



**RECYCLING &
PELLETIZING**

CATALOG 2026

**RECYCLING &
PELLETIZING**



OUR MISSION: MAXIMIZING LINE UPTIME

IN THE DEMANDING ENVIRONMENT OF MATERIAL RECYCLING, EQUIPMENT LONGEVITY IS THE KEY TO PROFITABILITY. PERSISTOOLS PROVIDES HIGH-PERFORMANCE COMPONENTS ENGINEERED TO WITHSTAND EXTREME ABRASION AND HEAVY IMPACT, ENSURING YOUR RECYCLING AND PELLETIZING LINES RUN LONGER WITH FEWER INTERRUPTIONS.

ENGINEERED FOR EXTREME IMPACT

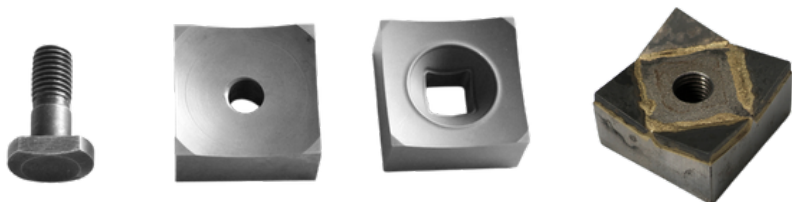
OUR COMPONENTS FEATURE SPECIALIZED HEAT TREATMENT AND MATERIAL SELECTION TO HANDLE THE RIGOROUS DEMANDS OF SHREDDING AND CRUSHING VARIOUS WASTE STREAMS, FROM POST-CONSUMER PLASTICS TO INDUSTRIAL SCRAP.

PRECISION PELLETIZING PERFORMANCE

WHETHER FOR UNDERWATER PELLETIZING OR STRAND (DRY) CUTTING, OUR BLADES MAINTAIN A SHARP, CONSISTENT EDGE TO ENSURE UNIFORM GRANULE SIZE AND MINIMIZE DUST/FINES.

WEAR-RESISTANT MATERIAL SCIENCE

- **TCT (CARBIDE TIPPED):** STRATEGIC CARBIDE INTEGRATION FOR LOCALIZED HIGH-WEAR ZONES.
- **SOLID CARBIDE & HSS:** OPTIMIZED FOR HIGH-SPEED, HIGH-PRECISION CUTTING APPLICATIONS WITHIN THE RECYCLING LOOP.



FULL-SPECTRUM SUPPORT

WE DON'T JUST PROVIDE BLADES; WE SUPPORT THE ENTIRE MATERIAL TRANSFORMATION PROCESS:

SIZE REDUCTION

HEAVY-DUTY SHREDDER TEETH AND GRANULATOR KNIVES FOR PRIMARY AND SECONDARY CRUSHING.

EXTRUSION & TRANSPORT

SPECIALIZED COMPONENTS FOR MELT-FILTRATION AND MATERIAL CONVEYANCE (INCLUDING UPCOMING HIGH-DURABILITY SCREW SHAFTS).

PELLETIZING

PRECISION BLADES FOR VARIOUS PELLETIZING SYSTEMS, ENSURING A PREMIUM FINAL PRODUCT.

INDUSTRY APPLICATIONS

CHOOSE THE RIGHT BLADE FOR YOUR SPECIFIC INDUSTRY:

PLASTIC & POLYMER RECYCLING

PELLETIZING KNIVES FOR CONSISTENT GRANULE QUALITY.

E-WASTE & METAL SCRAP

HEAVY-DUTY SHREDDING TEETH FOR REDUCING METAL VOLUME.

RUBBER & TIRE PROCESSING

HIGH-TOUGHNESS BLADES FOR CUTTING REINFORCED MATERIALS.

BIOMASS & WOOD WASTE

PRECISION SHREDDING FOR ENERGY RECOVERY PROCESSES.



MATERIAL STRATEGY: BALANCING PERFORMANCE & COST

TCT (Carbide Tipped) [Hybrid Solution]

- *Best for:* Abrasive materials where only the edge needs extreme hardness.
- *Value:* Combines the wear resistance of Carbide with the shock absorption and lower cost of a steel body.

D2 / SKD11 (Cold Work Die Steel)

- *Best for:* Large-scale shredding and primary crushing of mixed waste.
- *Value:* High toughness to prevent chipping from hidden metal contaminants; more economical than Carbide for large blades.

HSS (High Speed Steel)

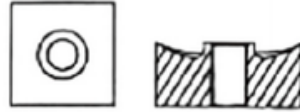
- *Best for:* High-speed pelletizing and cleaner cuts on softer plastics.
- *Value:* Superior impact strength for interrupted cutting conditions.

