 400 | 1000      | 12.5   | 251            | 128.1            | 20.0     | 26.4                          | 181                          | Kg 40.6                            | 181           |
| 200       | 400 | 1000      | 12.5   | 262            | 133.8            | 20.5     | 27.6                          | 189                          | Kg 42.3                            | 189           |
| 200       | 400 | 1000      | 12.5   | 273            | 139.5            | 21.0     | 28.8                          | 197                          | Kg 44.0                            | 197           |
| 200       | 400 | 1000      | 12.5   | 284            | 145.2            | 21.5     | 30.0                          | 205                          | Kg 45.7                            | 205           |
| 200       | 400 | 1000      | 12.5   | 295            | 150.9            | 22.0     | 31.2                          | 213                          | Kg 47.4                            | 213           |
| 200       | 400 | 1000      | 12.5   | 306            | 156.6            | 22.5     | 32.4                          | 221                          | Kg 49.1                            | 221           |
| 200       | 400 | 1000      | 12.5   | 317            | 162.3            | 23.0     | 33.6                          | 229                          | Kg 50.8                            | 229           |
| 200       | 400 | 1000      | 12.5   | 328            | 168.0            | 23.5     | 34.8                          | 237                          | Kg 52.5                            | 237           |
| 200       | 400 | 1000      | 12.5   | 339            | 173.7            | 24.0     | 36.0                          | 245                          | Kg 54.2                            | 245           |
| 200       | 400 | 1000      | 12.5   | 350            | 179.4            | 24.5     | 37.2                          | 253                          | Kg 55.9                            | 253           |
| 200       | 400 | 1000      | 12.5   | 361            | 185.1            | 25.0     | 38.4                          | 261                          | Kg 57.6                            | 261           |
| 200       | 400 | 1000      | 12.5   | 372            | 190.8            | 25.5     | 39.6                          | 269                          | Kg 59.3                            | 269           |
| 200       | 400 | 1000      | 12.5   | 383            | 196.5            | 26.0     | 40.8                          | 277                          | Kg 61.0                            | 277           |
| 200       | 400 | 1000      | 12.5   | 394            | 202.2            | 26.5     | 42.0                          | 285                          | Kg 62.7                            | 285           |
| 200       | 400 | 1000      | 12.5   | 405            | 207.9            | 27.0     | 43.2                          | 293                          | Kg 64.4                            | 293           |
| 200       | 400 | 1000      | 12.5   | 416            | 213.6            | 27.5     | 44.4                          | 301                          | Kg 66.1                            | 301           |
| 200       | 400 | 1000      | 12.5   | 427            | 219.3            | 28.0     | 45.6                          | 309                          | Kg 67.8                            | 309           |
| 200       | 400 | 1000      | 12.5   | 438            | 225.0            | 28.5     | 46.8                          | 317                          | Kg 69.5                            | 317           |
| 200       | 400 | 1000      | 12.5   | 449            | 230.7            | 29.0     | 48.0                          | 325                          | Kg 71.2                            | 325           |
| 200       | 400 | 1000      | 12.5   | 460            | 236.4            | 29.5     | 49.2                          | 333                          | Kg 72.9                            | 333           |
| 200       | 400 | 1000      | 12.5   | 471            | 242.1            | 30.0     | 50.4                          | 341                          | Kg 74.6                            | 341           |
| 200       | 400 | 1000      | 12.5   | 482            | 247.8            | 30.5     | 51.6                          | 349                          | Kg 76.3                            | 349           |
| 200       | 400 | 1000      | 12.5   | 493            | 253.5            | 31.0     | 52.8                          | 357                          | Kg 78.0                            | 357           |
| 200       | 400 | 1000      | 12.5   | 504            | 259.2            | 31.5     | 54.0                          | 365                          | Kg 79.7                            | 365           |
| 200       | 400 | 1000      | 12.5   | 515            | 264.9            | 32.0     | 55.2                          | 373                          | Kg 81.4                            | 373           |
