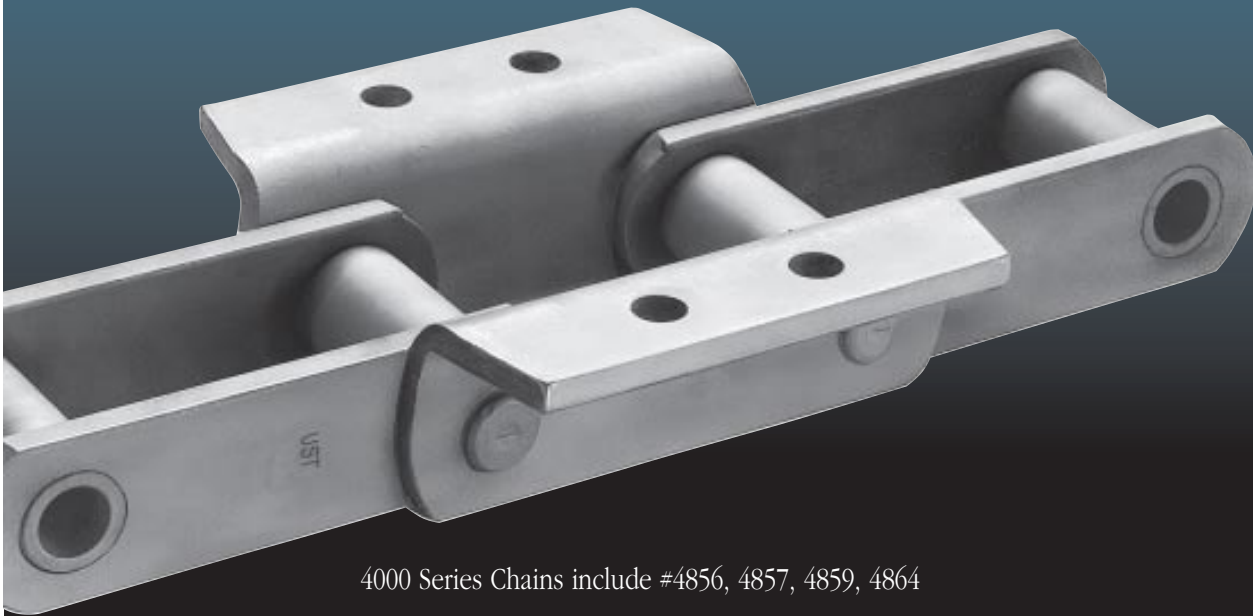




Engineering Chain Division

4000 Series

Cement Plant Elevator Chains



4000 Series Chains include #4856, 4857, 4859, 4864

Barrier Seal

Superior Wear Life

Superior Fatigue Strength

Superior Average Ultimate Strength

4000 Series Chain—

For Superior Performance In Cement

A truly remarkable bucket elevator chain, designed especially for service in cement plants, provides the highest ultimate and fatigue strengths for this application. As an added feature, barrier seals in 4000 Series Chains help prevent abrasive materials from entering and attacking the chain joints.

Matching sprockets, designed expressly for use with 4000 Series Chains, are also available. These include standard size sprockets furnished with a minimum 50R (Rockwell C) tooth hardness. Higher hardness sprockets can be ordered.

Maximum Strength

These 4000 Series Chains (4856, 4857, 4859, and 4864) are made of specially selected 100% alloy steel, and they possess ultimate strength ratings approximately 45% higher than any competitive brand. A special piercing technique developed by U.S. Tsubaki makes exceptionally smooth pitch holes for high interference fits. This piercing method, combined with shot peening, yields maximum fatigue strength and protects against failure, even when 4000 Series Chains are challenged by the most severe applications.

Precision Manufacturing Eliminates Staggered Pins

Problem: Staggering pins or pin links has been an industry trade-off for years. This was thought to be a remedy to the problem of side bowing (chain hangs crooked), which occurs when the pitch of the outer sidebars is not held to close enough tolerances or when pin links are not built straight.

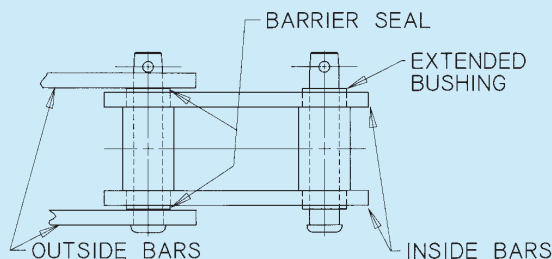
Solution: At the Engineering Chain Division of U.S. Tsubaki, 4000 Series Chains are manufactured to close tolerances using state-of-the-art production equipment and methods. This enables us to produce high-performance cement elevator chains without staggered pins, allowing chains to hang straight and true without compromising strength or wear life.

