

Steric Number*	# of Atoms Bonded to Central Atom	# of Lone Pairs on Central Atom	Examples	Electron Pair Geometry (Hybridization)	Shape/Geometry of Atoms (VESPER class)	Bond Angles
1	1	0	H ₂	Linear (s)	Linear (AB)	180°
2	2	0	BeH ₂ , BeCl ₂ , CO ₂ , CS ₂ , HCN	Linear (sp)	Linear (AB ₂)	180°
	1	1	N ₂ , CO, CN ⁻		Linear (AB ₂)	180°
3	3	0	BCl ₃ , BF ₃ , AlCl ₃ , CH ₂ O, SO ₃ , CO ₃ ²⁻	Trigonal Planar (sp ²)	Trigonal Planar (AB ₃)	120°
	2	1	O ₃ , SnCl ₂ , SO ₂ , NO ₂ ⁻		Bent/V-shaped (AB ₂ E)	118 ° (<120°)
	1	2	O ₂		Linear (ABE ₂)	120°
4	4	0	CH ₄ , SiCl ₄ , POCl ₃ , SO ₄ ²⁻	Tetrahedral (sp ³)	Tetrahedral (AB ₄)	109.5°
	3	1	NH ₃ , PF ₃ , PH ₃ , H ₃ O ⁺		Trigonal Pyramidal (AB ₃ E)	107.5° (<109°)
	2	2	H ₂ O, H ₂ S, SeBr ₂ , BO ₂ ⁻ , ICl ₂ ⁺		Bent/V-shaped (AB ₂ E ₂)	104.5° (<<109°)
	1	3	F ₂ , Cl ₂ , HF, OH ⁻		Linear (ABE ₃)	180°
5	5	0	PF ₅ , PCl ₅ , PH ₅ , AsF ₅ , SbF ₅ , IO ₃ F ₂ ⁻	Trigonal Bipyramidal (sp ³ d)	Trigonal Bipyramidal (AB ₅)	90° and 120°
	4	1	SF ₄ , TeCl ₄ , SeH ₄ , IF ₄ ⁺		Seesaw/Sawhorse (AB ₄ E)	<90° and <120°
	3	2	ICl ₃ , ClF ₃ , BrF ₃		T-shaped (AB ₃ E ₂)	<90°
	2	3	XeF ₂ , BrF ₂ ⁻ , I ₃ ⁻ , ICl ₂ ⁻		Linear (AB ₂ E ₃)	180°
6	6	0	SF ₆ , SeCl ₆ , PF ₆ ⁻ , SiF ₆ ²⁻	Octahedral (sp ³ d ²)	Octahedral (AB ₆)	90°
	5	1	BrF ₅ , IF ₅ , XeOF ₄ , SbCl ₅ ²⁻		Square Pyramidal (AB ₅ E)	<90°
	4	2	XeF ₄ , ICl ₄ ⁻ , BrF ₄ ⁻		Square Planar (AB ₄ E ₂)	90°

*Steric Number AKA Electron Domain: total number of atoms and lone pairs connected to central atom