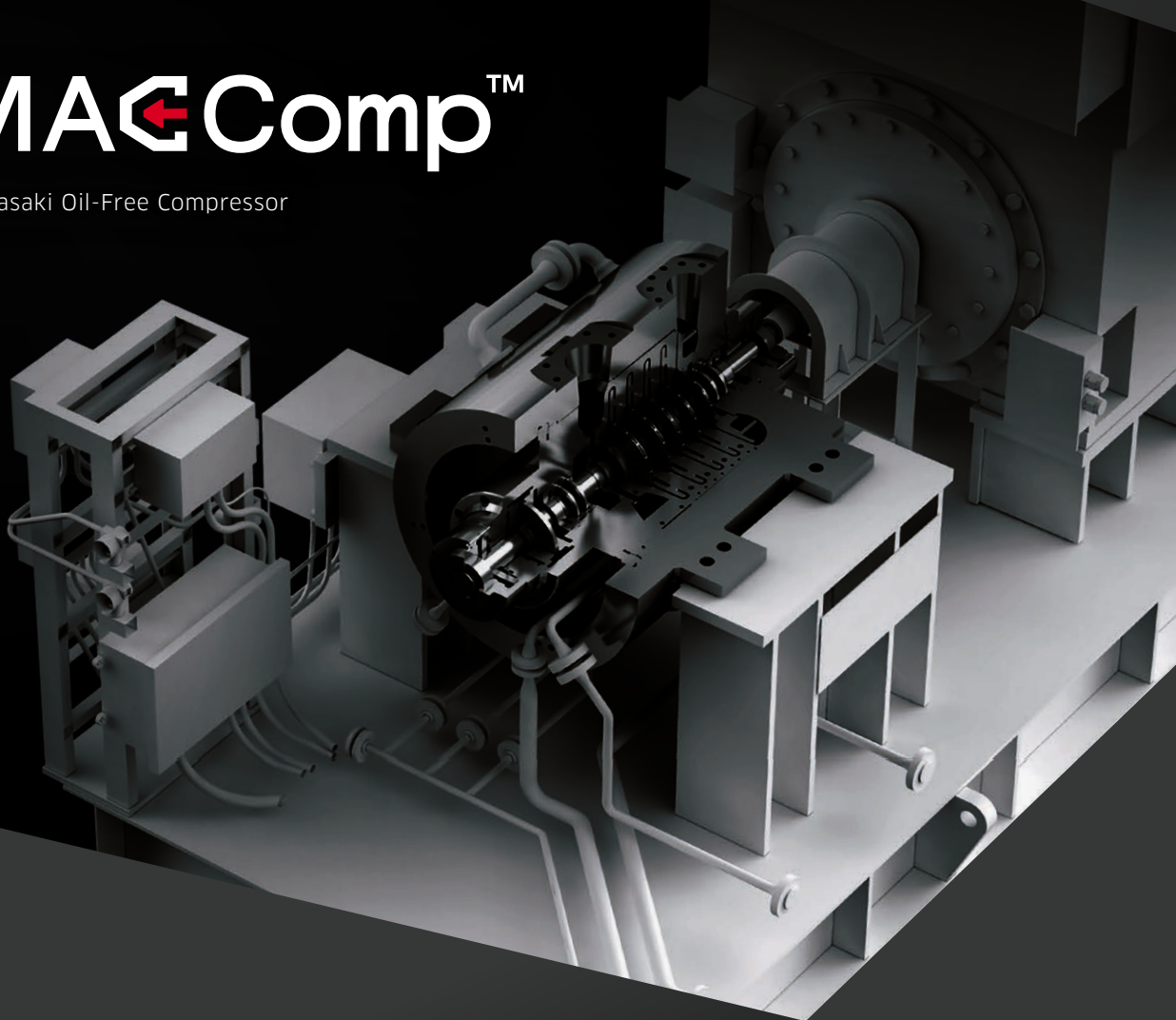


# MA<sub>←</sub>Comp™

Kawasaki Oil-Free Compressor





# TECHNOLOGY FOR THE NEXT GENERATION

It is our commitment to create new value for a better environment and a brighter future for the generations to come.

Gas compression systems in plants are one of the essential infrastructures to deliver energy and support human lives.

It is a common belief that gas compressors require oil for lubrication, requiring operators to perform maintenance activities frequently and being an environmental burden.

