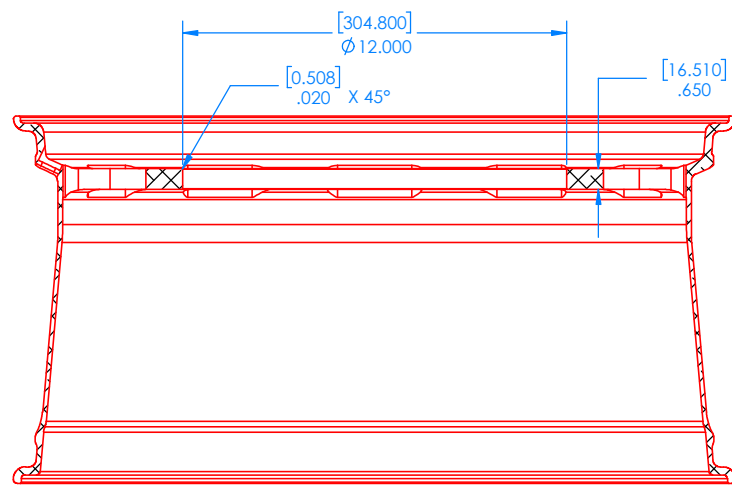
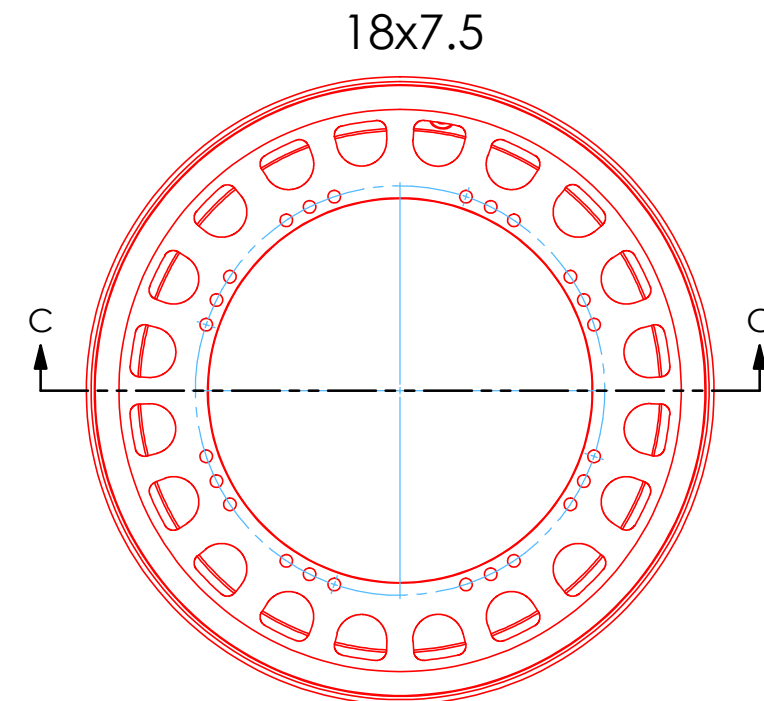