APPLICATION GUIDE: MATCHING MATERIAL TO TASK

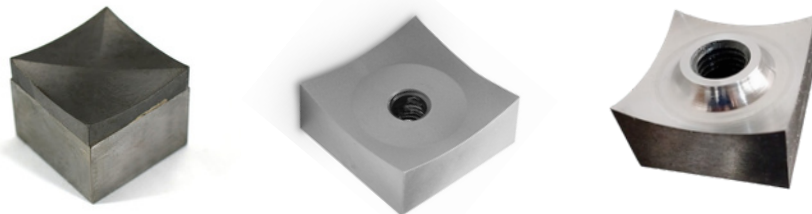
Challenge	Recommended Material	Core Benefit
High-Abrasion (e.g., Glass-fiber reinforced plastics)	TCT / Solid Carbide	Extreme wear resistance; extends service intervals.
Mixed Waste (e.g., Post-consumer with metal risk)	D2 / SKD11	Superior toughness; prevents catastrophic edge failure.
Precision Pelletizing (e.g., Re-melting & compounding)	HSS / Micro-Grain Carbide	Razor-sharp edges; minimizes dust and fines.
Heavy-Duty Shredding (e.g., Tire or thick scrap)	Shock-Resistant Alloy	Withstands high torque and violent impacts.

SINGLE-SHAFT SHREDDER COMPONENTS

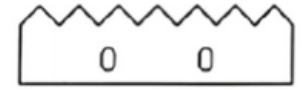
ROTARY SHREDDER TEETH



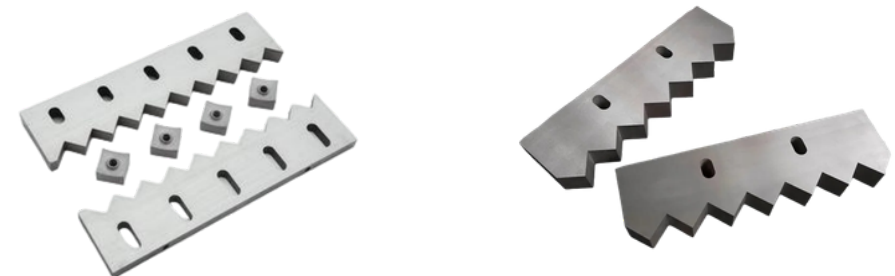
Item (Typical Size)	Installation Hole	Material Options	Hardness	Compatible Machine Brands
34x34x20 mm	M12	D2 / SKD-11 / DC53	HRC 58-62	WEIMA, UNTHA
35x35x22 mm	M12	TCT (Brazed) / D2	HRC 58-62	Vecoplan, ZERMA
40x40x20/23 mm	M12	D2 / SKD-11	HRC 58-62	Lindner, Genox
40x40x25 mm	M14	DC53 / Tungsten Steel	HRC 60-63	WEIMA, Forrec
60x60x30 mm	M18	D2 / SKD-11 / TCT	HRC 58-62	Vecoplan, Wagner
80x80x45 mm	M24	Shock-Resistant Steel	HRC 56-60	Lindner (Heavy Duty)



COUNTER KNIVES & STATOR BLADES

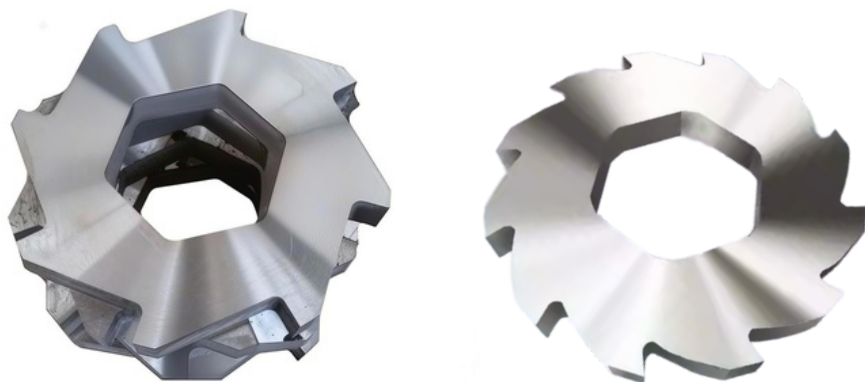


Item (Typical Size)	Bolt Holes	Material Options	Feature	Compatible Machine Brands
279x80x30 mm	2 Holes	D2 / SKD-11	Precision Ground	WEIMA Series
343x136.3x27 mm	2 Holes	D2 / 1.2379	High Toughness	Vecoplan Series
396x110x33 mm	4 Holes	D2 / DC53	Multi-Edge Life	Lindner Series
495x113.7x42.8 mm	5 Holes	SKD-11 / TCT	Heavy Volume	Genox, ZERMA
344.5x196x47 mm	2 Holes	D2 / Alloy Steel	Deep Shredding	Custom Industrial



DOUBLE-SHAFT SHREDDER KNIVES

UNLIKE STANDARD BLADES, DOUBLE-SHAFT SHREDDER KNIVES ARE HIGHLY SPECIALIZED COMPONENTS. AT PERSISTOOLS, WE DON'T JUST SELL BLADES; WE ENGINEER THE PRECISE GEOMETRY REQUIRED TO MASTER YOUR SPECIFIC WASTE STREAM.



