Data in Imperials

MF-PIPE

A great tool for constructing pipe sheet pile walls:

MF-Pipe Selection Lists

Find out the most economical combinations for vibration and impact pile driving as well as for the DTH procedure.

MF-Pipe - Vibro-/Impact driving with SteelWall connectors

MF-Pipe - DTH procedure with SteelWall connectors

MF-Pipe

What is MF-Pipe?

MF-Pipe is a steel pipe with welded SteelWall MF connectors that together form a MF-Pipe:
Steel pipe + MF connectors = MF-Pipe.
Contiguous MF-Pipes in a row form a MF-Pipe sheet pile wall. Both longitudinally and spirally welded pipes are suitable.

What are MF-Pipes used for?

MF-Pipes are mainly used for vertical support or waterfront-structures, from small excavation pits to the heaviest walls in deep water harbours. MF-Pipes are also suitable for horizontal protective screens, e.g. in tunnel construction. Common pipe diameters range from 15.75" to 118" and pipe lengths of up to 328 ft – supplied in sections – are possible. MF-Pipe sheet pile walls are often the more economical load-bearing systems in comparison.

What are MF connectors?

MF connectors have been specially developed for the requirements of pipe sheet piles. MF connectors are manufactured in Europe.
MF connectors offer a modular system that can be used to realise different pipe spacings as well as special installation procedures, such as DTH or Overburden Drilling. All MF-Pipe connectors have a minimum rotation angle of 20° (except MF64/MF64-IC) and are independently tested to withstand tensile forces from 14.5 up to 19.4 kips/in.
Connector play and traction are essential properties for difficult pile-driving conditions or longer MF-Pipes. MF-Pipe connectors can be provided with sealing material for tightness requirements. By injection through the integrated injection channel, the F40-IC connector can provide for restoration or reinforcement of the base support.

Advantages of MF-Pipes:

Even if the framework conditions on construction sites are never the same, the following general advantages still apply:
With drilling procedures, MF-Pipes can generally be installed in the correct position, with only minor deviations, and obstacles can be drilled through. The drilling procedures are low in vibration and therefore the first choice when it comes to low noise, environmental protection, as well as in inner cities or sensitive building environments. Soil replacement, as was often necessary when steel sheet piles or beam combination walls were used, is normally not necessary with drilling procedures. MF-Pipes are more environmentally friendly than comparable support systems, as pipes can be manufactured almost worldwide in any country and only the MF connectors need to be transported by container to the respective pipe mill. The CO_2 emissions are the lowest possible for heavy load-bearing elements due to shortest possible transport routes.
In addition, MF-Pipes are easy to divide due to precise manufacturing tolerances and can be reassembled by welding.

Who supplies MF-Pipes?

Ready-to-install MF-Pipes are available from your qualified steel pipe manufacturers or steel pipe dealers.
MF connectors are available from SteelWall: www.steelwall.eu.

For MF connector data, see pages 9-10.

Advantages of MF-Pipes in planning and calculation:

- Section modulus above 744 cu.in./ft for deep-water ports are already possible with a pipe diameter of 98".
  Length restrictions are practically non-existent. Tight manufacturing tolerances allow MF-Pipes to be welded together, even while pile driving if necessary.
- System width optimises cost-effectiveness in comparison with conventional wall structures.
- Low deflection thanks to the high moment of inertia of MF-Pipes.
- Vertical loads are transferred to the ground in the best possible way due to the large base area of MF-Pipes.
- Shear forces usually only stress partial cross-sectional areas of MF-Pipes.
- Anchor forces can be introduced into the MF-Pipes through uncomplicated force transmission structures.
- Changes of direction and corners are simply realised by moving the next MF-Pipe connectors to the corresponding angle on the pipe outer surface. This way, dedicated corner structures are not required.
- Sealing of MF-Pipe connectors can be easily realised – e.g. by hot sealing with Steelant-B – before installation.
- Reinforcement of the base support can be realised cost-effectively through the integrated injection channel of the F40-IC connector.
- Load-bearing capacity reserves can be implemented with MF-Pipe, e.g. through subsequent concreting.
- Tensile force requirements of more than 14.5 kips/inch are met by all MF-Pipe connectors. This value is already a normative requirement in some countries.

