

WEAR PARTS
JAW CRUSHERS
LIPPMANN



MPP
AFTERMARKET



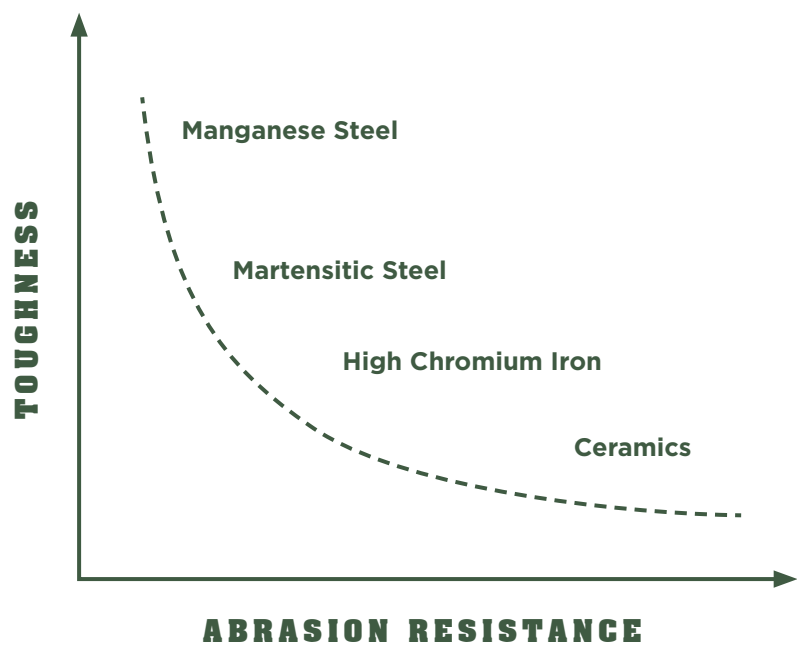
At MPP Aftermarket, we understand that every second of downtime impacts your bottom line. That is why we deliver premium wear parts for jaw crushers with precision, reliability and speed. Our global parts inventory, supported by factory-trained technical and on-call support teams, means you get the right component exactly when you need it.

Whether you are replacing liners, cheek plates, toggle assemblies or complete wear-kits, choosing the correct material grade and geometry is critical to maximize production and minimize unplanned maintenance. Industry leaders highlight that well-engineered wear parts help avoid costly stoppages, extend service life and stabilize crushing performance.

Partnering with MPP Aftermarket ensures your operations remain productive and profitable. Our promise is simple: uptime delivered.

WEAR PARTS MATERIALS & PROPERTIES

MATERIAL TOUGHNESS vs ABRASION RESISTANCE



WEAR PART MATERIALS

MANGANESE STEEL
Cone Liners (Cone Crushers)
Jaw Dies (Jaw Crushers)
MARTENSITIC STEEL (HARDENED STEEL)
Blow Bars (Impact Crushers)
HIGH CHROMIUM IRON (CHROME)
Blow Bars (Impact Crushers)
COMPOSITES (CERAMIC INSERTS)
Blow Bars (Impact Crushers)

MANGANESE STEEL

Manganese steel is the most common material for crusher wears. The wear resistance of manganese steel is based on a work hardening phenomenon. When the surface of manganese steel is under heavy impact or a compressive load, it hardens from the surface while the base material remains tough. The depth and hardness of the work hardened surface vary depending on the application and manganese steel grade.

The standard all-round manganese level, and the most common for all jaws and cone liners, is 18%. Low-manganese-grade steel (14%) work hardens more slowly than higher grades but is more impact resistant. Higher levels (22%) are used in very hard and abrasive applications where significant wear resistance is needed.



WEAR MECHANISMS IN CRUSHING CHAMBERS

TYPES OF WEAR MECHANISMS

Wear is the gradual loss of material from crushing surfaces through different mechanisms. The two primary types found in crusher chambers are abrasive wear and fatigue wear.

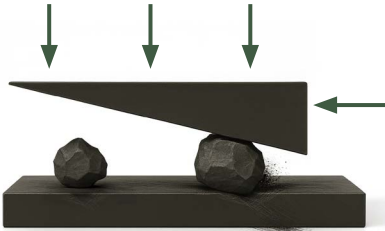
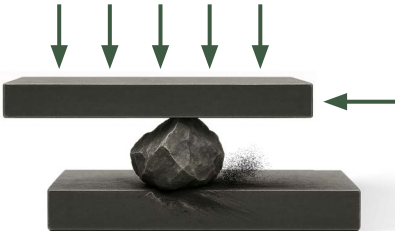
Abrasive wear happens when hard particles or fragments scrape, gouge, or grind against wear parts, steadily removing material from the surface.

Fatigue wear develops from repeated impact or compression loads that cause microscopic cracking and surface flaking over time.

During the crushing cycle, high-stress abrasion occurs when larger particles strike the surface, while low-stress abrasion appears between cycles as smaller particles slide across wear parts.