| 200       | 400 | 1000      | 12.5   | 526            | 270.6            | 32.5     | 56.4                          | 381                          | Kg 83.1                            | 381           |
| 200       | 400 | 1000      | 12.5   | 537            | 276.3            | 33.0     | 57.6                          | 389                          | Kg 84.8                            | 389           |
| 200       | 400 | 1000      | 12.5   | 548            | 282.0            | 33.5     | 58.8                          | 397                          | Kg 86.5                            | 397           |
| 200       | 400 | 1000      | 12.5   | 559            | 287.7            | 34.0     | 60.0                          | 405                          | Kg 88.2                            | 405           |
| 200       | 400 | 1000      | 12.5   | 570            | 293.4            | 34.5     | 61.2                          | 413                          | Kg 89.9                            | 413           |
| 200       | 400 | 1000      | 12.5   | 581            | 299.1            | 35.0     | 62.4                          | 421                          | Kg 91.6                            | 421           |
| 200       | 400 | 1000      | 12.5   | 592            | 304.8            | 35.5     | 63.6                          | 429                          | Kg 93.3                            | 429           |
| 200       | 400 | 1000      | 12.5   | 603            | 310.5            | 36.0     | 64.8                          | 437                          | Kg 95.0                            | 437           |
| 200       | 400 | 1000      | 12.5   | 614            | 316.2            | 36.5     | 66.0                          | 445                          | Kg 96.7                            | 445           |
| 200       | 400 | 1000      | 12.5   | 625            | 321.9            | 37.0     | 67.2                          | 453                          | Kg 98.4                            | 453           |
| 200       | 400 | 1000      | 12.5   | 636            | 327.6            | 37.5     | 68.4                          | 461                          | Kg 100.1                           | 461           |
| 200       | 400 | 1000      | 12.5   | 647            | 333.3            | 38.0     | 69.6                          | 469                          | Kg 101.8                           | 469           |
| 200       | 400 | 1000      | 12.5   | 658            | 339.0            | 38.5     | 70.8                          | 477                          | Kg 103.5                           | 477           |
| 200       | 400 | 1000      | 12.5   | 669            | 344.7            | 39.0     | 72.0                          | 485                          | Kg 105.2                           | 485           |
| 200       | 400 | 1000      | 12.5   | 680            | 350.4            | 39.5     | 73.2                          | 493                          | Kg 106.9                           | 493           |
| 200       | 400 | 1000      | 12.5   | 691            | 356.1            | 40.0     | 74.4                          | 501                          | Kg 108.6                           | 501           |
| 200       | 400 | 1000      | 12.5   | 702            | 361.8            | 40.5     | 75.6                          | 509                          | Kg 110.3                           | 509           |
| 200       | 400 | 1000      | 12.5   | 713            | 367.5            | 41.0     | 76.8                          | 517                          | Kg 112.0                           | 517           |
| 200       | 400 | 1000      | 12.5   | 724            | 373.2            | 41.5     | 78.0                          | 525                          | Kg 113.7                           | 525           |
| 200       | 400 | 1000      | 12.5   | 735            | 378.9            | 42.0     | 79.2                          | 533                          | Kg 115.4                           | 533           |
| 200       | 400 | 1000      | 12.5   | 746            | 384.6            | 42.5     | 80.4                          | 541                          | Kg 117.1                           | 541           |
| 200       | 400 | 1000      | 12.5   | 757            | 390.3            | 43.0     | 81.6                          | 549                          | Kg 118.8                           | 549           |
| 200       | 400 | 1000      | 12.5   | 768            | 396.0            | 43.5     | 82.8                          | 557                          | Kg 120.5                           | 557           |
| 200       | 400 | 1000      | 12.5   | 779            | 401.7            | 44.0     | 84.0                          | 565                          | Kg 122.2                           | 565           |
| 200       | 400 | 1000      | 12.5   | 790            | 407.4            | 44.5     | 85.2                          | 573                          | Kg 123.9                           | 573           |
