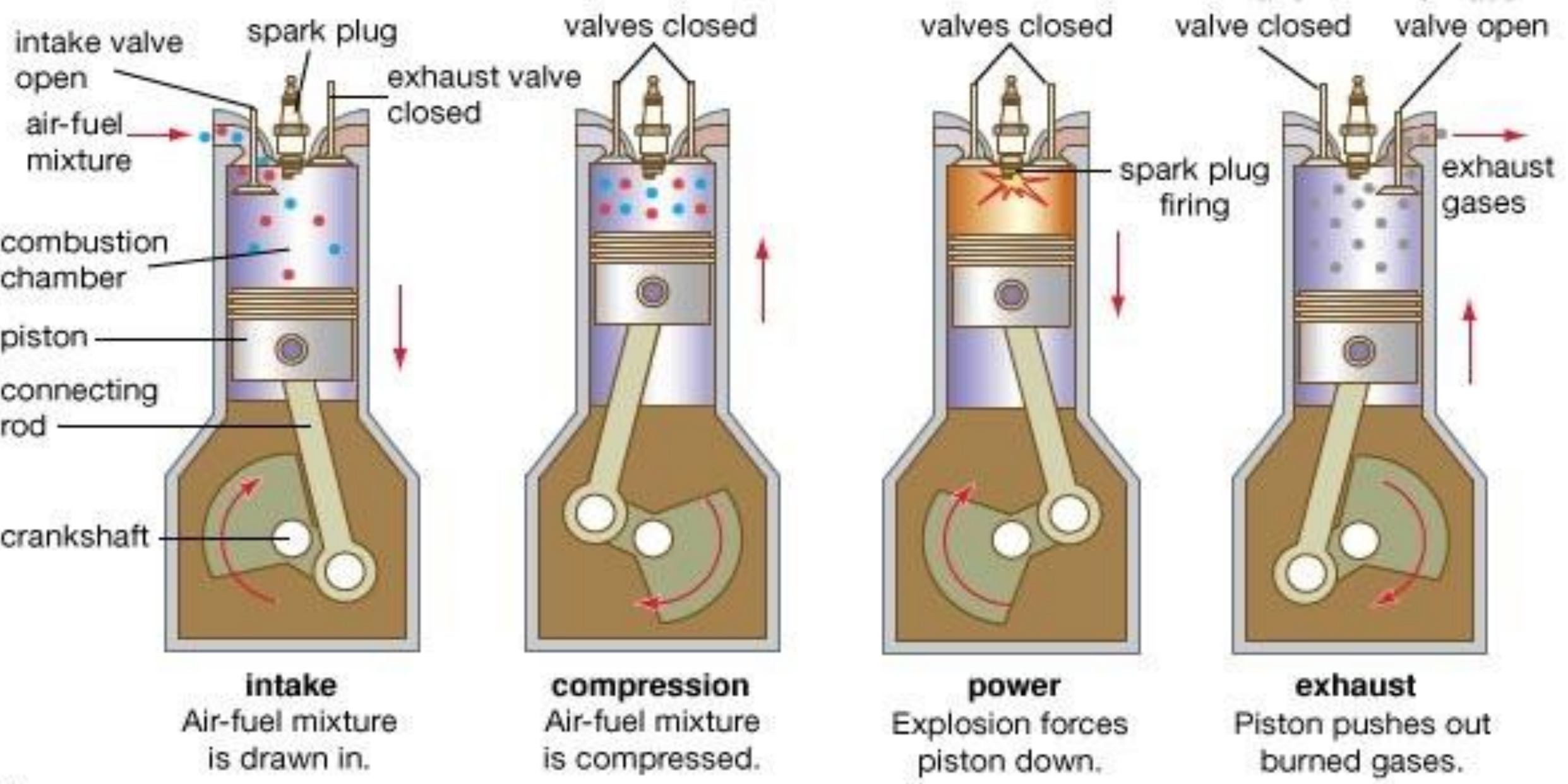


The background features a dark blue field with several light blue circular and semi-circular patterns. A prominent scale on the left side ranges from 140 to 260 in increments of 10. Other elements include concentric circles, dashed lines, and arrows, some of which are curved to suggest motion or rotation. The overall aesthetic is technical and modern.