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

Advantages of MF-Pipes in difficult installation conditions:

MF-Pipe opens up the possibility of applying pile-driving aids within the MF-Pipes to maintain the rate of penetration into the ground. A penetration speed of at least 3.281 ft/min for Vibro-/ Impact driving should be achieved in order to minimise not only damage that can occur, for example, due to the own impedance of the pipe in case of faltering insertion, but also negative impacts on the immediate surroundings by avoiding excessive vibrations and possible subsidence. Pile-driving aids in the free MF-Pipe interior, can be e.g. additional water flushing, dredging or drilling.
Special attention should be paid to pile driving to exclude negative impacts on the positioning. Relevant guidance on pile-driving aids and procedures in this regard can be found in commonly used manuals such as EAU, CUR, TESPA, NASSPA, etc. Deformations of the pipe base, in particular ovalisation, can be reduced or avoided by reinforcement collars during vibration or impact pile-driving procedures. Recommendations from some countries are close-fitting and welded collars made of pipes of the same material, externally and/or internally fitted, with a minimum length of 11.8“ and a minimum steel thickness of 0.35“. A kind of cutting or chiselling effect can be achieved by slightly lifting the collars from the base of the pipe. Approximately twice the wall thickness of the pipe is specified as the height of the offset. Leading/lagging, or positional corrections in vibration and impact pile-driving procedures can be made possible by free vertical strips (gaps) in the collars, and therefore deliberate slight deformations of the MF-Pipes.
From sheet pile driving technology (e.g. TESPA or Delmag technology), attachment and position correction with additional resistors was established. It is necessary to carry out on-site tests on the position and size of the free strips in the collars and to carry out a correction in small steps, spread over several pipes, to prevent damage. For example, leading could be corrected by implementing gaps in the wall axis (slight widening of the pipe base) and lagging could be corrected by implementing gaps at right angles to the wall axis (slight compression of the pipe base).
Due to different project conditions all over the world, quantitative generalisation or guarantee of success of this procedure cannot be given, which also applies for installation of sheet piles. Rocky soils or layers with high density can be well controlled by drilling procedures (DTH, Overburden). The pipes are drilled into the ground with very high positioning accuracy and the risk of damage is minimised. Starting in Scandinavia, this method has shown high efficiency in difficult conditions. Any soil replacement that may be necessary for conventional pile driving is usually no longer required. SteelWall MF64 and MF64-IC connection profiles have been specially designed for MF-Pipe and the DTH procedure. With the DTH method, a rotatable ring bit with an approx. 1.6“ larger diameter is welded to the pipe base for protection of the connection profiles. The bores are started with M22 in driving direction ahead. The F40 or the F40-IC is threaded in. Thanks to this precise procedure, the rotatable ring bits reach their final position with a small lateral distance in the ground. This way, the MF64 and MF64-IC connectors are optimally and almost completely protected during installation. The injection channel of the F40-IC allows subsequent filling of the drilled cavity for restoration of the base support for the pipes.

Less vibrations and high penetration force allow the use of the DTH procedure especially in sensitive environments, such as inner cities, near hospitals, data centres, etc. Despite slow penetration into the ground, the construction time is often shortened in the end, as additional measures are practically not necessary in comparison with conventional pile driving.
DTH has so far been used for pipe diameters of up to 48“ and is under development for diameters of up to 60“. Other drilling procedures already exist for pipe diameters of up to 60“.

MF-Pipe selection list:

In order to narrow down the almost infinite choice of MF-Pipe types in a sensible and clear way, **the most economical combinations** for vibration and impact pile driving as well as for the DTH procedure are listed in the following tables.
MF-Pipe has been consistently sorted for vibration and impact pile driving in ascending order of section modulus and weight. MF-Pipe-DTH is considered according to ascending section modulus. For special project requirements such as corrosion resistance, greater steel thickness for small pipe diameters, their limitation due to confined space, or other circumstances, please inform us by email: **info@mf-pipe.com**. We will be happy to provide you with an individual and economical MF-Pipe solution from the detailed tables.