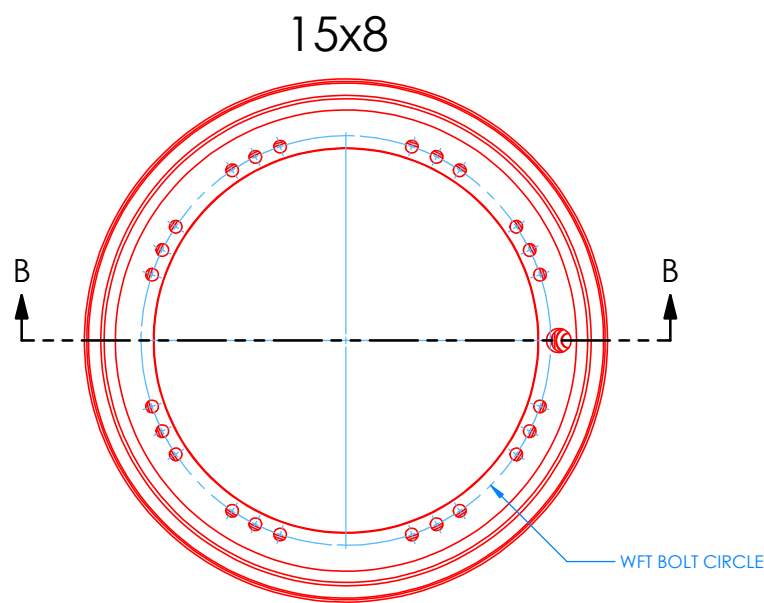
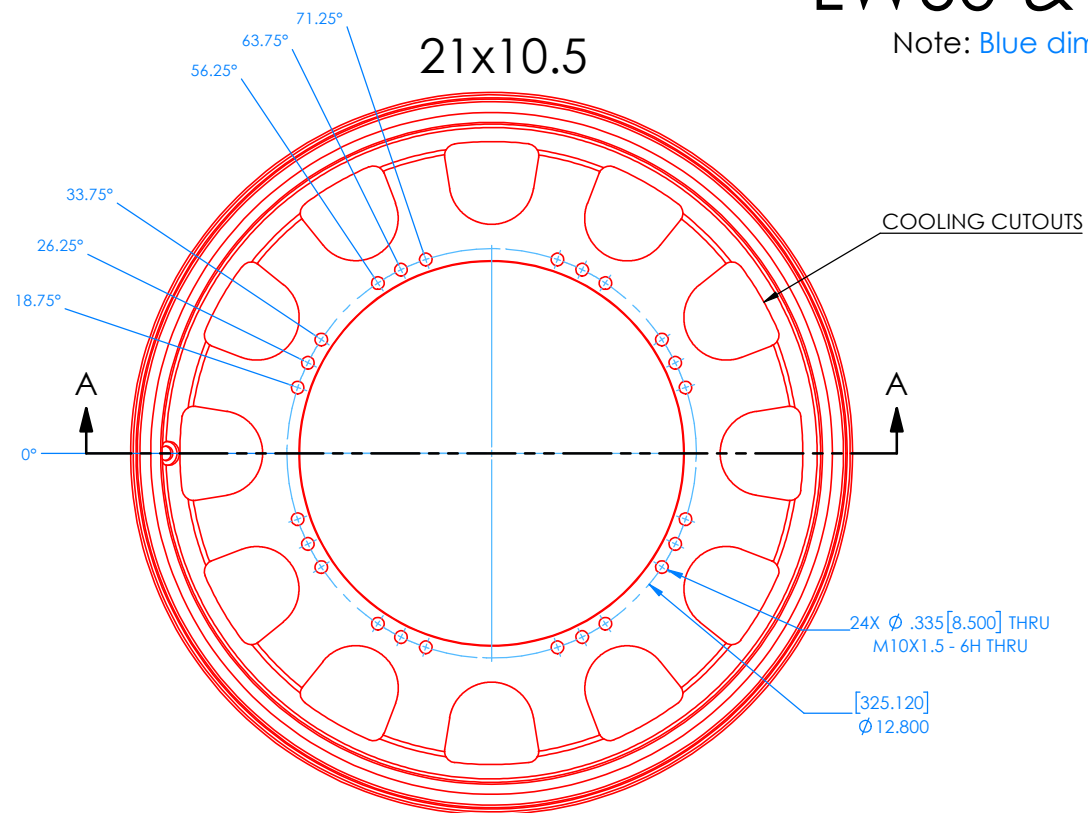


