

G2 Diesel Engine Installation Guide – DN03

3-2) Radiator Capacity

The heat rejection (kW or kcal) indicating the capacity of the radiator is the result under specified test condition. That is not an absolute value. Actual heat rejection is related to coolant flow, ambient temperature, air flow that related to shape of engine room. For selecting optimal radiator, the heat balance test is required.

Reference : Radiator heat rejection

Engine Speed (rpm)	Power (kW)	Heat rejection of the radiator(kW)	Heat rejection of the intercooler(kW)	Application
2400	100.6	69.5	13.6	Agricultural Machinery
2200	100.3	67	13	
2000	99.8	65.2	12.3	
1800	92.2	59	11.3	
1600	85.2	55.2	9.9	
1400	77	51.5	7.8	
1200	62.9	44.7	5.7	
1000	59	37.9	3.5	

Engine Speed (rpm)	Power (kW)	Heat rejection of the radiator(kW)	Heat rejection of the intercooler(kW)	Application
2400	TBD	TBD	TBD	Excavator Forklift
2200	TBD	TBD	TBD	
2000	TBD	TBD	TBD	
1800	TBD	TBD	TBD	
1600	TBD	TBD	TBD	
1400	TBD	TBD	TBD	
1200	TBD	TBD	TBD	
1000	TBD	TBD	TBD	

3-3) Heat balance test

Basically, heat balance follows guide of the equipment. HDI presents several guides to follow.

- Preparation for test
 - (i) Conduct test where the air flow is smooth. (Constant ambient temperature)
 - (ii) Measuring instruments and sensors shall be calibrated to prevent errors before testing.
 - (iii) Install the dummy (full opened) thermostat.
 - (iv) Install the protector in the radiator to prevent air recirculation.