MF-Pipe

All MF-Pipe selection lists have been drawn up according to the following criteria:

Pipe diameter: OD 16" - 100" (road transport)
Table works with OD <= 16" already exist
Wall thickness: t min >= 0.475" or OD/90 up to OD 78",
t min >= OD/100 for OD >= 78"
DTH: OD 16" - 60"

MF-Pipe types are specified by the following code in only one line:

CODE
MF-Pipe - 24.1 - DTH - MF64-IC - 240.7 - 98.7 - 36 - 0.813

with

24.1 = Abbreviation for MF-Pipe type
DTH = Reference to special installation procedure (currently only for DTH)
MF64-IC = SteelWall connector: (MF64 and MF64-IC only for DTH procedures)
- **M** = male
- **F** = female
- **64** = pipe spacing in mm
- **IC** = injection channel

240.7 = Section modulus in cu.in./ft. Only the pipes are taken into account.
98.7 = Weight in lb./sq.ft, length of connectors calculated with 97% of the pipe length
36 = Outer diameter of the pipe in inch
0.813 = Wall thickness of the pipe in inch.

This information leads to the most important technical data of the MF-Pipe sheet pile wall.
Only the individual length of the pipes from static calculation must still be added. A short form is already sufficient to reliably identify the code and other information in the selection lists: For example MF-Pipe - 24.1 - DTH - MF64-IC or MF- Pipe - 27.5 - MF230 (for vibration or impact pile driving always without special reference).

In the tables, there are two more blocks with further information:

SYSTEM

b_{system} = Width in ft from centre of pipe to centre of pipe
Iy_{system} = Moment of inertia in in^4/ft

$_{max}M_{elastic}$ of R_{eH} or $_{min}R_{t0.5}$ and safety factor = 1.0

Indicates the bending moment that can be absorbed, calculated according to the global safety system, in k.ft./ft for different steel grades, taking into account the conditions mentioned. This enables corresponding conversion of the bending moments into other calculation methods or simple conversion of country-specific specifications.

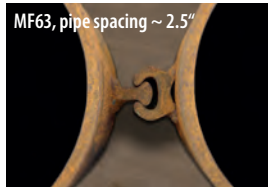
Formulas:
Iy = $(Pi/64) \times (D^4-d^4)/b_{system}$
Wy = $(Pi/32) \times (D^4-d^4)/b_{system}$
Sigma = M / Wy

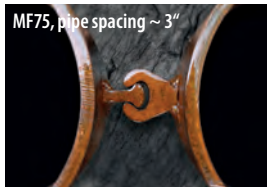
MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

MF-Pipe Vibro-/Impact driving with MF63 - MF230





Code						System		$_{max}M_{elast.}$ of $_{min}R_{eH}$ or $_{min}R_{t0.5}$ and safety factor = 1.0					
	Connector	Sec. Mod.$_{el\ system}$ cu.in./ft	Weight $_{97\%}$ lb./sq.ft	OD in	t in	b $_{system}$ ft	M.o.I.$_{el\ system}$ in^4/ft	S355J2H k.ft./ft	S460MH k.ft./ft	X60 k.ft./ft	X65 k.ft./ft	X70 k.ft./ft	X80 k.ft./ft
MF-Pipe - 10.6	MF230	106.2	52.9	32	0.472	3.420	1699.8	456	591	533	578	623	713
MF-Pipe - 12.3	MF230	123.1	53.5	36	0.472	3.754	2216.3	528	685	618	670	722	826
MF-Pipe - 14.0	MF230	140.2	54.1	40	0.472	4.087	2803.3	601	779	703	762	822	940
MF-Pipe - 14.6	MF180	146.0	55.6	40	0.472	3.923	2920.5	627	812	732	794	856	979
MF-Pipe - 14.8	MF230	148.0	56.9	40	0.500	4.087	2960.7	635	823	742	805	868	993
MF-Pipe - 15.2	MF130	152.4	57.3	40	0.472	3.759	3048.0	654	847	764	829	893	1022
MF-Pipe - 16.6	MF230	166.2	57.5	44	0.500	4.420	3656.1	693	884	834	904	974	1115
MF-Pipe - 17.3	MF180	172.6	58.9	44	0.500	4.256	3797.0	720	918	866	939	1012	1158
MF-Pipe - 18.0	MF130	179.5	60.7	44	0.500	4.092	3949.1	770	998	900	976	1052	1204
MF-Pipe - 18.4	MF100	183.9	61.7	44	0.500	3.994	4046.5	789	1023	923	1000	1078	1234
MF-Pipe - 18.8	MF75	187.8	62.6	44	0.500	3.912	4131.3	783	999	942	1021	1101	1260
MF-Pipe - 20.5	MF230	205.5	64.2	48	0.559	4.753	4930.9	857	1093	1030	1117	1204	1378
MF-Pipe - 21.3	MF180	212.8	65.8	48	0.559	4.589	5107.2	887	1132	1067	1157	1247	1427
MF-Pipe - 22.1	MF130	220.7	67.7	48	0.559	4.425	5296.4	947	1227	1107	1200	1294	1480
MF-Pipe - 22.6	MF100	225.7	68.7	48	0.559	4.327	5416.9	968	1255	1132	1228	1323	1514
MF-Pipe - 23.0	MF75	230.1	69.7	48	0.559	4.245	5521.5	959	1223	1154	1251	1349	1543
MF-Pipe - 23.2	MF63	232.2	69.8	48	0.559	4.206	5573.2	968	1235	1165	1263	1361	1558
MF-Pipe - 25.2	MF230	251.7	71.7	52	0.625	5.087	6544.2	1049	1338	1262	1369	1475	1688
MF-Pipe - 27.5	MF230	274.7	72.3	56	0.625	5.420	7690.9	1145	1461	1378	1494	1610	1842
MF-Pipe - 28.3	MF180	283.2	73.9	56	0.625	5.256	7930.9	1181	1506	1421	1540	1660	1900
MF-Pipe - 29.2	MF130	292.4	75.8	56	0.625	5.092	8186.3	1254	1625	1466	1590	1714	1961
MF-Pipe - 29.8	MF100	298.1	76.9	56	0.625	4.993	8347.6	1279	1657	1495	1621	1748	2000
MF-Pipe - 30.3	MF75	303.1	77.9	56	0.625	4.911	8487.0	1264	1612	1520	1648	1777	2033

