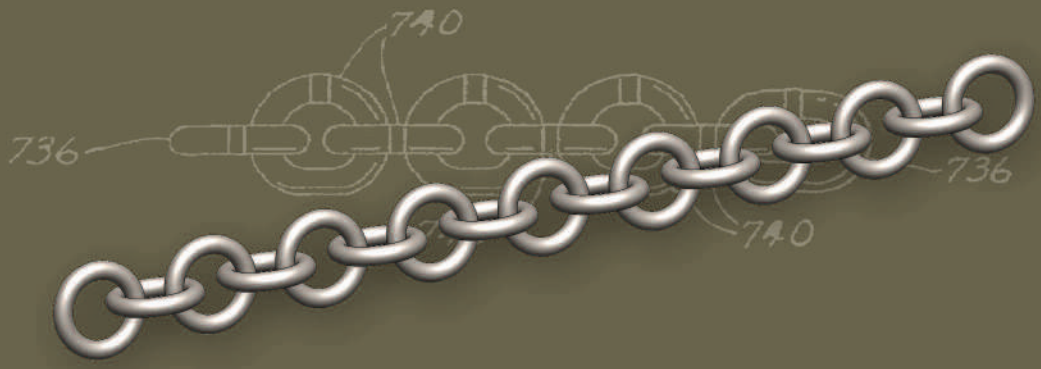
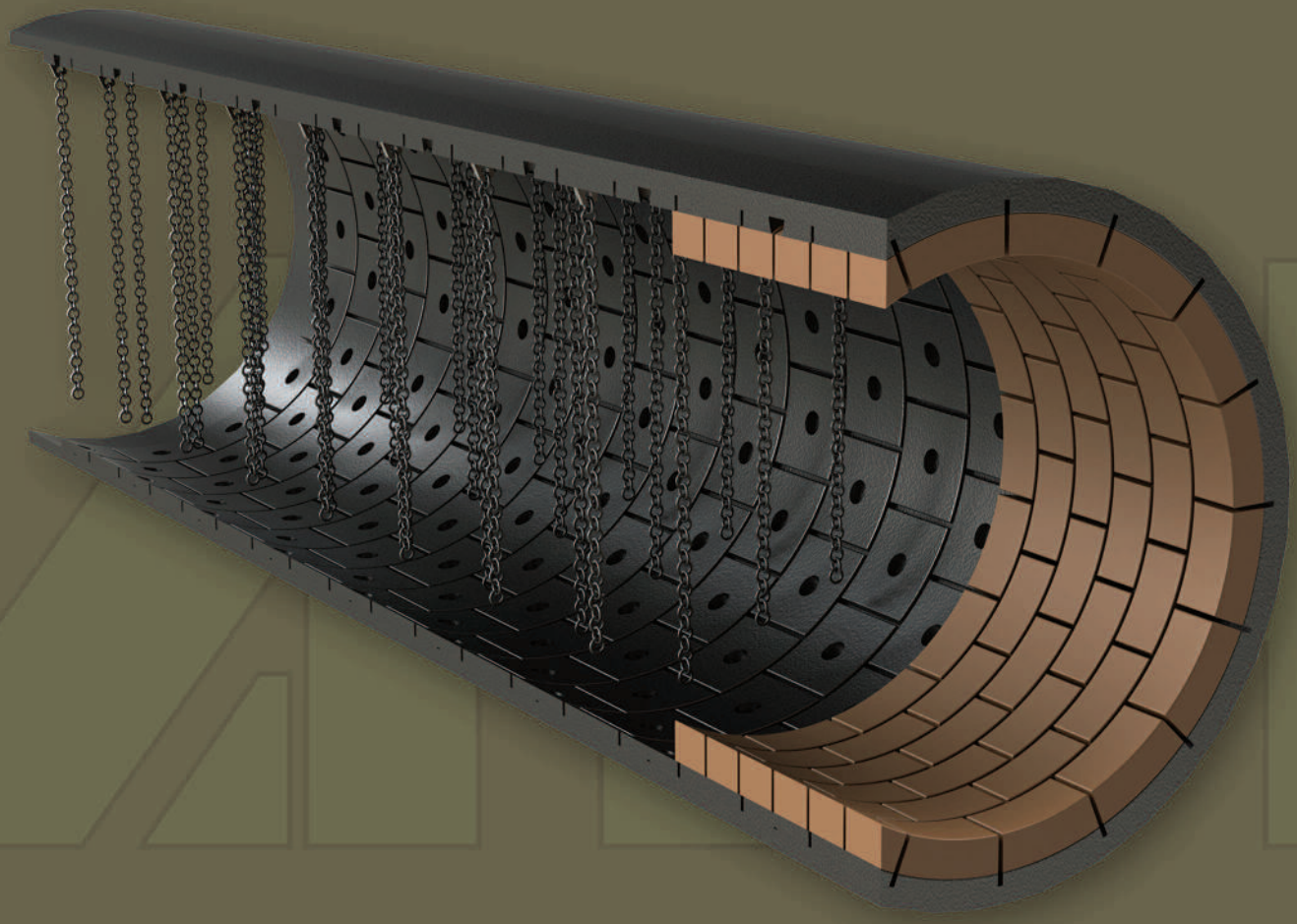


