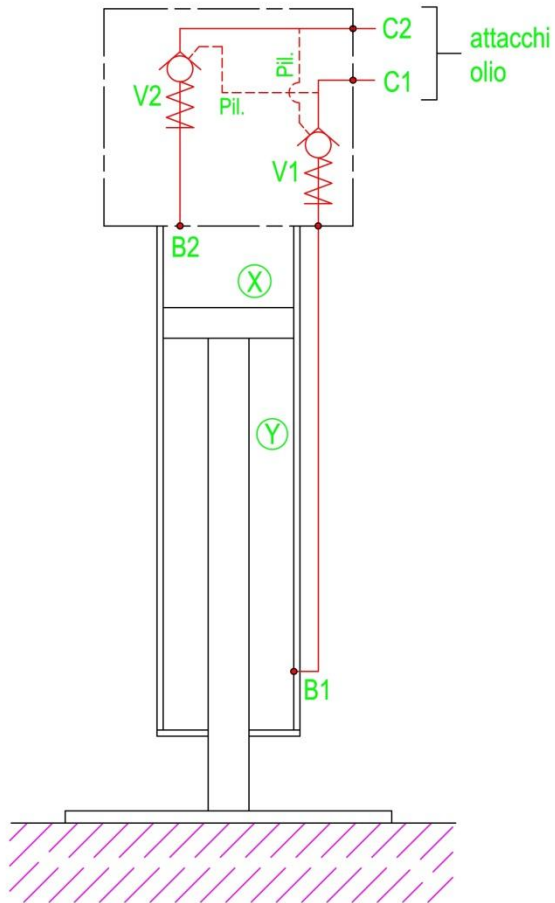


HYDRAULIC JACK WITH 2 SAFETY VALVES



VALVE OPERATION:

The valve V2 allows the passage of the oil from C2 to B2 and blocks it from B2 to C2.

The oil can flow freely from B2 to C2 only when the pressure in pilot system (Pil.) will unblock the valve. The valve V1 allows the flow of the oil from C1 to B1 and blocks it from B1 to C1.

The oil can flow freely from B1 to C1 only when the pressure in pilot system (Pil.) will unblock the valve.

WORKING CYCLE OF THE JACK:

- **Extension of the internal sleeve:** The oil flows from C2 to B2 filling up the X chamber of the cylinder. The oil in chamber Y of the cylinder flows out from B1 to C1 when the pressure in the pilot system (Pil.) will unblock valve V1.
- **Load supporting:** The cylinder is not powered by the oil. The chamber X of the cylinder is under pressure induced by the load to be supported. The flow of the oil from B2 to C2 is blocked by V2
- **Retraction of the internal sleeve:** The oil flows from C1 to B1 filling up chamber Y of the cylinder. The oil in chamber X of the cylinder flows out from B2 to C2 when the pressure in the pilot system (Pil.) will unblock valve V2.
- **Anti-extension of the internal sleeve when jack is retracted:** The cylinder is not powered by the oil. The chamber Y of the cylinder is under pressure induced by the mass of the internal sleeve. The flow of the oil from B1 to C1 is blocked by V1