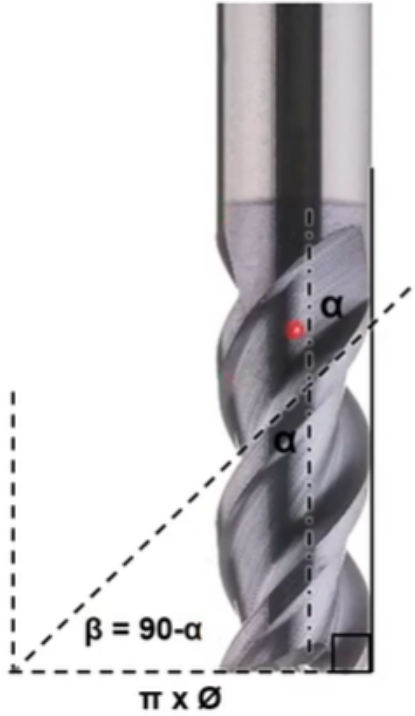
How many points in contact?:

The number of contact points can be calculated using the formulas shown

Two or more contact points are preferred for stability in most end milling applications



Lead mm, given Helix Angle

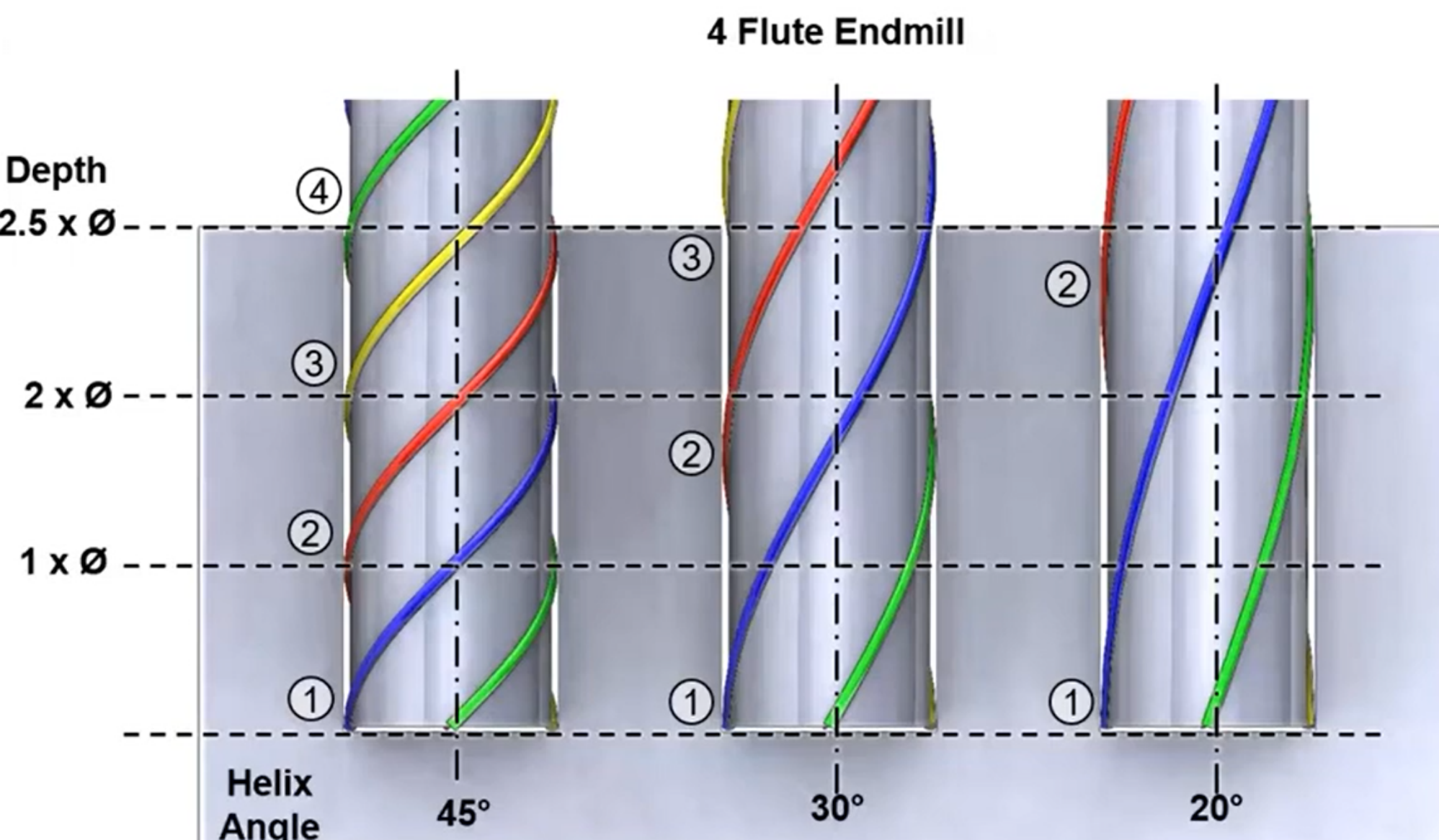
$$Lead, mm = \frac{(\pi \times \emptyset)}{(\tan \alpha)}$$

