

Super Powerbrace Plus





Our Story

Mabey is a leading provider of bridging and non-mechanical construction equipment and services. We accelerate the construction and maintenance projects that matter most to the customers and communities we serve, delivering reliable new infrastructure more safely, more efficiently and more quickly.

Super Powerbrace Plus

Benefits

- High-load capacity
- When used with Mabey bracing struts, Super Powerbrace Plus can be used to support very large excavations.
- Modular system allows for excavation sizes in a range of 10-83 feet depending on ground conditions.
- Fully compatible with Mabey's other waler and strut systems.
- High strength steel construction helps minimize waler size. This means a smaller excavation, reducing time and expense.
- No cutting or welding beams and pinned joints allow for irregular-shaped excavations.

Engineering Capabilities

Mabey's talented engineering team will work hard to ensure the success of your project. Our engineers are equipped with top-of-the-line CAD software, and every job is PE certified. When necessary, Mabey's team of veteran engineers will design a custom solution using our modular equipment. We can provide architectural engineering or structural engineering support when called for by your project. In addition to our extensive inventory of durable rental equipment that can be tailored to meet your needs, the expertise of our staff is the reason so many contractors across the U.S. turn to Mabey as a dependable partner.



A family-owned business operating for nearly 100 years, we employ 800 people and operate in 140 countries around the world. Our teams offer the unparalleled personal service of a local supplier combined with the financial stability, engineering expertise and resources of a global business.



Mabey Waler Systems

Single Leg Characteristics	Super Powerbrace	Super Powerbrace Plus
Max length	52.5 ft	83 ft
Approx. Max. Load at 52.5 ft	1,761 lbs/ft	5,600 lbs/ft
Approx. Max. Load at 65.6 ft	N/A	3,426 lbs/ft
Approx. Max. Load at 83 ft	N/A	2,467 lbs/ft
Approx. Max Load at 46 ft (length of typical underground tank excavation)	2,672 lbs/ft	7,537 lbs/ft

*approximations at maximum length of brace.

Technical Field Support

While Mabey prides itself on providing easy-to-install solutions, we also understand that each project is unique and may involve complex conditions and unforeseen challenges. Knowing that your reputation is at stake with every project, we offer on-site field support as an added service. Mabey's field technicians will thoroughly explain the safest and most effective way to use our products so that you can install them quickly and get your project moving. Many of our clients have relied on that extra field support to help them meet critical deadlines and avoid expensive penalties.



Super Powerbrace Plus is a modular hydraulic system.

Ram unit outer section:	20 in x 18 in fabricated box section	Grade 65 Steel
Ram unit inner section:	16 in x 14 in fabricated box section	Grade 65 Steel
Extension section:	20 in x 18 in x 249 lbs/ft fabricated UC	Grade 65 Steel
Intermediate joints:	Single 80 mm dia. pin and 4 No. M30 bolts	
Corner joints:	Single 80 mm dia. pin	ASTM A325 (bolts)
Allowable rail moment with no coexistent axial load:	1,696 kip-ft	
Allowable intermediate joint moment:	1,357 kip-ft	
Allowable axial load :	281 kips	
Restrictions:	Bracing Struts cannot be connected to the ram units. The allowable moment of the Super Powerbrace Plus intermediate joint in reverse bending is 192 kip-ft.	

Main Components: Codes and Weights



Ram Unit Assembly

Code	Length (ft)		Weight (lbs)
	Min.	Max.	
SPPRAM	6.6	9.2	4,244



Intermediate Extension Unit

Code	Length (ft)	Weight (lbs)
SPP01	3.3	1,230
SPP0125	4.1	1,435
SPP02	6.6	2,094
SPP05	16.4	4,614
SPP07	23.0	6,316
SPP10	32.8	8,902
SPP14	45.9	12,247



End Extension Unit

Code	Length (ft)	Weight (lbs)
SPP00.5	1.6	789

Corner Unit Bracket

Code: SPPBKT
Weight: 44 lbs

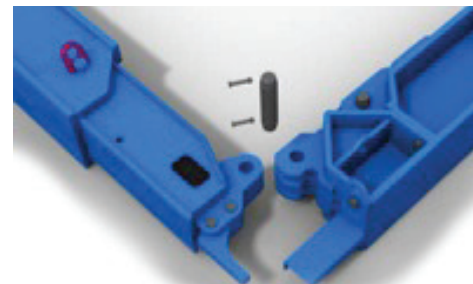


Corner Unit Plate

Code: SPPPLT
Weight: 36 lbs



If required, corner units can be fitted to each end of the Super Powerbrace Plus legs to carry the support for the sheets into the corners of the excavation.





