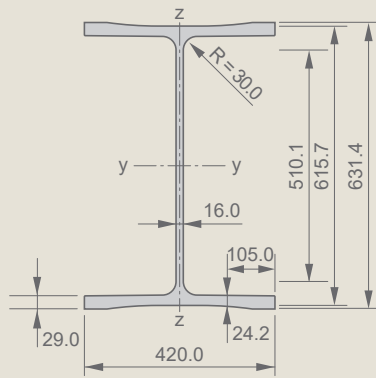




HZ 630M

HZ[®]-M Steel wall system



$A_v = 116.1 \text{ cm}^2$

This combined wall system comprises 3 elements¹⁾:

- HZ-M king piles: wide flange beams with specific flange geometries and milled grooves,
- AZ infill sheet piles: standard sheet piles,
- RZD, RZU and RH: hot rolled connectors.

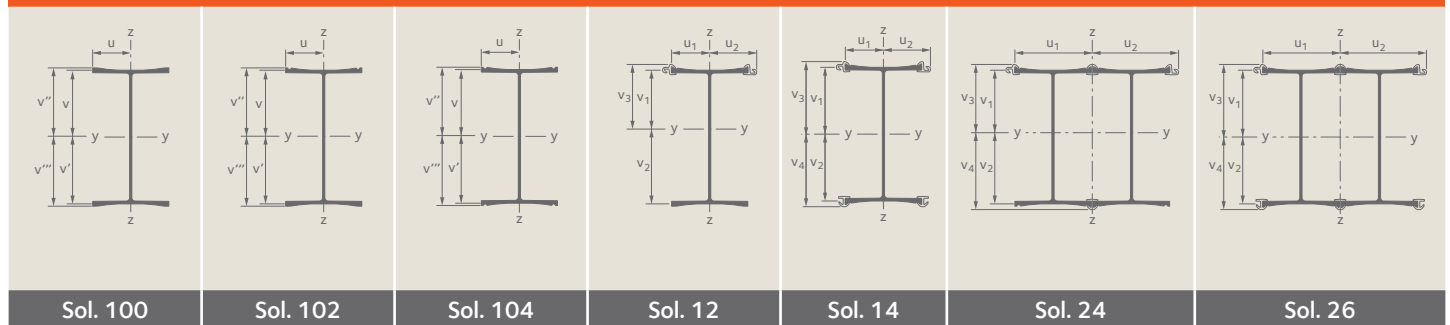
The new HZ 630M section, launched in 2019, completes the existing range of the already large HZ-M series. It was developed mainly for very **hard driving conditions** (installation in compact soils) and for **structures with restrictions on the height of the system**.

The **flange thickness is 24.2 mm** (measured at the location specified in the European standard), and the **maximum height of an HZ 630M solution is only 672 mm** (including connectors).

Check our brochure 'The HZ[®]-M Steel Wall System' for more details on available steel grades, connectors, tolerances, delivery conditions, welding, installation recommendations, etc.

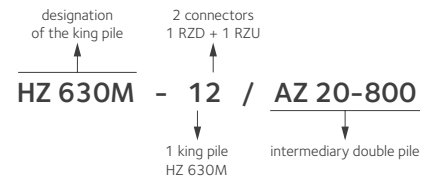
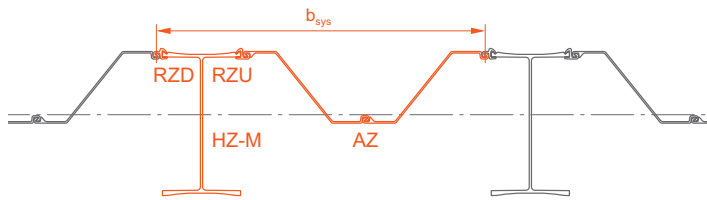
¹⁾ The HZ-M king pile can also be installed without any infill sheet piles, yielding a very stiff combined wall system C 1 or C 23.