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

MF-Pipe Vibro-/Impact driving with MF63 - MF230

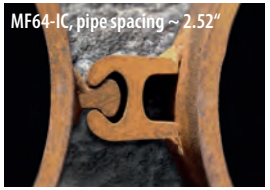
Code						System		$_{max}M_{elast.}$ of $_{min}R_{eH}$ or $_{min}R_{t0.5}$ and safety factor = 1.0					
	Connector	Sec. Mod.$_{el\ system}$ cu.in./ft	Weight $_{97\%}$ lb./sq.ft	OD in	t in	b_{system} ft	M.o.I.$_{el\ system}$ in^4/ft	S355J2H k.ft./ft	S460MH k.ft./ft	X60 k.ft./ft	X65 k.ft./ft	X70 k.ft./ft	X80 k.ft./ft
MF-Pipe - 31.1	MF180	311.1	81.0	56	0.689	5.256	8710.0	1297	1654	1560	1692	1823	2087
MF-Pipe - 33.7	MF180	336.6	81.4	60	0.689	5.589	10099.1	1404	1790	1688	1831	1973	2258
MF-Pipe - 34.7	MF130	346.8	83.4	60	0.689	5.425	10404.4	1446	1844	1739	1886	2033	2326
MF-Pipe - 35.3	MF100	353.2	84.6	60	0.689	5.327	10596.6	1473	1878	1772	1921	2070	2369
MF-Pipe - 35.9	MF75	358.7	85.6	60	0.689	5.245	10762.3	1496	1908	1799	1951	2103	2406
MF-Pipe - 38.3	MF230	382.6	86.9	64	0.750	6.086	12243.4	1595	2035	1919	2081	2243	2566
MF-Pipe - 41.0	MF230	410.3	87.3	68	0.750	6.420	13952.1	1711	2182	2058	2232	2405	2753
MF-Pipe - 42.1	MF180	421.1	89.1	68	0.750	6.256	14317.9	1756	2239	2112	2290	2468	2825
MF-Pipe - 43.2	MF130	432.4	91.1	68	0.750	6.092	14703.4	1803	2300	2169	2352	2535	2901
MF-Pipe - 44.0	MF100	439.5	92.3	68	0.750	5.993	14944.8	1833	2337	2205	2391	2576	2948
MF-Pipe - 44.3	MF230	443.4	94.3	68	0.813	6.420	15074.8	1849	2358	2224	2411	2599	2974
MF-Pipe - 47.3	MF230	473.5	94.8	72	0.813	6.753	17045.6	1974	2518	2375	2575	2775	3176
MF-Pipe - 48.5	MF180	485.3	96.6	72	0.813	6.589	17469.8	2023	2581	2434	2639	2844	3255
MF-Pipe - 49.8	MF130	497.6	98.7	72	0.813	6.425	17915.8	2075	2646	2496	2707	2917	3338
MF-Pipe - 50.5	MF100	505.4	99.9	72	0.813	6.326	18194.4	2107	2688	2535	2749	2962	3390
MF-Pipe - 50.9	MF230	508.6	101.7	72	0.875	6.753	18310.7	2121	2705	2551	2766	2981	3412
MF-Pipe - 57.4	MF230	573.6	102.7	80	0.875	7.419	22945.0	2392	3050	2877	3120	3362	3848
MF-Pipe - 58.7	MF180	586.6	104.6	80	0.875	7.255	23463.6	2517	3261	2942	3190	3438	3935
MF-Pipe - 60.0	MF130	600.1	106.6	80	0.875	7.091	24006.3	2502	3191	3010	3264	3518	4026
MF-Pipe - 61.3	MF230	612.9	109.7	80	0.937	7.419	24518.3	2556	3260	3074	3334	3593	4111
MF-Pipe - 64.8	MF230	647.8	110.1	84	0.937	7.753	27208.7	2701	3445	3249	3523	3797	4345
MF-Pipe - 68.3	MF230	682.7	110.6	88	0.937	8.086	30040.2	2847	3631	3424	3713	4002	4579
MF-Pipe - 69.7	MF180	696.8	112.4	88	0.937	7.922	30662.1	2906	3706	3495	3790	4085	4674
MF-Pipe - 71.2	MF130	711.6	114.5	88	0.937	7.758	31310.3	2967	3784	3569	3870	4171	4773
MF-Pipe - 72.7	MF230	726.7	117.7	88	1.000	8.086	31977.7	3030	3865	3645	3953	4260	4875
MF-Pipe - 80.1	MF230	801.3	118.5	96	1.000	8.752	38463.8	3341	4261	4019	4358	4697	5375
MF-Pipe - 83.9	MF230	838.6	118.8	100	1.000	9.086	41932.8	3497	4460	4206	4561	4916	5625
MF-Pipe - 85.4	MF180	854.1	120.7	100	1.000	8.922	42703.6	3561	4542	4284	4645	5006	5729
MF-Pipe - 87.0	MF130	870.0	122.6	100	1.000	8.758	43503.3	3628	4627	4364	4732	5100	5836
MF-Pipe - 88.3	MF130	882.9	129.9	96	1.063	8.424	42379.6	3681	4695	4428	4802	5175	5922
MF-Pipe - 92.3	MF130	922.8	130.1	100	1.063	8.758	46139.5	3848	4907	4628	5019	5409	6190

