



## HDD ROLLER-CONE REAMING TOOLING

# Bolt-On Hole Opener Product Data Sheet

Drawing-verified dimensions, connections and replaceable roller-cone configurations for four HDD hole opener models.

**Document scope**

Product data sheet based only on the four supplied engineering drawings. This document supports model comparison and technical review; it is not a manufacturing drawing.

| Model                         | Drawing    | OD       | Overall length | Connection                                  | Roller / nozzle reference                                                                         |
|-------------------------------|------------|----------|----------------|---------------------------------------------|---------------------------------------------------------------------------------------------------|
| 12 in Bolt-On Hole Opener     | D260907B-1 | 304.8 mm | 1000 mm        | 2-7/8 IF BOX, both ends                     | 4 replaceable roller-cone assemblies shown; 6 nozzles (4 front + 2 back)                          |
| 14 in Bolt-On Hole Opener     | D260902-B2 | 355.6 mm | 1118 mm        | 3-1/2 IF BOX, both ends                     | 4 replaceable roller-cone assemblies shown; 6 nozzles (4 front + 2 back)                          |
| 16 in Millteeth Hole Opener   | D260701B-2 | 406.4 mm | 1250 mm        | 6-5/8 FH BOX (upper) / 6-5/8 FH PIN (lower) | 4 milled-tooth roller cones; drawing identifies IADC 327; 6 NPT-thread nozzles (4 front + 2 rear) |
| 32 in Bolt-On TCI Hole Opener | D260428B-1 | 812.8 mm | 1880 mm        | 4-1/2 REG BOX, both ends                    | 7 x 12MH-3R replaceable roller-bit assemblies; No nozzle count or size stated on drawing          |

## Verified facts and project-controlled inputs

| Verified from supplied drawings                                                                                                                           | Must be confirmed for the project                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Model, drawing/date/revision, outside diameter, overall length, connection, shown roller arrangement, identified nozzle arrangement and hardfacing notes. | Formation suitability, actual mass, lift plan, makeup procedure, rotation, torque, pullback, thrust, flow, pressure, staging and acceptance limits. |

## Four-step controlled use

| 1   Identify               | 2   Match                       | 3   Inspect                     | 4   Approve                     |
|----------------------------|---------------------------------|---------------------------------|---------------------------------|
| Confirm model and drawing. | Check bore, rig and connection. | Verify delivered configuration. | Release under the project plan. |

**Controlled-use notice:** Drawing fields for weight are blank. Do not infer weight or universal operating limits from nominal diameter, connection or drawing scale.



## Product family overview

**Quick answer:** A DRILLNOVA bolt-on hole opener enlarges an HDD pilot bore using field-replaceable roller-cone or roller-bit assemblies mounted to a reamer body. The supplied drawings cover outside diameters from 304.8 mm to 812.8 mm, with model-specific connections and cutting structures.

### Verified model matrix

| Model                         | Drawing    | OD       | Overall length | Connection                                  | Roller / nozzle reference                                                                         |
|-------------------------------|------------|----------|----------------|---------------------------------------------|---------------------------------------------------------------------------------------------------|
| 12 in Bolt-On Hole Opener     | D260907B-1 | 304.8 mm | 1000 mm        | 2-7/8 IF BOX, both ends                     | 4 replaceable roller-cone assemblies shown; 6 nozzles (4 front + 2 back)                          |
| 14 in Bolt-On Hole Opener     | D260902-B2 | 355.6 mm | 1118 mm        | 3-1/2 IF BOX, both ends                     | 4 replaceable roller-cone assemblies shown; 6 nozzles (4 front + 2 back)                          |
| 16 in Millteeth Hole Opener   | D260701B-2 | 406.4 mm | 1250 mm        | 6-5/8 FH BOX (upper) / 6-5/8 FH PIN (lower) | 4 milled-tooth roller cones; drawing identifies IADC 327; 6 NPT-thread nozzles (4 front + 2 rear) |
| 32 in Bolt-On TCI Hole Opener | D260428B-1 | 812.8 mm | 1880 mm        | 4-1/2 REG BOX, both ends                    | 7 x 12MH-3R replaceable roller-bit assemblies; No nozzle count or size stated on drawing          |