| 200       | 400 | 1000      | 12.5   | 801            | 413.1            | 45.0     | 86.4                          | 581                          | Kg 125.6                           | 581           |
| 200       | 400 | 1000      | 12.5   | 812            | 418.8            | 45.5     | 87.6                          | 589                          | Kg 127.3                           | 589           |
| 200       | 400 | 1000      | 12.5   | 823            | 424.5            | 46.0     | 88.8                          | 597                          | Kg 129.0                           | 597           |
| 200       | 400 | 1000      | 12.5   | 834            | 430.2            | 46.5     | 90.0                          | 605                          | Kg 130.7                           | 605           |
| 200       | 400 | 1000      | 12.5   | 845            | 435.9            | 47.0     | 91.2                          | 613                          | Kg 132.4                           | 613           |
| 200       | 400 | 1000      | 12.5   | 856            | 441.6            | 47.5     | 92.4                          | 621                          | Kg 134.1                           | 621           |
| 200       | 400 | 1000      | 12.5   | 867            | 447.3            | 48.0     | 93.6                          | 629                          | Kg 135.8                           | 629           |
| 200       | 400 | 1000      | 12.5   | 878            | 453.0            | 48.5     | 94.8                          | 637                          | Kg 137.5                           | 637           |
| 200       | 400 | 1000      | 12.5   | 889            | 458.7            | 49.0     | 96.0                          | 645                          | Kg 139.2                           | 645           |
| 200       | 400 | 1000      | 12.5   | 900            | 464.4            | 49.5     | 97.2                          | 653                          | Kg 140.9                           | 653           |
| 200       | 400 | 1000      | 12.5   | 911            | 470.1            | 50.0     | 98.4                          | 661                          | Kg 142.6                           | 661           |
| 200       | 400 | 1000      | 12.5   | 922            | 475.8            | 50.5     | 99.6                          | 669                          | Kg 144.3                           | 669           |
| 200       | 400 | 1000      | 12.5   | 933            | 481.5            | 51.0     | 100.8                         | 677                          | Kg 146.0                           | 677           |
| 200       | 400 | 1000      | 12.5   | 944            | 487.2            | 51.5     | 102.0                         | 685                          | Kg 147.7                           | 685           |
| 200       | 400 | 1000      | 12.5   | 955            | 492.9            | 52.0     | 103.2                         | 693                          | Kg 149.4                           | 693           |
| 200       | 400 | 1000      | 12.5   | 966            | 498.6            | 52.5     | 104.4                         | 701                          | Kg 151.1                           | 701           |
| 200       | 400 | 1000      | 12.5   | 977            | 504.3            | 53.0     | 105.6                         | 709                          | Kg 152.8                           | 709           |
| 200       | 400 | 1000      | 12.5   | 988            | 510.0            | 53.5     | 106.8                         | 717                          | Kg 154.5                           | 717           |
| 200       | 400 | 1000      | 12.5   | 999            | 515.7            | 54.0     | 108.0                         | 725                          | Kg 156.2                           | 725           |
| 200       | 400 | 1000      | 12.5   | 1010           | 521.4            | 54.5     | 109.2                         | 733                          | Kg 157.9                           | 733           |
| 200       | 400 | 1000      | 12.5   | 1021           | 527.1            | 55.0     | 110.4                         | 741                          | Kg 159.6                           | 741           |
| 200       | 400 | 1000      | 12.5   | 1032           | 532.8            | 55.5     | 111.6                         | 749                          | Kg 161.3                           | 749           |
| 200       | 400 | 1000      | 12.5   | 1043           | 538.5            | 56.0     | 112.8                         | 757                          | Kg 163.0                           | 757           |
| 200       | 400 | 1000      | 12.5   | 1054           | 544.2            | 56.5     | 114.0                         | 765                          | Kg 164.7                           | 765           |
| 200       | 400 | 1000      | 12.5   | 1065           | 549.9            | 57.0     | 115.2                         | 773                          | Kg 166.4                           | 773           |
