

Bearing Pads

Type & transition bands

Bearing types are determined under a certain design criteria. In the table below by using AASHO-LRFD Bridge –Design Specification, we have established the transition band between the changes in the specification. This work had been carried out only for Rotations of ≤ 0.005 & ≤ 0.015 . Table A1 & A2.

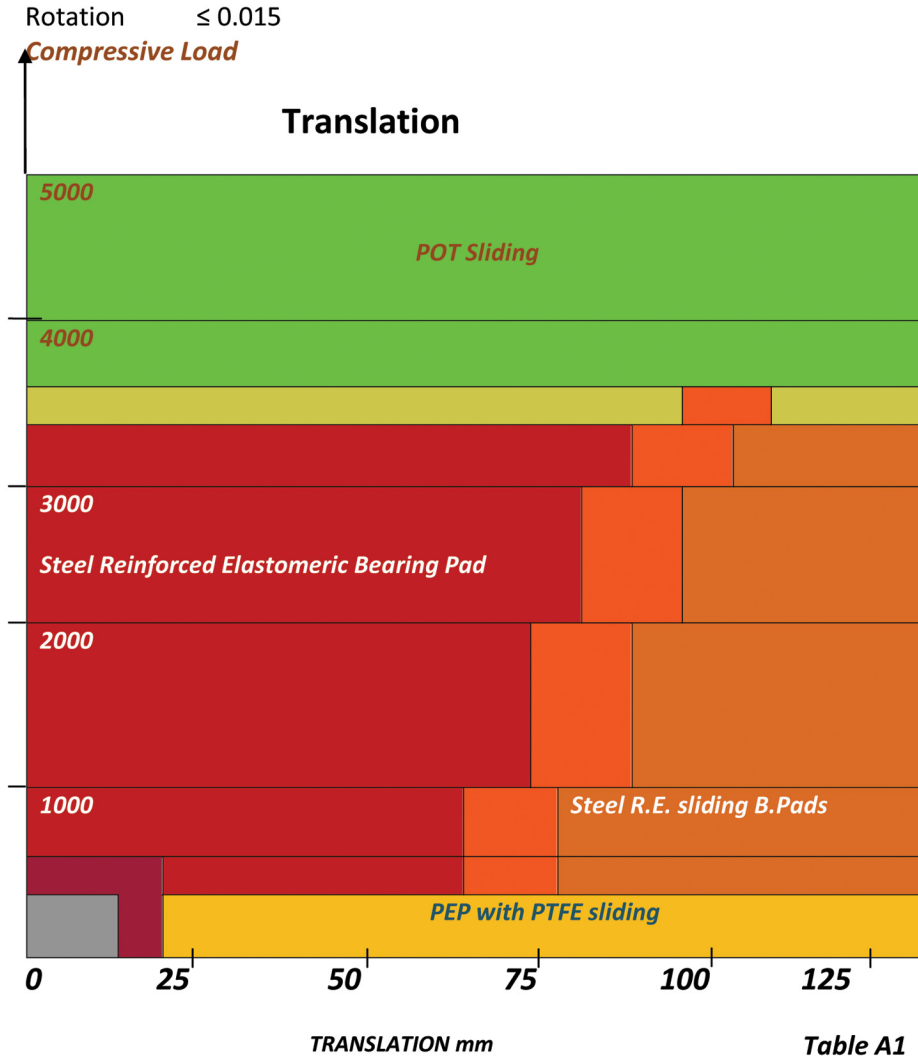
The resulting design will provide the geometry and other pertinent specifications for the bearing. It is likely that one or more of the preliminary selections will be eliminated in this step because of an undesirable attribute. The final selection should be the bearing system with the lowest combination of first cost and maintenance costs as indicated in Table A. If no bearing appears suitable, the selection process must be repeated with different constraints.

The most likely cause of the elimination of all possible bearing types is that a mutually exclusive set of design criteria was established. In this case the basis of the requirements should be reviewed and, if necessary, the overall system of superstructure and bearings should be re-evaluated before repeating the bearing selection process.