FOUR-STROKE ENGINE

Four-stroke cycle



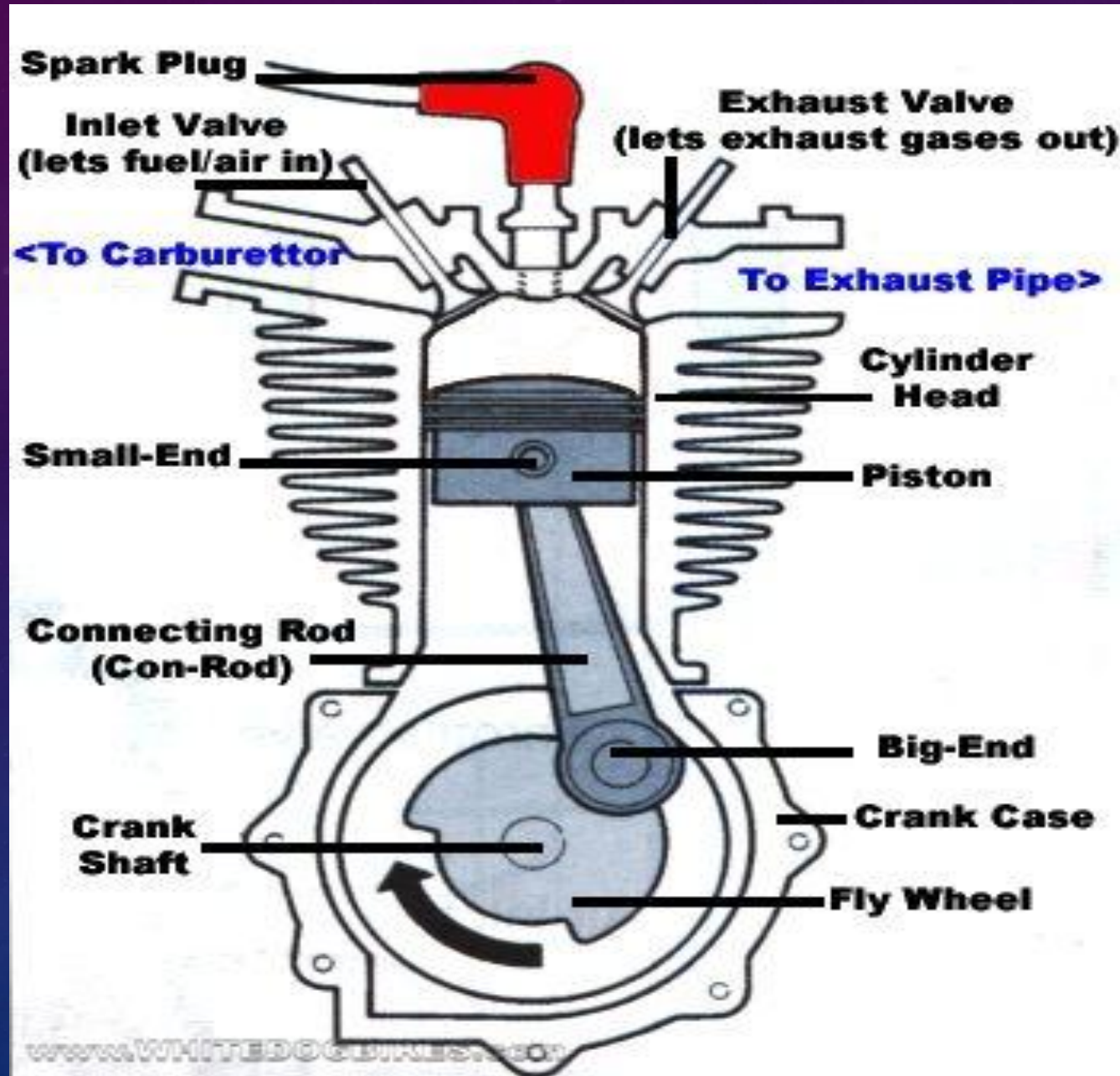
THE BASICS

- ❖ A FOUR-STROKE ENGINE:
- ❖ IS AN INTERNAL COMBUSTION ENGINE
- ❖ CONVERTS GASOLINE INTO MOTION
- ❖ IS THE MOST COMMON CAR ENGINE TYPE
- ❖ IS RELATIVELY EFFICIENT
- ❖ IS RELATIVELY INEXPENSIVE

