

## Rating definition chart | Marine diesel engines – High speed

Rating definitions for the SB, SA and SR engine series for propulsion application are as per the table below:

Rating EMEAR area	Overload operation	Allowable average load factor <sup>1</sup>	Allowable average speed <sup>1, 2</sup>	Allowable continuous operation with over 90% load <sup>1</sup>	Recommend operating hours per year <sup>1</sup>	Typical application <sup>3</sup> (reference)
Unrestricted Continuous Duty (UCD)	Not possible	100% or lower	100% or lower	Unlimited	Unlimited	Fishing boats, cargo boats, pusher boats
Heavy Duty (HD)	Not possible	83% or lower	94% or lower	Up to 8hrs per 24hrs	6000hrs	Tug boats, working boats, passenger boats, ferry boats
Medium Duty (MD)	Not possible	75% or lower	91% or lower	Up to 1hr per 6hrs	4000hrs	Pleasure boats, yachts, patrol boats, fire fighting boats, tug boats

<sup>1</sup> Atmospheric condition as per ISO 15550:2002 (JIS B 8003:2005) (barometric pressure: 100kPa, ambient temperature: 298K, relative humidity: 30%).

Average load factor shall be calculated as per the formula in ISO 8528-1:2018 'Average power output (Ppp)'.  
<sup>2</sup> This applies to FPP (Fixed Pitch Propellers). For CPP (Controllable Pitch Propeller), allowable average load factor shall be as per the required conditions for warranty of the average load factor.

<sup>3</sup> 'Typical application' is only for reference.