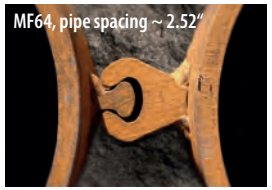
MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

MF-Pipe - DTH procedure with MF64 / MF64-IC





Code							System		$_{max}M_{elast.}$ of $_{min}R_{eH}$ or $_{min}R_{t0.5}$ and safety factor = 1.0					
		Connector	Sec. Mod.$_{el\ system}$ cu.in./ft	Weight $_{97\%}$ lb./sq.ft	OD in	t in	b $_{system}$ ft	M.o.I.$_{el\ system}$ in^4/ft	S355J2H k.ft./ft	S460MH k.ft./ft	X60 k.ft./ft	X65 k.ft./ft	X70 k.ft./ft	X80 k.ft./ft
MF-Pipe - 5.6	DTH	MF64-IC	56.3	58.0	16	0.472	1.543	450.5	242	313	282	306	330	378
MF-Pipe - 5.9	DTH	MF64-IC	59.3	60.9	16	0.500	1.543	474.3	254	330	297	322	348	398
MF-Pipe - 6.5	DTH	MF64-IC	65.0	58.3	18	0.472	1.710	584.7	279	361	326	353	381	436
MF-Pipe - 6.8	DTH	MF64-IC	68.4	61.2	18	0.500	1.710	615.9	294	380	343	372	401	459
MF-Pipe - 7.4	DTH	MF64-IC	73.7	58.5	20	0.472	1.876	736.6	316	410	369	401	432	494
MF-Pipe - 7.8	DTH	MF64-IC	77.6	61.5	20	0.500	1.876	776.3	333	432	389	422	455	521
MF-Pipe - 8.2	DTH	MF64-IC	82.4	58.7	22	0.472	2.043	906.3	353	458	413	448	483	553
MF-Pipe - 8.6	DTH	MF64-IC	86.0	67.9	20	0.559	1.876	860.3	369	478	431	468	504	577
MF-Pipe - 9.5	DTH	MF64-IC	95.2	74.9	20	0.625	1.876	952.5	409	530	478	518	558	639
MF-Pipe - 11.7	DTH	MF64-IC	117.1	68.7	26	0.559	2.376	1521.8	502	651	587	637	686	785
MF-Pipe - 11.8	DTH	MF64-IC	118.3	75.7	24	0.625	2.209	1419.9	508	658	593	644	694	794
MF-Pipe - 13.0	DTH	MF64-IC	129.9	76.1	26	0.625	2.376	1688.9	557	722	652	707	761	871
MF-Pipe - 13.8	DTH	MF64-IC	137.9	69.0	30	0.559	2.709	2068.1	592	766	692	750	808	925
MF-Pipe - 14.2	DTH	MF64-IC	141.5	76.3	28	0.625	2.543	1981.4	607	787	710	770	830	949
MF-Pipe - 14.8	DTH	MF64-IC	148.3	69.2	32	0.559	2.876	2372.8	636	824	744	807	869	995
MF-Pipe - 15.3	DTH	MF64-IC	153.2	76.6	30	0.625	2.709	2297.4	657	851	768	833	898	1027
MF-Pipe - 15.5	DTH	MF64-IC	154.9	83.5	28	0.689	2.543	2168.5	665	861	777	842	908	1039
MF-Pipe - 16.5	DTH	MF64-IC	164.8	76.8	32	0.625	2.876	2637.0	707	916	827	896	966	1106
MF-Pipe - 16.8	DTH	MF64-IC	167.7	83.8	30	0.689	2.709	2515.6	720	932	841	912	983	1125
MF-Pipe - 18.1	DTH	MF64-IC	181.4	90.7	30	0.750	2.709	2721.6	778	1009	910	987	1064	1217
MF-Pipe - 20.6	DTH	MF64-IC	206.2	84.5	36	0.689	3.209	3712.5	885	1147	1034	1122	1209	1383
MF-Pipe - 20.9	DTH	MF64-IC	209.1	104.7	30	0.875	2.709	3136.1	897	1162	1049	1137	1226	1402
MF-Pipe - 24.1	DTH	MF64-IC	240.7	98.7	36	0.813	3.209	4333.5	1033	1338	1207	1309	1411	1615
MF-Pipe - 25.1	DTH	MF64-IC	251.4	92.0	40	0.750	3.542	5028.0	1079	1398	1261	1367	1474	1686
MF-Pipe - 25.8	DTH	MF64-IC	257.8	85.2	44	0.689	3.876	5671.8	1106	1433	1293	1402	1511	1729

