

	Cylinder Size	Pipe Size	Static Level	Pump Set Depth	Oz/Stroke Output	Approx. GPM	lbs. of pressure exerted on handle
	3"	1 1/4"	0	50'	20	4 1/2 - 5	effortless
	3"	1 1/4"	30'	50'	20	4 1/2 - 5	15
	3"	1 1/4"	78'	98'	17	4	50
see note (6)	3"	1 1/4"	100'	150'	14	3	80
	3"	1 1/4"	130'	150'	10	2	110
	3"	1 1/4"	148'	150'	8	2	110
	2"	1 1/4"	7'	224'	11	5	5
	2"	1 1/4"	124'	224'	7	3	40
	2"	1 1/4"	150'	224'	5	2 1/2	50
	2"	1 1/4"	196'	224'	5	2 1/2	60
see note (6)	2"	1 1/4"	200'	224'	5	2 1/2	60
	2"	1 1/4"	224'	224'	4 3/4	2	60
	2"	1 1/4"	250'	296'	2	1	60
	2"	1 1/4"	275'	296'	1.7	0.8	60
	1 1/2"	1"	7'	104'	6	3	effortless
	1 1/2"	1"	50'	104'	4	2	10
	1 1/2"	1"	100'	104'	4	2	15
	1 1/2"	1"	150'	202'	3	1 1/2	35
see note (6)	1 1/2"	1"	200'	202'	3	1 1/2	40

Notes on Chart

1. The information in the chart is based on actual field tests.
2. The gpm output on each cylinder size is based on the Bison Pump being operated by a 200 lb. male - 6' tall, stroking the handle 60 times in one minute. The gallons per minute output - over time - is directly related to the physical condition of the pump operator.
3. The highlighted lines of the chart are approximate limits to each size cylinder (+ 10%)
4. On static levels of 100' and greater, the pump should be installed using mechanical lifting and lowering devices (i.e. electric winch). This should be done by experienced installers with appropriate equipment.
5. Always install the pump with safety rope properly tied off and secured. (2 people required for most installations)
6. Maximum static level depths, for the practical use of a hand pump, as follows:
3" cylinder - 100' static
2" cylinder - 200' static
1 1/2" cylinder - 200' static