

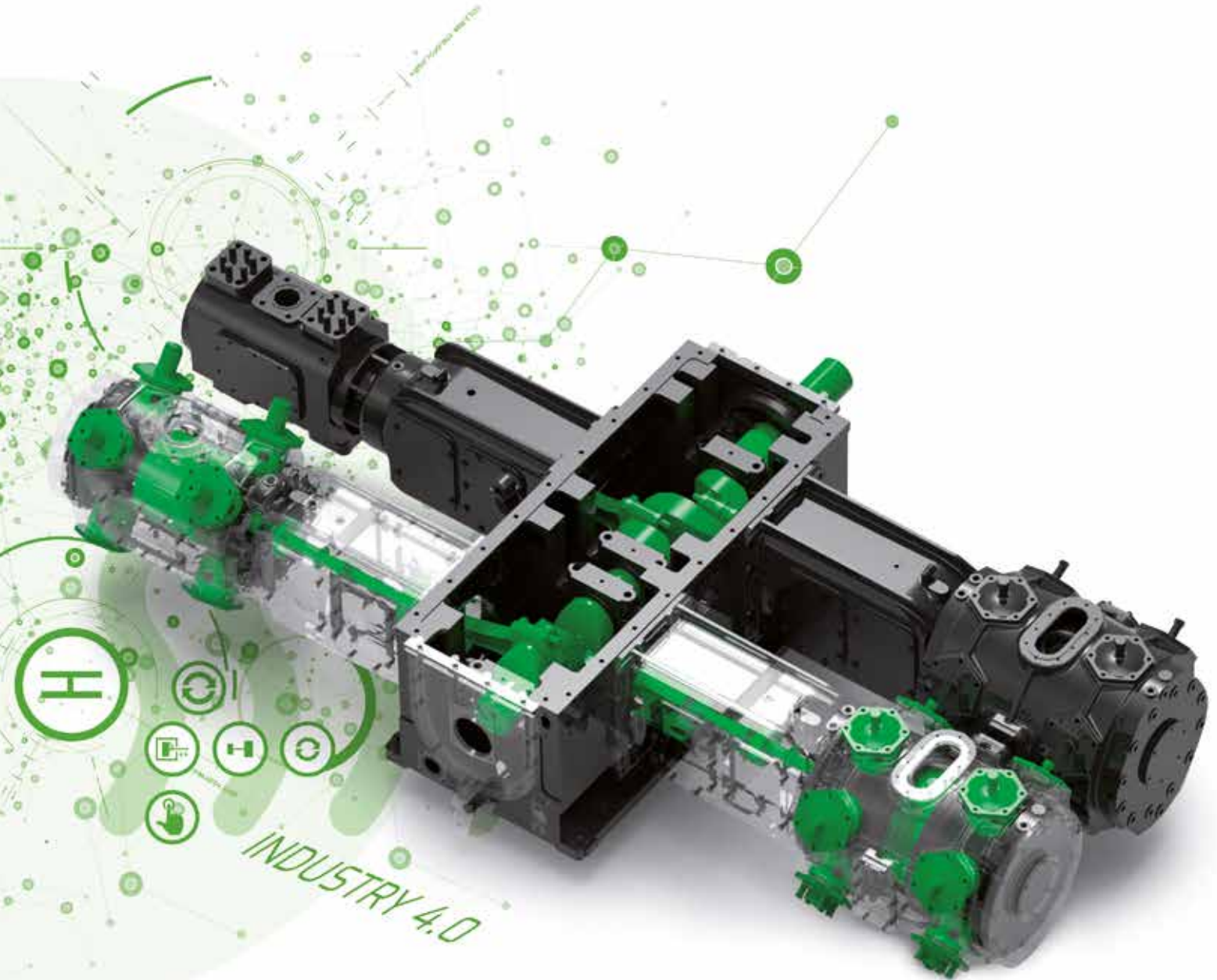


**van Elewout
Kompressoren**
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HORIZON
OIL FREE COMPRESSORS

PET-HIGH PRESSURE

LOW PRESSURE



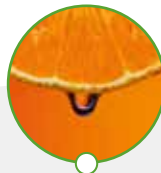
RELIABLE BEYOND LIMITS

PIONEERS

IN PET MARKET



Water & CSD drinks
Oil free, heavy duty compressors



Juices, tea and isotonic
Up to 6.000m³/h big size units



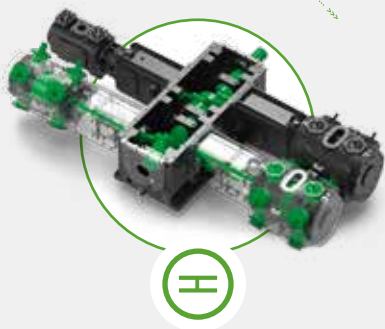
Beer & wine
Available PET & CO₂ technologies



Milk & Dairy
Customized modular design



HORIZON 2000
315kW



HORIZONTAL OPPOSED
HORIZON operates virtually without vibrations



DOUBLE ACTING
HORIZON design gives optimum performance



DIRECT COUPLED MOTOR
HORIZON is fitted with the most reliable and efficient direct coupled transmission



“

Since its **foundation in 1943**, ABC has focused on providing **the most reliable compressors for different sectors and applications**. Its **global orientation** and the commitment for growth was shown from its early exports in the 50's to its latest geographical expansion, having delivered compressors to more than 120 countries.

30 YEARS BLOWING YOUR BOTTLES

80'

· **1986 - ABC becomes market standard.**

- All OEM manufacturers enter the market with ABC in scope.
- Top CSD and water producers trust ABC for 1st rotary machines.
- ABC enters edible oil market, big projects in Europe and America.
- Converters in Europe and America do their first projects with ABC.

90'

- Market leadership in America; + 100 units installed in Brazil.
- PET arrives to Asia with ABC.