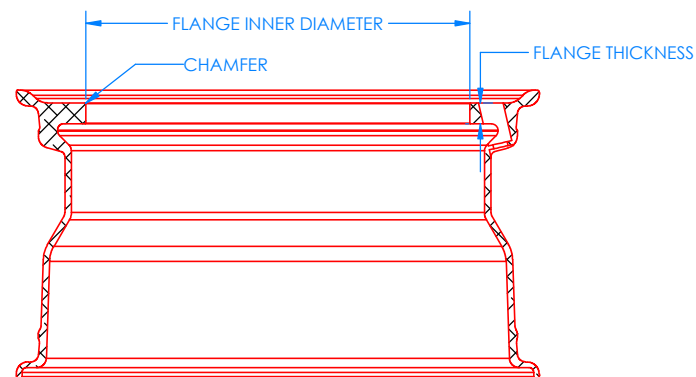
# LW60 & LW65 RIM ADAPTER DESIGN GUIDE

Note: Blue dimensions are CRITICAL and CANNOT change.

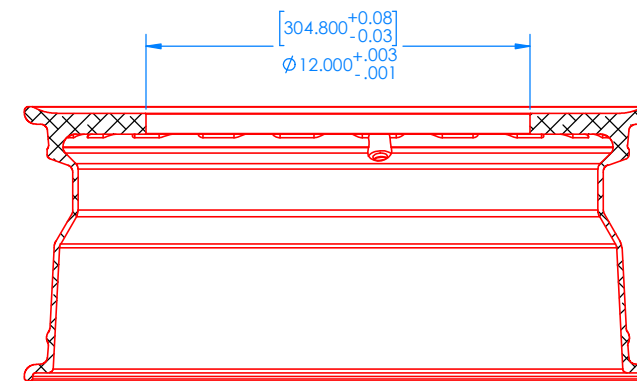
Black dimensions can change.



SECTION A-A



SECTION B-B



SECTION C-C

It is essential that the adapters match the recommended guidelines. This will ensure the system can withstand the rated loads and provide the most accurate results.

Michigan Scientific Corporation (MSC) prefers to use the test vehicle's Original Equipment Manufacturer (OEM) wheel profile as the basis of the rim adapter design. If 3D wheel models or drawings of the OEM wheel are not available, MSC recommends using The Tire and Rim Association or ISO standards as a design basis for the tire mounting profile.

MSC machines rim adapters from 6061-T6 aluminum forgings. These forgings have consistent yield strength and hardness throughout. If 'bar stock' or 'billet' is used, the heat treatment may not be consistent through the section, resulting in a lower yield strength and hardness than published. The material must have a yield strength of at least 40 ksi (275 MPa) if the examples above are followed. If a weaker material is used, the thickness of the rim adapter sections might need to increase.

The "COOLING CUTOUTS" allow for airflow to the brakes and reduce the weight of the adapter system. MSC refines the size and shape of the cutouts for each adapter design. Typical cutouts are shown. The pattern of the cutouts should be aligned away from the Wheel Force Transducer (WFT) mounting holes as shown.

The "FLANGE THICKNESS" must be 0.650 in (12.700 mm). The M10x1.5 fasteners must pass completely through the flange to ensure complete thread engagement.

MSC verifies all rim and hub adapter assemblies using FEA to simulate the SAE J328 wheel durability standard. This should be done with all adapters to verify the load ratings and fatigue life of the adapters. The LW65 has an SAE J328 static load rating of 2,900 lb (1,320 kg.) The LW60 is rated to 2,700 lb (1,225 kg.) This should not be exceeded. The lateral stiffness of the rim adapter should match that of the adapter MSC uses to calibrate the transducer for the best accuracy. MSC can check your adapter design at no cost. Contact MSC online at michsci.com/contact-us or via phone at 1-231-547-5511.

