



Walson Woodburn™

Custom Dies. Consistent Excellence.

Compacting & Stranding Die

An Indo-American Joint Venture.



*Innovation That Performs
Beyond Precision.*

About Walson Woodburn Die

CRAFTING PRECISION, BUILDING TRUST

Located in the Diamond capital of the world, Walson Woodburn is an Indo–American joint venture between Walson (India) and Woodburn (USA) - a partnership built on over sixty years of combined expertise in precision engineering.

Since 1970, we've shaped a reputation for uncompromising quality, consistency, and performance - making us a trusted name among leading wire and cable manufacturers worldwide.

Every die we craft begins with a deep understanding of our customer's process and ends with flawless performance - delivering results you can measure, and reliability you can feel.

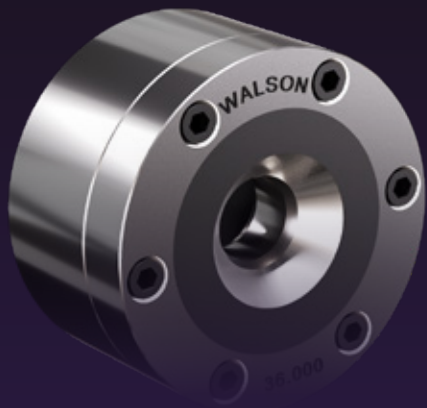
Compacting Die

PRECISION. DURABILITY. PERFORMANCE.

Founded in 1997, *Walson Woodburn Wire Die Pvt Ltd* brings decades of combined Indo-American expertise, delivering dies that set the benchmark for precision, performance, and longevity in wire drawing.

In multi-conductor cable construction, individual wires or strands must be guided, grouped (bunched), twisted or stranded, and then compacted to produce a uniform, high density conductor. Solid compacting / stranding / bunching dies serve these functions: a stranding/bunching die guides a set of individual wires into a single unified strand or bundle; a compacting die reduces the cross-section of the stranded bundle, improving mechanical stability and reducing voids.

We work with your cable design team to optimize die geometry for higher compaction ratio, which helps you reduce the overall diameter of the conductor, without compromising Conductor Resistance (CR).



Our Materials / Types

Polycrystalline Diamond Wire Drawing Die

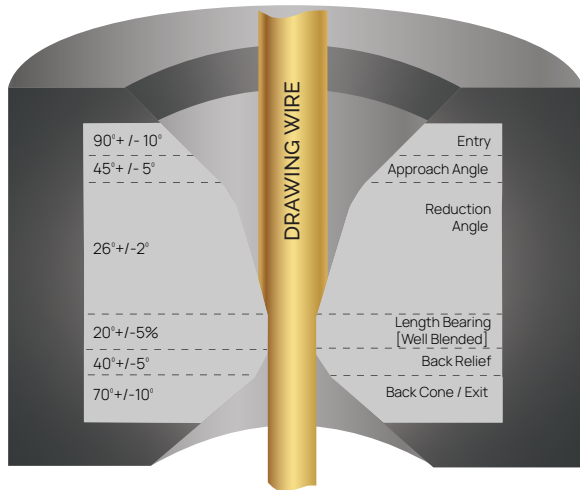
Excellent wear resistance, low friction coefficient, very long life. Ideal for continuous, high-volume production. Excellent surface finish and lower generation of fines / shavings. Strong stability of geometry over long runs. Size/Hole Range: Upto 40mm

Tungsten Carbide Wire Drawing Die

More economical option for moderate volumes or where ultimate life is not critical. Good corrosion/Wear resistance, robust in many applications. Size/Hole Range: Upto 50mm

Diamond-Coated Die

Carbide or steel core substrate coated with diamond or nano-diamond layers. Offers better wear performance than bare carbide at moderate cost. Useful for larger diameters or when full PCD is not cost-justifiable. Size/Hole Range: Upto 50mm



Size Ranges, Reductions & Tolerances

PARAMETER

SPECIFICATION

⦿ Hole Size

Polycrystalline Diamond Wire Drawing Die

Up to 40mm bore diameter

Tungsten Carbide Wire Drawing Die

Up to 50mm bore diameter

Diamond-Coated Die

Up to 50mm bore diameter

☰ Materials

They support copper, aluminum, stainless steel, nickel alloys, and other ferrous/nonferrous materials.

Advantages / Key Benefits

Custom Geometry

we optimize die profiles for your specific cable construction.

Precision Polishing & Concentricity

ensures stable wire guidance and low friction.

High Surface Finish & Low Friction

minimizes wire wear, energy consumption, and thermal stress.

Long Operational Life & Reduced Replacement

less downtime, lower maintenance.

Reduced Wire Breakage & Fines

better yields, fewer defects.

Wide Size Range

for small to large conductors.

Refurbishment Capability

we can recondition dies to almost new condition, prolonging their useful life.

Quality Control

Rigorous metrology, concentricity, surface finish, alignment checks before delivery.

Industry Impact

Such dies are essential for cable makers who demand precision, long life, and quality output across diverse industries.

