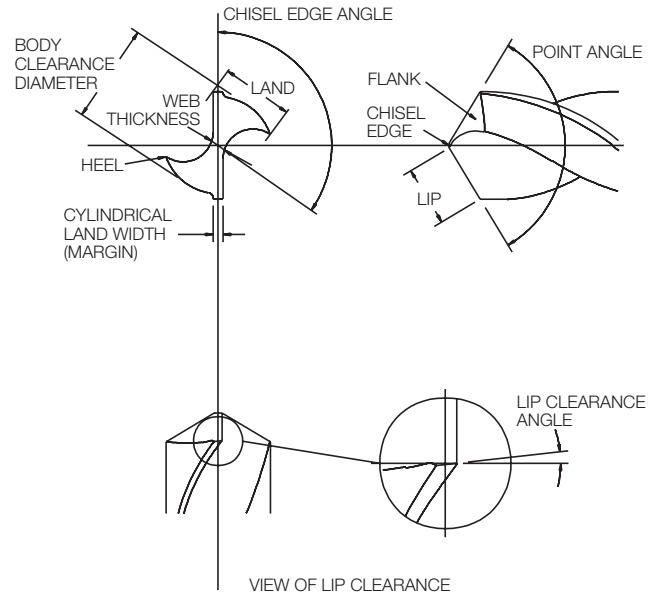
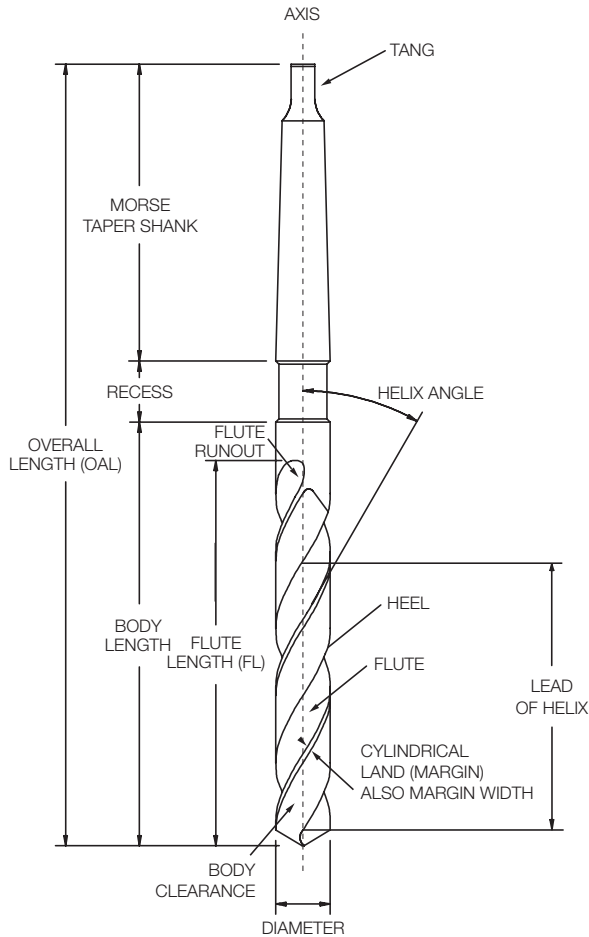


Drill Nomenclature and Definitions



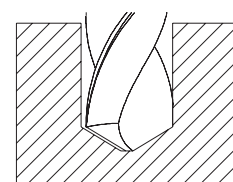
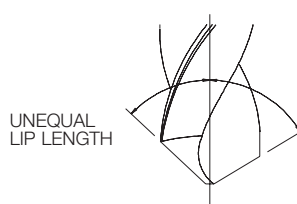
Axis	The longitudinal centre line of the drill.
Back Taper	The slight decrease in diameter from the front to the back in the drill body.
Body	The portion of the drill extending from the cutting lips to the shank.
Body Clearance	The portion of the land that has been cut away to provide diametrical clearance.
Chisel Edge	The edge formed by the intersection of the cutting lips.
Chisel Edge Angle	The included angle between the chisel edge and the cutting lip when viewed from the point end of the drill.
Cylindrical Land (Margin)	The cylindrical portion of the land that is not cut away to provide clearance.
Cylindrical Land Width	The distance between the leading edge and the heel of the land, measured at a right angle (Margin Width) to the leading edge.
Diameter	The measurement across the cylindrical lands (margin) at the outer corners of the drill.
Flank	The surface of the drill point extending behind the lip to follow the flute.
Flute Length	The axial length from the extreme end of the point to the termination of the flutes at the shank end of the drill. As this includes the flute runout, flute length does not indicate the usable length of the drill.
Flute Runout	The end of the flutes near the shank where they join the drill body.
Flutes	The grooves in the body of a drill which provide the cutting lips, allow swarf and chip ejection, and permit cutting fluid to reach the cutting lips.
Heel	The edge formed by the intersection of the body clearance and the flute surface.
Helix Angle	The angle formed by the leading edge of the land and the plane containing the axis of the drill.
Land	The peripheral portion of the body between adjacent flutes.
Lead of Helix	The distance measured parallel to the axis between corresponding points on the leading edge of the land in one turn of the drill.
Lip Clearance Angle	The angle formed between the outer corner of the lip and a plane at right angles to the axis of the drill, and usually measured at the periphery of the drill.
Lips	The cutting edges of a two flute drill extending from the chisel edge to the periphery of the drill.
Overall Length	The total length measured from the extreme point to the end of the shank.
Point	The sharpened end of the drill comprising the cutting lips, chisel edge, lands and the web.
Point Angle	The included angle between the cutting lips.
Relative Lip Height	The relative position of the lips measured at the outer corners in a direction parallel to the drill axis.
Recess	The section of reduced diameter between the shank and the body of a drill.
Shank	The part of the drill by which it is held and driven.
Tang	The flattened end of a taper shank intended to fit into a driving slot in a socket.
Web (Core)	The central portion of the drill that joins the land. The end of the web forms the chisel edge on a two flute drill.
Web (Core) Thickness	The minimum dimension of the web measured at the point of the drill.

Drill Nomenclature

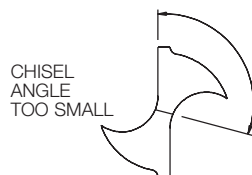


¹LIP CLEARANCE ANGLE:			
Drill Size (mm)		Angle (°)	
0.3 - 3		18	- 24
3.1 - 6		14	- 18
6.1 - 12		10	- 14
12.1 - 20		8	- 12
20+		6	- 10

Common Resharpener Errors on Standard Point Drills



DIFFERENCE IN RELATIVE LIP HEIGHT (DUE TO UNEQUAL LIP LENGTH) WILL CAUSE AN OVERSIZE HOLE



²WEB THINNING RECOMMENDED FOR:

1. restoring chisel edge to the original length after multiple regrinds
2. larger drills where machine thrust is limited
3. difficult materials.