



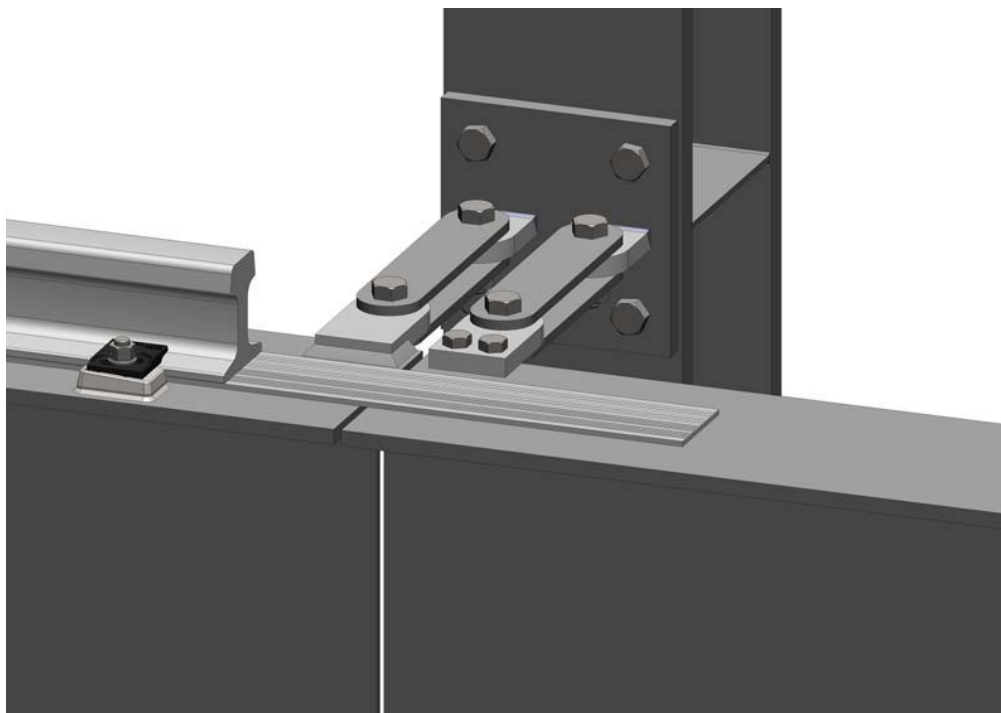
## The Atlantic Track Spherical Bearing Tie-Back Assembly

When a crane travels along the crane rail its dynamic motion creates both a vertical and a lateral force that needs to be managed in a manner that is not damaging to the building and crane runway. These rolling load forces are transmitted through the crane rail directly to the crane girder and from the rail clips to the crane girder. From this point, the forces need to be transmitted efficiently from the girder and into the building column.

Ridged tie-backs made from angle iron or channel steel cannot accommodate the girder end rotation that results from the girder being loaded and the top flange compressing. The bolts used to secure the ridged tie-backs are in shear and eventually fatigue and fail in operation as do the welds used to secure the ridged tie-backs. The use of thicker steel or creating an otherwise robust but still ridged, fabricated steel tie-back, will simply transfer the damaging forces to another location and the problem will migrate to that location eventually.

Atlantic Track manages these forces effectively with an engineered mechanical link assembly. The rotation of the spherical bearings can accommodate significantly more rotational movement than a traditional, stiff and ridged tie-back assemblies. The structural engineer needs to consider the full design of this detail in the knowledge of the loading and use anticipated. It is possible to design with the full force that will occur at a pair of columns being carried on either one connector or two. This is dependent on the method of carrying load from one girder to another.

The Atlantic Track Crane Runway Division can assist you. We do require your participation in filling out the required informational request forms so that we may assist you in the best possible fashion.



