

PUMP OPERATIONS CALCULATOR

FMC Model #:	<u>M 0818</u>	suction pressure:	<u>0</u> PSI (<u>0</u> bar)
number of plungers	<u>3</u>	discharge pressure:	<u>1,100</u> PSI (<u>75.845</u> bar)
stroke length: (inch)	<u>2.000</u>	rod load:	<u>4,374</u> lbs (<u>19455</u> N)
plunger dia (inch):	<u>2.250</u>	max rated pressure:	<u>1,119</u> PSI (<u>77.168</u> barg)
Gallons/rev:	<u>0.103</u>	max rated rod load:	<u>4,450</u> lbs (<u>19,794</u> N)
		percent difference:	<u>2%</u>

Notes:

1. Minimum pump speed without power end pressure lubrication system is 100 rpm.
2. Maximum continuous duty pump speed is 240 rpm.

PUMP RPM	FLOW GPM	FLOW LPM	HP required	kW required
0	0.0	0.0	0.0	0.0
25	2.5	9.3	1.7	1.3
50	4.9	18.6	3.5	2.6
75	7.4	27.9	5.2	3.9
100	9.8	37.1	7.0	5.2
125	12.3	46.4	8.7	6.5
150	14.7	55.7	10.5	7.8
175	17.2	65.0	12.2	9.1
200	19.6	74.3	14.0	10.4
225	22.1	83.6	15.7	11.7
250	24.5	92.9	17.5	13.0
275	27.0	102.1	19.2	14.3
max rpm: 300	29.4	111.4	21.0	15.7

Estimated Mechanical Eff. = 90%

Estimated Volumetric Eff. = 95%

59.0 GPM is achieved at: 601 RPM

Power required (no suction): 42.1 HP

Power required (add suction): 42.1 HP

223.3 LPM is achieved at: 601 RPM

Power required (no suction): 31.4 kW

Power required (add suction): 31.4 kW

Note: Only edit the cells in red.