

HS-20 Loading Table

HS-20 Loading & LRFD Alternate Loads - Single Lane Traffic

Item	Cover Depth (inches)												
	6	18	20	30	38	48	60	72	84	96	108	120	144
Axle Load (lbs)	32,000	32,000	32,000	32,000	25,000*	25,000*	25,000*	25,000*	25,000*	25,000*	25,000*	25,000*	25,000*
Tire Load (lbs)	16,000	16,000	16,000	16,000	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
Tire Contact Area (10" x 20" = 200 inch ²)	200	200	200	200	200	200	200	200	200	200	200	200	200
Area of Applied Load at 33% Angle of Repose (inch ²)	416	1,064	1,200	2,000	2,784	3,944	5,600	7,544	9,776	12,296	15,104	18,200	25,256
Unmodified Wheel Load Applied to R-Tank	38.46	15.04	13.33	8.00	8.98	6.34	4.46	3.31	2.56	2.03	1.66	1.37	0.99
Impact Factor (per AASHTO Standard)	50.36	19.07	16.82	9.82	10.77	7.38	5.02	3.59	2.66	2.03	1.59	1.26	0.83
Cover Material Pressure at 130 lbs/cf (psi)	0.45	1.35	1.50	2.26	2.86	3.61	4.51	5.42	6.32	7.22	8.13	9.03	10.83
Total Load Applied to R-Tank (psi)	50.81	20.42	18.32	12.07	13.63	11.00	9.53	9.00	8.98	9.26	9.71	10.29	11.66
Capacity of R-Tank Unit (psi)	320.00	42.90	33.40	33.40	33.40	33.40	33.40	33.40	42.90	42.90	42.90	320.00	320.00
Safety Factor	6.30	2.10	1.82	2.77	3.04	3.04	3.50	3.71	4.78	4.64	4.42	31.10	27.44

- R-Tank^{HD}
- R-Tank^{SD}
- R-Tank^{XD}

*LRFD Alternate Load controls at depths of 38" or more.

**Standard Table for 95% of
Projects**

