# Diamond Coated Drawing Inserts

## for steel wire manufacturing

ESTEVES GROUP

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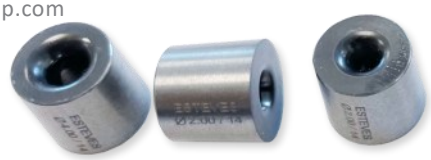
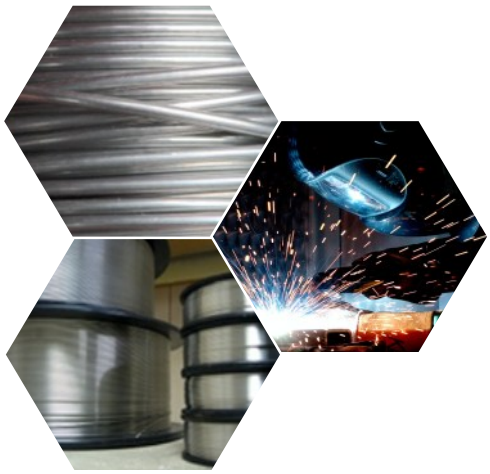


## Highlights

- Smooth surface - low friction coefficient
- Exceptional durability
- Improved diameter and ovality consistency
- More cost effective than TC dies
- Maintenance-free (no recuts)
- Stock reduction vs TC inserts
- Higher machine uptime (fewer die changes)



## We Specialize in...

- Wire Drawing Dies
- Bunching, Stranding & Compacting
- Split Dies
- Tubing Dies
- Shaped Dies
- Extrusion Tooling
- Die Reconditioning Tools
- Engineering Services
- Customer Support

**Excellent durability, extremely smooth wire surface, energy savings due to low friction, and cost reduction vs TC drawing inserts.**

Esteves Diamond Coated (DC) drawing inserts are the ideal choice for customers manufacturing steel wire and welding wire with existing pressure die systems. This revolutionary technology replaces tungsten carbide inserts previously used in the ferrous industry. Expect improved productivity compared to using tungsten carbide dies as DC inserts have an improved lifespan of 10x over TC dies, leading to fewer changeovers and higher machine uptime as well as needing less power due to their decreased friction force when drawing wire. The diamond coated die offers a combination of large size availability like that of tungsten carbide with superior surface properties thanks to its randomly oriented synthetic diamond layer that ensures optimum smoothness on the finished product.

This solution is suitable for carbon steel wires and welding wires alike. There are numerous advantages related to maintenance and reduction of working capital:

- Diamond coated dies don't need recutting or refurbishing after use so there's no need for returning them, hence reducing logistic costs;
- Simplified stock-keeping;
- Reduced shipping costs, since total quantities will be significantly reduced (less amounts used in drawing);
- Cost differences versus TCs quickly offset due do lowered running expenses - you'll start saving money from day one!

Free of charge test runs are available upon request to customers that have never tried this technology, allowing fact-based decision-making before investing.

# Diamond Coated Drawing Inserts

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### Key Features

- Exceptional durability
- Low friction coefficient
- High diameter accuracy
- Available even for large diameters

### Benefits

- Increased die life
- Improved wire surface finish
- Reduced die maintenance cost
- Reduced energy cost
- Increased productivity

**DC drawing inserts for steel**

| Insert type | Standard angle | Size range | |
|---|---|---|---|
| | | mm | inch |
| E4DC | 9° | 1.50 - 1.99 | .0591 - .0783 |
| | | 2.00 - 4.98 | .0787 - .1961 |
| | 12° | 1.50 - 1.99 | .0591 - .0783 |
| | | 2.00 - 4.98 | .0787 - .1961 |
| | | 5.00 - 5.85 | .1969 - .2303 |
| | 16° | 3.00 - 5.85 | .1181 - .2303 |
| E6DC | 12° | 4.00 - 8.90 | .1575 - .3504 |
| | 16° | 5.50 - 8.90 | .2165 - .3504 |
| E8DC | 12° | 7.60 - 9.95 | .2992 - .3917 |
| | 18° | 8.90 - 13.10 | .3504 - .5157 |
| E30DC | 10°/12°/18° | 6.50 - 15.25 | .2559 - .6004 |
| E40DC | 12°/18° | 14.00 - 21.60 | .5512 - .8504 |

**DC drawing inserts Standard Tolerances**

| Size range | | Bearing | Bearing tolerance | | Angle tolerance | Diameter tolerance | |
|---|---|---|---|---|---|---|---|
| mm | inch | % | mm | inch | | mm | inch |
| 1.50 - 2.49 | .0591 - .0980 | 30 - 50% | ± 0.2 | ± .0079 | ± 1.5° | +0.01 / -0.01 | +.0004 / -.0004 |
| 2.50 - 4.99 | .0984 - .1965 | 30 - 50% | ± 0.2 | ± .0079 | ± 1.5° | +0.01 / -0.01 | +.0004 / -.0004 |
| 5.00 - 7.49 | .1969 - .2949 | 25 - 45% | ± 0.2 | ± .0079 | ± 1.5° | +0.01 / -0.01 | +.0004 / -.0004 |
| 7.50 - 9.99 | .2953 - .3933 | 20 - 40% | ± 0.2 | ± .0079 | ± 1.5° | +0.01 / -0.01 | +.0004 / -.0004 |
| 10.00 - 12.69 | .3937 - .4996 | 20 - 35% | ± 0.2 | ± .0079 | ± 1.5° | +0.01 / -0.01 | +.0004 / -.0004 |
| 12.70 - 21.60 | .5000 - .8504 | 20 - 30% | ± 0.2 | ± .0079 | ± 1.5° | +0.01 / -0.01 | +.0004 / -.0004 |

Virtually any diamond coated die size is available.
Please contact **Esteves Group** for a quotation for your wire and cable tooling.