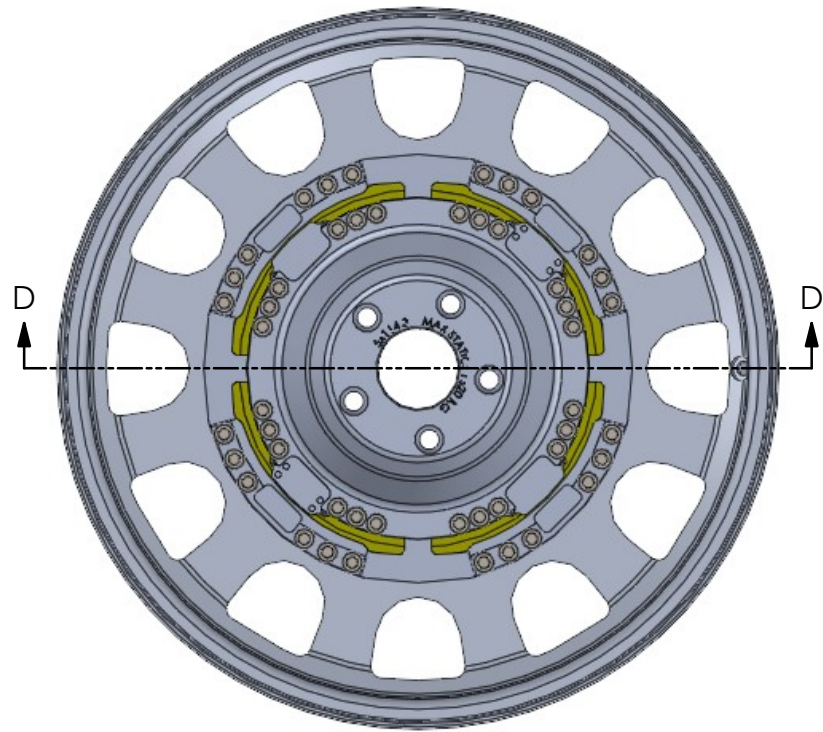
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ANGULAR: MACH		PROJECT CODE			
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MATERIAL		REV		A	
FINISH		SCALE		1:3	
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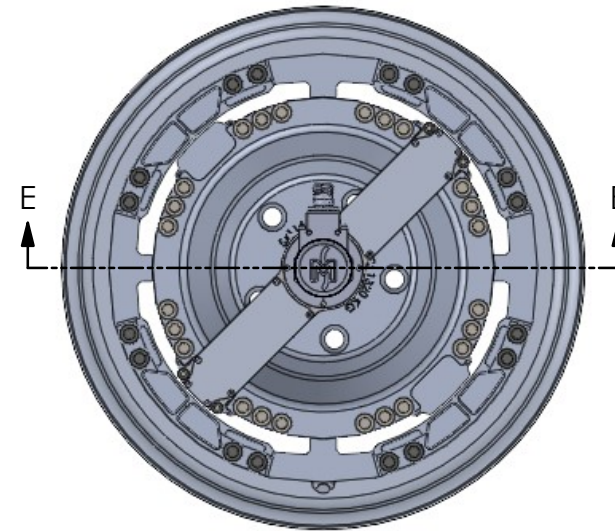
# LW60 & LW65 RIM ADAPTER DESIGN GUIDE

