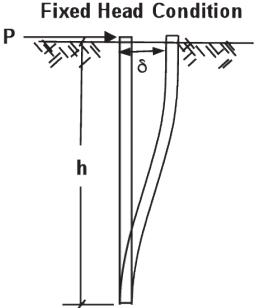


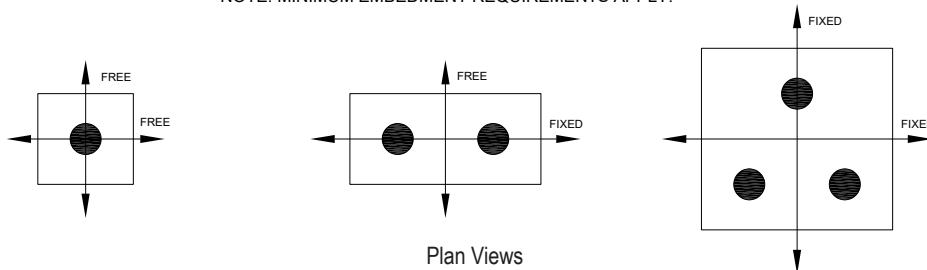
MAGNUM® Helical Pile Allowable Lateral Shaft Capacity (lbs)*

Head Fixity	Helical Pile	Non-Cohesive Soils				Cohesive Soils			
		V. Loose	Loose	Medium	Dense	V. Soft	Soft	Medium	Stiff
	MH2325U	1,000	1,700	2,300	3,000	600	1,500	2,500	3,800
	MH222U	1,300	2,200	3,100	3,800	800	1,800	3,200	4,800
	MH227U	1,400	2,400	3,400	4,500	800	1,900	3,400	5,500
	MH313B/BR	1,100	1,700	2,000	2,300	800	1,600	2,300	3,100
	MH325B/BR	1,500	2,500	3,300	3,800	900	2,000	3,500	4,700
	MH3521U	1,700	3,000	4,200	5,100	1,100	2,300	4,000	6,200
	MH3530U	1,900	3,500	4,900	6,600	1,100	2,500	4,400	7,700
	MH429U/Y	2,800	5,100	7,100	9,600	1,600	3,400	6,100	10,500
	MH434U	3,000	5,400	7,500	10,300	1,700	3,500	6,300	11,000
	MH530Y	3,800	7,000	9,700	13,000	2,100	4,400	7,900	13,500
	MH536Y	4,100	7,500	10,400	14,000	2,200	4,700	8,300	14,200
	MH542Y	4,300	8,000	11,000	15,000	2,300	4,800	8,600	14,900
	MH547Y	4,500	8,300	11,500	15,700	2,400	5,000	8,900	15,300
	MH736U	5,800	10,900	15,000	20,400	3,100	6,300	11,300	19,500
	MH740U	6,000	11,500	15,800	21,400	3,200	6,500	11,600	20,000
	MH745U/Y	6,300	11,900	16,500	22,400	3,300	6,700	12,000	20,500
	MH850Q	8,700	16,800	23,000	26,800	4,400	8,900	16,200	27,000
	MH939U	9,300	17,800	24,700	33,800	4,800	9,600	17,400	29,800
	MH1050U	11,500	23,000	31,800	43,500	5,900	11,800	21,300	36,500
	MH1250Q	14,400	29,200	39,500	45,200	7,300	14,600	26,500	44,400
MH1338Q	13,800	28,000	37,400	42,700	7,200	14,400	26,100	42,500	
MH1650U	19,000	40,000	50,000	56,700	9,800	19,500	35,500	55,000	
MH1843Q	21,500	47,000	65,000	78,700	11,400	22,700	41,500	70,500	
Minimum Pile Depth, h =		28d	28d	28d	28d	34d	34d	34d	34d

Index Soil Properties:	Non-Cohesive Soils				Cohesive Soils			
	V. Loose	Loose	Medium	Dense	V. Soft	Soft	Medium	Stiff
SPT Blow Count (bpf)	1-4	4-10	10-30	30-50	1-2	2-4	4-8	8-15
Strain, ϵ_{50}	N/A	N/A	N/A	N/A	0.06	0.02	0.01	0.005
p-y Modulus (pci)	5	25	90	225	30	100	500	1000
Cohesion (psf)	0	0	0	0	200	400	800	1500
Friction Angle (deg)	25	29	33	39	0	0	0	0
Unit Weight (pcf)	70	90	110	120	80	85	90	100

PILE HEAD FIXITY EXAMPLES

NOTE: MINIMUM EMBEDMENT REQUIREMENTS APPLY.



¹Allowable lateral capacity for round-shaft helical piles. Square shaft helical piles (MS150B and MS175B) have negligible lateral capacity
 *Limitations: IBC2021 states that the allowable lateral capacity of a pile shall be half the load causing 1-inch of deflection. Many professionals use the lateral capacity at a deflection of 0.5 inches as the allowable lateral capacity. The allowable lateral capacities shown in these tables are based on a predicted deflection of 0.5 inches at the ground surface. Refer to MAGNUM® Technical Reference Manual for theoretical load displacement curves and for allowable capacities at other deflection limits. These capacity tables are based on lateral load applied at ground surface and galvanized shafts with 50 years corrosion in non-severe corrosive conditions. Contact MAGNUM® technical support professionals for lateral capacity when loads are applied above ground, for other corrosion conditions, or for resistance to bending moments. Occasionally, annular space can develop around upper portions of the shaft when helical piles have multiple bolted couplings (all MAGNUM® helical piles larger than 3.5" diameter) or when installation methods cause excessive wobbling. It is recommended that any annular space be grouted from the surface using fast-setting, non-shrink, neat cement grout when lateral capacity is required.

