



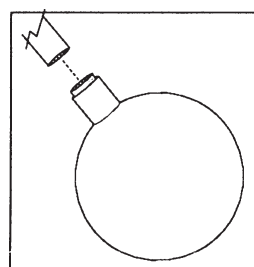
GIANT MOLECULAR MODELS

Kit Components and Open-Stock Parts

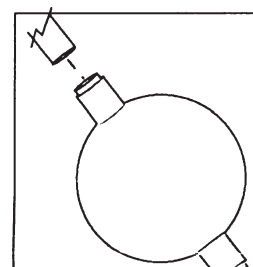
The components of the Basic, Standard and Deluxe Kits build skeletal molecular models that are useful for research and demonstration of organic and some inorganic concepts to associates and students. The components are large 5 cm atom centers and bonds in two scales—8 cm/Å and 20 cm/Å. The atom centers are made of double density polystyrene. Each element is color coded according to commonly accepted standards—black for carbon, white for hydrogen for example. The color is a high gloss brilliant coating for excellent visibility. The bonds are of rigid wood and solid flexible plastic. Bonds are color coded to illustrate the type of bond. The table itemizes the quantity of each type of component (atom centers and bonds) included in each of the Giant Molecular Model Kits. Each component is available in packages of six so that any kit can be expanded to meet specific requirements. For prices for Packages of Six of any component, please contact Aldrich Chemical Company.

KIT COMPONENTS			◆	PARTS
Atom Centers	Basic Kit Z23,131-2	Deluxe Kit Z23,132-0	Standard Kit Z12,660-8	Pkg. of Six Catalog No.
Carbon (black)				
tetrahedral	8	16	8	Z13,458-9
trigonal				Z13,459-7
octahedral			2	Z13,460-0
tri bipyramidal			6	Z13,461-9
Oxygen (Red)				
tetrahedral			2	Z13,465-1
diunivalent	3	6		Z13,467-8
carbonyl			1	Z13,468-6
tri bipyramidal				Z13,469-4
Hydrogen (White)				
monovalent	17	34	17	Z13,476-7
H Bond			1	Z13,477-5
Nitrogen (Blue)				
tetrahedral	1	2	1	Z13,462-7
trigonal				Z13,463-5
tri bipyramidal			2	Z13,464-3
Sulfur (Yellow)				
tetrahedral			1	Z13,470-8
diunivalent				Z13,471-6
Chlorine (Green)				
tetrahedral			1	Z13,473-2
octahedral				Z13,474-0
monovalent	1	2	2	Z13,475-9
Bromine (Brown)				
monovalent	1	2	2	Z13,478-3
Iodine (Orange)				
monovalent	1	2	2	Z13,479-1
Phosphorous (Purple)				
tetrahedral				Z13,472-4
Metal (Silver)				
tetrahedral			1	Z13,480-5
octahedral			1	Z13,481-3
Bonds				
Single Bond (Black)				
8cm/Å, 9.0 cm long	8	16	16	Z13,636-0
20cm/Å, 23 cm long	8	16	16	Z13,482-1
Double Bond (Red)				
8cm/Å, 7.5 cm long			4	Z13,637-9
20cm/Å, 20 cm long			4	Z13,484-8
C-H Bond (Yellow)				
8cm/Å, 5.5 cm long	17	34	25	Z13,638-7
20cm/Å, 16 cm long	17	34	25	Z13,485-6
H Bond (White)				
8cm/Å, 10.0 cm long			1	Z13,641-7
20cm/Å, 26.0 cm long			1	Z13,642-5
Flexible Bond (Opaque)				
8cm/Å, 10.0 cm long	8	16	4	Z13,639-5
20cm/Å, 24.0 cm long	8	16	4	Z13,486-4
P Orbital Overlap (Red)				
8cm/Å, 11.0 cm long			6	Z13,640-9
20cm/Å, 27.0 cm long			6	Z13,487-2

