TECHNICAL BULLETIN

SEAWATER COOLING PUMP RECOMMENDATIONS

PRODUCT ALL SEAKEEPER MODELS

DESCRIPTION

The following guidance is offered to help size and design seawater cooling systems for each Seakeeper product. The final pump selection and system design are the responsibilities of the installer.

SEAWATER REQUIREMENTS PER MODEL

Table 1: Seakeeper Seawater Cooling Requirements

Seakeeper Model	Required Flow Rate (GPM/LPM)	Cooling Water Schematic Drawing #	Seawater Pump Power Supply (V, A)	Pump Power Cycle
SEAKEEPER 1	2 – 4 / 7.6 – 15.1	90512	12 VDC, 15A max	On-Demand
SEAKEEPER 2	2 – 6 / 7.6 - 22.7	90490	12 VDC, 15A max	On-Demand
SEAKEEPER 3	2 – 6 / 7.6 - 22.7	90376	12 VDC, 15A max	On-Demand
SEAKEEPER 4	2.5 – 4 / 9.46 – 15.1	90802	12 VDC, 15A max	On Demand
SEAKEEPER 4.5	2.5 – 4 / 9.46 – 15.1	90802	12 VDC, 15A max or 24 VDC, 10A max	On Demand
SEAKEEPER 5/6	2.5 – 8 / 9.46 – 30.3	90397	12 VDC, 15A max or 24 VDC, 10A max	On-Demand
SEAKEEPER 9	4 – 8 / 15.1 – 30.3	90251	24 VDC, 10A max	On-Demand
SEAKEEPER 18	4 – 8 / 15.1 – 30.3	90540	24 VDC, 10A max	On-Demand
SEAKEEPER 26	4 – 8 / 15.1 – 30.3	90320	220 VAC, 5A max	Continuous
SEAKEEPER 40	13 – 15 / 49 - 57	90711	24 VDC, 20A max	On-Demand

COOLING SYSTEM DESIGN NOTES

- Seawater pumps should be sized to account for friction losses through the plumbing run. If an oversized pump is used and flow is found to exceed the maximum, a flow-restrictor valve can be installed to regulate the flow within the Seakeeper's specified limits. The installer is responsible for verifying the flow rate through the system (at rest and at speed) via a flow meter, or the seawater discharge can be diverted into a bucket, and the flow rate is calculated by the time to fill a known volume.
- For multiple Seakeeper installations, Seakeeper recommends installing one dedicated seawater pump per Seakeeper so that proper cooling can be provided for each unit when needed. Over-cooling or under-cooling could cause premature bearing issues.
- It is recommended that seawater travel in a continual upward direction from intake to outlet as much as practical to avoid air traps in the system.
- A vented loop should be installed in an appropriate location for vessels regularly hauled in/out of the water and when aeration of the seawater intake is expected to allow air purging of the seawater supply. For example, a Marelon vented loop (P/N 161010) or similar can be installed when applicable.
- A complete list of plumbing recommendations for each Seakeeper model can be found in the Cooling Water Schematic (schematic numbers listed above).

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SEAKEEPER PUMP OPTIONS

Seakeeper offers a DC Seawater Pump Assemblies as an option for the following Seakeeper models, which are covered under the Seakeeper Standard Warranty:

Table 2: Seakeeper Optional Seawater Pumps

Seakeeper Model	Pump Manufacturer	Seakeeper Part Number	Power Requirements	Nominal Flowrate
SEAKEEPER 1	SeaFlo	30331	12 VDC, 15A	2.5 GPM / 9.4 LPM
SEAKEEPER 2	SeaFlo	30331	12 VDC, 15A	2.5 GPM / 9.4 LPM
SEAKEEPER 3	SeaFlo	30331	12 VDC, 15A	2.5 GPM / 9.4 LPM
SEAKEEPER 4	SeaFlo	30331	12 VDC, 15A	2.5 GPM / 9.4 LPM
SEAKEEPER 4.5	SeaFlo	30331	12 VDC, 15A or 24 VDC, 10A	2.5 GPM / 9.4 LPM 5.5 GPM / 21 LPM
SEAKEEPER 5/6	SeaFlo	30331	12 VDC, 15A or 24 VDC, 10A	2.5 GPM / 9.4 LPM 5.5 GPM / 21 LPM
SEAKEEPER 9	SeaFlo	30331	24VDC, 10A	5.5 GPM / 21 LPM
SEAKEEPER 18	Jabsco	30322	24VDC, 10A	6.0 GPM / 23 LPM
SEAKEEPER 40	Gianneschi	30529	24VDC, 20A	21 GPM / 79 LPM*
* A flow restrictor valve may be necessary if measured flow is greater than 15 GPM.				

- Seakeeper P/N 30331 is a 24 VDC pump intended for 12 VDC operation with the Seakeeper 1 / 2 / 3 / 4 / 4.5 / 5 / 6.
- The Seakeeper 4.5, 5, and 6 can support 12 VDC or 24 VDC seawater pump power supplies.
- Seakeeper P/N 30331 is intended for 24 VDC operation with the Seakeeper 9.

ALTERNATIVE PUMP OPTIONS

The following list shows pumps we have seen used successfully on existing Seakeeper installations. This list is not meant to be complete and may be used only as a guide in the pump selection process.

12 VOLT DC PUMPS

Pump Manufacturer	Pump Model	Max Flowrate	Power Requirement
Jabsco Par-Max	31395-0092	2.9 GPM	12 VDC, 10A
Jabsco Washdown Pump	82405-0092	4 GPM	12 VDC, 13A
Pentair Shurflo Pro Blaster II	4248-153-A09	4 GPM	12 VDC, 10A
Rule 500 GPH Baitwell Pump	401 C	8 GPM	12 VDC, 2.5A
Pro Blaster II Deluxe 4.0(A)	4248-153-E09	4 GPM	12 VDC, 10A

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24 VOLT DC PUMPS

Pump Manufacturer	Pump Model	Max Flowrate	Power Requirement
Primetime	PT-24VDC-W	21 GPM*	24 VDC, 10A
Pentair Shurflo Pro	4258-163-A09	5 GPM	24 VDC, 7A
Gianneschi	CP30-A1-24V	21 GPM	24 VDC, 20 A

* Do not use with Seakeeper 40, acceptable for Seakeeper 18

220 VOLT AC PUMPS

Pump Manufacturer	Pump Model	Max Flowrate	Power Requirement
PrimeTime	PT-230VT-50/60-W	21 GPM	230 VAC, 0.250 KW
March	AC-5C-MD	17 GPM	110/220 VAC, 0.093KW
Dometic	PML500C	6 GPM	230 VAC

REVISION	DESCRIPTION OF CHANGES	DATE	APPROVED
3	Update Format, Include 24 V Pumps	21APR2020	JFK
4	Include Seakeeper 1 Details and 2 – 4 GPM 12 V Pumps	16JUN2020	JFK
5	Add Seakeeper Pump Options	26OCT2020	DMF
6	SK5/6/9 Cooling System Update	4MAR2021	DMF
7	Seakeeper 40 introduction	19JUL2023	A Patricio
8	Seakeeper 4 and 4.5 introduction	DDMMMYYYY	A Patricio