1. Engineering the Perfect Cut

The performance of a double-shaft shredder is determined by the synergy between diameter, thickness, and teeth configuration.

- **Teeth Configuration:** We offer designs ranging from Single-claw to Multi-claw (2, 3, 6, 8, 12, or more).
- **Fewer Teeth:** Ideal for heavy-duty primary crushing (e.g., tires, metal scrap) to maximize "bite" and throughput.
- **More Teeth:** Designed for precision shredding to achieve smaller, more uniform output sizes in a single pass.

Gap & Spacer Management: We precision-grind every knife and spacer to ensure a tight, consistent shearing gap, which is critical for processing thin or elastic materials like films and rubber.

2. Technical Capabilities

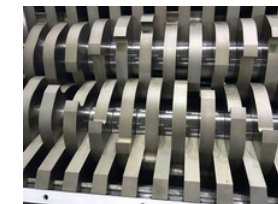
Diameter Range: Custom manufacturing from Ø200mm to Ø800mm+.

Thickness: Flexible thickness options to match your machine's shaft and torque requirements.

Material Selection (Heavy-Duty Grades):

- **55SiCr / H13:** High toughness for high-shock environments.
- **D2 / SKD-11 / DC53:** The industry gold standard for a balance of wear resistance and resilience.
- **Cr12MoV / LD:** Optimized for specialized industrial waste recycling.

Surface Treatment: Optional alloy coatings for extreme corrosion and wear resistance.



3. Applications: From Scrap to Resource

Our custom double-shaft knives are built to conquer the toughest materials:

- **Metal & E-Waste:** Scrap metal, circuit boards, and appliances.
- **Tires & Rubber:** High-torque shredding for rubber recycling.
- **Plastics & Films:** Clean shearing of bulky plastic waste and flexible packaging.
- **Wood & Biomass:** High-volume reduction of industrial wood waste.

PELLETIZING KNIVES

PELLETIZER BLADES SPECIFICATIONS

Dimensions (LWT mm)	Material Type	Hardness	Compatible Systems/Brands
44 * 12.7 * 1.2	M6 (Powder Metallurgy)	63 - 65 HRC	Gala, Coperion, Erema
44 * 12.7 * 0.9	M6 (Powder Metallurgy)	63 - 65 HRC	Gala, BKG, Coperion
44 * 12.7 * 0.7	M6 (Powder Metallurgy)	63 - 65 HRC	Gala, BKG, Erema
44.4 * 12.7 * 1.2	Stainless Steel (440C)	56 - 58 HRC	Econ, Reduction Engineering
44.4 * 12.7 * 0.9	Stainless Steel (440C)	56 - 58 HRC	Econ, Reduction Engineering
38.1 * 12.7 * 0.635	CPM 10V / M4	60 - 62 HRC	BKG, Berstorff
50 * 15 * 1.5	Tungsten Carbide (Inlay)	88 - 90 HRA	Farrel, Japan Steel Works (JSW)

1.Strategic Material Selection

- *M6 (ASP 2060): High-performance powder metallurgy steel. Ideal for long production runs where extreme durability is required.*
- *Stainless Steel (440C): Provides excellent corrosion resistance. Best suited for medical-grade or food-grade plastics.*
- *CPM 10V / M4: Superior wear resistance compared to standard tool steels. The preferred choice for processing glass-filled or highly abrasive polymers.*
- *Tungsten Carbide (Inlay): Features extreme hardness (88-90 HRA). Used for high-output industrial masterbatch production and recycled pellets with high filler content.*



VISUAL GALLERY

BEYOND STANDARDS: TAILORED FOR YOUR NEEDS



WHETHER IT'S A UNIQUE GEOMETRY, A SPECIFIC MATERIAL GRADE, OR A COMPLEX APPLICATION, WE PROVIDE FULLY CUSTOMIZED SLITTING SOLUTIONS TAILORED TO YOUR EXACT BLUEPRINTS. FROM PROTOTYPE TO MASS PRODUCTION, YOUR CHALLENGES ARE OUR SPECIALTY.


NEED SPECIAL SIZES OR TESTING SAMPLES?


WE'RE HERE TO HELP — CONTACT US TO DISCUSS YOUR REQUIREMENTS.

 www.persistools.com

 general@persistools.com

 +86 18613218072

 [Room 37, Building 1, No.155, Wanjing 2nd Road, Wuhou District, Chengdu City. \(Chengdu Office\)](#)

 [No. 8 Factory Building, Enterprise Industrial Incubation Park, Zhoujia shan Town, Mian County, Hanzhong City, Shaanxi Province](#)

 [Lishui Industrial Park, Lishui District, Nanjing City, Jiangsu Province, P.R.China](#)