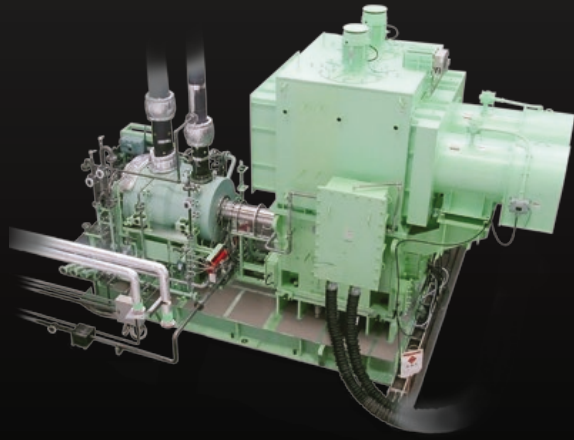
But what if your gas compressors were free from oil?

Allow us to present “MAG Comp,” a totally oil-free machine that provides the ideal and stylish system for your compression demands.





# EVOLUTIONARY MACHINE



Flow Capacity up to  
200 m<sup>3</sup>/min

Pressure up to  
150 kgf/cm<sup>2</sup>A

Power up to  
10 MW

**Triple-E Concept** - 3 Powerful Reasons to Choose MAG Comp -

**E**fficient

**E**cofriendly

**3E**

**E**asy

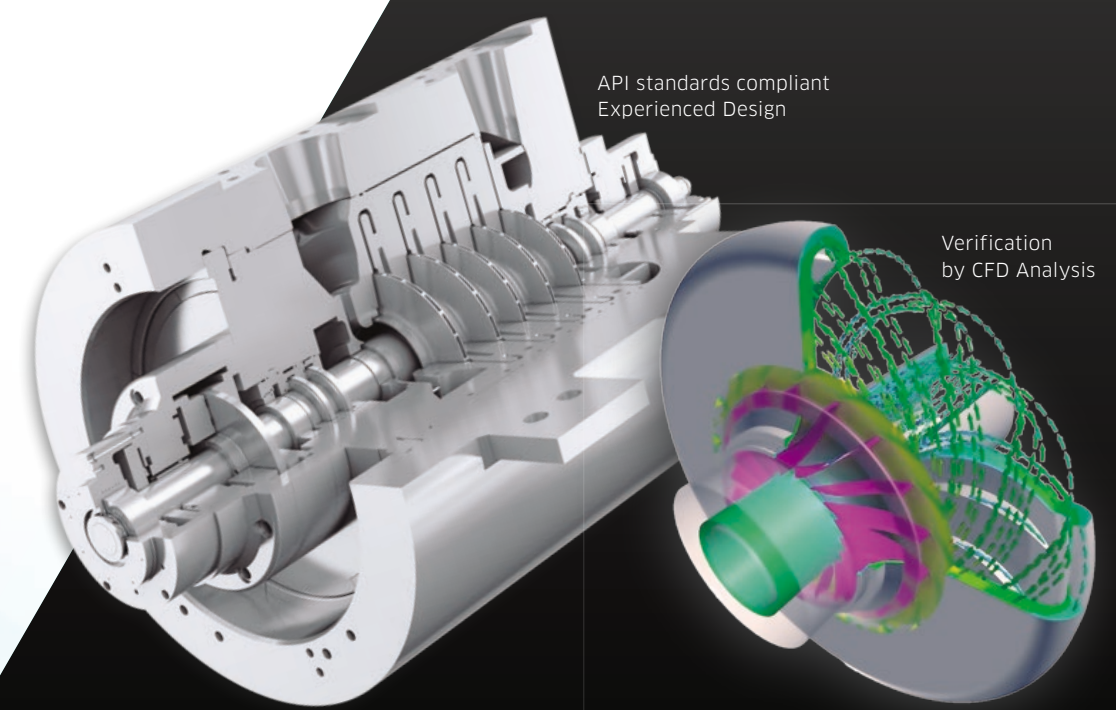
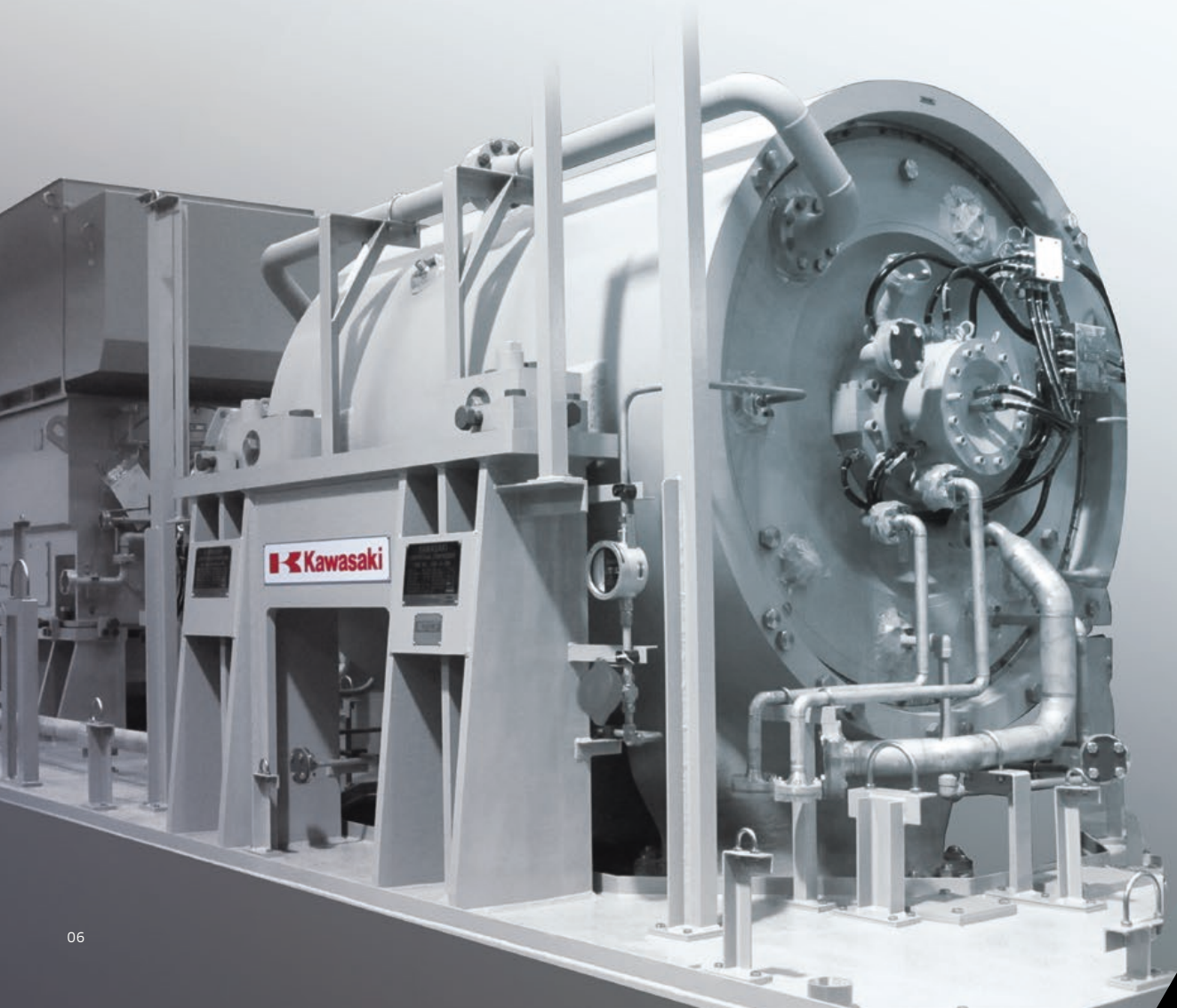
Our evolutionary machine offers Easy, Efficient and Ecofriendly solutions to optimize lifetime cost required for installation, operation and maintenance of customer's gas compression systems.

MAG Comp is expected to be used anywhere even in severe conditions such as unmanned remote locations, deserts and extremely cold climates.





# KAWASAKI CENTRIFUGAL COMPRESSOR



API standards compliant  
Experienced Design

Verification  
by CFD Analysis

## High Reliability

The “Kawasaki Centrifugal Compressor” is a reputable brand of gas compressors in conformity with API standards sold all around the world in both offshore & onshore areas with enormous proven track records over half century. Its history is that of a highly reliable machine.

## High Efficiency

Impellers as well as the stationary aero passage design are optimized applying advanced technologies such as 3D-impellers, brazing, sealing component improvement, etc. to ensure top class high efficiency and appropriate head characteristic, followed by repeated CFD study and in-house verification testing.