Mabey Super Struts

The Mabey Super Strut is designed to be used alongside Mabey's waler systems and can be configured as a horizontal strut, a corner knee brace, or a raking prop. The standard extension unit is based on a 16" box beam, but larger extensions are available when longer spans or higher loads dictate.

Super Strut



Typical Leg Arrangements

Leg Arrangement	Leg Code	Clear Internal Dimensions (see notes below)								Deflection per waling (in)	Approx. Weight of one Leg (lb)
		Between Waling Flanges except at intermediate connection (ft)		Between Walings at intermediate connection (ft)		Corner Pin to Pin Dimension (ft)		Dimension to face of sheet (ft)			
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
SPPRAM	SPPL-01	6.6	9.2	N/A	N/A	6.6	9.2	9.8	12.5	0.59	4,244
SPPRAM+SPP00.5	SPPL-02	8.2	10.8	7.6	10.2	8.2	10.8	11.5	14.1	0.59	5,062
SPPRAM+SPP01	SPPL-03	9.8	12.5	9.3	11.9	9.8	12.5	13.1	15.7	0.59	5,503
SPPRAM+SPP01+SPP00.5	SPPL-04	11.5	14.1	10.9	13.5	11.5	14.1	14.8	17.4	0.59	6,321
SPPRAM+SPP02	SPPL-05	13.1	15.7	12.5	15.2	13.1	15.7	16.4	19.0	0.59	6,367
SPPRAM+SPP02+SPP00.5	SPPL-06	14.8	17.4	14.2	16.8	14.8	17.4	18.0	20.7	0.59	7,185
SPPRAM+SPP02+SPP01	SPPL-07	16.4	19.0	15.8	18.4	16.4	19.0	19.7	22.3	0.59	7,626
SPPRAM+SPP02+SPP01+SPP00.5	SPPL-08	18.0	20.7	17.5	20.1	18.0	20.7	21.3	24.0	0.71	8,444
SPPRAM+SPP02+SPP02	SPPL-09	19.7	22.3	19.1	21.7	19.7	22.3	23.0	25.6	0.87	8,490
SPPRAM+SPP02+SPP02+SPP00.5	SPPL-10	21.3	24.0	20.7	23.4	21.3	24.0	24.6	27.2	1.10	9,308
SPPRAM+SPP05	SPPL-11	23.0	25.6	22.4	25.0	23.0	25.6	26.2	28.9	1.34	8,887
SPPRAM+SPP05+SPP00.5	SPPL-12	24.6	27.2	24.0	26.6	24.6	27.2	27.9	30.5	1.69	9,705
SPPRAM+SPP05+SPP01	SPPL-13	26.2	28.9	25.7	28.3	26.2	28.9	29.5	32.2	1.93	10,146
SPPRAM+SPP05+SPP01+SPP00.5	SPPL-14	27.9	30.5	27.3	29.9	27.9	30.5	31.2	33.8	2.13	10,964
SPPRAM+SPP07	SPPL-15	29.5	32.2	28.9	31.6	29.5	32.2	32.8	35.4	2.32	10,589
SPPRAM+SPP07+SPP00.5	SPPL-16	31.2	33.8	30.6	33.2	31.2	33.8	34.4	37.1	2.56	11,407
SPPRAM+SPP07+SPP01	SPPL-17	32.8	35.4	32.2	34.8	32.8	35.4	36.1	38.7	2.99	11,848
SPPRAM+SPP07+SPP01+SPP00.5	SPPL-18	34.4	37.1	33.9	36.5	34.4	37.1	37.7	40.4	3.23	12,666
SPPRAM+SPP07+SPP02	SPPL-19	36.1	38.7	35.5	38.1	36.1	38.7	39.4	42.0	3.46	12,712
SPPRAM+SPP07+SPP02+SPP00.5	SPPL-20	37.7	40.4	37.1	39.8	37.7	40.4	41.0	43.6	3.74	13,530
SPPRAM+SPP10	SPPL-21	39.4	42.0	38.8	41.4	39.4	42.0	42.7	45.3	4.02	13,175
