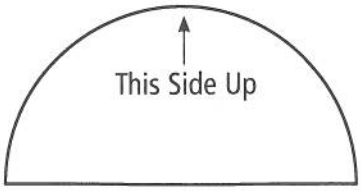
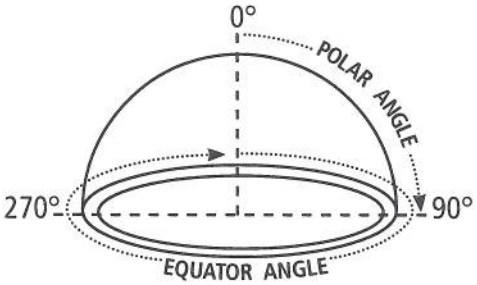
Drill Hole Instruction Sheet

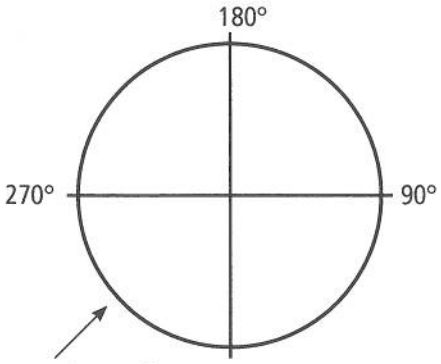
TELEDYNE BENTHOS
A Teledyne Technologies Company

When measuring for holes, orient hemispheres as shown.

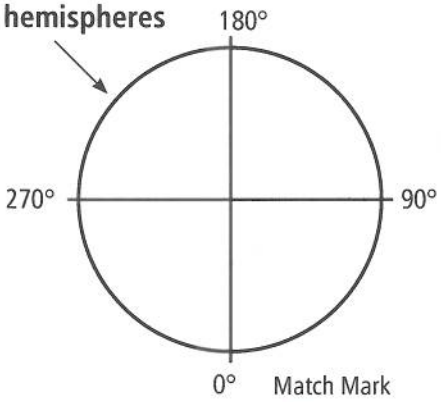




Measure along the Polar and Equator angles to determine the exact location of all holes to be drilled in each glass sphere. Record all necessary information in the grids below.



Top view of hemispheres



TOP HEMISPHERE

Hole Number	A	B	C	D	E	F	G	H
Equator Angle	0.0							
Polar Angle	25.0							
Hole Type	1							

BOTTOM HEMISPHERE

Hole Number	1	2	3	4	5	6	7	8	9
Equator Angle	247.5	292.5	337.5	22.5	67.5	112.5	157.5	202.5	0.0
Polar Angle	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	0.0
Hole Type	6	6	7	7	6	6	6	7	8

Customer: Hans Thomas / MBARI Date: 9/17/2009

Revision: changed polar angle for holes 1-8 to 60°

Sales Order: 0911595 Ship Date: _____ Quantity: 1 Size: 17"

Recommended Polar Angle for Penetrators for Hard Hat Clearance				
10" H	13" SRO	17" H	17" HR	17" SR
25	30	30	N.A.	25

Typical Vacuum Port Positions	
XT-6000-10	E=180 P=45, top hemi, per B-500-3
XT-6000-17	E=0 P=25, top hemi, per B-500-7
TR-6000	E=135 P=25, per B-210-428

Hole Type	Standard Applications	Drill Diameter
1	Vacuum Port, 3/16"	.203"
2	XT/TR Transducer	.281"
3	Bulkhead, 7/16", Brass	.453"
4	Bulkhead, 7/16", Titanium	.438"
5	Single Pin Penetrator	.156"

Special Applications	
6	Bulkhd, 7/16" Brass, Min 1" spotface
7	Bulkhd, 3/4" Ti, Min 1" spotface
8	Bulkhd, 3/4" Ti, Min 1.9" spotface

NOTE: — All customer supplied penetrators must have 1" stems and be furnished with dummy plugs and mounting hardware.
— When shipping penetrators to Teledyne Benthos, please reference purchase order number and/or sales order number.

Maximum polar angle is 50°