

# MCO Super High Pressure Compressor

## Super high pressure compressor proven to 700 bar using CO<sub>2</sub>

### Concepts and Enhanced technologies

The MCO's super high pressure compressor has the improved efficiency, stability and operating range with compact body.

The application is targeted for CO<sub>2</sub> / Natural gas / N<sub>2</sub> EOR, CCS, Oil & Gas plants and offshore equipment.

#### Wide range operation

Stability range : more than 30%

#### Compact & Light weight

Machine weight : half of conventional

#### Robust design

Thrust load : lower than half of allowable limit

#### High rotor stability

Log decrement : more than 2.0  
(Under high pressure conditions)

#### High efficiency

Efficiency : 17% up of conventional  
(Relative ratio)

#### Double balance piston with optimized step hole pattern seal

#### Short length vaned diffuser

#### Compact casing

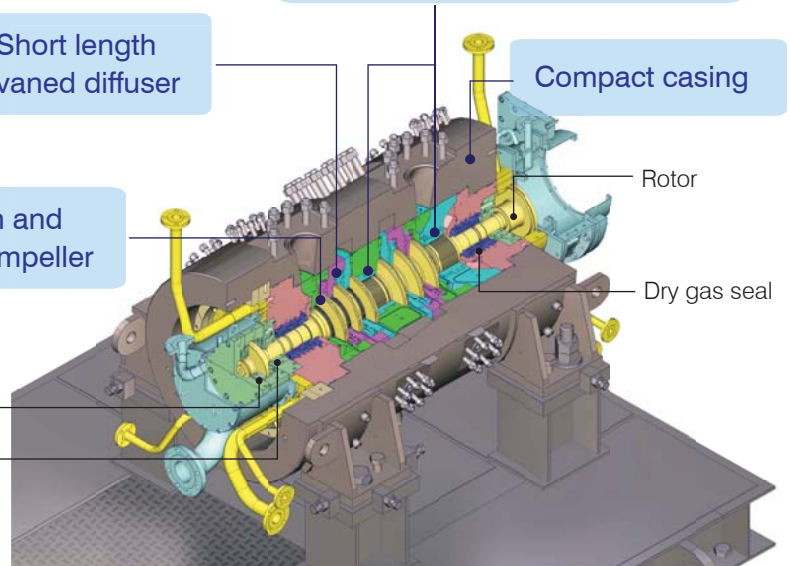
#### High boss ration and wide flow pass impeller

Rotor

Dry gas seal

Thrust bearing

Journal bearing



### Shop demonstration

The demonstration under actual conditions was conducted successfully in our Hiroshima shop in 2013. It confirmed this robust mechanical and aero performance, and consequently we received the first order of the 550 bar class compressors.

- Test Gas : CO<sub>2</sub>, Natural gas, N<sub>2</sub>
- Disch. Pressure : Up to 700 bar (# 10,000)
- Test speed : Up to 13,000 rpm (MCR)