ABRASION AND FATIGUE OVERVIEW

	GOUGING ABRASION ■ Large particles. ■ High impact or compression loads. ■ Good work hardening on manganese.
	LOW STRESS OR SCRATCHING ABRASION ■ No compression load. ■ Scratching abrasion occurs while material is sliding on the surface of the wear part. ■ Less work hardening on manganese.
	HIGH STRESS OR GRINDING ABRASION ■ Smaller particles. ■ High compression load. ■ Less work hardening on manganese.

WEAR FACTORS WHAT AFFECTS WEAR LIFE

SERVICE LIFE FACTORS

The service life of crusher wear parts is influenced by many factors, from the type of wear and operating conditions to the characteristics of the feed material and the properties of the parts themselves.

Of these, the abrasiveness and crushability of the feed material are often the most critical, directly affecting performance, longevity, and overall operating efficiency.

ENVIRONMENTAL FACTORS	TYPE OF WEAR	CRUSHER PARAMETERS	FEED	WEAR MATERIAL
- Moisture - Temperature	- Abrasion - Fatigue - Corrosion - Adhesion	- CSS - Speed - Stroke	- Distribution - Rock types & characteristics - Wearing - Particles	- Wear material type / Chemical composition - Wear part - Manufacturing quality

FEED MATERIAL CLASSIFICATION & PROPERTIES

CLASSIFICATION	FRENCH ABRASIVENESS (G/TON)
Non-Abrasive *	0 - 100
Slightly Abrasive **	101 - 600
Medium Abrasive ***	601 - 1200
Abrasive ****	1201 - 1700
Very Abrasive *****	1701 +

CLASSIFICATION	CRUSHABILITY (%)
Very Easy *	50 +
Easy **	40 - 49
Medium ***	30 - 39
Difficult ****	20 - 29
Very Difficult *****	0 - 19

APPLICATION	ABRASIVENESS	CRUSHABILITY
Basalt	500 - 2500 ****	20 - 50 ***
Dolomite	0 - 500 **	30 - 60 **
Granite	900 - 1900 **	30 - 90 *
Gravel	300 - 2500 ***	30 - 55 **
Limestone	0 - 500 **	30 - 65 **
Recycled Concrete	600 - 1200 ***	20 - 50 ***
Recycled Asphalt	1500 - 2400 *****	30 - 50 ***

ABRASIVE CLASSIFICATION

Abrasiveness of the feed material can be determined in rock laboratories using a test for abrasiveness. The table (left) indicates the abrasiveness of rock based on this test.

CRUSHABILITY CLASSIFICATION

Crushability indicates how easily the rock material breaks down. Harder rock with a low crushability value requires more crushing energy than softer rock with a higher crushability value.

MATERIAL PROPERTIES

Different materials wear crusher parts differently. Highly abrasive types like basalt need tougher parts, while softer aggregates such as limestone are easier to crush. Understanding abrasiveness and crushability ensures optimal wear part selection.

“Not all jaw crushers crush as effectively and efficiently as a Lippmann jaw does. You can’t have a rock polisher, you gotta have a rock crusher.”

HANS DAWSON

OWNER/OPERATOR, LANNON STONE PRODUCTS



JAW CRUSHERS WEAR PARTS

ENGINEERED COMPONENTS, PROVEN PERFORMANCE

Jaw plates and cheek plates are manufactured under controlled casting standards. Material selection and production consistency ensure dependable wear life and stable crushing performance. From raw material control through final inspection, every stage is managed to maintain reliability and operating efficiency.

1 JAW DIES (FIXED & SWING)

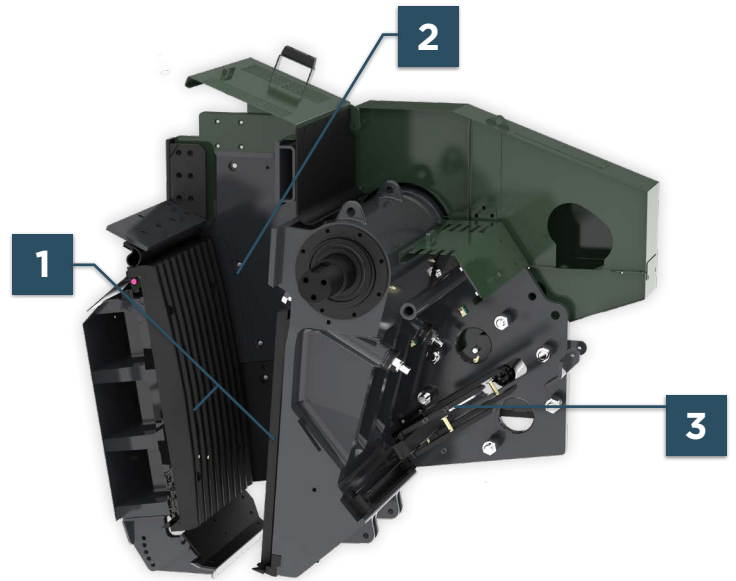
Protect the crushing chamber from structural wear. Correct fit reduces material build-up and unplanned downtime. Designed to maintain chamber alignment and consistent feed engagement, jaw dies support steady throughput and predictable wear patterns.

