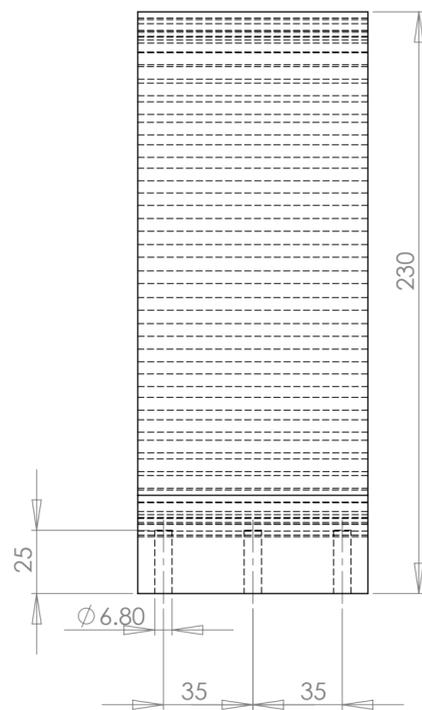
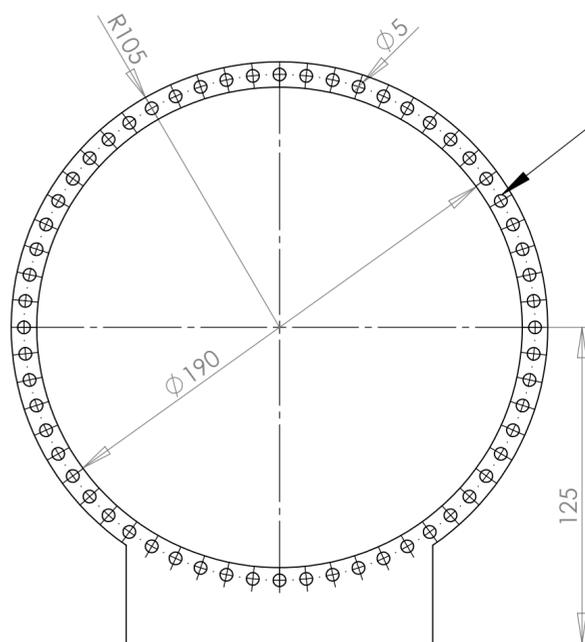


BOTTOM VIEW

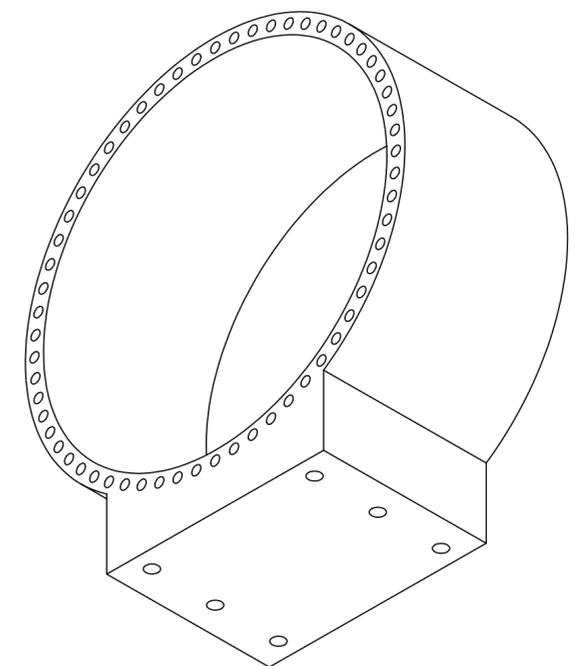


SIDE VIEW



FRONT VIEW

THE CENTRIFUGAL BRAKE HOUSING ACTS AS THE STATIONARY BRAKING SURFACE OF THE CENTRIFUGAL BRAKE. IT IS MANUFACTURED FROM CAST IRON AND HAS A SERIES OF 5mm \varnothing HOLES AROUND A PCD OF 100 mm BETWEEN THE BORE AND THE OUTSIDE DIAMETER. THE HOLES ARE BOTH FOR WEIGHT REDUCTION AND TO INCREASE THE UNIT'S ABILITY TO LOOSE HEAT THROUGH FORCED CONVECTION. DURING BREAKING, THE TWO COMPOSITE BREAK SHOES MAKE CONTACT WITH THE INSIDE OF THE BREAK DRUM. THE FRICTION BETWEEN THE TWO SURFACES CAUSES THE BREAK ROTOR TO SLOW DOWN AND CONSEQUENTLY LIMIT THE SPEED OF GENERATOR INPUT SHAFT TO WHICH IT IS COUPLED. HEAT IS CREATED DUE TO THE ENERGY LOSSES CAUSED BY FRICTION DURING BREAKING. THE HEAT IS REMOVED VIA FORCED CONVECTION. A STREAM OF AIR IS DIRECTED ONTO THE BREAK ASSEMBLY VIA PORTS IN THE NACELLE HOUSING. THE AIR ABSORBS SOME OF THE HEAT ENERGY AND ESCAPES THROUGH A MESH GRID AT THE REAR OF THE NACELLE HOUSING. THE BRAKE HOUSING IS MECHANICALLY FASTENED TO THE BRAKE AND GENERATOR PLATFORM WITH 6 M8 BOLTS.



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UNIVERSITY OF SOUTHERN QUEENSLAND	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm	DRAWN J.KIRSCH 6/10/09	NAME DATE	KH3- 500 WIND TURBINE
	INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL	CHECKED		
	FINISH	ENG APPR.		SIZE DWG. NO. REV
NEXT ASSY	USED ON	MFG APPR.		C 21
APPLICATION	DO NOT SCALE DRAWING	Q.A.		SCALE: 1:2 SHEET 1 OF 1
		COMMENTS:		