Industries Served:

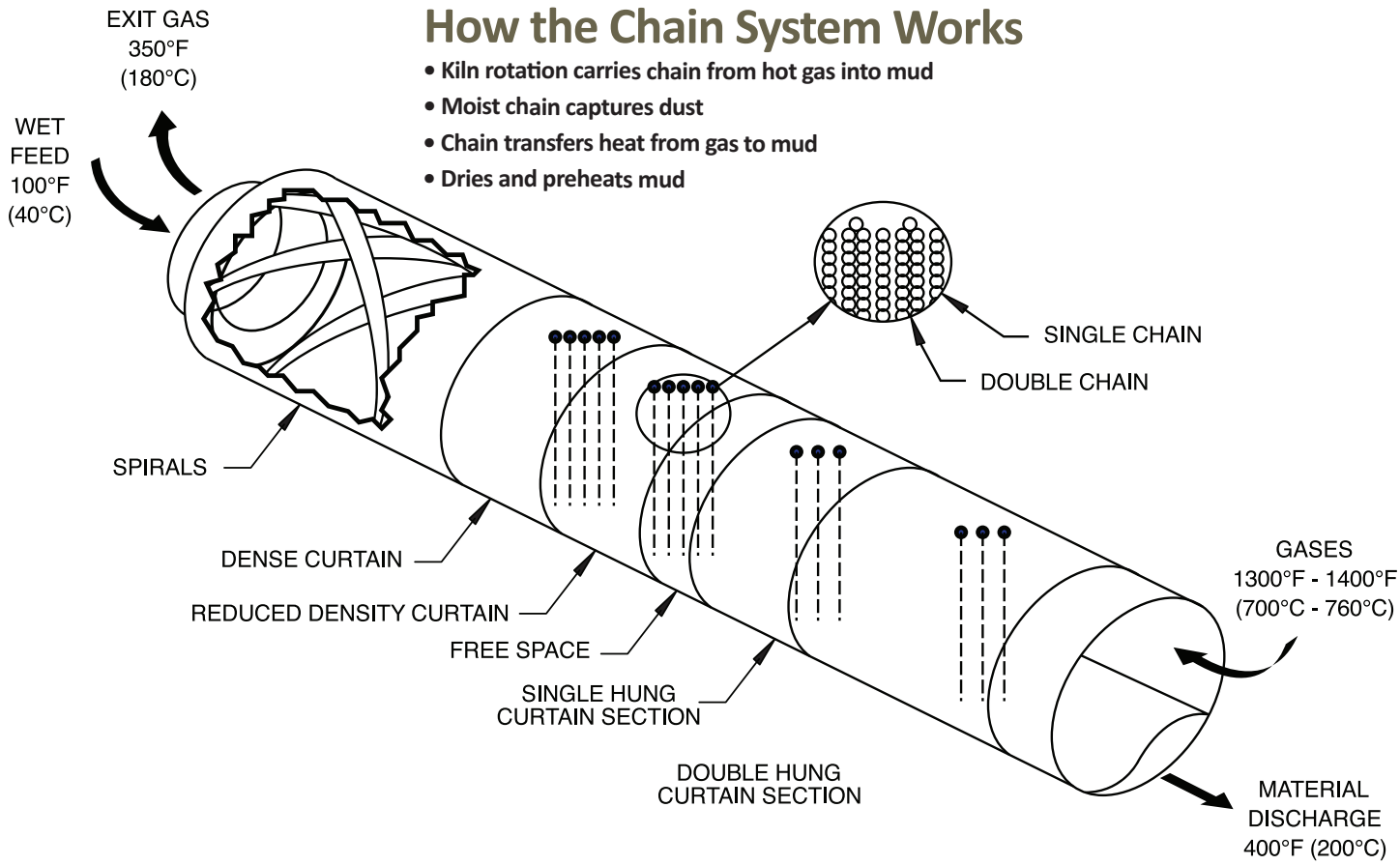
- Pulp & paper
- CO-Generation
- Mining/Oil & Gas
- Cement
- Potash