OTHER ENGINE TYPES

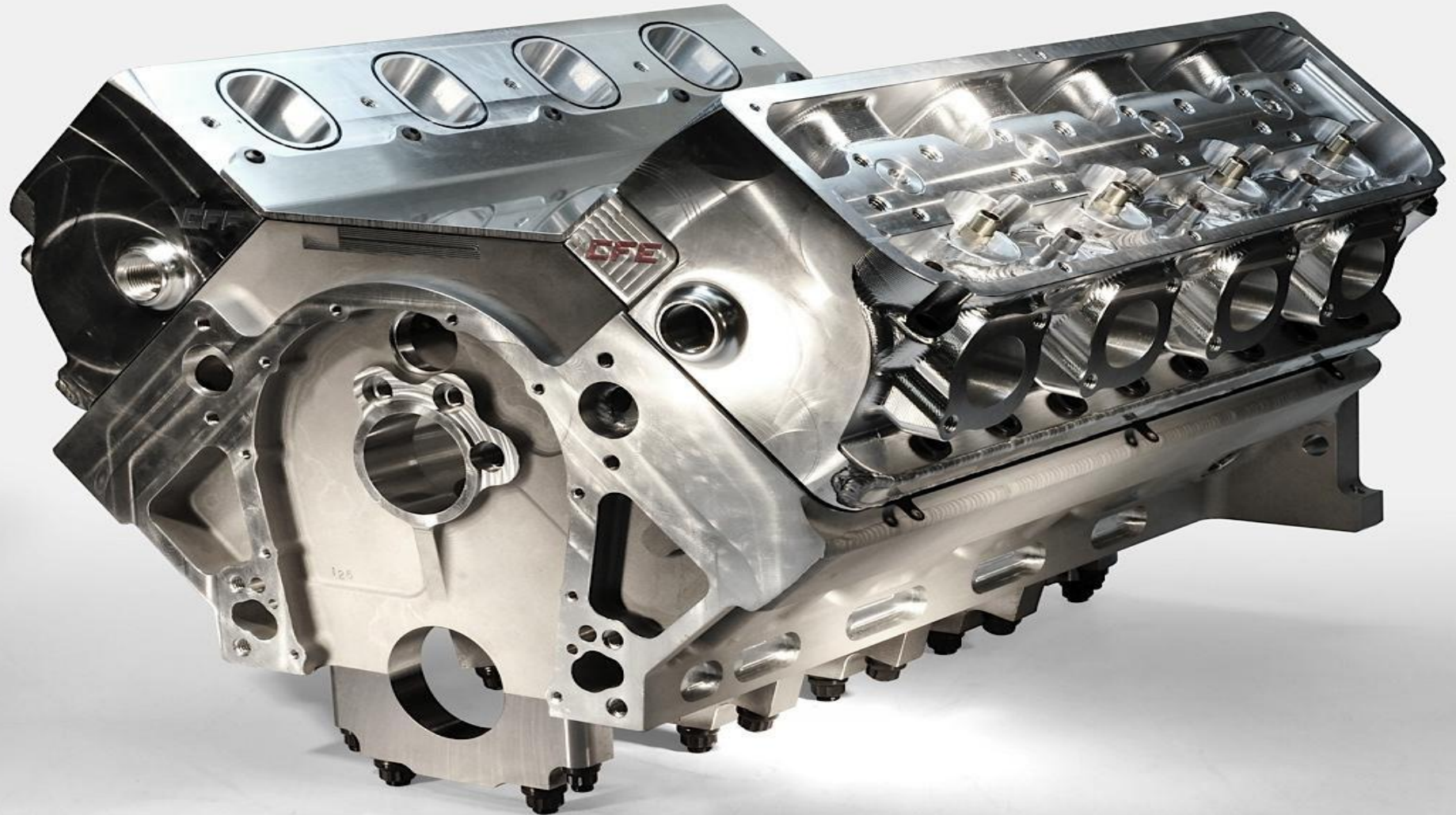
- ❖ TWO-STROKE ENGINES
- ❖ DIESEL ENGINES
- ❖ ROTARY ENGINES
- ❖ TURBINE ENGINES
- ❖ STEAM ENGINES

COMPONENTS OF FOUR-STROKE ENGINES



- ❖ Intake Valve- opens at the proper time to let in air and fuel.
- ❖ Valve Cover- Protects the valves and the valve springs. Keeps dirt out and lubricating oil in.
- ❖ Intake manifold- the passageway in a cylinder head for the fuel and air to pass through.
- ❖ Head- a platform containing most of the parts of the combustion chamber.
- ❖ Oil Sump- the collected oil primarily for lubricating the crankshaft and rod bearing.
- ❖ Camshaft- a round shaft with lobes, that rotates to open and close intake and exhaust valves.
- ❖ Exhaust Valve- open at the proper time to release the exhaust.
- ❖ Exhaust manifold- the passageway in a cylinder head, for the exhaust to pass through.

- ❖ ENGINE BLOCK- CAST IN ONE PIECE. THE BASIS FOR MOST OF THE PARTS OF THE ENGINE.



- ❖ Oil Pan- where the oil is collected and recirculated.
- ❖ Spark Plug- a device, inserted into the combustion chamber for firing an electrical spark to ignite air-fuel mixture
- ❖ Piston- the part of the engine that moves up and down in the cylinder converting the gasoline into motion.
- ❖ Connecting Rod- links the piston to the crankshaft.
- ❖ Crankshaft- converts the up and down motion of the piston into a turning, or rotating motion



THE 4-STROKE CYCLE

- I. INTAKE
- II. COMPRESSION
- III. COMBUSTION
- IV. EXHAUST

- ❖ INTAKE- PROCESS OF FILLING THE CYLINDER WITH THE PROPER AIR-FUEL MIXTURE THROUGH THE INTAKE VALVE
- ❖ COMPRESSION- THE PROCESS OF COMPRESSING THE AIR-FUEL MIXTURE IN THE CYLINDER TO MAKE IT MORE COMBUSTIBLE
- ❖ COMBUSTION-THE PROCESS OF IGNITING THE COMPRESSED AIR-FUEL MIXTURE TO CREATE MOTION AND THE OVER ALL POWER OF THE ENGINE.
- ❖ EXHAUST- THE PROCESS OF RELEASING THE EXHAUST OUT OF THE CYLINDER THROUGH THE EXHAUST VALVE.

***THANK YOU FOR YOUR
ATTENTION!!!***