Regrinding Systems

Step 1) Position horizontal register at +30°, (half round drills at +20°), vertical register at +12°. Grind until all wear is removed.

Step 2) Position horizontal register at +29°, (half round drills at +19°), vertical register at +20°. Grind to establish the primary relief width of approximately 5% of the diameter.

Step 3) Position horizontal register at -20°, (half round drill at -15°), vertical register at +12°. Grind to establish the point position width of drill diameter. (Dia./4).

Step 4) Position horizontal register at 0°, vertical register at +25°. Grind front clearance until the triangle created reaches the rear edge of the primary relief.

Step 5) For gun drill only. Position horizontal register at -25°, vertical register at -12°. Grind until the triangle formed reaches the center of the tip "V".

Step 6) Remove drill and freehand a periphery chamfer around the radial surface at approximately 20°, stopping just short of the primary relief.

Contact: Gilbert Deep Hole Drilling, 9 Morris Lane, Bath United Kingdom.
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DM-43 Sharpening System

Versatile, Convenient, Productive:

These words best describe the DM-43 sharpening system from Sterling Gun Drills. Designed as a compact, self-contained unit, it can easily be located next to work in progress, enabling operators to properly maintain gun drills and half round drills while remaining at their work stations. The DM-43 sharpening system services drills from .100" to .700" in diameter and comes complete with everything necessary to maintain and maximize tool life and efficient hole production. With the drill grinding table removed, a protractor table is revealed, allowing the resharpening of carbide inserts and lathe tools.

Standard Items Include:

- Portable grinding machine
- Protractor and drill regrind tables
- Toolholder for gun drills and half round drills
- 360 grit wheel
- Wheel wrench
- Cleaning stick
- Spray bottle
- Wetting agent
Gilbert Deep Hole Drilling
Machines and Tooling

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DM-41 Gun and Half Round Drill Regrind Fixture

The Sterling Gun Drills manual regrind fixture provides a fast and easy method of resharpening gun drills and half round drills with the popular facet style grind. Drills of a large diameter range are positioned and ground without the need of expensive bushings or collets. The universal nature of the fixture allows standard or custom regrinds.

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The Sterling Gun Drills DM-41 Gun Drill Regrinding Fixture Consists of Three Elements:

1) **The Workhead** with clamping device to hold either a single flute gun drill or half round drill in position.

2) **A Scale**, graduated in degrees, to allow the drill to be aligned in the vertical plane. This scale is mounted on the vertical member of the fixture that holds the workhead.

3) **A Scale** mounted on the diamond-shaped base of the fixture to allow the drill to be angled in the horizontal plane. This scale is graduated in degrees.

Both scales have locking levers to maintain vertical and horizontal positioning, and when used together allow compound angles to be ground on the nose of the drill mounted in the workhead.

The fixture is normally used on a tool and cutter grinder equipped with a 11V9 or 11A2 style diamond wheel (120 - 180 grit). Some may choose a metal or plated bond wheel with concentric roughing and finishing faces, the roughing face having a coarser grit than the finishing faces. The spindle of the grinding wheel will start at 90° to the table slideway.
DM-42 Sharpening Head for Gun Drills up to 2 1/8” Diameter

Sterling Gun Drills, Inc. announces a new sharpening head for single flute gun drills to increase the range of our Manual Regrind Fixtures to over 2 1/8" (54mm).

Part # DM-42 Large Manual Sharpening fixture has a range of .75” (19mm) to approx. 2 1/8” (54mm).
Part # DM-42-A, Large Sharpening Head, is offered as an option* for a (modified) DM-41 Manual Regrind Fixture.

No additional collets or adapters are necessary to sharpen single flute gun drills of any manufacture with the popular “facet” nose grind to virtually any configuration required.

* To cope with the additional weight of very large gun drills, we recommend strengthening the clamping screws and handles of DM-41 fixtures already in use before fitting the DM-42-A head. The vertical and horizontal adjustment studs of DM-41 fixture should be increased in size to a ½ x 13 thread, along with more substantial locking handles. New fixtures ordered as DM-42, or DM-42 with the DM-41-A option, will have this modification included as standard.

Changeover of the standard sharpening head DM-41-A to the DM-42–A large sharpening head on the base fixture involves just two screws to swap the vertical register from the standard fixture to the large fixture.

Due to variation in flute shape from size to size and from one manufacturer to another, a fine adjustment feature is built into the clamping wedge that allows leveling the cutting face on gun drills with flute angles from 105º - 120º. A 1/8” hex key is furnished for this purpose.

Existing sharpening instruction is suitable for all diameters.

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<td>DM-41</td>
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<tr>
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<tr>
<td>DM-42 + DM-41 A</td>
<td>Head Assy. Includes the &quot;large&quot; fixture base assy., large head, and standard head allowing gun drill sharpening from .156 (4mm) to 2.125&quot; (54mm).</td>
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