Rotary Kiln Chains & Accessories

How the Chain System Works

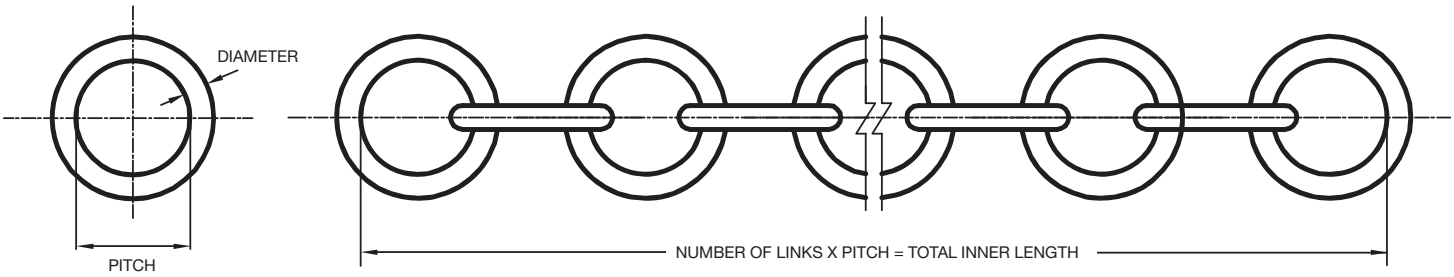
- Kiln rotation carries chain from hot gas into mud
- Moist chain captures dust
- Chain transfers heat from gas to mud
- Dries and preheats mud



Objectives

- Efficient evaporation of moisture
- Increase/optimize heat transfer from gas to material
- Dust suppression
- Reduce kiln exit gas temperature
- Continued spiral pattern moves material through kiln
- Dry and initial material preheat

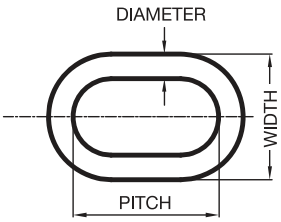
Rotary Kiln Chain – Round

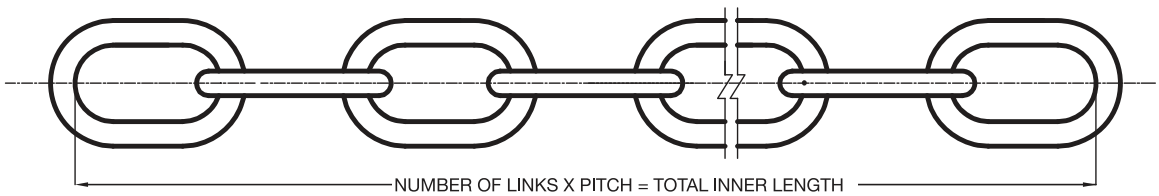


AMH **offers a wide range of products for rotary kilns for both the pulp and paper and cement industries. We specialize in the manufacture and sale of kiln chains, shackles, and hangers. We manufacture these in various sizes and material grades based on your specific kiln operation conditions.**

Diameter (inch)	Pitch (inch)	Weight/Ring (Lbs.)	Weight/ 100 Feet(Lbs.)
5/8	2-3/4	0.95	413
5/8	4	1.63	497
3/4	2-9/16	1.43	672
3/4	2-3/4	1.39	605
3/4	3	1.48	592
3/4	2-9/16	1.48	693
3/4	2-3/4	1.54	672
3/4	3	1.65	665
3/4	3-5/64	1.70	663
3/4	3-1/8	1.72	655
3/4	4	2.05	625
7/8	3	2.05	822
7/8	3-1/8	2.14	815
7/8	4	2.51	766
7/8	3	2.25	902
7/8	3-1/8	2.36	899
7/8	4	2.51	765
1	3	2.71	1088
1	3-1/8	2.85	1083
1	3-1/2	3.09	1057
1	4	3.35	1021
1-1/8	4	4.30	1310
1-3/16	4	5.03	1532
1-1/4	4	5.84	1781

Rotary Kiln Chain – Oval



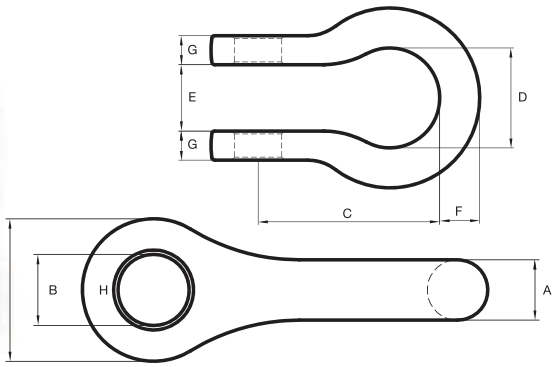


AMH kiln chains are supplied in materials ranging from carbon steel to high temperature stainless steel. The welding process is done robotically and supplied in cut-to-size lengths.