**Engineered and Manufactured in the USA**

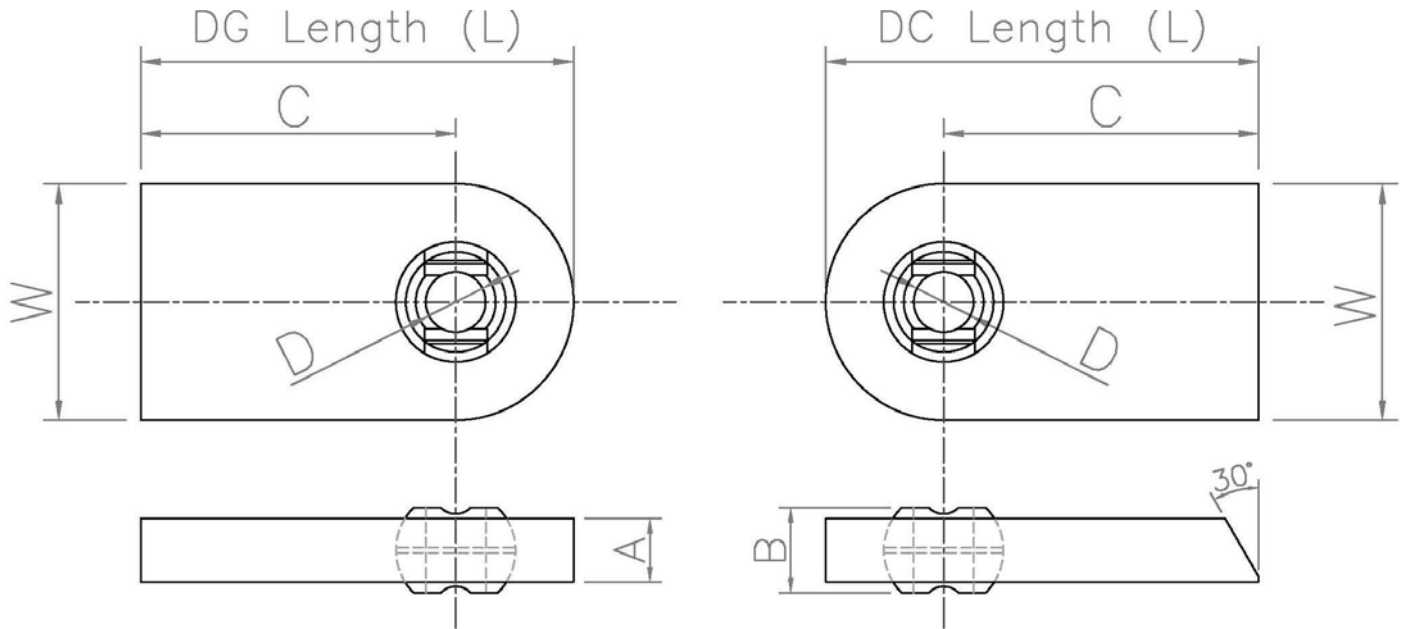
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Rev. 1 / 8-2018



## Spherical Bearing Tie Back Capacity Chart



Column End – D Plate Dimensions		Load Carrying Capacity (Kips)			
Part No.	Bolt Diameter D “	<100,000 Cycles Kips	<500,000 Cycles Kips	<2,000,000 Cycles Kips	>2,000,000 Cycles Kips
CED075	0.75	22.9	18.9	16.2	12.6
CED100	1.00	45.7	37.8	32.3	25.2
CED125	1.25	65.6	54.3	46.4	36.2
CED150	1.50	82.5	68.3	58.3	45.5
CED200	2.00	114.3	94.5	80.8	63.0
CED225	2.25	164.5	136.0	116.2	90.7