### How the four drawings differ

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| 12 in model           | 304.8 mm OD; 2-7/8 IF BOX at both ends; four rollers shown; six nozzles identified.                     |
| 14 in model           | 355.6 mm OD; 3-1/2 IF BOX at both ends; four rollers shown; six nozzles identified.                     |
| 16 in millteeth model | 406.4 mm OD; 6-5/8 FH BOX to FH PIN; four IADC 327 milled-tooth cones; six NPT-thread nozzles.          |
| 32 in TCI model       | 812.8 mm OD; 4-1/2 REG BOX at both ends; seven 12MH-3R replaceable roller bits; nozzle data not stated. |

### Selection and ordering inputs

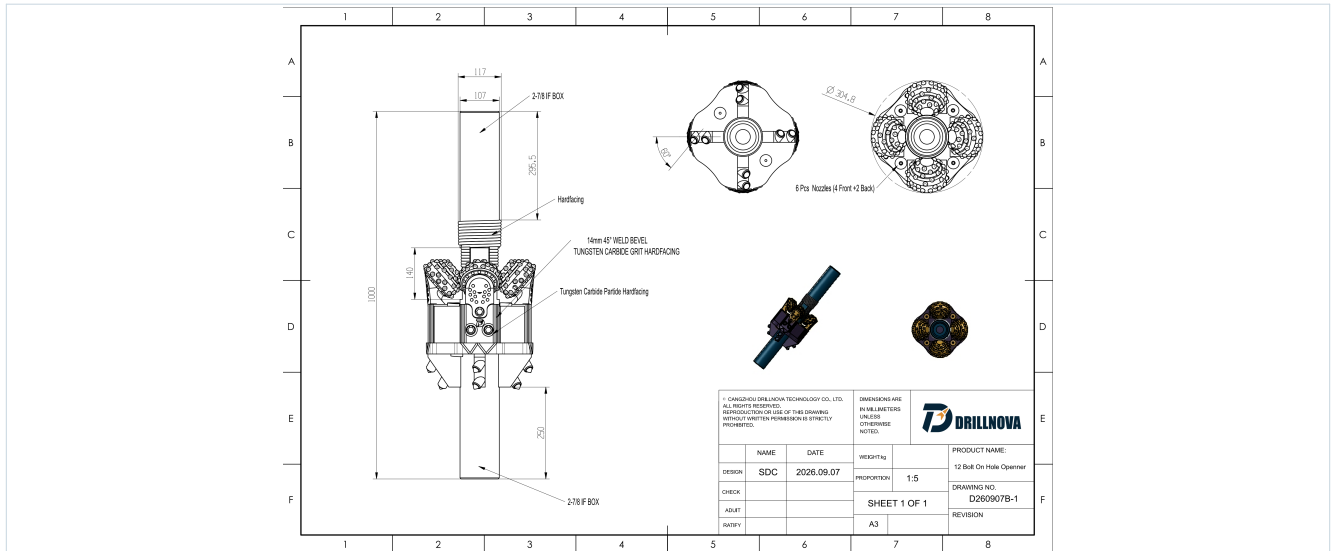
- Target diameter, pilot diameter and staged enlargement plan.
- Formation profile, strength, abrasiveness, boulders, fractures and transitions.
- Rig make/model, connection, available torque and pullback capacity.
- Mating assembly, swivel and connection drawings.
- Pump capacity, drilling-fluid program, nozzle/hydraulic requirement and returns plan.
- Required drawing/revision, roller type, spare assemblies, fasteners and documentation.

#### No diameter-only substitution

A nominal diameter does not establish interchangeability. Confirm drawing, connection, body length, roller arrangement, nozzle plan, mating interfaces and approved project envelope.



