D.E.W.5.

ATL

DESIGN ENGINEER'S WORK SHEET

AERO TEC LABORATORIES INC. RAMSEY, NEW JERSEY, 07446, USA

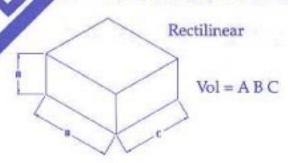
ATL specializes in the design and fabrication of custom made bladders and other flexible devices. So that our engineers may best assist you, please complete and return the following

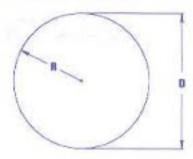
ATTL	DESIGN ENGINEER'S WORK SHEET by fax or e-mail. If you would like to send a drawing for further clarification, please attach to email. Accepted file types: .PDF, .DXF, .DWG or .IGES.
	1. Intended application for flexible or collapsible product:
10	2. Operating pressure:
ATT.	3. Operating temperature range:
	4. Chemicals or other substances present in the environment:
	5. Environmental exposure; (ie. wind, sunlight, radiation, abrasion, bacteria, ozone, impact, ice, etc.):
	6. Predetermined specifications for bladder materials; (ie. tensile strength, tear strength, puncture strength, durometer, etc.):
ATT.	7. Specific limitations such as weight, volume, collapsed size, etc.:
	8. Is bladder unsupported (free standing), supported (fully restrained), or partially supported?
ATL	9. Basic size, type and location of fittings required:
	10. Desired flow rate for filling, discharging or venting if known:
	11. Quantity desired (no order too small):
A)	12. Your name, address, fax, phone, e-mail and best time to call:

CALL, FAX OR E-MAIL OUR SALES ENGINEERS

TOLL FREE: 800-526-5330 TEL: 201-825-1400 FAX: 201-825-1962 E-MAIL: atl@atlinc.com

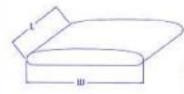
TYPICAL BLADDER SHAPES & VOLUMES





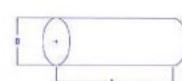
Sphere

 $Vol = 4.189R^3$



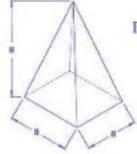
Pillow

Vol = 0.188LW² (APPROX.)



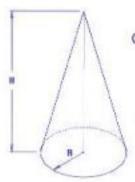
Cylinder

 $Vol = 0.785LD^2$



Pyramid

$$Vol = \frac{HAB}{3}$$



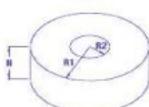
Cone

 $Vol = 1.047R^2H$



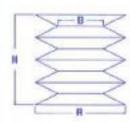
Wedge

$$Vol = \frac{L(A_1B_1 + A_2B_2)}{2}$$



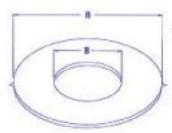
Torroid

 $Vol = 3.141H(R_1^2 - R_2^2)$



Bellows

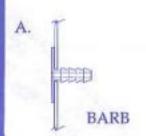
$$Vol = 0.196H(A^2+2AB+B^2)$$

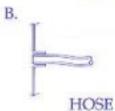


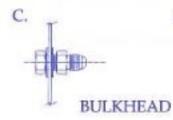
"Pancake Donut"

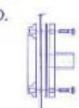
$$Vol = \frac{(A+B)(A-B)^2}{7.5}$$
(APPROX.)

Typical Bladder Fittings









FLANGE

SKETCH YOUR IDEA HERE FAX OR MAIL TO A T L

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P. T.

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