



# PIPE LOAD TABLES

## 1 1/2" SCHEDULE 40 -ALUM PIPE .145" - T6 6061 - SIMPLY SUPPORTED

SECTION PROPERTIES		
Thickness	t	0.145 in
Outside diameter	OD	1.9 in
Outside radius	R	0.95 in
Inside diameter	ID	1.61 in
Inside radius	r	0.805 in
Cross-Section Area	A	0.799 in <sup>2</sup>
Moment of Inertia	I <sub>x</sub>	0.310 in <sup>4</sup>
Centroid distance	c	0.95 in
Elastic Section Modulus	Z	0.326 in <sup>3</sup>
Plastic Section Modulus	S	0.448 in <sup>3</sup>
Linear Weight		0.94 lb/ft

MATERIAL PROPERTIES		
Alloy		T6 6061
Ultimate Strength	F <sub>u</sub>	37700 psi
Yield Strength	F <sub>y</sub>	34800 psi
Modulus of Elasticity	E	10100000 psi
ALLOWABLE LOAD		
Safety Factor	SF	4 : 1
Bending Moment (Z)	M	256 lbf.ft
Bending Moment (S)	M	352 lbf.ft
Shear	V	3767 lbf
Deflection	Δ	L / 80

ACTUAL SPAN	THEROTICAL WEIGHT	ALLOWABLE DEFLECTION	Maximum UDL Load		Max. Centre Point Load		Max. Third Point Loads		Max. Quarter Point Load	
			MAX. ALLOWABLE LOAD	ANTICIPATED DEFLECTION	MAX. ALLOWABLE LOAD	ANTICIPATED DEFLECTION	MAX. ALLOWABLE LOAD	ANTICIPATED DEFLECTION	MAX. ALLOWABLE LOAD	ANTICIPATED DEFLECTION
ft	lb	in	PLF	in	LBS	in	LBS	in	LBS	in
2	1.88	0.30	703	0.08	703	0.06	527	0.08	352	0.08
3	2.82	0.45	313	0.18	469	0.15	352	0.19	234	0.17
4	3.76	0.60	176	0.32	352	0.26	264	0.33	176	0.31
5	4.7	0.75	113	0.51	281	0.40	211	0.52	141	0.48
6	5.64	0.90	78	0.73	234	0.58	176	0.74	117	0.69
7	6.58	1.05	57	0.99	201	0.79	151	1.01	100	0.94
8	7.52	1.20			176	1.04				
9	8.46	1.35			156	1.31				
10	9.4	1.50								
11	10.34	1.65								
12	11.28	1.80								
13	12.22	1.95								
14	13.16	2.10								
15	14.1	2.25								
16	15.04	2.40								
17	15.98	2.55								
18	16.92	2.70								
19	17.86	2.85								
20	18.8	3.00								