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

MF-Pipe - DTH procedure with MF64 / MF64-IC

Code							System		$_{max}M_{elast.}$ of $_{min}R_{eH}$ or $_{min}R_{t0.5}$ and safety factor = 1.0					
		Connector	Sec. Mod.$_{el\ system}$ cu.in./ft	Weight $_{97\%}$ lb./sq.ft	OD in	t in	b $_{system}$ ft	M.o.I.$_{el\ system}$ in^4/ft	S355J2H k.ft./ft	S460MH k.ft./ft	X60 k.ft./ft	X65 k.ft./ft	X70 k.ft./ft	X80 k.ft./ft
MF-Pipe - 26.5	DTH	MF64-IC	265.4	92.2	42	0.750	3.709	5574.1	1139	1476	1331	1444	1556	1780
MF-Pipe - 27.1	DTH	MF64-IC	270.7	85.3	46	0.689	4.042	6226.6	1162	1505	1358	1472	1587	1816
MF-Pipe - 27.9	DTH	MF64-IC	279.5	92.3	44	0.750	3.876	6148.4	1199	1554	1402	1520	1638	1875
MF-Pipe - 28.6	DTH	MF64-IC	286.3	99.5	42	0.813	3.709	6012.2	1228	1592	1436	1557	1678	1920
MF-Pipe - 29.1	DTH	MF64-IC	290.6	106.5	40	0.875	3.542	5812.2	1247	1616	1458	1581	1703	1949
MF-Pipe - 30.1	DTH	MF64-IC	301.5	99.7	44	0.813	3.876	6633.1	1294	1676	1512	1640	1767	2022
MF-Pipe - 30.8	DTH	MF64-IC	307.6	92.6	48	0.750	4.209	7381.9	1320	1710	1543	1673	1803	2063
MF-Pipe - 31.7	DTH	MF64-IC	316.7	99.9	46	0.813	4.042	7284.5	1359	1761	1589	1722	1856	2124
MF-Pipe - 32.3	DTH	MF64-IC	323.3	107.0	44	0.875	3.876	7113.4	1387	1798	1622	1759	1895	2169
MF-Pipe - 33.2	DTH	MF64-IC	331.9	100.0	48	0.813	4.209	7966.6	1424	1845	1665	1805	1946	2227
MF-Pipe - 34.0	DTH	MF64-IC	339.7	107.2	46	0.875	4.042	7813.5	1458	1889	1704	1848	1991	2279
MF-Pipe - 34.7	DTH	MF64-IC	347.2	100.2	50	0.813	4.376	8679.3	1490	1930	1741	1888	2035	2329
MF-Pipe - 35.6	DTH	MF64-IC	356.1	107.4	48	0.875	4.209	8546.6	1528	1980	1786	1937	2087	2389
MF-Pipe - 36.2	DTH	MF64-IC	362.4	100.3	52	0.813	4.542	9422.6	1555	2015	1818	1971	2124	2431
MF-Pipe - 37.2	DTH	MF64-IC	372.5	107.6	50	0.875	4.376	9312.7	1598	2071	1868	2026	2183	2499