| 200       | 400 | 1000      | 12.5   | 1076           | 555.6            | 57.5     | 116.4                         | 781                          | Kg 168.1                           | 781           |
| 200       | 400 | 1000      | 12.5   | 1087           | 561.3            | 58.0     | 117.6                         | 789                          | Kg 169.8                           | 789           |
| 200       | 400 | 1000      | 12.5   | 1098           | 567.0            | 58.5     | 118.8                         | 797                          | Kg 171.5                           | 797           |
| 200       | 400 | 1000      | 12.5   | 1109           | 572.7            | 59.0     | 120.0                         | 805                          | Kg 173.2                           | 805           |
| 200       | 400 | 1000      | 12.5   | 1120           | 578.4            | 59.5     | 121.2                         | 813                          | Kg 174.9                           | 813           |
| 200       | 400 | 1000      | 12.5   | 1131           | 584.1            | 60.0     | 122.4                         | 821                          | Kg 176.6                           | 821           |
| 200       | 400 | 1000      | 12.5   | 1142           | 589.8            | 60.5     | 123.6                         | 829                          | Kg 178.3                           | 829           |
| 200       | 400 | 1000      | 12.5   | 1153           | 595.5            | 61.0     | 124.8                         | 837                          | Kg 180.0                           | 837           |
| 200       | 400 | 1000      | 12.5   | 1164           | 601.2            | 61.5     | 126.0                         | 845                          | Kg 181.7                           | 845           |
| 200       | 400 | 1000      | 12.5   | 1175           | 606.9            | 62.0     | 127.2                         | 853                          | Kg 183.4                           | 853           |
| 200       | 400 | 1000      | 12.5   | 1186           | 612.6            | 62.5     | 128.4                         | 861                          | Kg 185.1                           | 861           |
| 200       | 400 | 1000      | 12.5   | 1197           | 618.3            | 63.0     | 129.6                         | 869                          | Kg 186.8                           | 869           |
| 200       | 400 | 1000      | 12.5   | 1208           | 624.0            | 63.5     | 130.8                         | 877                          | Kg 188.5                           | 877           |
| 200       | 400 | 1000      | 12.5   | 1219           | 629.7            | 64.0     | 132.0                         | 885                          | Kg 190.2                           | 885           |
| 200       | 400 | 1000      | 12.5   | 1230           | 635.4            | 64.5     | 133.2                         | 893                          | Kg 191.9                           | 893           |
| 200       | 400 | 1000      | 12.5   | 1241           | 641.1            | 65.0     | 134.4                         | 901                          | Kg 193.6                           | 901           |
| 200       | 400 | 1000      | 12.5   | 1252           | 646.8            | 65.5     | 135.6                         | 909                          | Kg 195.3                           | 909           |
| 200       | 400 | 1000      | 12.5   | 1263           | 652.5            | 66.0     | 136.8                         | 917                          | Kg 197.0                           | 917           |
| 200       | 400 | 1000      | 12.5   | 1274           | 658.2            | 66.5     | 138.0                         | 925                          | Kg 198.7                           | 925           |
| 200       | 400 | 1000      | 12.5   | 1285           | 663.9            | 67.0     | 139.2                         | 933                          | Kg 200.4                           | 933           |
| 200       | 400 | 1000      | 12.5   | 1296           | 669.6            | 67.5     | 140.4                         | 941                          | Kg 202.1                           | 941           |
| 200       | 400 | 1000      | 12.5   | 1307           | 675.3            | 68.0     | 141.6                         | 949                          | Kg 203.8                           | 949           |
| 200       | 400 | 1000      | 12.5   | 1318           | 681.0            | 68.5     | 142.8                         | 957                          | Kg 205.5                           | 957           |
| 200       | 400 | 1000      | 12.5   | 1329           | 686.7            | 69.0     | 144.0                         | 965                          | Kg 207.2                           | 965           |
| 200       | 400 | 1000      | 12.5   | 1340           |                  |          |                               |                              |                                    |               |

Above cases and facts are for information only. Accrual date chosen against had has to be corroborated with direct calculations.