<i>Bearing Types</i>	<i>Load</i>		<i>Transition</i>		<i>Rotation</i>	<i>Costs</i>	
	<i>Min KN</i>	<i>Max KN</i>	<i>Min mm</i>	<i>Max mm</i>	<i>Limit (Rad)</i>	<i>Initial</i>	<i>Maintenance</i>
Elastomeric Pads							
Plain (PEP)	0	450	0	15	0.01	Low	Low
Cotton Duck (CDP)	0	1400	0	5	0.03	Low	Low
Fibber glass (FGP)	0	600	0	25	0.015	Low	Low
Steel Reinforced Elastomeric Bearing	225	3500	0	100	0.04	Low	Low
Sliding Bearing	0	>10,000	25	>100	0.04	Low	Moderate
POT Bearing	1200	10,000	0	0	0.02	Moderate	High

Table A - Summary of most used Bearing capabilities

Bearing Selection Diagram



Note that the limit lines which define the regions in this diagram are only approximate. The limits could move 5% in either direction. As a result, the user should examine both options when the application falls near one of these limit lines

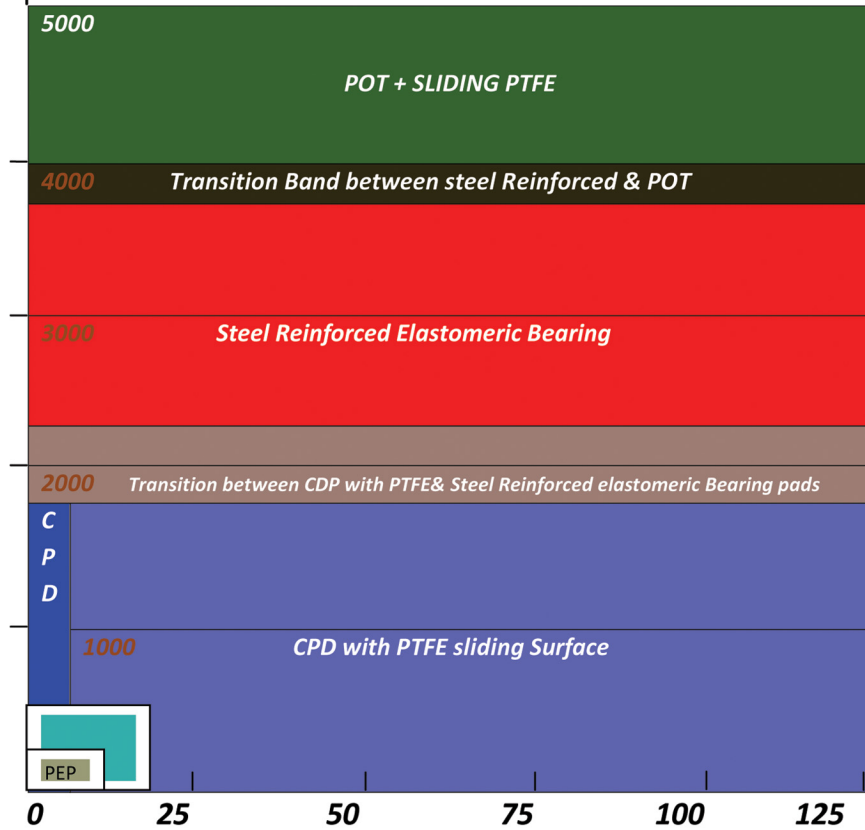
LEGEND

Steel reinforced E Bearing with sliding	
CPD with PTFE sliding surface	
PEP with PTFE sliding	
Steel reinforced Elastomeric Bearing	
Steel reinforced E sliding Bearing	
POT sliding	
POT with PTFE sliding	
Transition between Steel reinforced & sliding POT	
Transition between steel reinforce and steel reinforce	
Transition between PEP sliding & steel R with PTFE	
PEP	
Transition between PEP & steel reinforced B	

Rotation ≤ 0.005

Compressive Load

Translation



TRANSLATION mm

Table A2

