



MSC GRANDIOSA ENVIRONMENTAL SPECS




Hydrodynamics:
optimised hull design and latest generation azipods and propellers.




Hybrid exhaust gas cleaning system:
98% less sulphur oxide (SOx) through a system – which can operate in closed loop.




Selective catalytic reduction system:
90% less nitrogen oxide (NOx) through active emissions control technology.



LED lighting:
all MSC Cruises ships use only energy efficient LED and fluorescent lighting.



Smart heating, ventilation and air conditioning system:
two high- and low-heat recovery loops to intelligently redistribute heat and cold from the laundry room and machinery spaces to warm up the swimming pools or other parts of the ship.



Trim optimisation:
this technology supports ship officers to keep the vessel's trim optimised to reduce fuel consumption and optimise performance.




Advanced waste management:
comprehensive systems to reduce, recycle and reuse all waste aspects on board.




Advanced wastewater treatment:
the system treats wastewater to a very high quality that is of a better standard than most shoreside municipal waste standards around the world.



Shore-to-ship power:
ready to connect to local power grid to reduce emissions while at berth in port.



Ballast water treatment system:
a system to avoid introducing invading species through ballast water.



Energy-efficient :
28% less fuel and 255 kg less CO2 per passenger per cruise compared to Fantasia Class ships equal to a reduction of 255kg CO2 per passenger, per cruise.



Anti-fouling paints:
the hulls of all MSC Cruises' ships are coated with special environmentally-friendly paints which impede the growth of barnacles, algae and marine organisms to reduce drag significantly.