# ACTIVE MAGNETIC BEARINGS

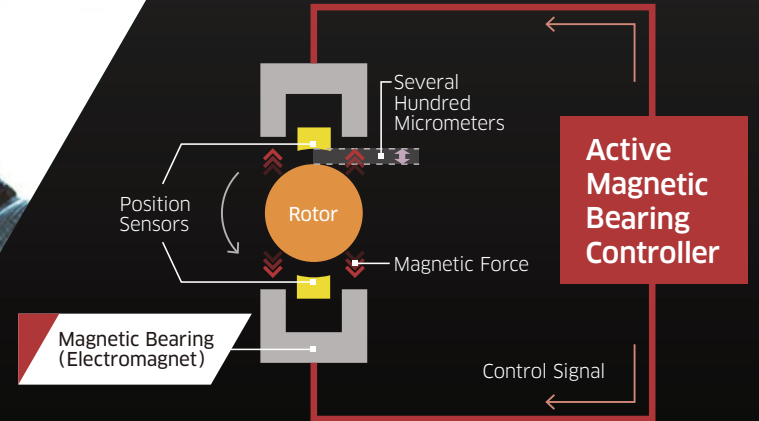
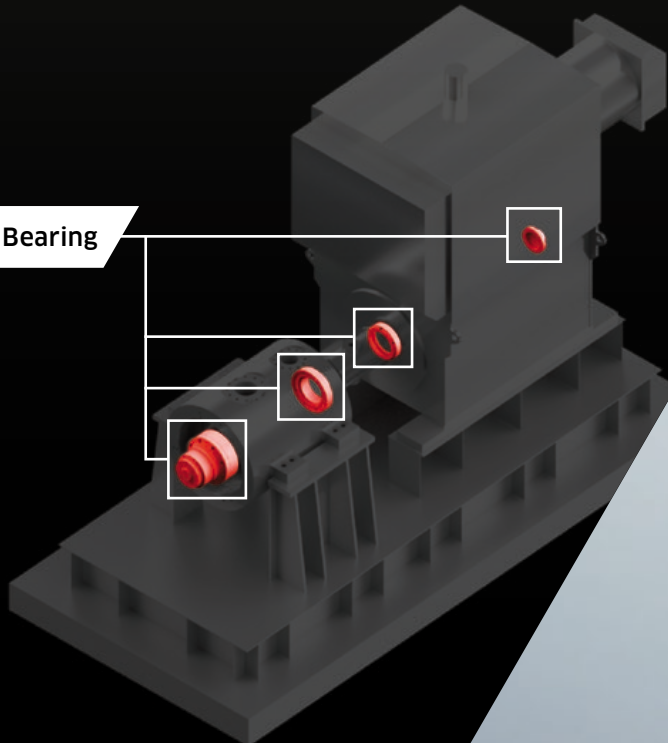
No Contact Rotation

No Mechanical Loss

No Lubrication

## Rotor Levitation

Magnetic Bearing



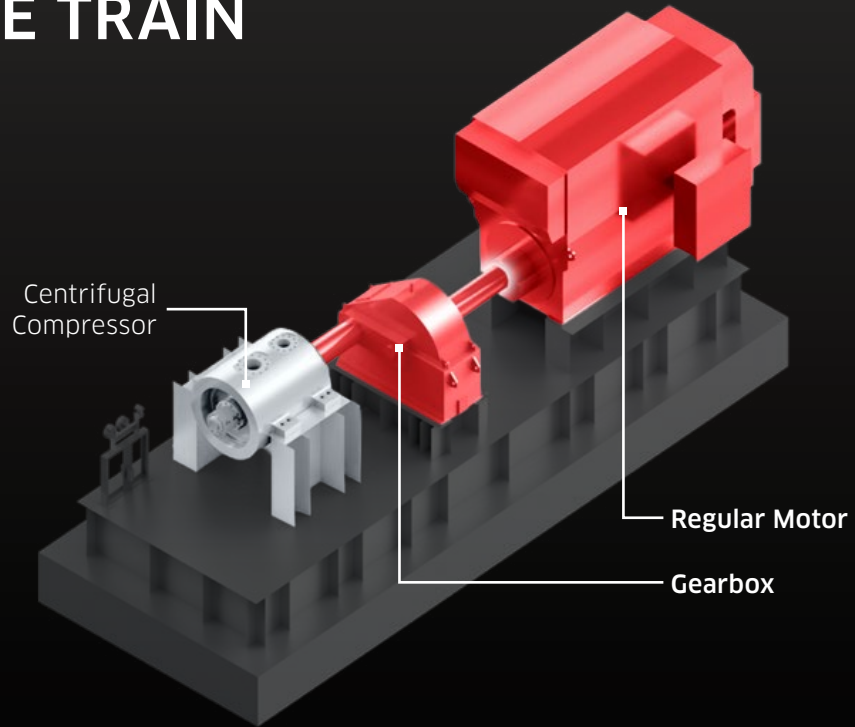
The bearings we use levitate and precisely control the rotor system through magnetic force. Active magnetic bearing controller uses position sensors to accurately determine the rotor's position at all times.

