

Kamewa™ Waterjets, S-series

Kamewa waterjets – Excellence in design and performance

Rolls-Royce – the professional supplier

- Rolls-Royce is the world leader in research, development and manufacture of high power waterjets for commercial and naval markets.

- Rolls-Royce is the only supplier in the industry with its own, fully equipped marine laboratory. In constant use, the laboratory personnel research, develop and test new products and improvements to existing ones.

- All Kamewa SII series waterjets flow from the same, basic design, ensuring fast implementation of the latest product developments.

Quality components, quality support

- Efficiency ratings of higher than 90 per cent stem from the mixed-flow type pumps used in Kamewa waterjets.

- Built-in bearings absorb the impeller thrust, thus facilitating the inlet duct structural dimensioning.

- Each shaft-line is adapted when it comes to whirling, dimensions and weight.

- Minimal and simple cable installation is achieved through a new, computerized database-based system for steering and reversing control, which can be used for both manual and joystick manoeuvring. Number and placement of stations can be customised. The system provides redundancy

A 70 m Monohull, one of five built by Lürssen Werft for the Indonesian Ministry of Transport. Equipped with two Kamewa 90SII plus two Kamewa 90BII (non-steerable boosters) she has a max speed of 38 knots with a three-deck capacity of totally 925 passengers.

A 43,4 m Catamaran built 1995 in Australia by Austal Ships for Diamond Ferry Company in Japan. Capacity: 331 passengers and a crew of 6. Equipped with four Kamewa 63SII she has a service speed of 42,5 knots.

and real time control with a very high level of security.

- Stainless steel components provide long life and reliable service. Every waterjet size can also be supplied as a booster.

- The sale is just the beginning of a reliable partnership. Where ever you are in the world, Rolls-Royce provides a high level of service and support, including custom tailored service agreements designed to meet your individual needs.



Optimised power for reduced fuel consumption

The Kamewa waterjets can be individually optimized for every installation, providing reduced fuel consumption. Eight different water outlet nozzle diameters provide balance to the waterjet speed. Five different blade pitch angles allow fine adjustment to the rpm. And, as many as 10 shapes of the waterjet inlet are used to avoid flow separation and cavitation problems.

Rolls-Royce utilises our own proprietary, computerised design program, which contains the latest waterjet technology, as well as actual results from earlier waterjet installations. With the aid of this program, individual influences and the combined effect of all parameters will be studied to find the solution that provides the best fuel economy for your installation.

Fact sheet

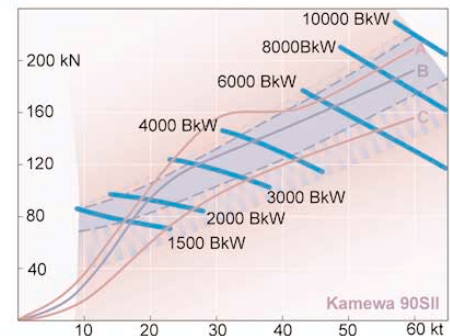
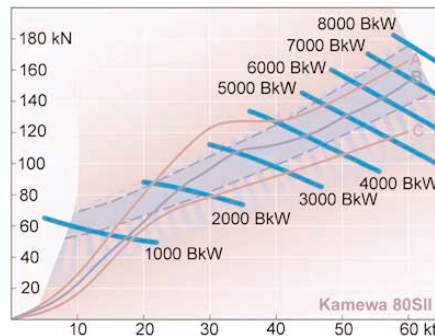
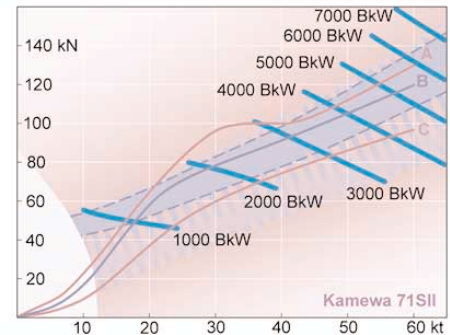
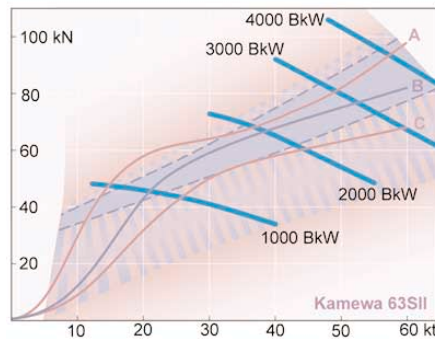
Choice of waterjet size