ASSEMBLY VIEW

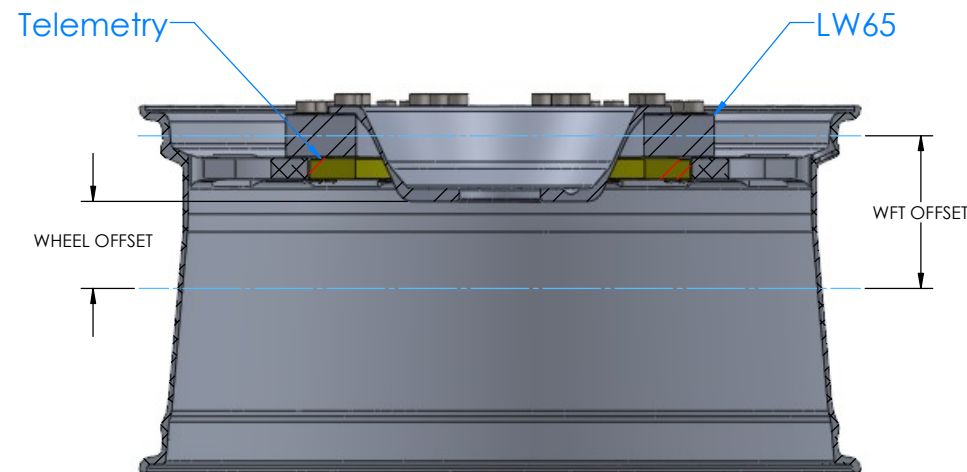
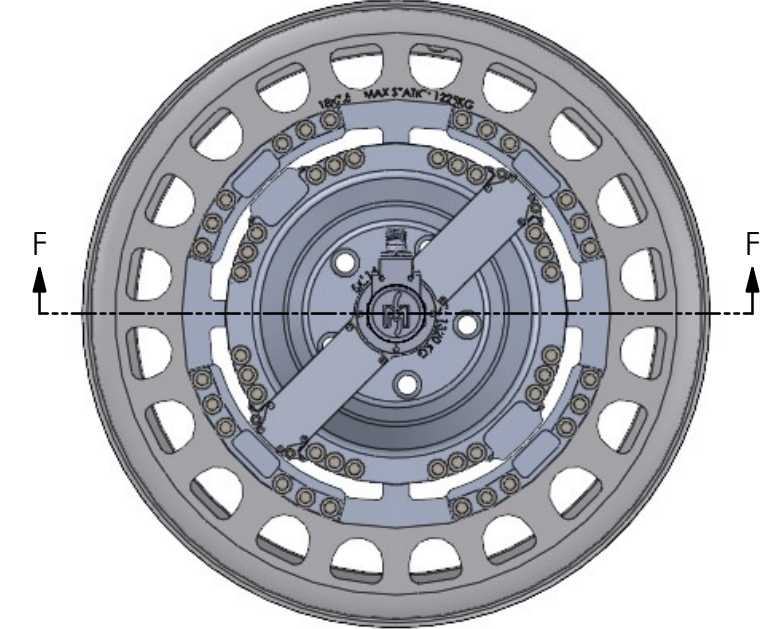
21x10.5  
LW65



