Product Data Sheet
Battery Backup 700w/1000w

At NPS we believe in designing our pump battery backs ups to perform. Rather than use a computer UPS, we use Victron Energy products. These have specifically been designed to run products such as pumps.

Two standard unit sizes, 700watt and 1000watt systems with a 60Ah LiFePO4 battery for maximum pump cycles and light weigh too.

Easy fast and simple installation to save time on site.

Performance Examples of typical ground water pumps fitted in our NPS Pro Chamber running on 700w/60Ah backup.

Example 1: KSB 301 Amadrainer: P1 = 430w 1.9A - duty point 4.5m - 91 l/min

Typical installation lift of 3.5m, 6m horizontal run and 4x 90 degree elbows. Rising main from 40mm OD 10 bar PVC pipe with a 36.2mm bore

Cycle time = 20 seconds - The total run time at 80%DOD this pump will discharge 6.95 cubic metres of water on back up power

Inputs		
Method of Calculation	Darcy-Weisbach	
Material	HDPE	
Schedule	SDR 17	
Internal Roughness	0.001524	mm
Length	6.00	m
Elevation Change	3.50	m
Fluid	Water	
Temperature	20.0	°C
Density	998.000000	kg/m³
Viscosity	1.002000	Centipoise
Vapour Pressure	0.023390	bar a
Volume Flow	91.0000	l/min
Mass Flow	1.5136	kg/sec
Pressure Loss	4.500000	m fluid
Results		
Flow Type	Turbulent	
Reynolds Number	53198	
Friction Factor	0.020774	
Fluid Velocity	1.48	m/sec
Friction Loss	0.383582	m fluid
Fittings Loss	0.616418	m fluid
Total Entry Loss	0.616418	m fluid
Total Entry K	5.54	
40mm x 4 (K= 0.66 x 4)		
40mm x 1 (K= 2.90 x 1)		
Elevation Loss	3.500000	m fluid
Internal Diameter	36.16	mm

Typical cycle time = 20 seconds - The total run time at 80%DOD this pump will discharge 6.98 cubic metres of water on back up power

No cycles/hr	1	2	3	4	5	6	7	8	9	10
Total Back up hrs	230	115	77	58	46	38	33	29	26	23
No of days	9.59	4.79	3.20	2.40	1.92	1.60	1.37	1.20	1.07	0.96

Performance Examples of typical ground water pumps fitted in our NPS Pro Chamber running on 700w/60Ah backup.

Example 2: Pedrollo Top2: P1 = 460w 1.9A - duty point 4.5m - 118 l/min.

Typical installation lift of 3.5m, 6m horizontal run and 4x 90 degree elbows. Rising main from 50mm OD 16 bar PVC pipe with a 42mm bore

Inputs		
Method of Calculation	Darcy-Weisbach	
Material	HDPE	
Schedule	SDR 17	
Internal Roughness	0.001524	mm
Length	6.00	m
Elevation Change	3.50	m
Fluid	Water	
Temperature	20.0	°C
Density	998.000000	kg/m³
Viscosity	1.002000	Centipoise
Vapour Pressure	0.023390	bar a
Volume Flow	118.0000	l/min
Mass Flow	1.9627	kg/sec
Pressure Loss	4.500000	m fluid
Results		
Flow Type	Turbulent	
Reynolds Number	62940	
Friction Factor	0.020026	
Fluid Velocity	1.59	m/sec
Friction Loss	0.393169	m fluid
Fittings Loss	0.606831	m fluid
Total Entry Loss	0.606831	m fluid
Total Entry K	4.68	
50mm x 4 (K= 0.57 x 4)		
50mm x 1 (K= 2.40 x 1)		
Elevation Loss	3.500000	m fluid
Internal Diameter	39.63	mm

Typical cycle time = 20 seconds - The total run time at 80%DOD this pump will discharge 8.60 cubic metres of water on back up power

No cycles/hr	1	2	3	4	5	6	7	8	9	10
Total hrs	219	109	73	55	44	36	31	27	24	22
No of days	9.11	4.55	3.04	2.28	1.82	1.52	1.30	1.14	1.01	0.91