MF-Pipe - 37.8	DTH	MF64-IC	377.6	100.5	54	0.813	4.709	10196.6	1620	2100	1894	2054	2214	2533
MF-Pipe - 39.7	DTH	MF64-IC	397.5	114.9	50	0.937	4.376	9937.2	1705	2210	1994	2162	2330	2666
MF-Pipe - 40.5	DTH	MF64-IC	405.3	107.9	54	0.875	4.709	10943.7	1739	2253	2033	2204	2376	2719
MF-Pipe - 41.5	DTH	MF64-IC	415.0	115.1	52	0.937	4.542	10791.4	1781	2307	2082	2257	2433	2784
MF-Pipe - 42.2	DTH	MF64-IC	421.7	108.1	56	0.875	4.875	11808.8	1809	2345	2115	2294	2472	2829
MF-Pipe - 43.3	DTH	MF64-IC	432.6	115.3	54	0.937	4.709	11680.9	1856	2405	2170	2353	2536	2902
MF-Pipe - 44.1	DTH	MF64-IC	441.2	122.5	52	1.000	4.542	11470.3	1893	2453	2213	2399	2586	2959
MF-Pipe - 45.0	DTH	MF64-IC	450.2	115.4	56	0.937	4.875	12605.8	1932	2503	2258	2448	2639	3020
MF-Pipe - 46.0	DTH	MF64-IC	459.9	122.7	54	1.000	4.709	12417.5	1973	2557	2307	2501	2696	3085
MF-Pipe - 47.9	DTH	MF64-IC	478.6	122.9	56	1.000	4.875	13402.3	2054	2661	2401	2603	2806	3211
MF-Pipe - 48.5	DTH	MF64-IC	485.4	115.8	60	0.937	5.209	14561.5	2083	2698	2434	2640	2845	3256
MF-Pipe - 51.6	DTH	MF64-IC	516.2	123.2	60	1.000	5.209	15485.1	2215	2870	2589	2807	3026	3462

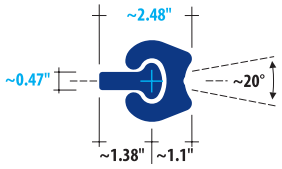
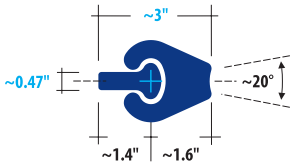
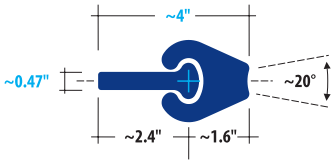
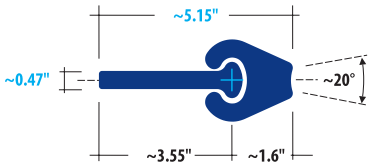
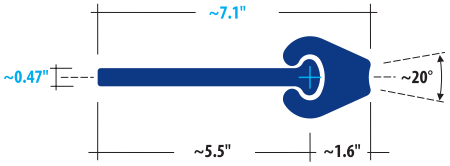
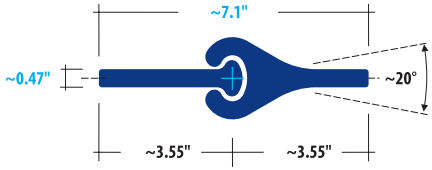
Disclaimer:
The selection lists do not claim to be complete. Use and application of these tables and their calculated values is at your own risk. Neither SteelWall nor MF-Pipe assume any liability for accuracy nor any errors or damages resulting from the application. Before application, the data must be checked by qualified specialist engineers.