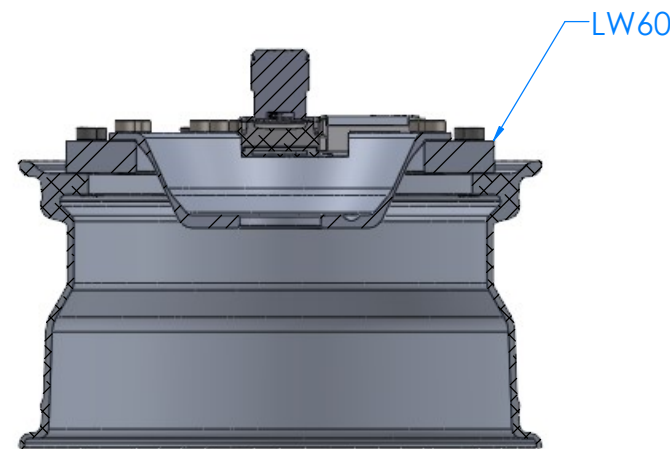
15x8  
LW60



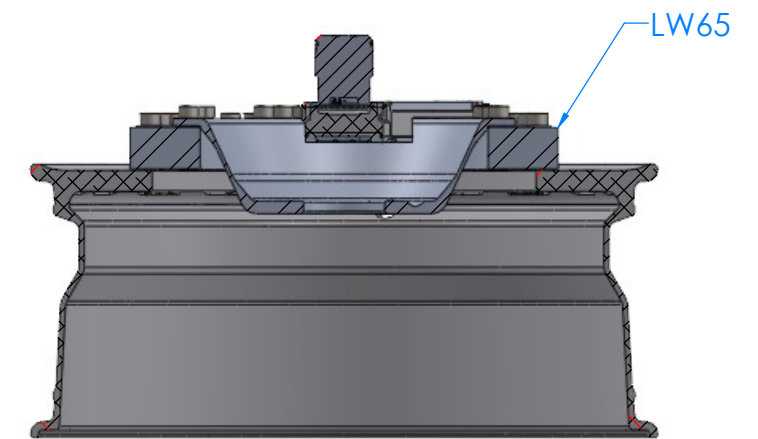
18x7.5  
LW65



SECTION D-D



SECTION E-E



SECTION F-F

It is essential that the adapters match the recommended guidelines. This will ensure the system can withstand the rated loads and provide the most accurate results.

The "WFT OFFSET" is the distance from the centerline of the rim to the centerline of the transducer. The "WFT OFFSET" should be as small as possible to reduce the moment load on the WFT. The WFT and adapters need at least 0.15 in (3.8 mm) of clearance to the brake and suspension components to prevent interference. The LW60 & LW65 telemetry fits inside the rim adapter. No additional clearance is needed when using telemetry.

MSC verifies all rim and hub adapter assemblies using FEA to simulate the SAE J328 wheel durability standard. This should be done with all adapters to verify the load ratings and fatigue life of the adapters. The LW65 has an SAE J328 static load rating of 2,900 lb (1,320 kg.) The LW60 is rated to 2,700 lb (1,225 kg.) This should not be exceeded. MSC can check your adapter design at no cost. Contact MSC online at [michsci.com/contact-us](http://michsci.com/contact-us) or via phone at 1-231-547-5511.

3D models and 2D drawings of the LW60 & LW65 are available for download on MSC's website. ([michsci.com](http://michsci.com))

Note: Blue dimensions are CRITICAL and CANNOT be changed.  
Black dimensions can be changed