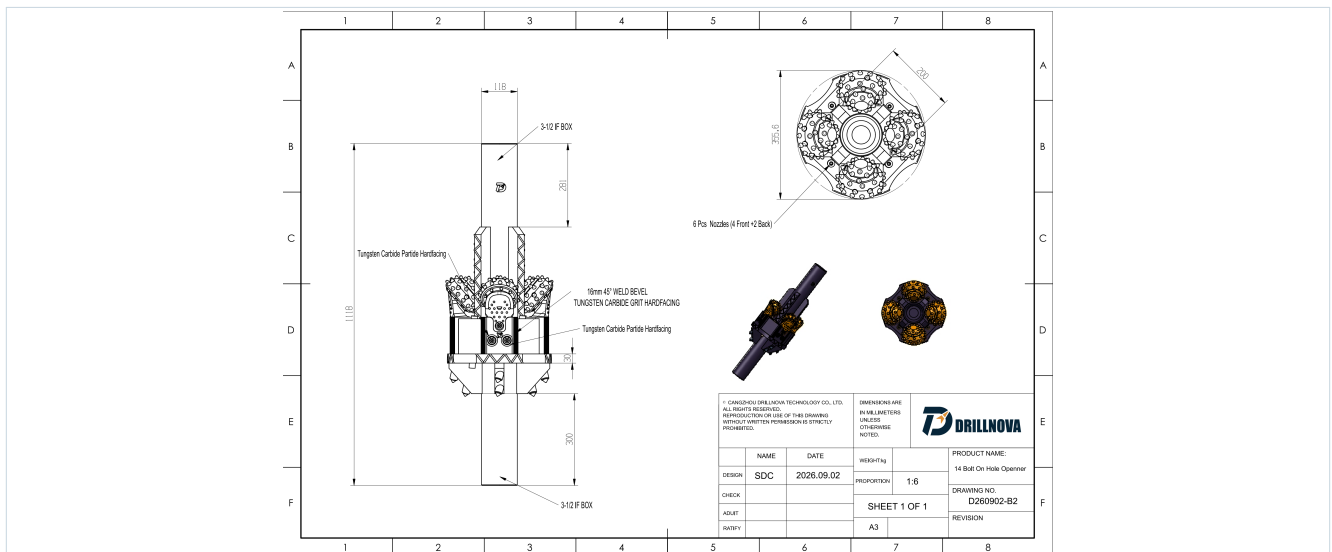
## 12 in Bolt-On Hole Opener



| Drawing / date / revision            | OD / length                                | Connection              | Weight                                                                                                              |
|--------------------------------------|--------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------|
| D260907B-1 / 2026-09-07 / Not stated | 304.8 mm / 1000 mm                         | 2-7/8 IF BOX, both ends | Not stated                                                                                                          |
| Roller configuration                 | 4 replaceable roller-cone assemblies shown | Nozzles / construction  | 6 nozzles (4 front + 2 back); Hardfacing; 14 mm 45-degree weld bevel; tungsten carbide grit and particle hardfacing |

Preview for identification only. Use the supplied controlled source drawing for manufacturing and acceptance.