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

SteelWall MF connectors for vibration and impact pile driving

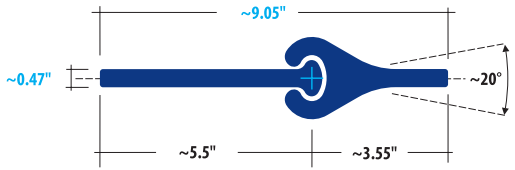
Connectors | We recommend continuous welds of at least 6 mm (0.24") on both sides.	Steel grade	Steel thickness	Standard lengths	Weights	Application	Max. tensile strength	Pile driving methods
MF63 	S355J2	0.47"	26.25 ft 38.7 ft	M35: 3.2 lbs/ft F28: 7.19 lbs/ft	Pipe pile walls	14.57 kips/in (FEM)	Vibration Impact
MF75 	S355J2	0.47"	26.25 ft 38.7 ft	M35: 3.2 lbs/ft F40: 9.6 lbs/ft	Pipe pile walls	19.52 kips/in	Vibration Impact
MF100 	S355J2	0.47"	26.25 ft 38.7 ft	M60: 4.64 lbs/ft F40: 9.6 lbs/ft	Pipe pile walls	19.52 kips/in	Vibration Impact
MF130 	S355J2	0.47"	26.25 ft 38.7 ft	M90: 6.56 lbs/ft F40: 9.6 lbs/ft	Pipe pile walls	19.52 kips/in	Vibration Impact
MF180a 	S355J2	0.47"	26.25 ft 38.7 ft	M140: 9.92 lbs/ft F40: 9.6 lbs/ft	Pipe pile walls	19.52 kips/in	Vibration Impact
MF180b 	S355J2	0.47"	26.25 ft 38.7 ft	M90: 6.56 lbs/ft F90: 12.38 lbs/ft	Pipe pile walls	14.6 kips/in (FEM)	Vibration Impact

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

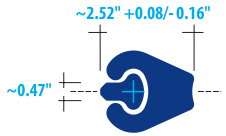
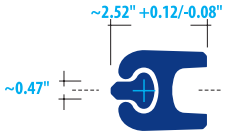
Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

SteelWall MF connectors for vibration and impact pile driving

Connectors | We recommend continuous welds of at least 6 mm (0.24“) on both sides.	Steel grade	Steel thickness	Standard lengths	Weights	Application	Max. tensile strength	Pile driving methods
MF230 	S355J2	0.47“	26.25 ft 38.7 ft	M140: 9.92 lbs/ft F90: 12.38 lbs/ft	Pipe pile walls	14.6 kips/in (FEM)	Vibration Impact

SteelWall MF connectors for the DTH procedure

Connectors | We recommend continuous welds of at least 6 mm (0.24“) on both sides.	Steel grade	Steel thickness	Standard lengths	Weights	Application	Max. tensile strength	Pile driving method
MF64 	S355J2	0.47“	26.25 ft 38.7 ft	M22: 2.3 lbs/ft F40: 9.6 lbs/ft	Pipe pile walls	19.52 kips/in	DTH procedure only
MF64-IC 	S355J2	0.39“ - 0.47“	26.25 ft 38.7 ft	M22: 2.3 lbs/ft F40-IC: 9.1 lbs/ft	Pipe pile walls	18.07 kips/in	DTH procedure only

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

MF-Pipe is a division of SteelWall ISH GmbH
Tassilostr. 21
82166 Gräfelfing / Germany

Phone: +49-89-74 120 122
Fax: +49-89-74 120 128
E-Mail: info@mf-pipe.com

www.steelwallus.com
www.mf-pipe.com

MF-PIPE