SPPRAM+SPP10+SPP00.5	SPPL-22	41.0	43.6	40.4	43.0	41.0	43.6	44.3	46.9	4.29	13,993
SPPRAM+SPP10+SPP01	SPPL-23	42.7	45.3	42.1	44.7	42.7	45.3	45.9	48.6	4.61	14,434
SPPRAM+SPP10+SPP01+SPP00.5	SPPL-24	44.3	46.9	43.7	46.3	44.3	46.9	47.6	50.2	4.92	15,252
SPPRAM+SPP10+SPP02	SPPL-25	45.9	48.6	45.3	48.0	45.9	48.6	49.2	51.8	5.24	15,298
SPPRAM+SPP10+SPP02+SPP00.5	SPPL-26	47.6	50.2	47.0	49.6	47.6	50.2	50.9	53.5	5.59	16,116
SPPRAM+SPP10+SPP02+SPP01	SPPL-27	49.2	51.8	48.6	51.2	49.2	51.8	52.5	55.1	6.10	16,557
SPPRAM+SPP10+SPP02+SPP01+SPP00.5	SPPL-28	50.9	53.5	50.3	52.9	50.9	53.5	54.1	56.8	6.46	17,375
SPPRAM+SPP14	SPPL-29	52.5	55.1	51.9	54.5	52.5	55.1	55.8	58.4	6.85	16,519
SPPRAM+SPP14+SPP00.5	SPPL-30	54.1	56.8	53.5	56.2	54.1	56.8	57.4	60.0	7.20	17,337
SPPRAM+SPP14+SPP01	SPPL-31	55.8	58.4	55.2	57.8	55.8	58.4	59.1	61.7	7.60	17,778
SPPRAM+SPP14+SPP01+SPP00.5	SPPL-32	57.4	60.0	56.8	59.4	57.4	60.0	60.7	63.3	7.99	18,596
SPPRAM+SPP14+SPP02	SPPL-33	59.1	61.7	58.5	61.1	59.1	61.7	62.3	65.0	8.43	17,930
SPPRAM+SPP14+SPP02+SPP00.5	SPPL-34	60.7	63.3	60.1	62.7	60.7	63.3	64.0	66.6	8.82	19,460
SPPRAM+SPP14+SPP02+SPP01	SPPL-35	62.3	65.0	61.7	64.4	62.3	65.0	65.6	68.2	9.25	19,901
SPPRAM+SPP14+SPP02+SPP01+SPP00.5	SPPL-36	64.0	66.6	63.4	66.0	64.0	66.6	67.3	69.9	9.72	20,719
SPPRAM+SPP14+SPP02+SPP02	SPPL-37	65.6	68.2	65.0	67.7	65.6	68.2	68.9	71.5	10.35	21,160
SPPRAM+SPP14+SPP02+SPP02+SPP00.5	SPPL-38	67.3	69.9	66.7	69.3	67.3	69.9	70.5	73.2	10.83	21,978
SPPRAM+SPP14+SPP05	SPPL-39	68.9	71.5	68.3	70.9	68.9	71.5	72.2	74.8	11.30	22,024
SPPRAM+SPP14+SPP05+SPP00.5	SPPL-40	70.5	73.2	69.9	72.6	70.5	73.2	73.8	76.4	11.81	22,842
SPPRAM+SPP01+SPP14+SPP05	SPPL-41	72.2	74.8	71.6	74.2	72.2	74.8	75.5	78.1	12.28	22,888
SPPRAM+SPP01+SPP14+SPP05+SPP00.5	SPPL-42	73.8	76.4	73.2	75.9	73.8	76.4	77.1	79.7	12.80	23,706
SPPRAM+SPP02+SPP14+SPP05	SPPL-43	75.5	78.1	74.9	77.5	75.5	78.1	78.7	81.4	13.35	23,285
SPPRAM+SPP02+SPP14+SPP05+SPP00.5	SPPL-44	77.1	79.7	76.5	79.1	77.1	79.7	80.4	83.0	13.86	24,965

- Notes: 1. The clear internal dimensions shown above do not include any allowance for deflection of the walings under load.
2. These waling deflections are listed separately above and generally it will be necessary to increase the clear internal dimensions by twice the appropriate waling deflection.
3. Items denoted "N/A" in the table = Not Applicable.

