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heller 293020

Heller Tools HSS Steel Drill Bit User Manual

Model: 293020

PRODUCT OVERVIEW

This manual provides essential information for the safe and effective use of the Heller Tools 293020 HSS Steel Drill Bit. These drill bits are designed for precision drilling in various materials.

Key features include:

- Particularly long service life and great drilling performance thanks to titanium coating.
- Split point grinding and 135° point angle for optimum centering during spot drilling.
- Manufactured in special HSS quality for a long service life.
- Precision tool as per DIN 338 RN for outstanding dimensional accuracy of the hole.
- Excellent concentricity as per DIN 1414.

Applications: Suitable for drilling in steel, iron, castings, sheet metal, non-ferrous metals, plastics, steel and cast steel up to 1400 N/mm² strength.



Image: A single Heller Tools HSS Steel Drill Bit, showcasing its gold titanium coating and spiral flutes.

SETUP AND PREPARATION

1. **Safety First:** Always wear appropriate personal protective equipment (PPE), including safety glasses, gloves, and hearing protection, before operating any power tools.
2. **Select Correct Bit:** Choose the correct drill bit size (e.g., 9.5mm) and type for the material you intend to drill. Ensure the material is within the drill bit's application range (steel, iron, etc.).
3. **Secure Workpiece:** Firmly secure the material to be drilled using a vise or clamps to prevent movement during drilling.
4. **Install Bit:** Insert the drill bit into the chuck of your drill. Ensure the bit is fully seated and centered, then tighten the chuck securely. A loose bit can be dangerous and lead to inaccurate drilling.
5. **Mark Drilling Point:** Use a center punch to mark the exact drilling location on your workpiece. This helps prevent

the drill bit from wandering at the start of the drilling process.

OPERATING INSTRUCTIONS

1. **Start Slowly:** Begin drilling at a slow speed to allow the drill bit to properly engage the material and prevent it from skidding.
2. **Apply Consistent Pressure:** Once the bit has started to cut, apply steady, consistent pressure. Avoid excessive force, which can overheat the bit or cause it to break.
3. **Maintain Speed:** For optimal performance and to prevent overheating, maintain the recommended drilling speed for the specific material. Generally, harder materials require slower speeds.
4. **Use Cutting Fluid:** When drilling metals, especially harder ones, use a suitable cutting fluid or lubricant. This reduces friction, dissipates heat, and extends the life of the drill bit.
5. **Clear Chips:** Periodically withdraw the drill bit from the hole to clear chips and allow coolant to reach the cutting edge. This is particularly important for deeper holes.
6. **Complete the Hole:** Continue drilling until the desired depth is reached. Reduce pressure as the drill bit is about to break through the material to prevent splintering or sudden jerking.



Image: A person using a cordless drill with a Heller drill bit to bore into a metal workpiece secured in a vise, demonstrating proper drilling technique.

MAINTENANCE AND STORAGE

- **Cleaning:** After each use, clean the drill bits to remove any debris, metal shavings, or cutting fluid residue. Use a brush or cloth.
- **Inspection:** Regularly inspect the drill bits for signs of wear, dullness, or damage. A dull bit will require more force and generate more heat, leading to poor performance and potential breakage.
- **Sharpening:** If the drill bit becomes dull, it can be professionally sharpened or sharpened using a suitable drill bit sharpener. Ensure the correct point angle (135°) is maintained.
- **Lubrication/Protection:** Apply a light coat of oil to the drill bits before storage, especially if they will not be used for an extended period. This helps prevent rust and corrosion.
- **Storage:** Store drill bits in their original case or a dedicated drill bit organizer. This protects the cutting edges from damage and keeps them organized. Store in a dry environment.

TROUBLESHOOTING

| Problem | Possible Cause | Solution |
|--------------------------------------|---|---|
| Drill bit not cutting / Slow cutting | Dull bit, incorrect speed, insufficient pressure, wrong bit for material. | Sharpen or replace bit, adjust drill speed, apply more consistent pressure, verify bit suitability. |

| Problem | Possible Cause | Solution |
|---------------------------------|---|--|
| Excessive heat / Smoke | Too high speed, insufficient cutting fluid, dull bit, chips not clearing. | Reduce speed, apply cutting fluid, sharpen bit, clear chips frequently. |
| Drill bit breaking | Excessive force, bit binding, workpiece not secured, incorrect angle. | Reduce force, ensure workpiece is secure, maintain proper drilling angle, clear chips. |
| Hole is not round or off-center | Bit wandering, improper centering, loose chuck. | Use center punch, ensure bit is securely tightened in chuck, start slowly. |



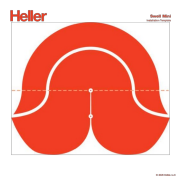


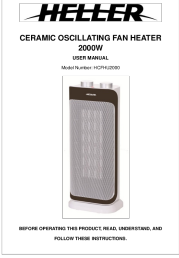
SPECIFICATIONS

| Attribute | Detail |
|--------------------------------|-----------------------------|
| Brand | Heller Tools |
| Model Number | 293020 |
| Material | High Speed Steel (HSS) |
| Coating/Finish | Gold, Titanium |
| Cutting Diameter | 9.5 Millimeters |
| Shank Type | Round |
| Cutting Angle | 135 Degrees |
| Tool Flute Type | Straight |
| Surface Recommendation | Alloy Steel |
| Number of Pieces | 10 |
| Product Dimensions (L x W x H) | 17.71 x 11.81 x 7.87 inches |
| Item Weight | 0.032 ounces |

WARRANTY AND SUPPORT

Specific warranty information for this product is not provided in the available data. For warranty claims or technical support, please contact Heller Tools directly through their official website or authorized distributors. For further assistance, please refer to the manufacturer's official documentation or contact their customer service department.



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|  | <p>Heller 40cm Desk Fan Instruction Manual (Model HHDF40SG)</p> <p>Instruction manual for the Heller 40cm Desk Fan, Model HHDF40SG. Includes operating instructions, safety precautions, care and cleaning guidelines, specifications, and assembly steps.</p> |
|  | <p>Heller HCF1500 Ceramic Oscillating Fan Heater 1500W User Manual</p> <p>User manual for the Heller HCF1500 Ceramic Oscillating Fan Heater. Includes important safety instructions, product features, operating instructions, thermostat and oscillation controls, tip-over and overheat protection, cleaning and maintenance, storage, specifications, and customer service information.</p> |
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|  | <p>Heller Ice Maker HIM10 User Manual</p> <p>User manual for the Heller Ice Maker, Model HIM10. Provides important safety information, operating instructions, troubleshooting tips, and specifications for this household appliance.</p> |
|  | <p>Heller HCFHU2000 Ceramic Oscillating Fan Heater 2000W User Manual</p> <p>User manual for the Heller HCFHU2000 Ceramic Oscillating Fan Heater 2000W, providing essential safety instructions, operation guidance, features, and technical specifications for optimal use.</p> |