Solutions



	Dimensions							Properties per solution											
	b_{sys}	v	v'	v''	v'''	u	-	A	G	I_y	I_z	I_l	I_{ω}	$W_{el,y}^*$	$W_{el,y}^{**}$	$W_{el,z}$	$W_{pl,y}$	A_{LW}	A_{LS}
	mm	mm	mm	mm	mm	mm		cm ²	kg/m	cm ⁴	cm ⁴	cm ⁴	10 ³ cm ⁶	cm ³	cm ³	cm ³	cm ³	m ² /m	m ² /m
Sol. 100	-	307.9	307.9	315.7	315.7	210.0	-	312.0	244.9	220860	34220	600	29450	7175	-	1630	7880	0.421	2.430
Sol. 102	-	311.4	304.4	319.2	312.2	210.0	-	308.6	242.2	217460	33010	570	28410	6985	-	1570	7770	0.440	2.430
Sol. 104	-	307.9	307.9	315.7	315.7	210.0	-	305.1	239.5	214130	31800	540	27440	6955	-	1515	7665	0.440	2.449
	b_{sys}	v_1	v_2	v_3	v_4	u_1	u_2	A	G	I_y	I_z	I_l	I_{ω}	$W_{el,y}^*$	$W_{el,y}^{**}$	$W_{el,z}$	$W_{pl,y}$	A_{LW}	A_{LS}
	mm	mm	mm	mm	mm	mm	mm	cm ²	kg/m	cm ⁴	cm ⁴	cm ⁴	10 ³ cm ⁶	cm ³	cm ³	cm ³	cm ³	m ² /m	m ² /m
Sol. 12	490.0	275.5	340.2	303.8	-	209.9	263.9	349.7	274.5	251260	53400	730	40250	7385	8270	2025	8785	0.582	2.527
Sol. 14	490.0	307.5	308.3	335.7	336.6	209.9	263.9	386.5	303.4	288850	71250	870	62460	9370	8580	2700	10125	0.582	2.808
Sol. 24	924.0	290.0	325.8	318.3	354.1	426.9	480.9	691.5	542.9	500770	430330	253320	95210	15370	14140	8950	17655	1.067	3.031
Sol. 26	924.0	307.6	308.1	336.0	336.4	426.9	480.9	731.8	574.5	540280	506260	253470	129710	17535	16060	10530	19010	1.067	3.292

HZ-M/AZ steel wall solution definitions and designations



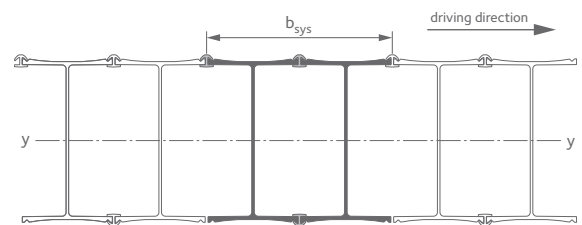
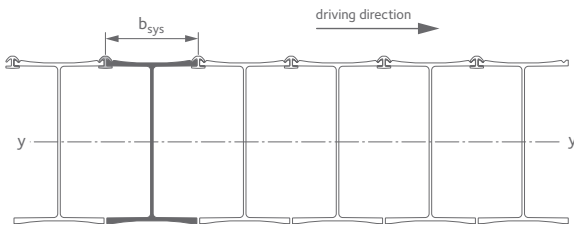
Combinations