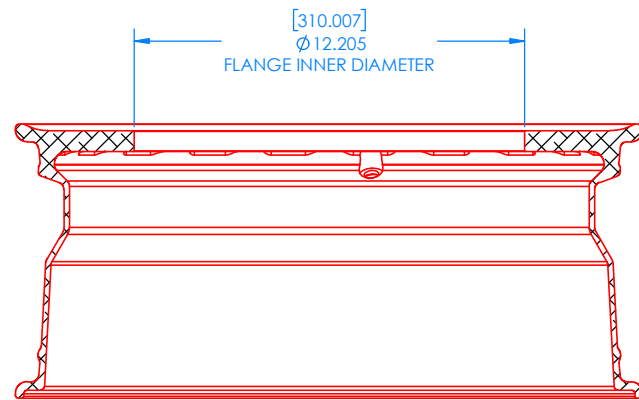
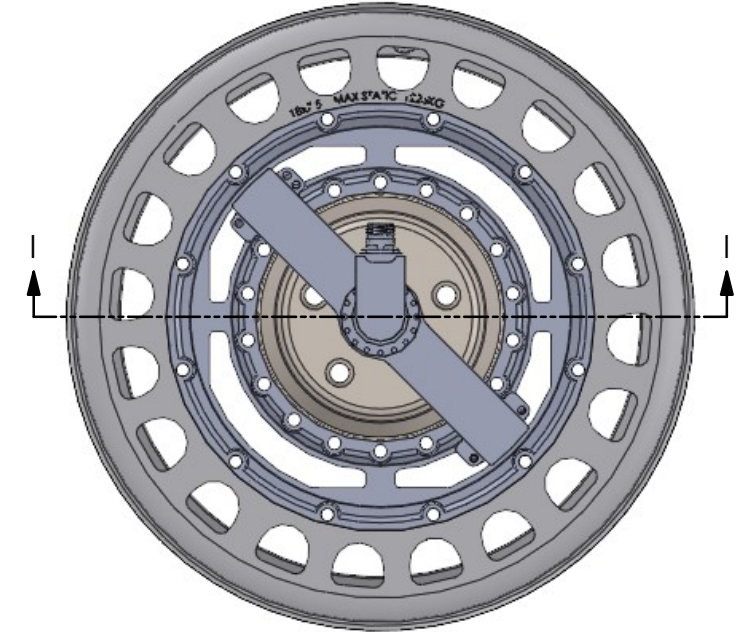
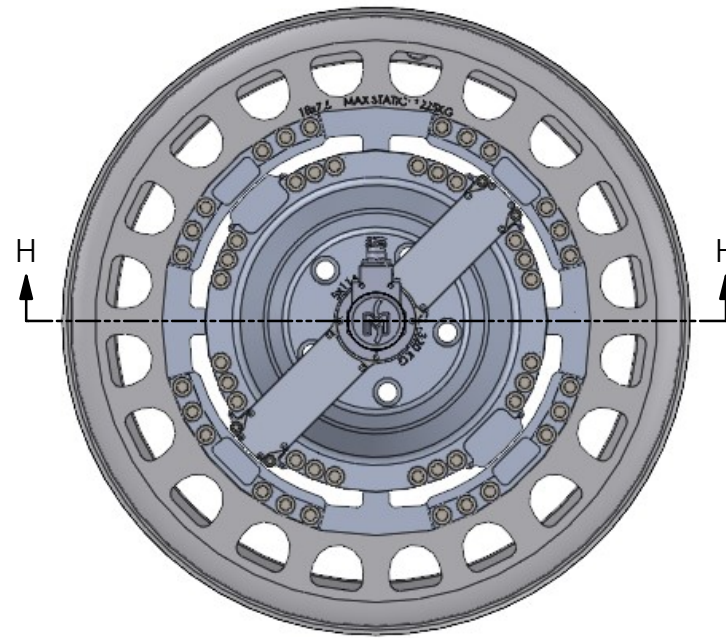
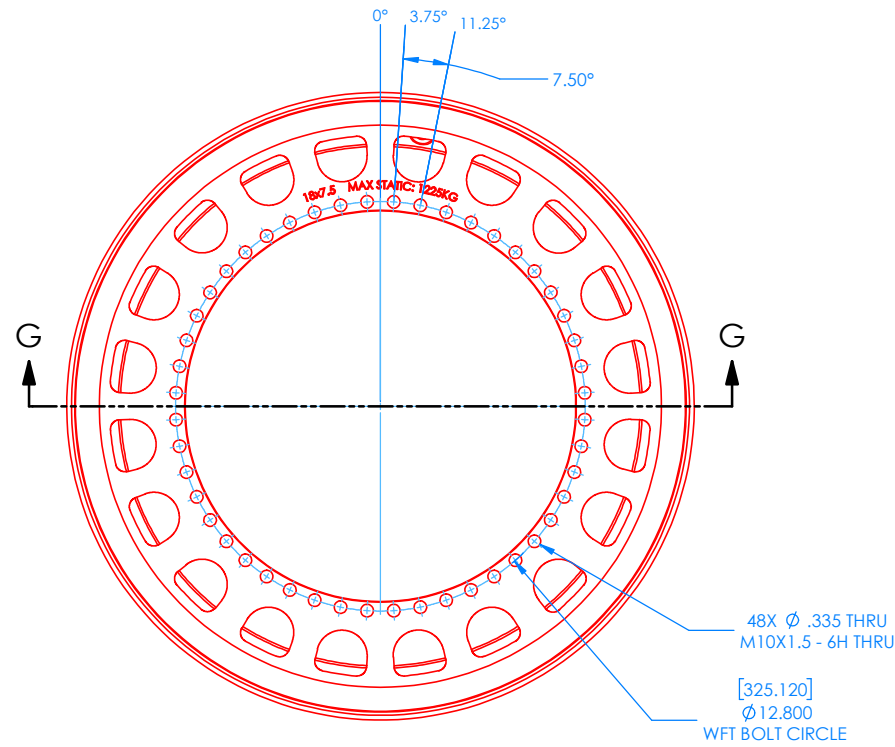
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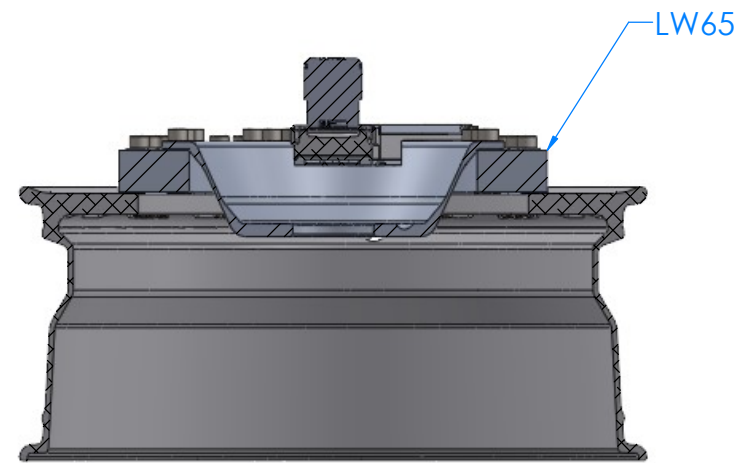
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BEND ±		SIZE		DWG. NO.	
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MATERIAL		SCALE		1:3	
FINISH		SHEET		2 OF 3	

