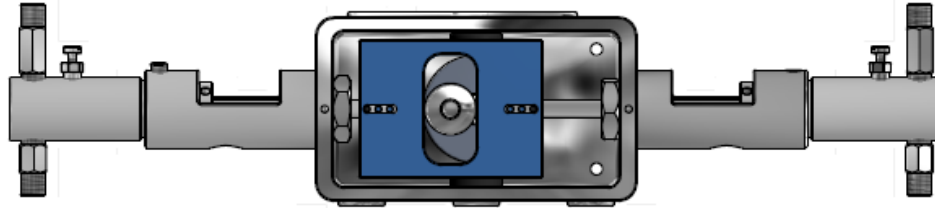




PUMP PERFORMANCE



HBT Models:

HBT Solar Pump

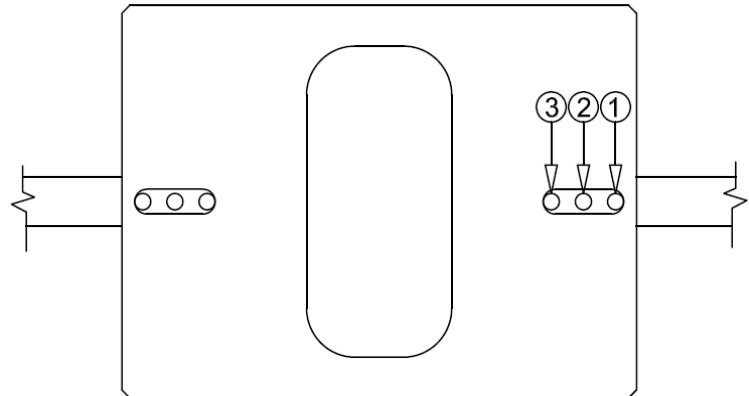
HBTEXP Explosion Proof Solar Pump

HBT2 Electric Pump

HBTEXP Explosion Proof Electric Pump

PIN PLACEMENT

Pin Positions	Stroke Lengths
1	1.123
2	0.872
3	0.622



Note: All dimensions are in inches.

HBT Pump Specifications									
Plunger size	1/4"			3/8"			1/2"		
Pin position	1	2	3	1	2	3	1	2	3
Plunger cross section area (in ²)	0.0491			0.1104			0.1963		
Stroke lengths at different pin positions	1.1230	0.8720	0.6220	1.1230	0.8720	0.6220	1.1230	0.8720	0.6220
Displacement per stroke (cubic inches)	0.0551	0.0428	0.0305	0.1240	0.0963	0.0687	0.2204	0.1712	0.1221
Displacement per stroke (fluid ounces)	0.0305	0.0237	0.0169	0.0687	0.0534	0.0381	0.1222	0.0948	0.0677

Table 10.0

DISPLACEMENT VOLUME IN ONE SECOND VS PIN PLACEMENT

Pump Model: HBT1 DC

Plunger size	1/4"			3/8"			1/2"		
Pin position	1	2	3	1	2	3	1	2	3
Displacement Per Second (cubic inches/second)	0.0322	0.0250	0.0178	0.0723	0.0562	0.0401	0.1286	0.0999	0.0712
Displacement Per Second (fluid ounces/second)	0.0178	0.0138	0.0099	0.0401	0.0311	0.0222	0.0713	0.0553	0.0395

Pump Model: HBT2 DC

Plunger size	1/4"			3/8"			1/2"		
Pin position	1	2	3	1	2	3	1	2	3
Displacement Per Second (cubic inches/second)	0.0606	0.0471	0.0336	0.1364	0.1059	0.0756	0.2425	0.1883	0.1343
Displacement Per Second (fluid ounces/second)	0.0336	0.0261	0.0186	0.0756	0.0587	0.0419	0.1344	0.1043	0.0744

ACTUAL DISCHARGE VOLUME PER STROKE AT DIFFERENT PRESSURES

With **ADVANCE PUMP CONTROL** and adjustable stroke lengths (Pin Placement) TXAM pumps allow a broad range of injection rates and operating conditions. An Injection rate can be achieved by using one of infinite number of combinations between electronic controller and mechanical adjustment. Due to an infinite number of combinations to set an injection rate; TXAM provides the actual test data below at a specified test condition only.

Test conditions: Fluid type: 50/50 glycol/water at 60 degrees Fahrenheit. Pin position #1 (full stroke).

Plunger size: 1/4"						
Discharge Pressure (psig)	0	1000	2000	3000	4000	5000
Discharge Volume per stroke (cubic inches)	0.053	0.045	0.040	0.036	0.034	0.032
Discharge Volume per stroke (fluid ounces)	0.029	0.025	0.022	0.020	0.019	0.018

Plunger size: 3/8"						
Discharge Pressure (psig)	0	500	1000	1500	2000	2500
Discharge Volume per stroke (cubic inches)	0.112	0.105	0.099	0.098	0.094	0.093
Discharge Volume per stroke (fluid ounces)	0.062	0.058	0.055	0.054	0.052	0.052

Plunger size: 1/2"				
Discharge Pressure (psig)	0	500	1000	1500
Discharge Volume per stroke (cubic inches)	0.219	0.217	0.212	0.198
Discharge Volume per stroke (fluid ounces)	0.121	0.120	0.117	0.110

NOTES:

- The flow rates of a pump depend on many factors such as: Viscosity of fluid, working pressures, differential pressures between discharge and suction, RPM of the motors.
- The values on **Table10.0** are theoretical calculated values. These values are used to estimate the discharge flow rates at different pin placements and pump working conditions.
- TXAM only provides the Displacement per Second for the pump models which do not have Variable Speed Control. Unstable power supply and working pressure can affect to the displacement volume per second of a pump.

..... DATE: 3/26/2014 Rev: A.....By: DN.....Approved by: JA.....