Technical Specification of Laminated Elastomeric Bearing  
Type B meeting EN 1337-3:2005

| a   | b     | V [dN] | N/mm2 | h [mm] | Displacement<br>±s [mm] | Rotation<br>(O) % | Rotation<br>(O) % | Total<br>rubber<br>thickness<br>[mm] | Weight<br>[kg] |
|-----|-------|--------|-------|--------|-------------------------|-------------------|-------------------|--------------------------------------|----------------|
| 400 | X 500 | 3000   | 15,0  | 24     | 11,2                    | 2,0               | 1,5               | 39                                   | Kg 16,5        |
| 400 | X 500 | 3000   | 15,0  | 34     | 11,2                    | 2,0               | 1,5               | 49                                   | Kg 22,5        |
| 400 | X 500 | 3000   | 15,0  | 54     | 26,6                    | 6,0               | 4,5               | 38                                   | Kg 24,4        |
| 400 | X 500 | 3000   | 15,0  | 69     | 34,3                    | 8,0               | 6,0               | 49                                   | Kg 33,4        |
| 400 | X 500 | 3000   | 15,0  | 84     | 42,0                    | 10,0              | 7,5               | 59                                   | Kg 52,3        |
| 400 | X 500 | 3000   | 15,0  | 99     | 49,7                    | 12,0              | 9,0               | 69                                   | Kg 61,2        |
| 400 | X 500 | 3000   | 15,0  | 114    | 57,4                    | 14,0              | 10,5              | 82                                   | Kg 79,2        |
| 400 | X 500 | 3000   | 15,0  | 129    | 65,1                    | 16,0              | 12,0              | 95                                   | Kg 99,2        |
| 400 | X 500 | 3000   | 15,0  | 144    | 72,8                    | 18,0              | 13,5              | 104                                  | Kg 118,1       |
| 400 | X 500 | 3000   | 15,0  | 159    | 80,5                    | 20,0              | 15,0              | 115                                  | Kg 137,1       |
| 400 | X 500 | 3600   | 15,0  | 24     | 11,2                    | 2,0               | 1,2               | 16                                   | Kg 19,8        |
| 400 | X 500 | 3600   | 15,0  | 39     | 18,9                    | 4,0               | 2,4               | 27                                   | Kg 30,6        |
| 400 | X 500 | 3600   | 15,0  | 54     | 26,6                    | 6,0               | 3,6               | 38                                   | Kg 41,3        |
| 400 | X 500 | 3600   | 15,0  | 69     | 34,3                    | 8,0               | 4,8               | 49                                   | Kg 52,0        |
| 400 | X 500 | 3600   | 15,0  | 84     | 42,0                    | 10,0              | 6,0               | 59                                   | Kg 62,7        |
| 400 | X 500 | 3600   | 15,0  | 99     | 49,7                    | 12,0              | 7,2               | 71                                   | Kg 73,5        |
| 400 | X 500 | 3600   | 15,0  | 114    | 57,4                    | 14,0              | 8,4               | 82                                   | Kg 84,3        |
| 400 | X 500 | 3600   | 15,0  | 129    | 65,1                    | 16,0              | 9,6               | 95                                   | Kg 95,0        |
| 400 | X 500 | 3600   | 15,0  | 144    | 72,8                    | 18,0              | 10,8              | 104                                  | Kg 105,8       |
| 400 | X 500 | 3600   | 15,0  | 159    | 80,5                    | 20,0              | 12,0              | 115                                  | Kg 116,5       |
| 400 | X 500 | 3600   | 15,0  | 174    | 88,2                    | 22,0              | 13,2              | 126                                  | Kg 127,2       |
| 500 | X 600 | 4500   | 15,0  | 24     | 11,2                    | 2,0               | 1,2               | 16                                   | Kg 24,8        |
| 500 | X 600 | 4500   | 15,0  | 39     | 18,9                    | 4,0               | 1,8               | 27                                   | Kg 37,2        |
| 500 | X 600 | 4500   | 15,0  | 54     | 26,6                    | 6,0               | 2,7               | 38                                   | Kg 51,6        |
| 500 | X 600 | 4500   | 15,0  | 69     | 34,3                    | 8,0               | 3,6               | 49                                   | Kg 66,1        |
| 500 | X 600 | 4500   | 15,0  | 84     | 42,0                    | 10,0              | 4,8               | 59                                   | Kg 81,5        |