# LW60 & LW65 RIM ADAPTER DESIGN GUIDE

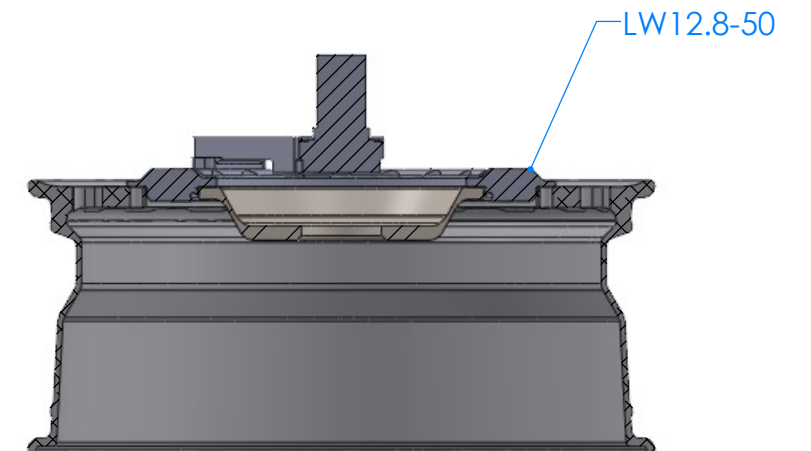
LW12.8-50 Compatibility



SECTION G-G



SECTION H-H



SECTION I-I

A rim adapter can be compatible with the LW12.8-50, LW60, and LW65. There are two important modifications required. Both modifications are shown in the drawing above and described below:

1. There needs to be a 48 instance tapped hole pattern. This ensures that all three transducers can be bolted to the same rim adapter.
2. The "FLANGE INNER DIAMETER" needs to be 12.205" (310.007 mm.) The LW12.8-50 will not fit if the "FLANGE INNER DIAMETER" is left at 12.000" (304.800 mm) as shown on Sheet 1.

It is important to note that changing the "FLANGE INNER DIAMETER" will limit the static load rating of the rim adapter to the LW60 rating. This is 2,700 lbs (1,225 kg.)

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		D	LW60 & LW65 Rim	A	
		SCALE: 1:3	Adapter Design Guide	SHEET 3 OF 3	