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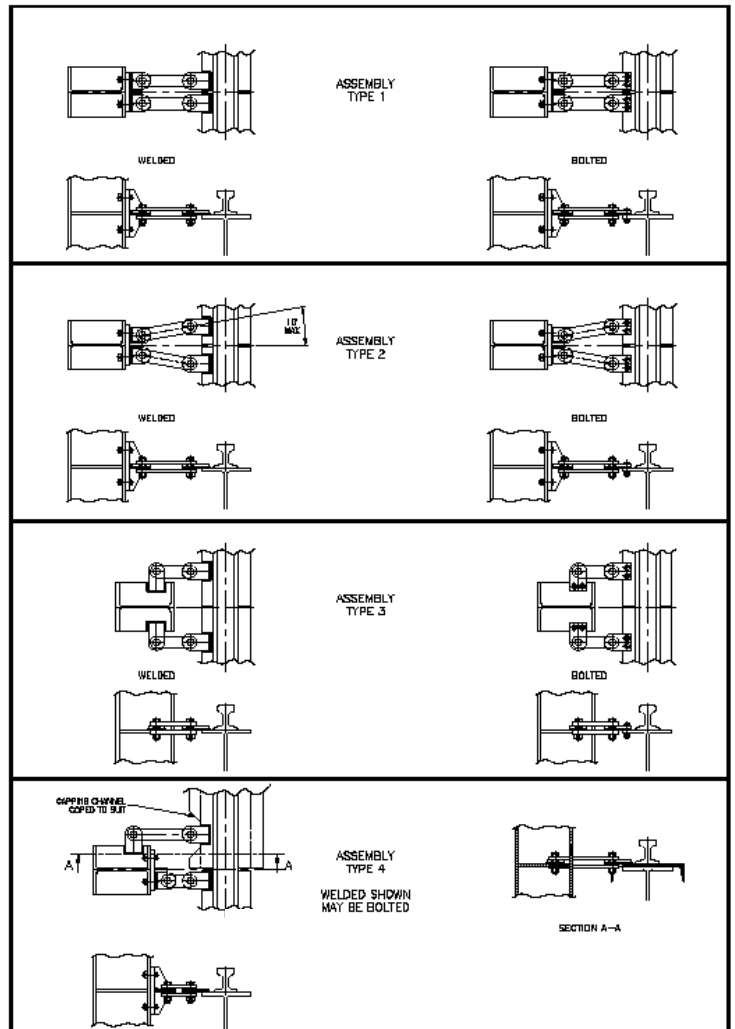
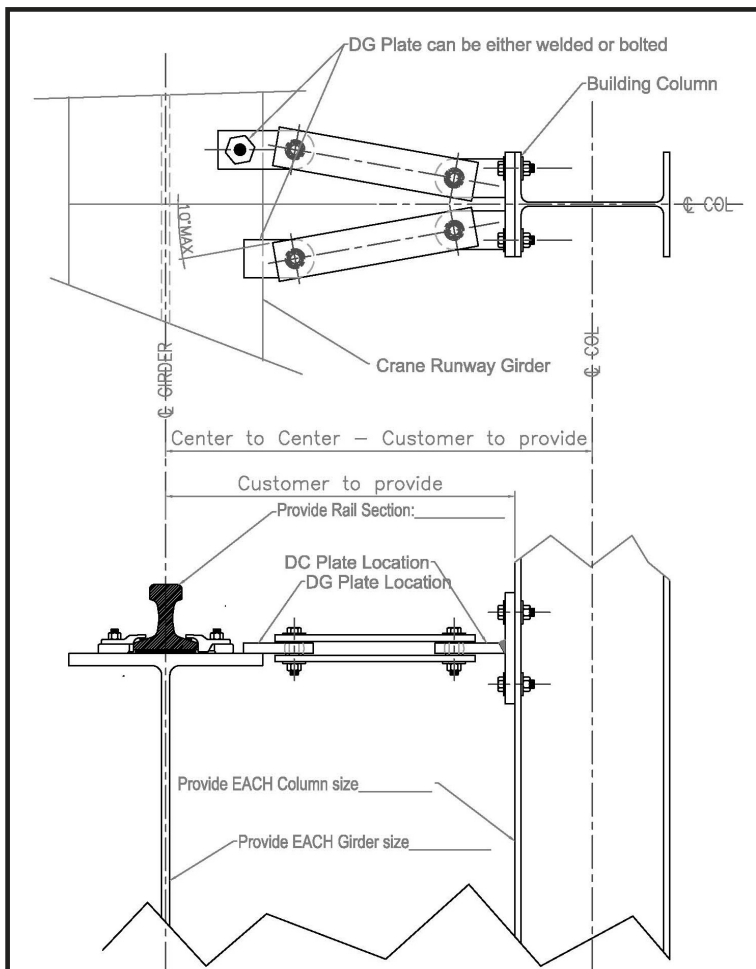
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## Application Data Sheet - Spherical Bearing Tie Backs

Company Name:	
Company Contact:	
Phone Number (Direct):	
Phone Number (Cell):	
Email :	
Project Information:	

To assist us in recommending the best and most cost efficient solution to address your needs, please provide the information requested on the following page;



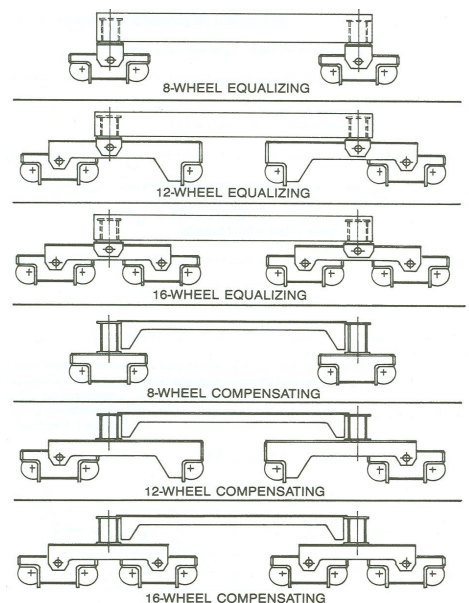


**Application Data Sheet - Spherical Bearing Tie Backs**

(Please Complete)

Runway Information	
Runway Rail Size:	
Face of Column to Face of Crane Girder	
C/L of Column to C/L of Crane Girder or;	
Distance Between Columns: (or girder lengths)	
Size of Building Columns: (If multiple, list size and quantity)	
Size of Crane Girders: (If multiple, list size and quantity)	
Is there a Channel Cap? If so, what size?	
Can the Channel Cap be trimmed if required?	
Please note if Girder Connection is to be bolted or welded?	
Quantity of Single Link Assemblies Required: (Runway Ends or continuous span girders)	
Quantity of Double Link Assemblies Required:	

Crane Information	
Rated Capacity of the Crane:	
Weight of Trolley:	
Below the hook Device: <i>(if applicable)</i>	
Wheel Vertical Load (in Kips)	
Wheel Lateral Load (in Kips)	
CMAA Crane Class & Duty Cycle	
Indicate or Draw Wheel Layout	



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