| 500 | X 600 | 4500   | 15,0  | 99     | 49,7                    | 12,0              | 6,0               | 69                                   | Kg 97,9        |
| 500 | X 600 | 4500   | 15,0  | 114    | 57,4                    | 14,0              | 7,2               | 79                                   | Kg 114,3       |
| 500 | X 600 | 4500   | 15,0  | 129    | 65,1                    | 16,0              | 8,4               | 89                                   | Kg 130,7       |
| 500 | X 600 | 4500   | 15,0  | 144    | 72,8                    | 18,0              | 9,6               | 99                                   | Kg 147,1       |
| 500 | X 600 | 4500   | 15,0  | 159    | 80,5                    | 20,0              | 10,8              | 104                                  | Kg 163,5       |
| 500 | X 600 | 4500   | 15,0  | 174    | 88,2                    | 22,0              | 12,0              | 115                                  | Kg 180,0       |
| 500 | X 600 | 4500   | 15,0  | 189    | 95,9                    | 24,0              | 13,2              | 126                                  | Kg 196,5       |
| 500 | X 600 | 4500   | 15,0  | 204    | 103,6                   | 26,0              | 14,4              | 137                                  | Kg 213,0       |
| 500 | X 600 | 4500   | 15,0  | 219    | 111,3                   | 28,0              | 15,6              | 148                                  | Kg 229,5       |

Above sizes and loads are for information only. Bearing size chosen against load has to be matched with design calculations.



Technical Specification of Laminated Elastomeric Bearing  
Type B meeting EN 1337-3:2005

| a<br>[mm] | b<br>[mm] | V [dN] | N/mm <sup>2</sup> | h [mm] | Displacement<br>+s [mm] | Rotation<br>(O) % | Rotation<br>(O) % | Total<br>thickness<br>[mm] | Weight<br>[Kg] |
|-----------|-----------|--------|-------------------|--------|-------------------------|-------------------|-------------------|----------------------------|----------------|
| 600       | X 700     | 6300   | 15,0              | 30     | 14,0                    | 2,0               | 1,5               | 20                         | Kg 43,3        |
| 600       | X 700     | 6300   | 15,0              | 50     | 24,5                    | 4,0               | 3,0               | 35                         | Kg 67,5        |
| 600       | X 700     | 6300   | 15,0              | 70     | 35,0                    | 6,0               | 4,5               | 50                         | Kg 91,6        |
| 600       | X 700     | 6300   | 15,0              | 90     | 45,5                    | 8,0               | 6,0               | 65                         | Kg 115,7       |
| 600       | X 700     | 6300   | 15,0              | 110    | 56,0                    | 10,0              | 7,5               | 80                         | Kg 139,8       |
| 600       | X 700     | 6300   | 15,0              | 130    | 66,5                    | 12,0              | 9,0               | 95                         | Kg 163,9       |
| 600       | X 700     | 6300   | 15,0              | 150    | 77,0                    | 14,0              | 10,5              | 110                        | Kg 188,0       |
| 600       | X 700     | 6300   | 15,0              | 170    | 87,5                    | 16,0              | 12,0              | 125                        | Kg 212,1       |
| 600       | X 700     | 6300   | 15,0              | 190    | 98,0                    | 18,0              | 13,5              | 140                        | Kg 236,2       |
| 600       | X 700     | 6300   | 15,0              | 210    | 108,5                   | 20,0              | 15,0              | 155                        | Kg 260,3       |
| 600       | X 700     | 6300   | 15,0              | 230    | 119,0                   | 22,0              | 16,5              | 170                        | Kg 284,4       |
| 700       | X 800     | 8400   | 15,0              | 30     | 14,0                    | 2,0               | 1,2               | 20                         | Kg 57,8        |
| 700       | X 800     | 8400   | 15,0              | 50     | 24,5                    | 4,0               | 1,8               | 35                         | Kg 89,9        |
| 700       | X 800     | 8400   | 15,0              | 70     | 35,0                    | 6,0               | 2,7               | 50                         | Kg 121,1       |
| 700       | X 800     | 8400   | 15,0              | 90     | 45,5                    | 8,0               | 3,6               | 65                         | Kg 154,2       |