The rotor is maintained in its position by controlling the amount of electric currents that flows through the bearings.

While in operation, the bearings do not contact with the rotors, completely eliminating friction inside the bearing, and its high damping capabilities enable a stable operation over a wide speed range.



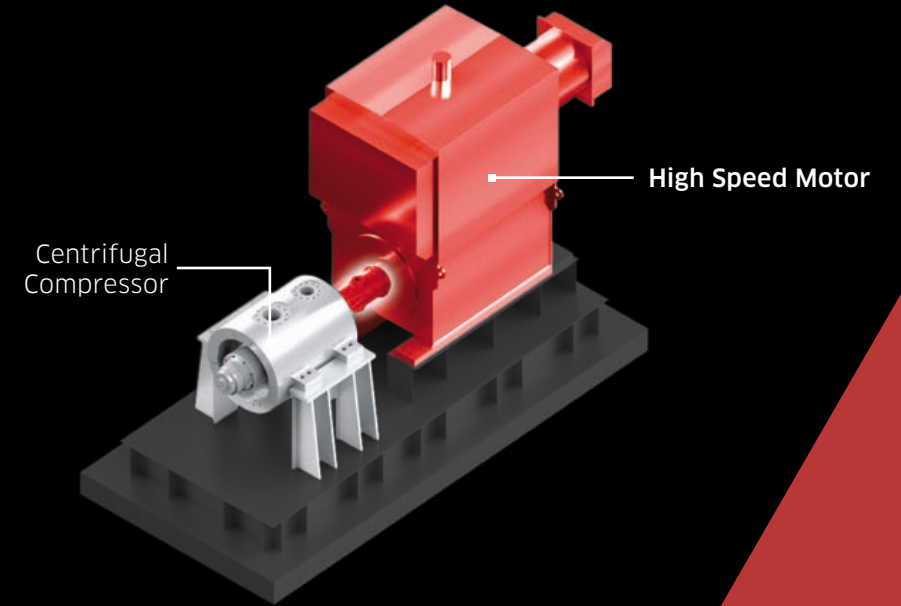
# CONVENTIONAL TYPE DRIVE TRAIN



## Regular Motor + Gearbox

<b>Driver</b>	Regular Motor (3 Phase Induction Motor)
<b>Bearing</b>	Fluid Dynamic Bearing
<b>Gearing</b>	Required (Speed Increasing)
<b>Lubrication</b>	Required (Forced Lubrication)

# MACComp™ DRIVE TRAIN



## High Speed Motor

<b>Driver</b>	High Speed Motor
<b>Bearing</b>	Active Magnetic Bearing
<b>Gearing</b>	None
<b>Lubrication</b>	None

# FIVE OUTSTANDING FEATURES

The combination of the three proven technologies provides outstanding features which embody our Triple-E concept: Easy, Efficient and Ecofriendly.