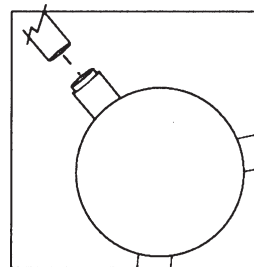
ATOM CONFIGURATIONS



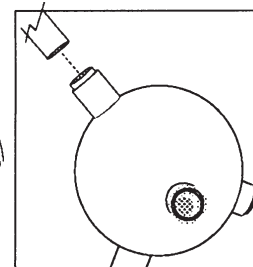
Monovalent



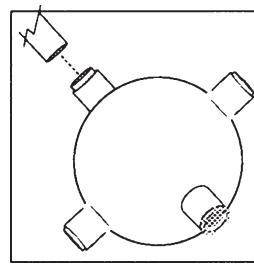
Diunivalent
(H bond)



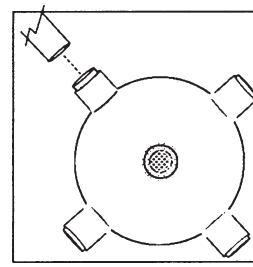
Trigonal



Tetrahedral



Tri bipyramidal



Octahedral

Molecular Models User's Guide

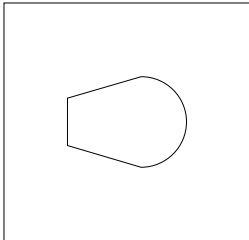
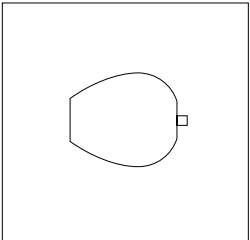
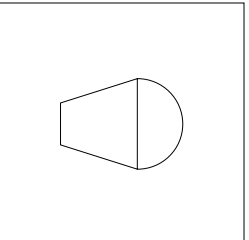
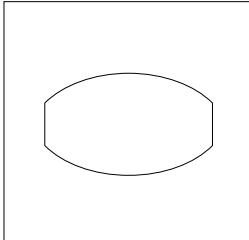
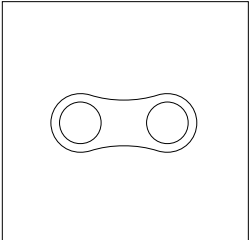
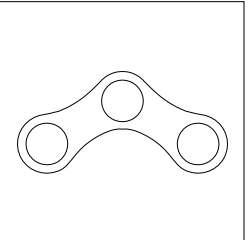
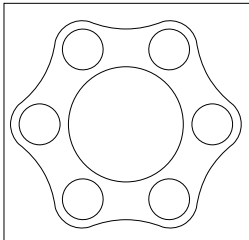
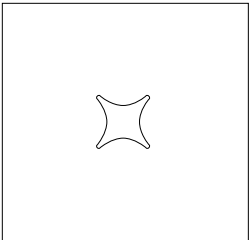
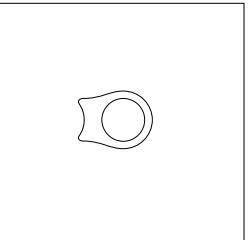
A comprehensive guide to teaching and demonstrating specific organic chemistry concepts and functional groups with molecular models. Included with each Giant Molecular Model Kit.

ORBITAL ATTACHMENT KIT

Cat. No. Z12,661-6

Components and Open Stock Parts

A collection of lightweight orbitals and Pi bonds for building three dimensional space-filling orbital models accurately representing the electron shell and electron bonding of organic compounds. The orbitals attach to the atom centers contained in the Basic, Deluxe and Standard Giant Molecular Model Kits. The Pi bonds fit over the ends of the orbital to illustrate p orbitals. Most orbitals measure 10 x 7.5 cms and are brilliantly finished polystyrene in standard colors. Pi bonds are lightweight plastic foam. For prices for Packages of Six, please contact Aldrich Chemical Company.

KIT COMPONENTS ♦ PARTS			ORBITAL & BOND CONFIGURATIONS		
Orbitals	No. In Kit	Pkg. of Six Catalog No.			
Atomic (Red)	7	Z13,489-9			
Atomic (Green)	7	Z13,490-2			
Lone Pair (Yellow)	4	Z13,491-0			
Protonated (Red/White)	8	Z13,492-9			
Sigma Bond (Red)	6	Z13,493-7			
Pi Bonds					
Ethylene	6	Z13,494-5			
Carbonyl	3	Z13,495-3			
Benzene	2	Z13,496-1			
Short Bridge	4	Z13,498-8			
Long Bridge	4	Z13,499-6			
Instructions	1 set				
			Benzene	Short Bridge	Long Bridge