



# AMERICAN

Manufacturing Company, Inc.

## Perc-Rite® DESIGN CALCULATION SHEET

This calculation sheet is set up for a two-zone system. If you are designing a single zone system, disregard items 19-26. If more zones are needed, continue calculating head losses for each zone, then size the pump for the highest head loss. Contact American for design support if pumping downhill or if over pressurizing is indicated.

To Simplify the design process use the American "Perc-Rite® Calc-Tool" for standard designs.

1. Site Name: \_\_\_\_\_ Date \_\_\_\_\_
2. \_\_\_\_\_ GALLONS PER DAY \_\_\_\_\_ BEDROOMS
3. \_\_\_\_\_ GPD/S.F. SOIL LOADING RATE REQUIRED
4. \_\_\_\_\_ FT. X \_\_\_\_\_ FT. AREA FOR DISPOSAL LAYOUT a) \_\_\_\_\_ FT<sup>2</sup>
5. \_\_\_\_\_ GPD/FT<sup>2</sup> SOIL LOADING RATE PROVIDED (#2/#4a)
6. \_\_\_\_\_ ZONES
7. \_\_\_\_\_ TOTAL DRIPPER LINE PROVIDED
8. \_\_\_\_\_ SEPTIC TANK SIZE
9. \_\_\_\_\_ DOSING TANK SIZE
10. \_\_\_\_\_ GALLONS PER INCH DOSING TANK
11. ZONE ONE
12. \_\_\_\_\_ TOTAL ABSORPTION AREA
13. \_\_\_\_\_ LINEAR FEET DRIPPER LINE
14. \_\_\_\_\_ LONGEST LATERAL LENGTH
15. \_\_\_\_\_ DOSING FLOW RATE
16. \_\_\_\_\_ NUMBER OF RETURN FIELD FLUSH CONNECTIONS
17. \_\_\_\_\_ FIELD FLUSH FLOW RATE
18. \_\_\_\_\_ TOTAL FLOW REQUIRED
19. ZONE TWO
20. \_\_\_\_\_ TOTAL ABSORPTION AREA
21. \_\_\_\_\_ LINEAR FEET DRIPPER LINE
22. \_\_\_\_\_ LONGEST LATERAL LENGTH
23. \_\_\_\_\_ DOSING FLOW RATE
24. \_\_\_\_\_ NUMBER OF RETURN FIELD FLUSH CONNECTIONS
25. \_\_\_\_\_ FIELD FLUSH FLOW RATE
26. \_\_\_\_\_ TOTAL FLOW REQUIRED
27. \_\_\_\_\_ MAXIMUM DESIGN FLUSHING FLOW
28. \_\_\_\_\_ FEET HEAD LOSS HYDRAULIC UNIT (BASED ON # 27)
29. HYDRAULIC UNIT SUPPLY LINE SIZE (1-1/2" TYPICAL)
30. \_\_\_\_\_ INCHES PIPE
31. \_\_\_\_\_ LENGTH SUPPLY PIPE
32. \_\_\_\_\_ FT. STATIC LIFT (HYDRAULIC UNIT ELEVATION - OFF FLOAT ELEVATION)
33. \_\_\_\_\_ TOTAL FEET HEAD LOSS LINE (DYN. HEAD LOSS + #32)
34. FORCE MAIN SUPPLY LINE PIPE SIZE & LENGTH \_\_\_\_\_ FT.
35. \_\_\_\_\_ ZONE ONE SIZE, \_\_\_\_\_ ZONE ONE LENGTH \_\_\_\_\_ FEET HEAD LOSS
36. \_\_\_\_\_ ZONE TWO SIZE, \_\_\_\_\_ ZONE TWO LENGTH \_\_\_\_\_ FEET HEAD LOSS
37. RETURN FLUSH LINE SIZE & LENGTH \_\_\_\_\_
38. \_\_\_\_\_ ZONE ONE SIZE, \_\_\_\_\_ ZONE ONE LENGTH \_\_\_\_\_ FEET HEAD LOSS
39. \_\_\_\_\_ ZONE TWO SIZE, \_\_\_\_\_ ZONE TWO LENGTH \_\_\_\_\_ FEET HEAD LOSS
40. \_\_\_\_\_ FEET HEAD LOSS TOTAL STATIC (VERTICAL LIFT)
41. TOTAL PRESSURE LOSS ( ADD ITEMS; 28,33,35-36, 38-39,40 +FLUSHING)
42. \_\_\_\_\_ ZONE ONE HEAD LOSS, INCLUDES \_\_\_\_\_ FEET FLUSHING
43. \_\_\_\_\_ ZONE TWO HEAD LOSS, INCLUDES \_\_\_\_\_ FEET FLUSHING
44. PUMP SIZING
45. \_\_\_\_\_ MAXIMUM PRESSURE LOSS TOTAL (HIGHEST FEET 61-64)
46. \_\_\_\_\_ DISC FILTER BACKFLUSH (#32 + 115' @15 GPM)
47. \_\_\_\_\_ GPM @ \_\_\_\_\_ FEET (LARGER OF 45 & 46)
48. PUMP MODEL \_\_\_\_\_
49. \_\_\_\_\_ GPM @ \_\_\_\_\_ FEET \_\_\_\_\_ VOLTS \_\_\_\_\_ PHASE \_\_\_\_\_ HP
50. TIME DOSING PER ZONE
51. Two Zone Standard Enable (180 min rest)
52. Two Zone Peak Enable (108 min rest)
53. ZONE ONE \_\_\_\_\_ GPM \_\_\_\_\_ MIN/DOSE \_\_\_\_\_ AVE. CYCLES \_\_\_\_\_ PEAK
54. CYCLES \_\_\_\_\_ GAL/DOSE
55. ZONE TWO \_\_\_\_\_ GPM \_\_\_\_\_ MIN/DOSE \_\_\_\_\_ AVE. CYCLES \_\_\_\_\_ PEAK
56. \_\_\_\_\_ CYCLES \_\_\_\_\_ GAL/DOSE
57. \_\_\_\_\_ INCHES DRAWDOWN FLOAT SWITCH SETTING (MIN. 4")