## 14 in Bolt-On Hole Opener

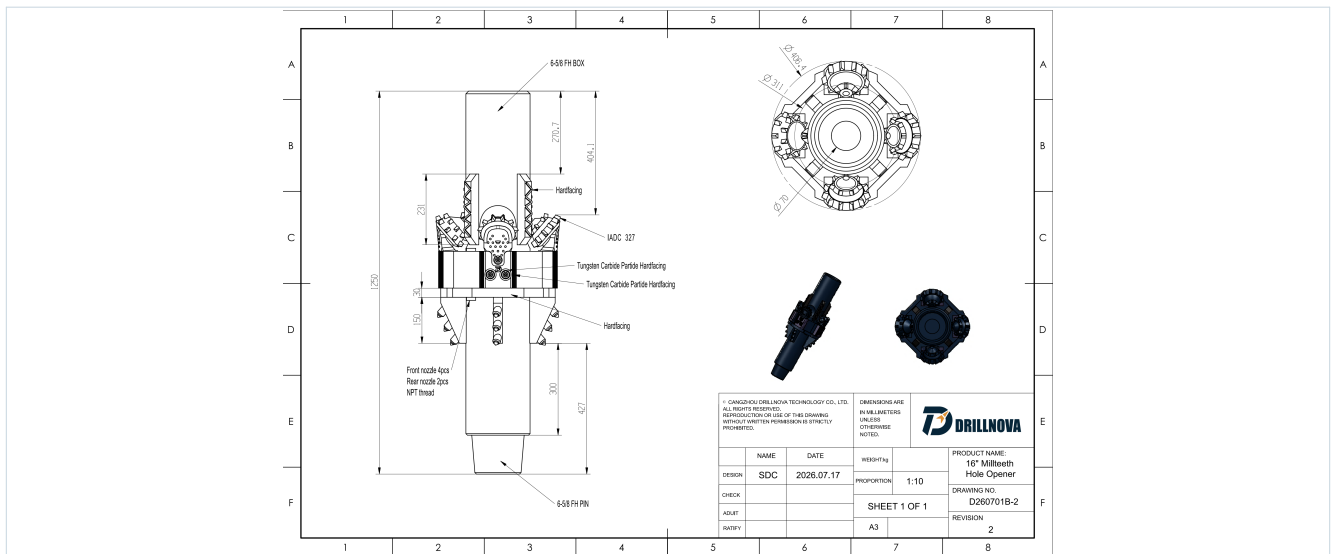


| Drawing / date / revision            | OD / length                                | Connection              | Weight                                                                                                              |
|--------------------------------------|--------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------|
| D260902-B2 / 2026-09-02 / Not stated | 355.6 mm / 1118 mm                         | 3-1/2 IF BOX, both ends | Not stated                                                                                                          |
| Roller configuration                 | 4 replaceable roller-cone assemblies shown | Nozzles / construction  | 6 nozzles (4 front + 2 back); Hardfacing; 16 mm 45-degree weld bevel; tungsten carbide grit and particle hardfacing |

Preview for identification only. Use the supplied controlled source drawing for manufacturing and acceptance.