The choice of waterjet is determined by the resistance curve of the vessel, as well as the engine power available.

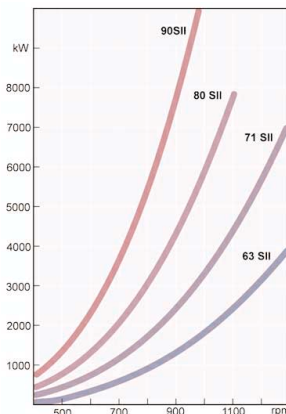
The operating range for the Kamewa SII-series are shown in the diagram to the right. The blue field indicates where optimum performance is achieved and excessive pump cavitation is avoided.

The diagram below shows the suitable engine power for different shaft speeds.

The diagrams are for preliminary waterjet selection only. The final combination of the outlet nozzle diameter, blade pitch angle and the water intake shape will be made by Rolls-Royce to optimise the performance according to your specific vessel data.

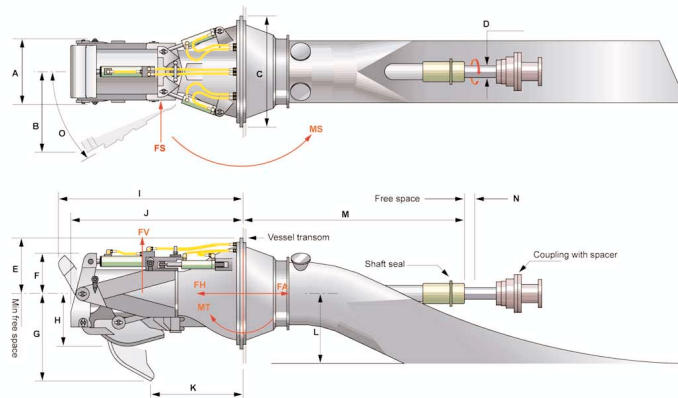


Power/speed per unit



Hull resistance curves

- A = The cavitation margins are exceeding the operating limits of the waterjet. For a safe passage of the hump a bigger water jet might be considered.
- B = Sufficient cavitation margins over the entire speed range. The waterjet size is the optimal choice.
- C = Ample cavitation margins over the entire speed range make it possible to choose a smaller waterjet.



Main data

Water Jet	Power range	Measurements in mm															Weights in kg		
Size	kW	A	B	C ø	D ø	E	F	G	H	I	J	K	L	M	N	O	DW 1)	WW 2)	DW H 3)
63SII	1000-4000	688	831	1120	120	600	460	883	537	1881	1746	1011	630-915	2376	100	30°	1790	1020	111
71SII	2500-7000	743	885	1280	130	650	469	1000	595	2110	1973	1072	710-1000	2668	100	30	2420	1450	123
80SII	3000-8000	873	958	1450	150	750	514	1081	662	2313	2174	1184	800-1075	2897	100	30	3230	2080	123
90SII	4000-10000	999	1073	1660	170	850	557	1214	740	2590	2440	1329	900-1210	3139	100	30	4530	2940	336

1) Dry weight of unit incl. cylinders and shaft flange

2) Weight of water in pump and inlet duct

3) Dry weight of Hydraulic unit with PTO Pump

Data prior to alteration without prior notice