Applications

Power & Energy Cables

low voltage (LV), medium voltage (MV), high voltage (HV),
extra-high voltage (EHV) power conductors

Automotive Wiring & Harnesses

Telecommunications & Data Cables

Aerospace / Defense Wiring

Industrial Flexible Cables & Multi-core Cables

Submarine & Underwater Cables

Traction, Railway & Elevator Cables

Specialty Alloys & High Performance Conductors

They support copper, aluminum, stainless steel, nickel alloys, and other ferrous/nonferrous materials.

Stranding Die

PRECISION. DURABILITY. PERFORMANCE.

Founded in 1997, *Walson Woodburn Wire Die Pvt Ltd* brings decades of combined Indo-American expertise, delivering dies that set the benchmark for precision, performance, and longevity in wire drawing.

Our Split Stranding Dies (with Tungsten Carbide (TC) inserts) are engineered for high-efficiency stranding, bunching, and cabling operations. The split-die design enables swift changeovers, minimal downtime, and seamless transitions between product sizes all without the need to re-thread the machine. Our dies are trusted by wire and cable manufacturers across industries globally.



Size Ranges, Reductions & Tolerances

PARAMETER

SPECIFICATION



Hole Size

Wire sizes / strand counts

From fine wires (e.g. 0.100 mm or finer) up to heavy cable strand sizes.

Die bore diameters

Typically available in the range from 2 mm up to 40 mm (or more) depending on application.



Tolerance

Precise tolerances (within few microns)



Materials

Suitable for a variety of wire types (bare copper, aluminum, alloy wires, copper-clad aluminum, etc.)



Surface Finish

Superior surface finish to ensure minimal friction and consistent wire profile.

Advantages / Key Benefits

Split-die architecture enables fast product transitions with zero interruption you avoid re-threading the stranding machine, saving time and reducing scrap.

High-quality TC inserts offer excellent wear resistance, high hardness, and long life in demanding cable-drawing and stranding applications.

Custom geometries are tailored to the die shape and split configuration for your process needs (number of wires, lay lengths, compacted or un-compacted wires).

Highly polished internal surfaces minimize friction, reduce wire surface defects, and maintain consistency in wire geometry.

Advantages / Key Benefits

Wide application range is suitable for a variety of wire types (bare copper, aluminum, alloy wires, copper-clad aluminum, etc.).

Robust design for continuous use is engineered to withstand heavy production loads, thermal stresses, and abrasion.

Reduced tool change and maintenance costs fewer die swaps, fewer rejects, longer periods between maintenance cycles.

Performance / Metrics / Success Scenarios

Minimized downtime

Thanks to the split-die design, switching between sizes or cable configurations can be done without stopping the stranding line or re-threading wire.

Higher throughput

With reduced interruptions, you can sustain production longer and more efficiently.

Lower scrap / defect rate

Smooth die surfaces, proper geometry, and optimal finishing reduce friction, wire dragging, and surface defects.

Longer service life

Our TC inserts deliver superior hardness and wear resistance, reducing frequency of replacement.

Cost-efficiency over life cycle

Reduced tool-change labor, lower downtime, and fewer rejects translate into better cost per usable meter of cable.

Flexibility & scalability

Adapt to new cable types or specifications without major investment in tooling changes.

Quality Control

Precision manufacturing maintains tight tolerances and consistency in every die.

Industry-best inspection protocols, measurement, and metallurgical validation ensure reliable performance.

Industry Impact

Because of the split design, these dies are especially valuable where frequent product changes are required such as multi-product cable plants, contract manufacturers, or R&D pilots.

Applications

Power & Transmission Cables

for manufacturing high-voltage, medium-voltage overhead, and underground cables.

Telecommunications / Fiber optic cable manufacturers

for stranded strength members or conductive cores.

Automotive wiring harnesses

where consistent strand geometry and high throughput are critical.

Aerospace & Defense

in specialty wire and cable assemblies demanding tight tolerances.

Electronics & Appliance wiring

for fine-gauge stranded conductors used inside devices.

Renewables & Energy / Solar / Wind

in cables for solar field wiring, turbine control cables, etc.

Industrial machinery / robotics / automation

in flexible stranded cables which see repeated flexing.

WHY CHOOSE WALSON WOODBURN?

Decades of Expertise

Deep experience in wire drawing die manufacturing.

Precision Engineering

Dies with high durability and dimensional accuracy.

Ethical & Sustainable

Diamonds sourced responsibly in line with international standards.

Trusted Worldwide

Reliably serving wire manufacturers across the globe.

Customer-Focused

Solutions tailored to production requirements for maximum efficiency.

SURAT ADVANTAGE



Global Diamond Hub

Surat produces and trades the majority of the world's polished diamonds, giving us direct access to top-grade natural diamonds.

Proximity to Raw Materials

Being at the source allows us to carefully select the highest-quality diamonds for our dies.

Faster Innovation & Supply

Local access enables rapid prototyping, customization, and high-volume production while maintaining consistent quality.

Strategic Advantage

Our location ensures unmatched control over sourcing, selection, and processing, producing dies with superior hardness and long life.

Services Offered

Care for WDD

Stereo Zoom Die inspection

Ultrasonic Die Cleaning

Certification





Walson Woodburn™

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