

**PRIMER ON SMALL RESEARCH VESSELS  
OUTFITTING AND EQUIPMENT**

Outfitting Items	Below 65 Feet	65 - 85 Feet	86 - 105 Feet
<b>Laboratories (wet and dry area)</b>	50 - 100 sq. ft.	100 - 400 sq. ft.	400 - 700 sq. ft.
Benches	5-10 feet	10-15 feet	15-20 feet
Fume Hood	Optional	Yes	Yes
Sink	Yes	Yes	Yes (2)
Refrigerator	Yes	Yes	Yes
Freezer	In Refrigerator	5-10 cubic feet	10-18 cubic feet
Running Sea Water	Yes	Yes	Yes
Uncontaminated Sea Water	Optional	Yes	Yes
Hot and Cold Fresh Water	Yes	Yes	Yes
Compressed Air	Optional	Optional	Yes
Intraship Communications	Yes	Yes	Yes
Hold Downs and Unistrut	Optional	Yes	Yes
<b>Navigation Equipment (for science)</b>			
DGPS w/ Charting	Yes	Yes	Yes
Gyroscope	Yes	Yes	Yes
Depth Sounder	Yes	Yes	Yes
Speed Log	Optional	Yes	Yes
RDF for Mooring Beacons	Yes	Yes	Yes
<b>Scientific Instrumentation</b>			
Scientific Data Logger (SAIL)	Yes	Yes	Yes
Meteorological System	Wind, Temp, BP, SST	+ RH, Light	+RH, Light
CTD	Internally Recording	Standard	Standard
Transmissometer	Yes	Yes	Yes
Fluorometer	Yes	Yes	Yes
ADCP	Optional	Optional	Yes
Water Sampling Bottles	Yes	Yes	Yes
Rosette System	Optional	Yes	Yes
Salinometer	Optional	Yes	Yes
Pinger(s)	Optional	Yes	Yes
Plankton Net, gravity corer	Yes	Yes	Yes
Outfitting Items	Below 65 Feet	65 - 85 Feet	86 - 105 Feet
<b>Winches (minimum requirements)</b>			
Hydrographic	500 meters 3/16"	1500 meters 3/16"	3000 meters 1/4"
CTD	Optional	2000 meter .322"	3000 meters .322"
Trawl	N/A	2000 meters 3/8"	3000 meters 1/2"
Capstan	Optional	Yes	Yes
Line Monitoring	Optional	Yes	Yes
<b>Frames and Cranes</b>			
Side Frame/Davit	Yes	Yes	Yes
Stern Frame	Optional	Yes	Yes
Deck Crane	N/A	Optional	Yes
<b>Communications (for science)</b>			
Cellular w/Fax	Yes	Yes	Yes
Msat Satellite Phone	N/A	Optional	Yes
INMARSAT Standard C	N/A	Optional	Yes
INMARSAT A, B, or M	N/A	N/A	Optional

<b>Electrical Power</b>			
115 VAC	15 - 25 amps	25-35 amps	35 - 50 amps
208/220 VAC	10 amps	20 amps	30 amps
208/220/480 VAC 3 phase	10 amps	20 amps	30 amps
12/24 VDC	5 amps	10 amps	15 amps
Clean/Uninterruptable Power	1.5 kVA	1.5-3 kVA	3-7 kVA
<b>Miscellaneous</b>			
Van Capability	N/A	Optional	Yes
SCUBA Platform	Yes	Optional	Optional
Inflatable/Work Boat & Motor	Yes	Yes	Yes
Science Berthing	5 -7	8 - 10	10 - 12
Endurance (days)	5	10	15
Bow Thruster	N/A	Optional	Yes
Weather Deck Working Area	100 - 250 sq. ft.	250 - 450 sq. ft.	450 - 600 sq. ft.