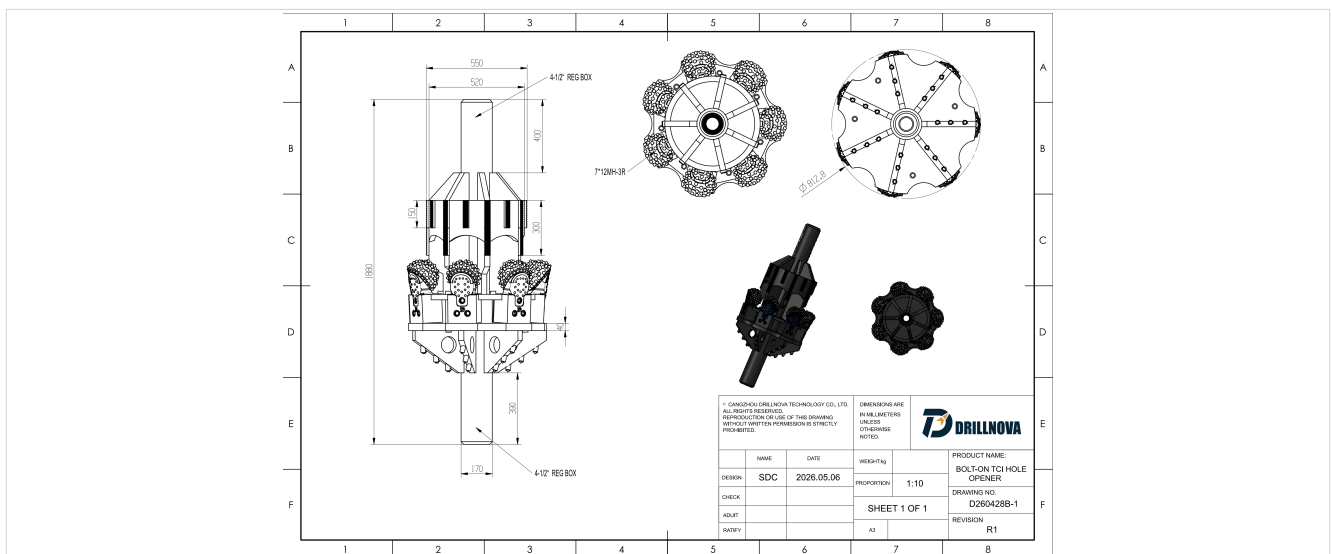
## 16 in Millteeth Hole Opener



| Drawing / date / revision   | OD / length                                              | Connection                                  | Weight                                                                                                 |
|-----------------------------|----------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------|
| D260701B-2 / 2026-07-17 / 2 | 406.4 mm / 1250 mm                                       | 6-5/8 FH BOX (upper) / 6-5/8 FH PIN (lower) | Not stated                                                                                             |
| Roller configuration        | 4 milled-tooth roller cones; drawing identifies IADC 327 | Nozzles / construction                      | 6 NPT-thread nozzles (4 front + 2 rear); Hardfacing and tungsten carbide particle hardfacing indicated |

Preview for identification only. Use the supplied controlled source drawing for manufacturing and acceptance.

## 32 in Bolt-On TCI Hole Opener



| Drawing / date / revision    | OD / length                                   | Connection               | Weight                                                                                                                           |
|------------------------------|-----------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| D260428B-1 / 2026-05-06 / R1 | 812.8 mm / 1880 mm                            | 4-1/2 REG BOX, both ends | Not stated                                                                                                                       |
| Roller configuration         | 7 x 12MH-3R replaceable roller-bit assemblies | Nozzles / construction   | No nozzle count or size stated on drawing; Bolt-on roller-bit layout; upper stem dimensions 550/520 mm; lower stem length 390 mm |

Preview for identification only. Use the supplied controlled source drawing for manufacturing and acceptance.



# Technical review, documentation and FAQ

## Information to submit

- Requested model and drawing number/revision.
- Bore plan, pilot condition, planned enlargement sequence and pullback direction.
- Geotechnical information and expected formation changes.
- Rig, swivel, connection and mating-component information.
- Hydraulic plan, pump limits and drilling-fluid details.
- Inspection, traceability, spare roller and repair-document requirements.

### Are all four connections interchangeable?

No. The drawings show different IF, FH and REG connections, and the 16-inch model uses a BOX-to-PIN arrangement.

### Do the drawings specify tool weight?

No. All four weight fields are blank. Obtain actual mass from manufacturing or shipping records before lifting.

### Do all models state nozzle information?

No. The 12-, 14- and 16-inch drawings identify six nozzles. The 32-inch drawing does not state a nozzle count or size.

### Does the drawing approve operating settings?

No. Rotation, torque, pullback, thrust, flow and pressure must be established for the actual rig, bore, formation and fluid plan.

### How are replacement rollers selected?

Match the exact approved roller/bit designation, mounting interface, fasteners and body drawing; obtain engineering confirmation before substitution.

## Controlled documentation package

|                             |                                                                                                                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Product data                | Approved model, drawing/revision, connection and delivered configuration.                                                               |
| Engineering review          | Formation, staging, rig compatibility, hydraulics and operating envelope.                                                               |
| Receiving record            | Traceability, condition, fasteners, rollers/bits, nozzles and photographs.                                                              |
| Field record                | Operating trends, formation changes, abnormal events and post-run wear.                                                                 |
| Repair record               | Removed components, measured conditions, approved replacements and release authority.                                                   |
| Final configuration control | Confirm the latest drawing and purchase-order configuration with DRILLNOVA before manufacture, repair, roller replacement or field use. |

## Project selection record

| Review input                        | Project information / reference | Status |
|-------------------------------------|---------------------------------|--------|
| Ground profile and transitions      |                                 |        |
| Pilot and staged enlargement plan   |                                 |        |
| Rig and pullback configuration      |                                 |        |
| Upper/lower mating connections      |                                 |        |
| Fluid and returns plan              |                                 |        |
| Approved model / drawing / revision |                                 |        |