| 700       | X 800     | 8400   | 15,0              | 110    | 56,0                    | 10,0              | 4,8               | 80                         | Kg 188,4       |
| 700       | X 800     | 8400   | 15,0              | 130    | 66,5                    | 12,0              | 6,0               | 95                         | Kg 222,6       |
| 700       | X 800     | 8400   | 15,0              | 150    | 77,0                    | 14,0              | 7,5               | 110                        | Kg 256,7       |
| 700       | X 800     | 8400   | 15,0              | 170    | 87,5                    | 16,0              | 9,0               | 125                        | Kg 290,8       |
| 700       | X 800     | 8400   | 15,0              | 190    | 98,0                    | 18,0              | 10,8              | 140                        | Kg 324,9       |
| 700       | X 800     | 8400   | 15,0              | 210    | 108,5                   | 20,0              | 12,0              | 155                        | Kg 359,1       |
| 700       | X 800     | 8400   | 15,0              | 230    | 119,0                   | 22,0              | 13,5              | 170                        | Kg 393,2       |
| 700       | X 800     | 8400   | 15,0              | 250    | 129,5                   | 24,0              | 15,0              | 185                        | Kg 427,3       |
| 700       | X 800     | 8400   | 15,0              | 270    | 140,0                   | 26,0              | 16,5              | 200                        | Kg 461,4       |
| 800       | X 900     | 9600   | 15,0              | 33     | 16,1                    | 2,0               | 2,0               | 23                         | Kg 68,3        |
| 800       | X 900     | 9600   | 15,0              | 53     | 26,6                    | 4,0               | 3,0               | 38                         | Kg 102,4       |
| 800       | X 900     | 9600   | 15,0              | 73     | 37,1                    | 6,0               | 4,5               | 53                         | Kg 136,5       |
| 800       | X 900     | 9600   | 15,0              | 93     | 47,6                    | 8,0               | 6,0               | 68                         | Kg 170,6       |
| 800       | X 900     | 9600   | 15,0              | 113    | 58,1                    | 10,0              | 7,5               | 83                         | Kg 204,7       |
| 800       | X 900     | 9600   | 15,0              | 133    | 68,6                    | 12,0              | 9,0               | 98                         | Kg 238,8       |
| 800       | X 900     | 9600   | 15,0              | 153    | 79,1                    | 14,0              | 10,5              | 113                        | Kg 272,9       |
| 800       | X 900     | 9600   | 15,0              | 173    | 89,6                    | 16,0              | 12,0              | 128                        | Kg 307,0       |
| 800       | X 900     | 9600   | 15,0              | 193    | 100,1                   | 18,0              | 13,5              | 143                        | Kg 341,1       |
| 800       | X 900     | 9600   | 15,0              | 213    | 110,6                   | 20,0              | 15,0              | 158                        | Kg 375,2       |
| 800       | X 900     | 9600   | 15,0              | 233    | 121,1                   | 22,0              | 16,5              | 173                        | Kg 409,3       |
| 800       | X 900     | 9600   | 15,0              | 253    | 131,6                   | 24,0              | 18,0              | 188                        | Kg 443,4       |
| 800       | X 900     | 9600   | 15,0              | 273    | 142,1                   | 26,0              | 19,5              | 203                        | Kg 477,5       |
| 800       | X 900     | 9600   | 15,0              | 293    | 152,6                   | 28,0              | 21,0              | 218                        | Kg 511,6       |
| 800       | X 900     | 9600   | 15,0              | 313    | 163,1                   | 30,0              | 22,5              | 233                        | Kg 545,7       |
| 800       | X 900     | 9600   | 15,0              | 333    | 173,6                   | 32,0              | 24,0              | 248                        | Kg 579,8       |
| 800       | X 900     | 9600   | 15,0              | 353    | 184,1                   | 34,0              | 25,5              | 263                        | Kg 613,9       |