

Cylinder Column Strength Charts

The below charts provide the maximum load capacity (Tonnes) at full extension when mounted pin to pin.
 Rod buckling may occur if these loads are exceeded.
 Load capabilities can be increased by fitting larger diameter rods.

SLM Series

BORE	ROD	LOAD IN TONNES FOR STANDARD STROKES (in inches)											
		4	6	8	10	12	16	18	20	24	30	36	48
1.5	7/8"	2.40	2.40	2.40	2.25	1.75	1.14	0.95	0.80	0.59	0.41	0.30	0.18
2.0	1.0"	4.27	4.27	4.27	3.84	2.98	1.94	1.62	1.37	1.01	0.69	0.50	0.30
2.5	1.5"	6.68	6.68	6.68	6.68	6.68	6.68	6.68	6.20	4.67	3.24	2.39	1.45
3.0	1.5"	9.62	9.62	9.62	9.62	9.62	8.65	7.27	6.20	4.67	3.24	2.39	1.45

SLH Series

BORE	ROD	LOAD IN TONNES FOR STANDARD STROKES (in inches)											
		8	10	12	16	18	20	24	30	36	42	48	
2.5	1.5"	6.68	6.68	6.68	6.68	6.68	6.20	4.67	3.24	2.39	1.83	1.45	
3.0	1.5"	9.62	9.62	9.62	8.65	7.27	6.20	4.67	3.24	2.39	1.83	1.45	
3.5	1.75"	13.09	13.09	13.09	13.09	13.09	11.49	8.64	6.01	4.42	3.39	2.68	
4.0	1.75"	17.09	17.09	17.09	16.02	13.48	11.49	8.64	6.01	4.42	3.39	2.68	
4.5	2.0	21.64	21.64	21.64	21.64	21.64	19.60	14.74	10.25	7.54	5.78	4.57	
5.0	2.0	26.71	26.71	26.71	26.71	22.99	19.60	14.74	10.25	7.54	5.78	4.57	

The above calculations are based on:

- "Euler" equation with safety factor of 2.0 (light duty - no shock loads)
- Higher safety factors must be used in more arduous conditions.
- Cylinder is assumed to be vertical, with both ends fully guided and no allowance is made for friction in the clevis pins due to the cylinder swinging through an arc.

