

Mounting Dimensions / Formulas

for DualVee® -basic wheel plate and track plate assemblies

When fabricating a DualVee® linear guide from componentry, the following (formulae) are applicable for mating carriage plate and track plate designs:

For sizes 1 through 4 DualVee® single edge track with equivalent sized guide wheels:

- Inboard Mounting (See Figure 1): $A = B + X$
 - Outboard Mounting (See Figure 2): $A = C - X$
 - Exterior Mounting (See Figure 3): $A = D - Y$
- A = hole centres for wheel plate

DualVee Size	X		Y	
	inch	mm	inch	mm
1	0.874	22.2	0.934	23.7
2	1.374	34.9	1.436	36.5
3	2.000	50.8	2.124	53.9
4	2.624	66.6	2.750	69.9
4XL	3.124	79.3	3.500	88.9

Notes:

1. Information above uses the same size DualVee® track and wheel except for size 4XL which uses W4XXL guide wheel with size T4 track.
2. Side views shown only, length of wheel plates can be any length required.
3. It is recommended that wheel plates be constructed with concentric bushings on one side of the plate and eccentric bushings on the opposing side.
4. "D" dimension is to the theoretical sharp of the 90° angle.

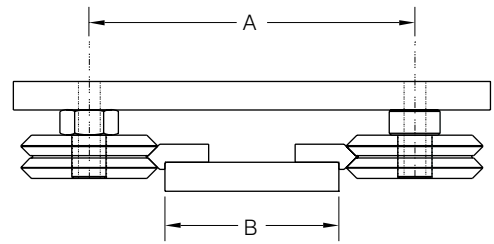


Figure 1 Inboard Mounting

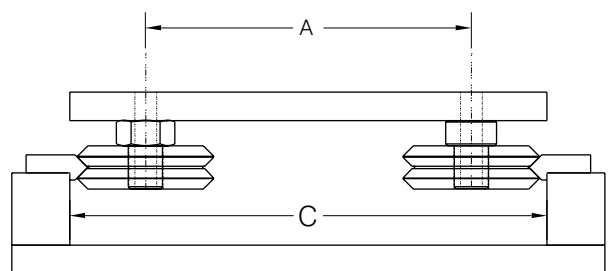


Figure 2 Outboard Mounting

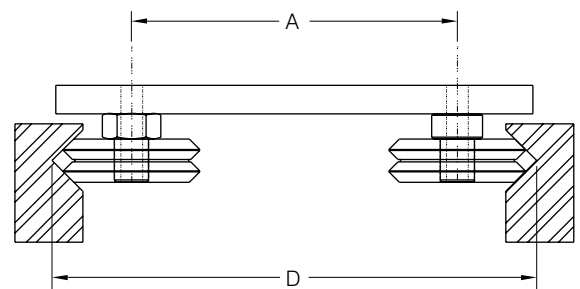


Figure 3 Exterior Mounting

Applications

Clean Room Products

TEA's clean room compatible guide wheels are manufactured from 440C stainless steel bearing elements, and contain stainless steel retainers and shields. They are internally lubricated with synthetic, corrosion resistant, clean room compatible grease.

For clean room operation, it is often desirable to plate the track with thin dense chrome (armoloy), black oxide, or electroless nickel. Stainless steel track can also be specially cleaned prior to heat treat and then passivated. Contact T.E.A. applications engineering for assistance with your clean room linear guidance questions. Higher level assemblies, custom engineered to accommodate specific clean room requirements, can be furnished by T.E.A. Contact T.E.A. for particle emissions data.

High Temperature Products

All T.E.A. high temperature guide wheel products are manufactured from specially processed, thermally stabilised, 440C stainless steel. Lubricated with a specially formulated synthetic grease, these guide wheels are capable of operating in temperatures up to 500°F. Special consideration should be given to guide wheel based designs when operating above temperatures of 300°F. Designers must make sure that a suitable lubricant is used on the wheel track interface, and if lubrication is prohibitive, the appropriate derating of the bearing should be factored in.