

Everllence

AdaptiVIT



Main Benefit

 Operational efficiency

Adaptive Variable Injection Timing

Operational efficiency

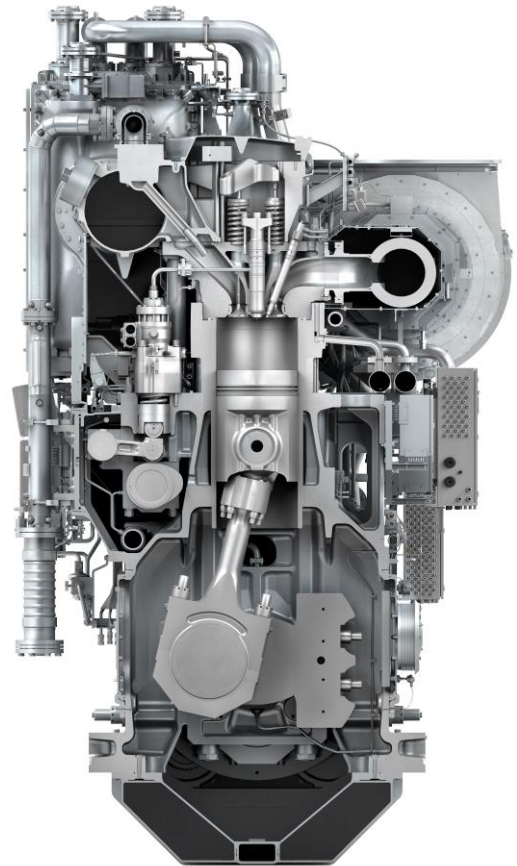
- Enhancement of engine efficiency through reduced specific fuel consumption
- Compensation of engine wear
- Optimization across various load conditions

Other Benefits

- Compliance with specified emission regulations
- Stand-alone system
- Continuous cylinder pressure monitoring

How the Solution works

- Manual or electrical VIT are being replaced by an adaptive VIT
- Combustion pressure sensors and NO_x sensors provide additional data for enhanced combustion parameter monitoring
- New control cabinet analyzes real-time engine parameters
- Servo Motor, equipped with a worm gear mechanism, drives an eccentric shaft
- Rotation of the eccentric shaft induces horizontal movement of the rocker arms
- The position of the rocker arms is critical for initiating pressure buildup and fuel injection
- The ignition timing plays a critical role in determining the engine's characteristics
- Advancing the ignition timing results in higher combustion pressures (part load) and reduced fuel consumption
- Retarding the ignition timing contributes to lower NO_x emissions



For further information:

Should you have any queries, our Retrofit & Upgrades team will be pleased to be of assistance.

EVERLLENCE SE

PrimeServ Germany
Stadtbachstraße 1
D-86153 Augsburg

Contact:

retrofit4s@everllence.com

Scan for
more Info



Workflow



Scope of Supply

- Installation of combustion pressure sensors for each cylinder
- Integration of new control cabinet and servo motor
- System adjustment and commissioning procedure

Case Study

- Engine type:	18V48/60
- Power Output:	20,700 kW
- Load considered:	85% MCR
- Annual operating time:	6000 hrs
- SFOC reduction:	up to 2g/kWh
- Annual fuel savings:	211 mt/a
- Fuel price: (Global 20 Ports 2025)	480 \$/mt
- Annual cost savings:	101,300\$

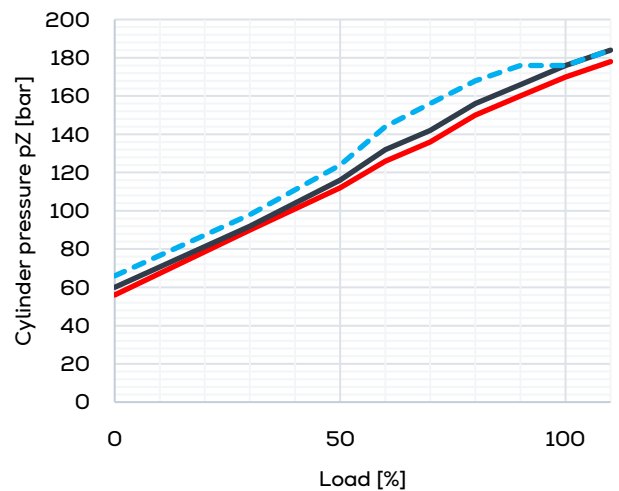
Applicability

AdaptiVIT is available for the following engine types (Power Application):

48/60, 48/60B, 51/60DF

Benefits of AdaptiVIT

- **Compensation:** Decrease of original cylinder pressure due to engine wear can be compensated
- **Optimization:** Increase of cylinder pressure between 50% and 90% load
- **Diagnostics:** Analysis of real time combustion data*



— Wear — Original - - - Optimization

* only possible if engine is equipped with a multi gap wheel

MAN Energy Solutions is now:

Everllence

For further information:

Should you have any queries, our Retrofit & Upgrades team will be pleased to be of assistance.

EVERLLENCE SE
PrimeServ Germany
 Stadtbachstraße 1
 D-86153 Augsburg

Contact:
retrofit4s@everllence.com

Scan for more Info

