

DESIGN LOADS (kp)
A.C. SINGLE CIRCUIT/TWO SHIELD WIRES , TRIPLE CONDUCTOR

TOWER TYPE		LOADS	Loads at point of support of			
			Phase Conductor		Shield Wire	
			A	B	A	B
S ₇	0 or 1 broken wires	(a) Transverse	4670	2030	920	430
		(b) Vertical	10460	6330	1660	1000
		(c) Longitudinal (br.w.)	14400	11070	4950	3800
		(d) Transverse (br.w.)	2370	1040	460	220
		(e) Vertical (br.w.)	10460	6330	1660	1000
R ₇	0 or 1 broken wires	(a) Transverse	9360	5030	1980	1050
		(b) Vertical	13790	8360	2220	1340
		(c) Longitudinal (br.w.)	14400	11070	4950	3800
		(d) Transverse (br.w.)	4710	2540	990	530
		(e) Vertical (br.w.)	13790	8360	2220	1340
T ₇	0 or 2 broken wires	(a) Transverse	26510	15390	5460	3170
		(b) Vertical	19370	11720	2770	1680
		(c) Longitudinal (br.w.)	24000	18450	4950	3800
		(d) Transverse (br.w.)	13410	7760	2730	1580
		(e) Vertical (br.w.)	19370	11720	2770	1680
Z ₇	0 or 3 broken wires	(a) Transverse	40280	23730	8300	4890
		(b) Vertical	16040	9710	2220	1340
		(c) Longitudinal (br.w.)	24000	18450	4950	3800
		(d) Transverse (br.w.)	20300	11930	4150	2440
		(e) Vertical (br.w.)	16040	9710	2220	1340
	5 dead ending wires	(a) Transverse	18440	10500	3800	2160
		(b) Vertical	16040	9710	2220	1340
		(c) Longitudinal of dead-ending wire	30440	18450	6270	3800

A= Loads including factors of safety. (Critical for tower loads and uplift loads).

B= Loads not including factors of safety. (Critical for bearing loads).

The term "phase conductor" refers to the whole bundle of one phase.

The term "wire" refers to the phase conductor and/or the shield wire.

The above loads do not include the dead weight of tower and the loads due to wind acting on the tower, which must be taken into account according to the specifications, with the corresponding factors of safety.

When longitudinal loads of broken wires are taken, the transverse loads (d) and the vertical loads (e) must be taken instead of transverse loads (a) and vertical loads (b). In case of broken or dead ending wires, the corresponding transverse vertical and longitudinal loads are totally applied on the same point of the cross-arm or peak.

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