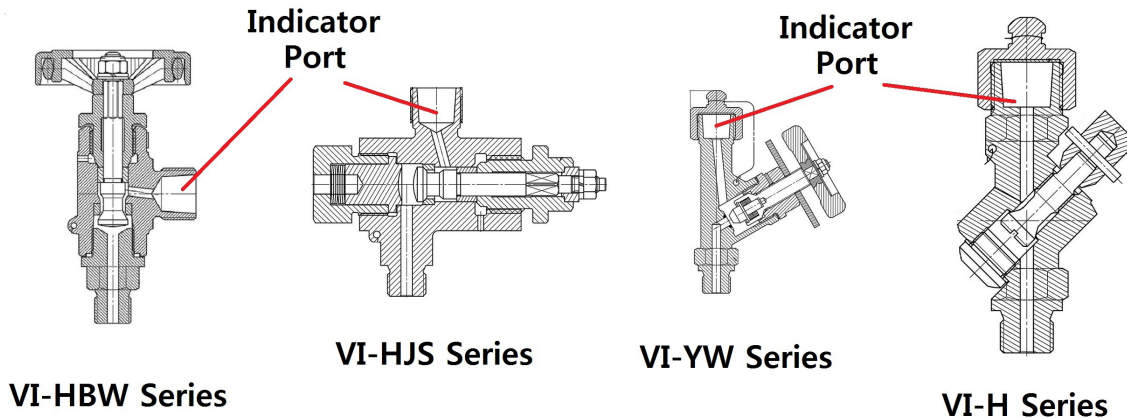


Indicator Valves

Marine Propulsion and Power Generation Diesel Engine



Indicator Valves measure and monitor the cylinder pressure of diesel engine while the engine is running. This is to analyze the condition and effectiveness of the engine.



Valve is mounted over the each cylinder head of diesel engine. Through a bore the indicator valve is connected to combustion chamber (cylinder).

A pressure gauge is connected to indicator port of the valve.

The indicator port is, if required, connected to a measuring instrument in order to read the cylinder's condition and effect.

Indicator valve is the major tool in working out horsepower rating. Also useful diagnostic tool to identify problem of injection valve and piston ring leakage. They work on Pmax and Pcom pressure against piston movement, and the resulting trace is marked onto a piece of treated paper for a record.

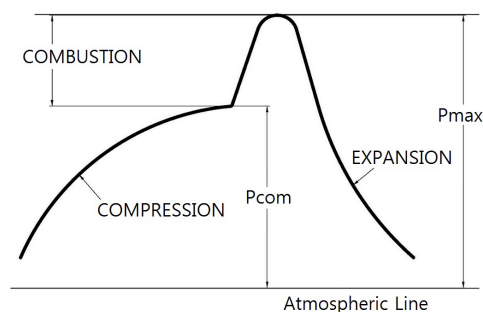
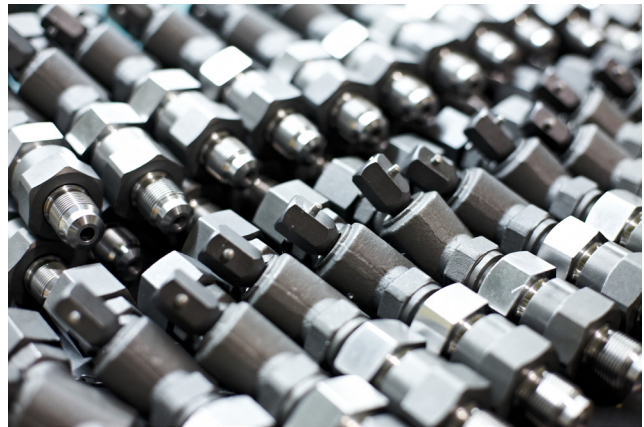
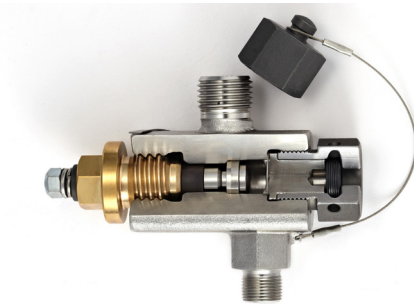
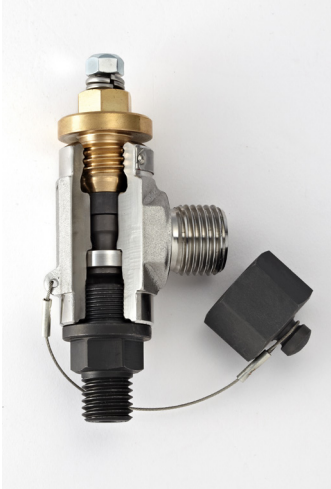


Diagram shown:

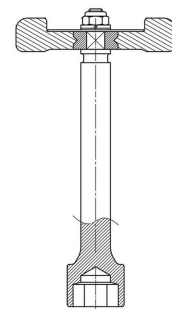
Cylinder maximum pressure Pmax
Cylinder compression pressure Pcom



Features

Body Construction	Forged Carbon steel or Stainless Steel	
Operating Temperature	Max. 600°C(1112°F)	
Operating Pressure	Max. 300 bar (4350 psig)	
End Connections	Engine port	M20 x 2, M20 x 2.5, 1/2 in. NPT & BSPT, 3/4 in. WH
	Indicator port	Suitable for mechanical and digital indicator with standardized thread W27 x 1/10 in.

- Inconel 718 disc-spring loaded axially moving valve cone ensures excellent sealing on hot and cold engine.
- Hard-facing sealing cone and seat ensures extended cycle life.
- Excellent creep-resistant Alloy 80A /ASTM B637 on cone and seat.
- Valves are designed with back-seat sealing.
- Valves open and close in all temperature, using either a built-in heat-protected wheel handle or a separate long-neck wrench handle.



**Long Neck
Wrench Handle**

Limitations

Indicator valve is a good instrument to measure engine pressure. However its use is limited to measuring indicated pressure of large slow and mid-speed engines only.

High speed engine requires separate indirect methods since the stylus movement is unable to draw the diagram in high speed piston movement.