2 CHEEK PLATES

High-manganese steel plates offer secure material gripping and enhance throughput. Engineered for accurate fit and durability, they protect the chamber structure and support long service intervals.

3 TOGGLE PLATE

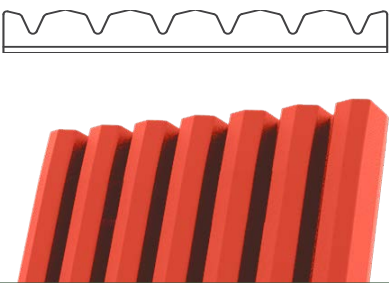
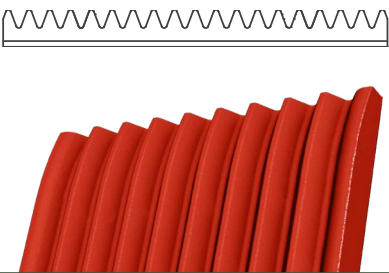
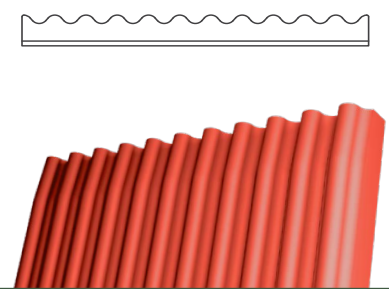
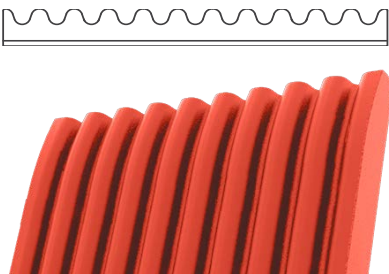
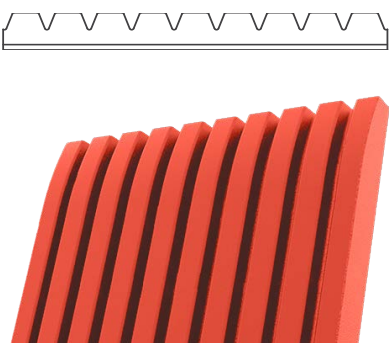
The toggle plate functions as a mechanical protection device. When uncrushable material enters the chamber, it is designed to deform or fail under excess load. This controlled release protects the crusher assembly and allows safe clearing of the chamber.



JAW CRUSHERS

DIE WEAR PART TYPES

Engineered for durability and throughput performance, Lippmann jaw dies are matched to rock type and operating conditions. Available in Multitooth, Squaretooth, Corrugated and Heavy Duty profiles, each design is developed to optimise material flow, wear life and production efficiency.

	HEAVY DUTY ■ Improved material flow due to more surface area for fines to flow. ■ Better wear life due to better fines removal and height of teeth. ■ More production than regular jaw plates. ■ Improved product quality due to less slabby material.
	MULTITOOTH ■ Suitable for recycled concrete and demolition waste. ■ Sharp tooth profile creates good grip on feed material. ■ More space for fines to pass through (fines removal from feed material is recommended).
	25-30 MM CORRUGATED ■ Suitable for recycled concrete, asphalt and demolition waste. ■ Resists dirt packing and can be fed with dirt and fines. ■ More tooth contact surface area compared to Multitooth jaws. ■ More wearable Mn-steel than in Multitooth jaws.
	50-65 MM CORRUGATED ■ Suitable for gravel, hard, soft and slabby rock. ■ Less slabby product with high production. ■ More space for fines to pass through (fines removal from feed material is recommended).
	SQUARETOOTH ■ Good in abrasive and / or blasted rock. ■ Flat tooth profile maximizes lifetime (more surface area to crush with). ■ More wearable Mn-steel than in Multitooth jaws. ■ Less space for fines to pass through (fines removal from feed material is important).

AFTERMARKET GENUINE PARTS. GENUINE PERFORMANCE.



MPP Aftermarket is the exclusive OEM provider of parts, service, and technical training for Lippmann. Strategically located parts centers in North America and Europe enable rapid delivery, maximizing equipment uptime for customers worldwide.

GENUINE OEM PARTS: THE KEY TO SUSTAINED PERFORMANCE



**PERFECT FIT
& FUNCTION**



**OPTIMIZED
CRUSHER ECONOMY**



**WARRANTY COMPLIANCE
& EXTENDED COVERAGE**



**SAFER MAINTENANCE
& LONGER LIFESPAN**



**TECHNICAL SUPPORT
& GLOBAL NETWORK**

WHEN EVERY MINUTE OF PRODUCTION MATTERS, TRUSTING OEM PARTS IS AN INVESTMENT THAT PAYS OFF IN PERFORMANCE, UPTIME, AND TOTAL PEACE OF MIND.

LIPPMANN

LIPPMANN - UNITED STATES

3271 East Van Norman Ave
Cudahy, WI 53110
USA

LIPPMANN - EUROPE

47 Moor Road
Coalisland, Dungannon
BT71 4QB
United Kingdom

LippmannCrushers.com

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