**01**  
FEWER COMPONENTS

No Gearbox  
No Lube Oil System

**02**  
LESS SPACE

Approx. 75%  
Reduced

**03**  
LESS WEIGHT

Approx. 35%  
Reduced

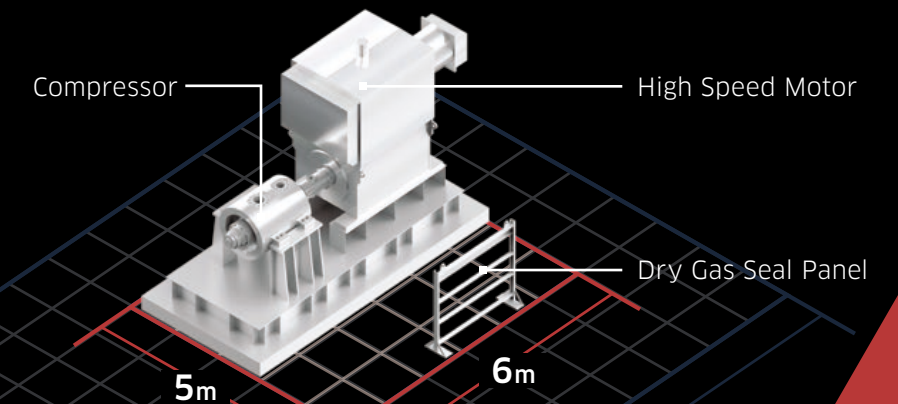
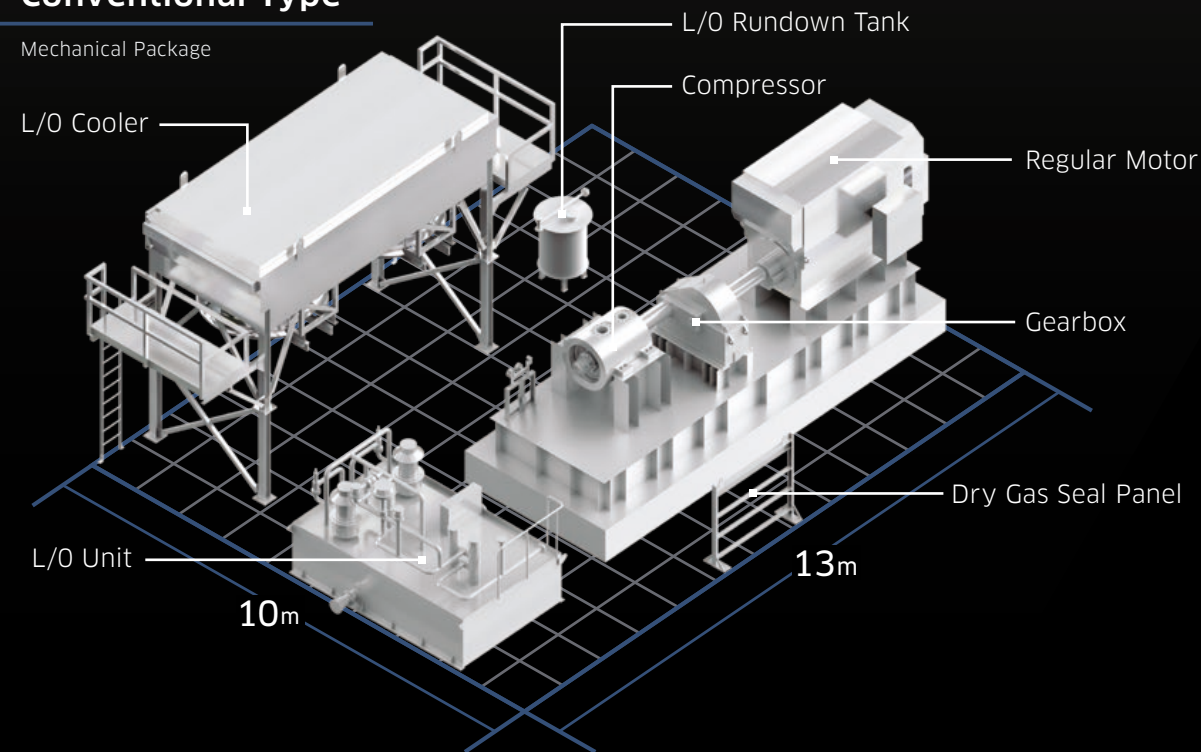
**04**  
LESS SITE WORK

Save Time  
Save Money

**05**  
LESS EMISSIONS

No Oil, Less Noise, Less Heat,  
Fewer Consumables, etc.

## Conventional Type



**MACComp™**

Mechanical Package





# KOBE WORKS

**MACComp™**  
Designed by Kawasaki in Japan



# Kawasaki Heavy Industries, Ltd.

**Energy System & Plant Engineering Company**

<https://www.khi.co.jp/>

## **Tokyo Head Office Compressor Sales Section**

1-14-5, Kaigan, Minato-ku, Tokyo 105-8315, Japan

TEL : +81-3-3435-2370 FAX : +81-3-3435-2022

E-MAIL : turbo\_machinery\_sales@khi.co.jp

## **Kobe Works Compressor Engineering Section**

1-1, Higashikawasaki-cho 3-chome, Chuo-ku, Kobe, 650-8670, Japan

TEL : +81-78-682-5350 FAX : +81-78-682-5552

