

Fact Sheet

Low-Cost Polyethylene Tube Digester Altiplano

by GTZ / EnDev – Bolivia

Application Region

Climate:	Soft summers and hard winters. Freezing temperatures during winter nights. Mean ambient temperature 0 - 15°C
Meters above sea level:	3.000 – 4.500 m _{asl}



Operational Characteristics

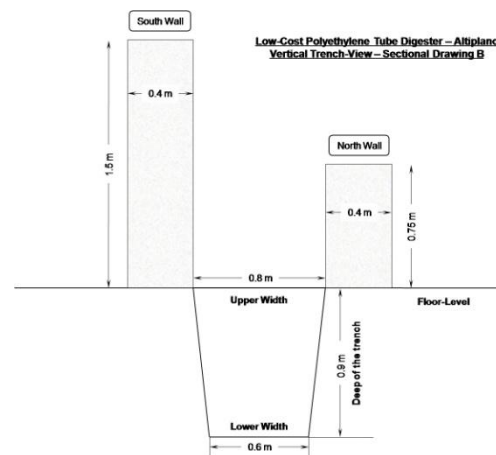
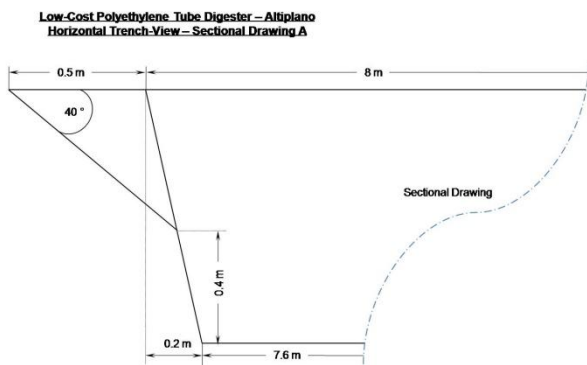
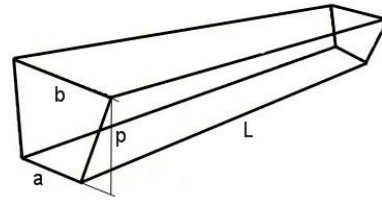
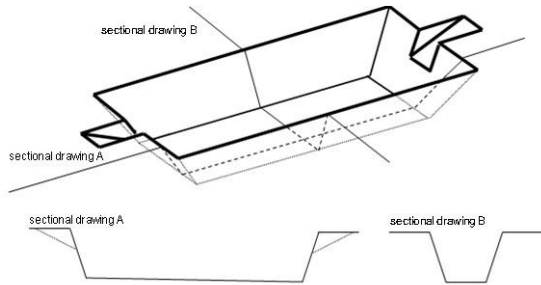
Diary load of substrate:	20 kg of dung (cow) and 60 l of water
Diary biogas production:	700 - 750 l (4 - 5 hours for cooking)
Diary biol (fertilizer) production:	80 l
Retention time:	73 days
Time needed to begin to work:	2 months
Internal working temperature:	8 – 12 °C

Digester Dimensions

Total Volume:	7,79 m ³
Liquid Volume:	5,84 m ³
Gasholder Volume:	1,95 m ³
Roll width:	1,75 m
Digester-Diameter (D):	1,11 m
Length of the digester (L):	8,0 m
Ratio L/D:	7,17

Trench Dimensions

Lower width of the trench (a):	0,6 m
Upper width of the trench (b):	0,8 m
Deep of the trench (p):	0,9 m
Length of the trench (L):	8 m



Accessories

Gas Storage Reservoir:	3 (0,65 m ³ each / total 1,95 m ³)
Burner (Stove):	1
Greenhouse:	Tubular Polyethylene 250 microns (9 m x 2 m)
BUDGET (January 2010):	148,- € (220,- us\$)