	Properties per meter of wall							Per system		
	b_{sys} mm	A cm ² /m	I_y cm ⁴ /m	$W_{el,y}^*$ cm ³ /m	$W_{el,y}^{**}$ cm ³ /m	$G_{60\%}$ kg/m ²	$G_{80\%}$ kg/m ²	$G_{100\%}$ kg/m ²	A_{LW} m ² /m	A_{LS} m ² /m
HZ 630M-12 / AZ 20-800	2090	275.2	154710	4550	5090	176	196	216	2.661	4.606
HZ 630M-14 / AZ 20-800	2090	292.8	172690	5600	5130	184	207	230	2.661	4.887
HZ 630M-24 / AZ 20-800	2524	363.4	226960	6965	6410	252	269	285	3.146	5.111
HZ 630M-26 / AZ 20-800	2524	379.3	242610	7875	7210	260	279	298	3.146	5.372
HZ 630M-12 / AZ 13-770	2030	267.7	140740	4135	4635	174	192	210	2.427	4.372
HZ 630M-14 / AZ 13-770	2030	285.8	159260	5165	4730	182	203	224	2.427	4.653
HZ 630M-24 / AZ 13-770	2464	359.3	217210	6665	6135	252	267	282	2.912	4.876
HZ 630M-26 / AZ 13-770	2464	375.6	233250	7570	6935	260	277	295	2.912	5.138
HZ 630M-12 / AZ 20-700	1890	297.6	163280	4800	5375	191	213	234	2.438	4.383
HZ 630M-14 / AZ 20-700	1890	317.1	183170	5940	5440	200	224	249	2.438	4.664
HZ 630M-24 / AZ 20-700	2324	389.1	240150	7370	6780	271	288	305	2.923	4.887
HZ 630M-26 / AZ 20-700	2324	406.5	257150	8345	7645	279	299	319	2.923	5.148
HZ 630M-12 / AZ 18-10/10	1750	313.1	169170	4975	5570	203	224	246	2.291	4.236
HZ 630M-14 / AZ 18-10/10	1750	334.1	190650	6185	5665	212	237	262	2.291	4.517
HZ 630M-24 / AZ 18-10/10	2184	407.4	249800	7665	7055	285	303	320	2.776	4.740
HZ 630M-26 / AZ 18-10/10	2184	425.8	267890	8695	7965	294	314	334	2.776	5.002

Note: Please contact us for combinations with other infill sheet piles.

Combination C 1

Combination C 23



	Properties per meter of wall							Per system		
	b_{sys} mm	A cm ² /m	I_y cm ⁴ /m	$W_{el,y}^*$ cm ³ /m	$W_{el,y}^{**}$ cm ³ /m	$G_{60\%}$ kg/m ²	$G_{80\%}$ kg/m ²	$G_{100\%}$ kg/m ²	A_{LW} m ² /m	A_{LS} m ² /m
C 1	434	757.3	542340	16780	16900	-	-	594.5	0.513	2.500
C 23	868	772.5	557210	17580	16135	-	-	606.4	0.998	2.992

b_{sys} width of one system (HZ or HZ/AZ combination) [m]
 v_y, v_z, u_1 distance of the neutral axis to the extreme fibre of the HZ-M flanges [m]
 v_y, v_z, u_2 distance of the neutral axis to the extreme fibre of the connector RH/RZ [m]
 A cross sectional area [m²], [m²/m]
 A_y shear area [m²]
 A_{LS} coating area on the soil side (back), excluding the inside of the interlocks, per element or system width, per unit length [m²/m]
 A_{LW} coating area on the water side (front), excluding the inside of the interlocks, per element or system width, per unit length [m²/m]
 G mass of the element / solution (with length RH/RZ = length HZ) per unit length [kg/m]
 $G_{60\%}$ mass of the combination with length of the infill sheet piles AZ = 60% of length of the HZ-M king piles [kg/m²]
 $G_{80\%}$ mass of the combination with length of the infill sheet piles AZ = 80% of length of the HZ-M king piles [kg/m²]

$G_{100\%}$ mass of the combination with length of all the elements = length of the HZ-M king piles [kg/m²]
 I_y moment of inertia about the main neutral axis y-y [m⁴], [m⁴/m]
 I_t torsional constant [m⁴]
 I_w warping constant [m⁶]
 I_z moment of inertia about the neutral axis z-z (weak axis) [m⁴]
 $W_{el,y}^*$ equivalent elastic section modulus of the combination related to the extreme fiber of the flange of the HZ-M [m³/m]
 $W_{el,y}^{**}$ equivalent elastic section modulus of the combination related to the extreme fiber of the connector RH/RZ [m³/m]
 $W_{el,z}$ elastic section modulus of the element related to neutral axis z-z (weak axis) [m³]
 W_{ply} plastic section modulus of the HZ-M [m³]