Diameter (inch)	Pitch (inch)	Outside Width	Weight/Ring (Lbs.)	Weight/ 100 Feet (Lbs.)
5/8	2-13/64	2-1/8	0.644	350
5/8	2-15/32	2-3/8	0.914	440
3/4	2-3/4	2-5/8	1.263	549
3/4	3-1/8	3-1/8	1.600	613
7/8	3-25/64	2-59/64	1.850	659
7/8	3-1/8	3-1/32	1.905	728
1	3-19/32	3-1/2	2.580	866
1	3-19/64	3-1/2	2.806	941
1-1/8	3-7/8	4	3.565	1109
1-3/16	4-5/32	4-5/32	4.400	1277

Shackles

AMH shackles are cast using a lost wax investment casting to maintain tighter tolerances and superior surface finishes. Our shackles accept either a weld-on pin or a standard nut and bolt. Custom shackles can also be designed and made to order.



Diameter	A	B	C	D	E	F	KG
3/4	3-3/4	2	1-11/32	7/8	9/16	1-3/4	0.75
7/8	4	2-5/32	1-7/16	1	5/8	2-1/16	1.05
1	4	2-5/16	1-1/2	1-5/32	23/32	2-15/16	1.5
1-1/8	3-3/4	2-3/4	1-3/4	1-7/32	1-1/16	2-49/64	2

Rotary Kiln – Material Grades

The right selection of material components will provide the best service life, and prove to be most cost effective over time. Kiln operation temperature, gases and method of firing are the primary elements in the selection of material.

DIN Standard Material Number	DIN Standard	AISI Standard	Scale Resisting Up To (Gas Temperature)		Recommended Temperature Range (Max. Gas Temperature)		Structure
			°C	°F	°C	°F	
Carbon Steels							
1.0402	C 22	C1020	500	932	500	932	Ferite/Perlite
1.0470	21Mn4Al	C1022	500	932	500	932	Ferite/Perlite
1.0501	C 35	C1035	500	932	500	932	Ferite/Perlite
Alloy Steels							
1.7225	42CrMo4	SAE 4140	550	1022	550	1022	Ferite/Perlite
1.6523	21NiCrMo2	SAE 8620	550	1022	550	1022	Ferite/Perlite
Ferritic Steels							
1.4713	X10CrAl7 (8F)	8F	850	1562	500-800	932-1472	Ferite
1.4724	X10CrAl13 (9F)	9F	950	1742	500-900	932-1652	Ferite
1.4742	X10CrAl18 (10F)	10F	1100	2012	800-1050	1472-1922	Ferite
Austenitic Steels							
1.4301	X5CrNi1810	304	850	1562	500-850	932-1562	Austenite
1.4821	X15CrNiSi254	329	1150	2102	900-1100	1652-2012	Austenite
1.4828	X15CrNiSi2012	309	1050	1922	800-1050	1472-1922	Austenite
1.4841	X15CrNiSi2520	310	1200	2192	850-1200	1562-2192	Austenite
1.4541	X6CrNiTi1810	321	850	1562	500-850	932-1562	Austenite
Austenitic Manganese Steels							
1.4892-85 MA	14872-92	N/A	850	1562	500-850	932-1562	Austinite Manganese
1.4892-105 MA	14872-93	N/A	1000	1837	750-950	1380-1748	Austinite Manganese
1.4892-100 MA	14872	N/A	1050	1922	800-1000	1472-1832	Austinite Manganese
1.4892-115 MA	14872-91	N/A	1200	2192	850-1200	1562-2192	Austinite Manganese

Carbon Steels

In the first section or "cold section" where the normal gas temperature is below 500 degrees Celsius, carbon steel chains can be installed. If this section is a high wear area we would suggest using a heat treated through hardened chain and hanger system.

Alloy Steels

When compared to carbon steels, alloy steels have higher core hardness and will provide better service in temperatures ranging from 300 to 500 degrees Celsius.

Ferritic Steels

These material grades are the most resistant to sulphurous gases, but less suitable for nitrating and carburizing environments. These steels are best suited for kilns that are fired with gas or oil.

Austenitic Cr-Ni Steels

This material is the most resistant to carburizing conditions, but not suited for atmospheres with sulphurous gases present. Austenitic Manganese Steel is suited for kilns with sulphur containing gases with carburizing conditions. These chains offer superior toughness and work hardening properties.