Average Tensile Strength (ATS)

(Measured in Pounds)

Chain Number	4000 Series ATS	Competitor's ATS
4856	145,000	100,000
4857	174,000	130,000
4859	264,000	200,000
4864	275,000	200,000

4000 SERIES ELEVATOR CHAIN WITH BARRIER SEALS

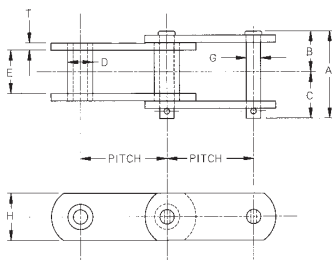


Barrier Seals

The chain bushing extends beyond the inside sidebar to establish a barrier to prevent as much abrasive material as possible from entering the pin/bushing joint area. This heavy duty hardened part will not wear out prematurely, as it will not separate from the chain and contaminate cement plant production batches. Located between the inside and outside sidebars, the barrier seals prevent a build-up of material due to "flooding" of the elevator boot section, which can result in dry cavitation of pins.

Plant Bucket Elevators

4000 SERIES CEMENT PLANT CHAIN



Maximum Wear Life

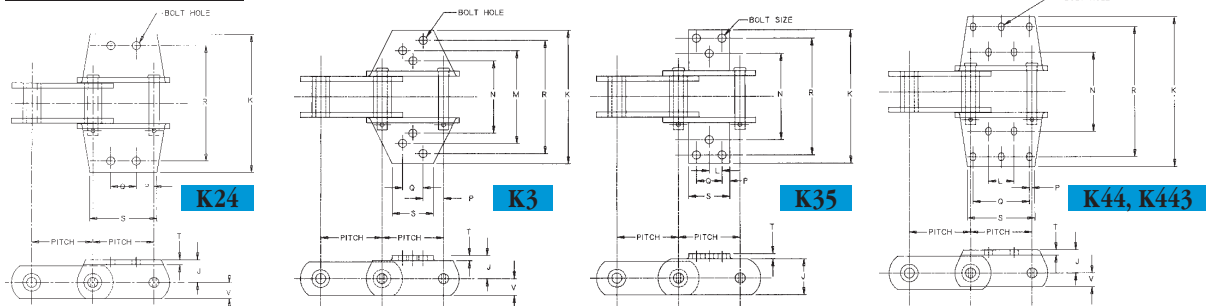
Extra deep induction hardening of pins and carburizing of bushings provide unsurpassed wear life. After years of testing, an appropriate high-hardness specification was developed to resist abrasion caused by cement. A specific level and depth of hardness is produced and carefully checked to ensure that 4000 Series Chain provides the maximum wear and toughness necessary to survive extended periods of service in cement plant bucket elevators.

SPECIFICATIONS

All dimensions are in inches unless otherwise indicated.

Chain No.	Pitch	Width				Bushing Dia. D	Pin Dia. G	Sidebar		Avg. Wt. (lbs./ft.)
		A	B	C	E			Hgt. H	Thick. T	
4856	6.00	6 1/8	2 13/16	3 7/32	3	1 3/4	1	2 1/2	1/2	16.5
4857	6.00	6 1/8	2 13/16	3 7/32	3	1 3/4	1	3 1/4	1/2	21.0
4859	6.00	7 3/8	3 15/32	3 13/16	3 3/4	2 3/8	1 1/4	4	5/8	34.0
4864	7.00	7 3/8	3 15/32	3 13/16	3 3/4	2 3/8	1 1/4	4	5/8	31.0

ATTACHMENTS



Attach. Number	Chain No.	N	M	R	K	L	Q	S	P	Bolt Size	J	T	V	Avg. Wt. lbs./ft.
K24	4856	—	—	7 1/4	9 1/2	—	2 1/2	7 1/4	1 3/4	5/8*	1 7/8	1/2	1 1/4	27.5
K3	4856	6 9/16	10 15/16	12 1/16	14	—	2 3/4	4 1/4	1 5/8	1/2	1 7/8	1/2	1 1/4	27.5
K35	4856	7 1/4	—	11 3/4	13 1/2	—	2 1/2	6 7/16	1 3/4	5/8	1 7/8	1/2	1 1/4	27.5
K44 Complete with 8 Att. Holes	4857	7	—	12	14 1/2	3 1/2	3 1/2	6 7/16	1 1/4	1/2	2 1/2	1/2	1 1/4	34.5
	4859	9	—	13	15 3/32	2 3/4	4 1/2	6 1/2	3/4	5/8	3	5/8	1 5/8	48.0
K443	4864	9	—	13	15 3/32	3 3/4	5 1/2	8 9/16	3/4	5/8	3	5/8	1 5/8	55.0

* Hole can also be supplied for 1/2" size bolt

Complete Solutions for Cement Chain Applications

Build reliability into your system with sprockets and power transmission components from U.S. Tsubaki.



Sprockets

Engineering Class Chains and Sprockets must work together, so buying them from the same source makes sense. When chains and sprockets articulate correctly, you get longer service life from your chain. That means long-term savings and real value for your operation.

Chain life is only as good as the sprocket that drives it, so maximize your operation with Engineering Class Sprockets from U.S. Tsubaki.



PRO-ALIGN®

Keep your operation running at peak performance with the PRO-ALIGN Laser Alignment System from U.S. Tsubaki. Our advanced technology lets you align all power transmission devices faster, easier, and more effectively than conventional methods. Available only from U.S. Tsubaki, PRO-ALIGN means laser precision for today's high line speeds, tight design specifications, and critical production.



ONE-TOUCH INSPECTION DOOR®

Save time and money with the ONE-TOUCH INSPECTION DOOR. Our prefabricated units — in stock and ready to go — install more quickly and are less expensive than building your own.