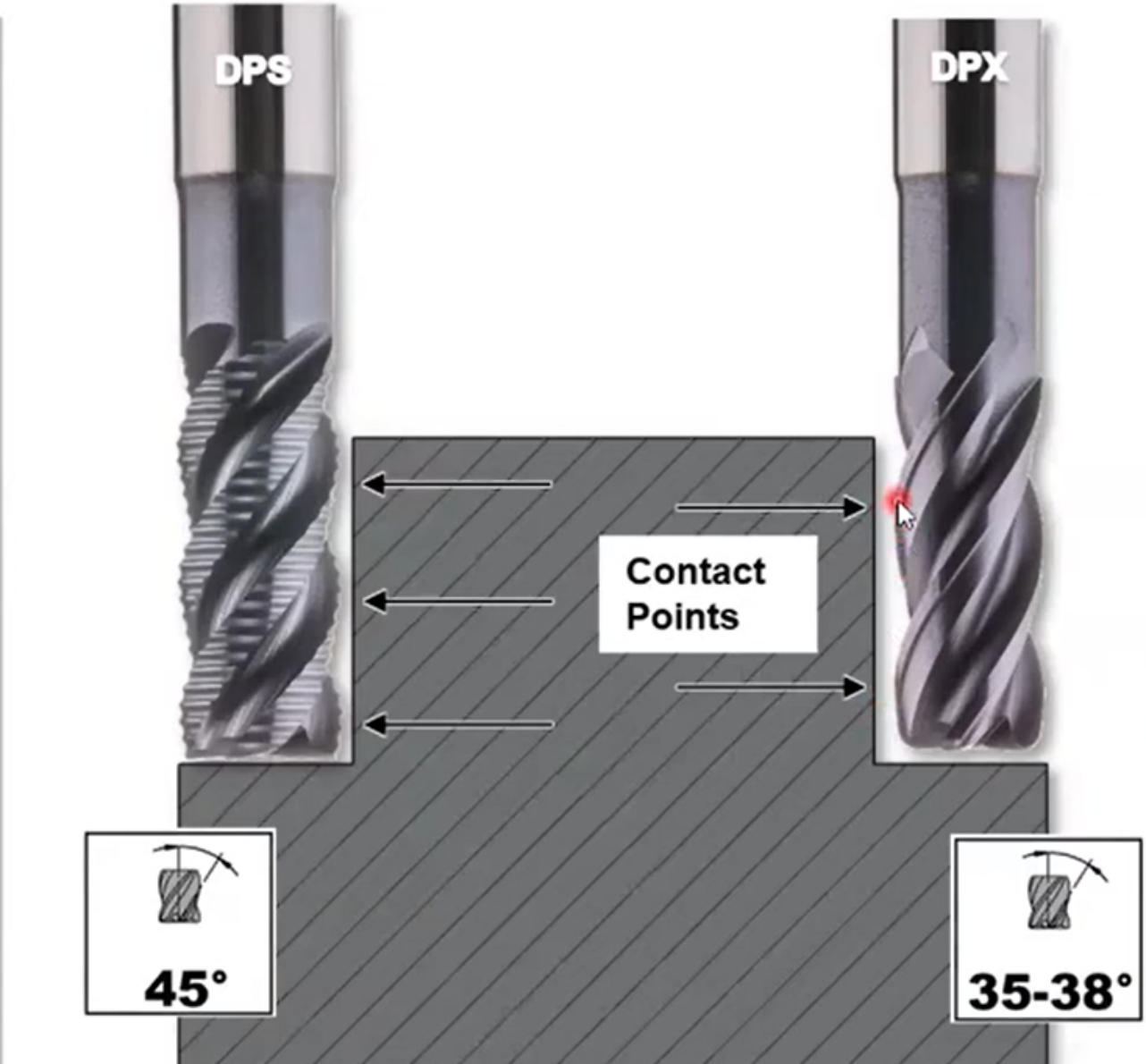
Where:
Lead : Distance between contact points on the same flute, mm.
α: Helix angle, Degrees
Ø: Diameter or Ds, mm

Number of Contact Points

$$\text{Contact Points} = \left[\frac{\text{ap}}{\left(\frac{\text{Lead}}{\text{z}}\right)}\right] + 1$$

Where:
Lead mm : Distance between contact points on the same flute, mm.
ap: Depth of Cut, mm
Z: Number of flutes
* Answer should be rounded down to the nearest whole number


4 Flute Endmill
Depth
2.5 x Ø
2 x Ø
1 x Ø
4
3
2
1
3
2
1
2
1
Helix Angle
45°
30°
20°


DPS
DPX
Contact
Points
45°
35-38°