

AeroSUV

TEST DATA EXCHANGE



COMPANY	FKFS	DATE	2.4.2019	CONTACT	Dr. Timo Kuthada
AeroSUV Configuration	F_EB_wM_wW_woL			EMAIL	timo.kuthada@fkfs.de

Tires		Wheels and Track		Geometrical Data	
Wheel Type	Other	Track Front [mm]	457	Length [mm]	1154.75
Wheel Type (Comments)	AeroSUV Baseline (Rigid Aluminium)	Track Rear [mm]	457	Width [mm]	457 (w/o side mirrors)
		Tires Size Front	235/55R19 (scaled)	Height [mm]	402
		Tires Size Rear	235/55R19 (scaled)	Wheelbase [mm]	696.5

Cooling Package		Cooling Intakes / With Active Shutters		Ride Heights from Ground to Wheel Arch	
Heat Exchanger (HX)	FKFS	Upper Grill	Open	Front Ride Height [mm]	199
HX Pressure Drop	A:	Lower Grill	Open	Rear Ride Height [mm]	201
	B:				
$\Delta p = A \cdot v + B \cdot v^2$	5.07				
HX x-Position [mm]	21.16				
HX Thickness [mm]	2.00				
Fan Shroud x-Pos. [mm]	37.67				
Sealing	Fully sealed				
Leakage Area [mm ²]	0				



Test Facility & Vehicle Setup			
Test Facility	IVK Model WT	Windspeed [kph]	180
Data Correction	No	Road Simulation	5-Belt
Blockage	9.33%	YAW Angle	0
Boundary Layer Treatment	Suction + Tangential Blowing	Model Mounting	Struts
Model Scale	1:4		
REMARKS (e.g. deviations from Baseline AeroSUV model)			

Test Data			
	Standard	Mock-Up Cooling Intakes [Δ]	Additional Test Data
Drag Cx [-]	0.286	0.007	
Frontal Area A [m ²]	0.154		
Front Lift C _f [-]	0.053	0.021	
Rear Lift C _{zr} [-]	0.080	-0.019	
Radiator Mass Flow [kg/s]	-		