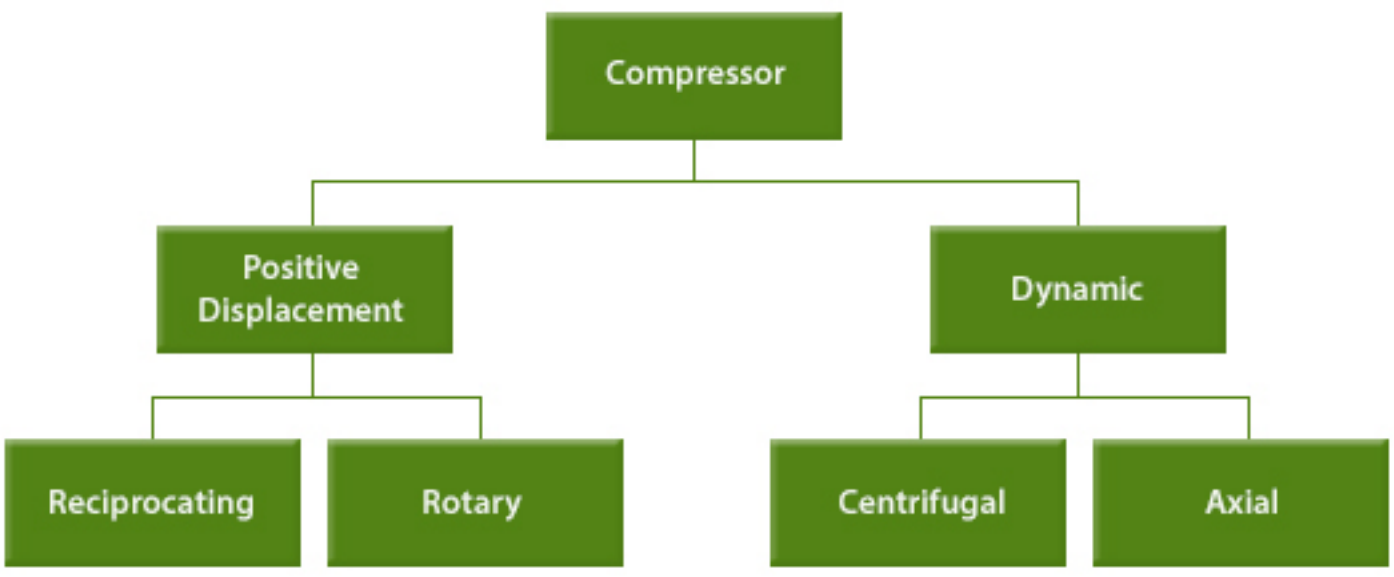
Application

COMPRESSOR Solution Using LS Drive

1. COMPRESSOR

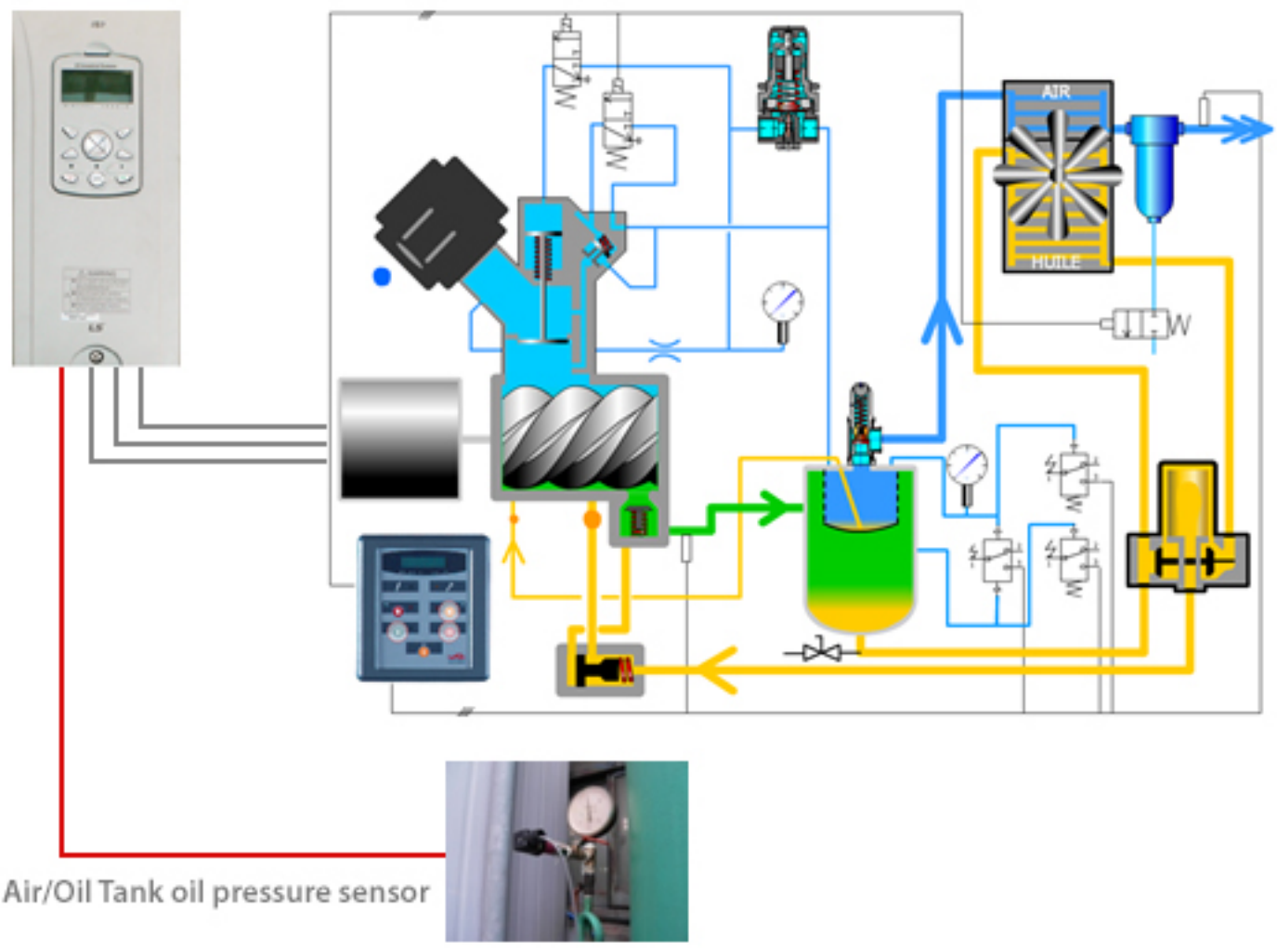
Compressor is a device that makes the pressure of gas more high level than current condition.
Firstly, converting the electrical energy into mechanical energy by a motor then, compresses the gas by mechanical power. Finally, it makes work with the compressed air.

2. System



- **Reciprocating** — A reciprocating compressor or piston compressor is a Positive-displacement compressor that uses pistons driven by a crankshaft to deliver gases at high pressure
- **Rotary** — They are commonly used to replace piston compressor where large volumes of high pressure air are needed, either for large industrial applications or to operate high-power air tools such as jackhammers
- **Centrifugal** — Centrifugal compressors, sometimes termed radial compressors, are a sub-class of dynamic axisymmetric work-absorbing turbomachinery.
- **Axial** — Axial compressors are rotating, airfoil-based compressor in which the working fluid principally flows parallel to the axis of rotation. This is in contrast with other rotating compressors such as centrifugal, axi-centrifugal and mixed-flow compressors where the air may enter axially but will have a significant radial component on exit.

3. System Diagram



- **Machine** — Air/Oil compressor
- **Key Function** — Screw rotor should be filled with oil and than compressor will be started. Although motor rotate , It cannot compress air because oil is not filled in the screw rotor when compressor start up
- **Solution** — By using Pre-PID function, it can use PID function after proper pressure should be fed back.

4. Applied Product

INVERTER iS7

5. Key Function

- **Pre-PID** — Pre-PID is useful at screw compressor. In such application should need an oil filled before start
  In order to fill the oil into screw compressor after starting drive, Pre-PID will react in the form of open loop
- **Sleep and Wake-up function** — Sleep and Wake-up function can stop drive's operation in low weighted load situation. And if the load is restored to a normal situation, drive will restart. This mechanism ultimately brings energy saving result of entire system.