- The biggest bottling factory of Asia in Shanghai installs ABC.
- ABC standard for extreme conditions; North Africa and Middle East.
- First installations in India & Russia.

00'

- ABC enters US market.
- Biggest blowing machine production site in Asia runs ABC.
- Number one converter in China installs + 50 units.
- +100 compressors installed in Africa.
- ABC expands in South East Asia.

10'

- +100 field audits in the world demonstrate ABC's leadership in efficiency.
- Growing markets SEA and Africa. Market leaders within Chinese end users.
- Biggest recip compressors in history 6.000m³/h.
- ABC standardized as preferred supplier among key worldwide bottlers and OEM.
- **2015 - HORIZON is launched as Market Benchmark.**



Edible oil

Available PET & hydrogen technologies



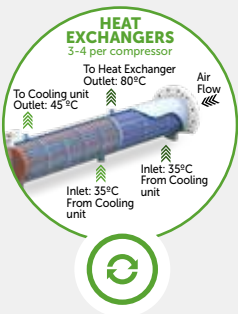
Pharma, chemicals and cosmetics

Wide regulation range



Aerospace & others

Variety of oil-free high pressure solutions



HEAT RECOVERY SYSTEM

Energy saving through heat recovery

THE QUALITY OF THE AIR ISO 8573-1:

OILS: **CLASS 1**

PARTICLES: **CLASS 1**

HUMIDITY: **CLASS 4**

CLASS 0 CERTIFICATE available project by project.

Management System **ISO 9001**

Occupational Health and Safety **OHSAS 18001**

Environmental Performance **ISO 14001**

DESIGN FOCUSED ON TCO

TOTAL COST OF OWNERSHIP

INVESTMENT

More AIR FLOW from equivalent platform

HORIZON allows a flow increase for a given compressor frame of +30%. Less number of cylinders for a given flow, hence a big investment advantage.

EFFICIENCY

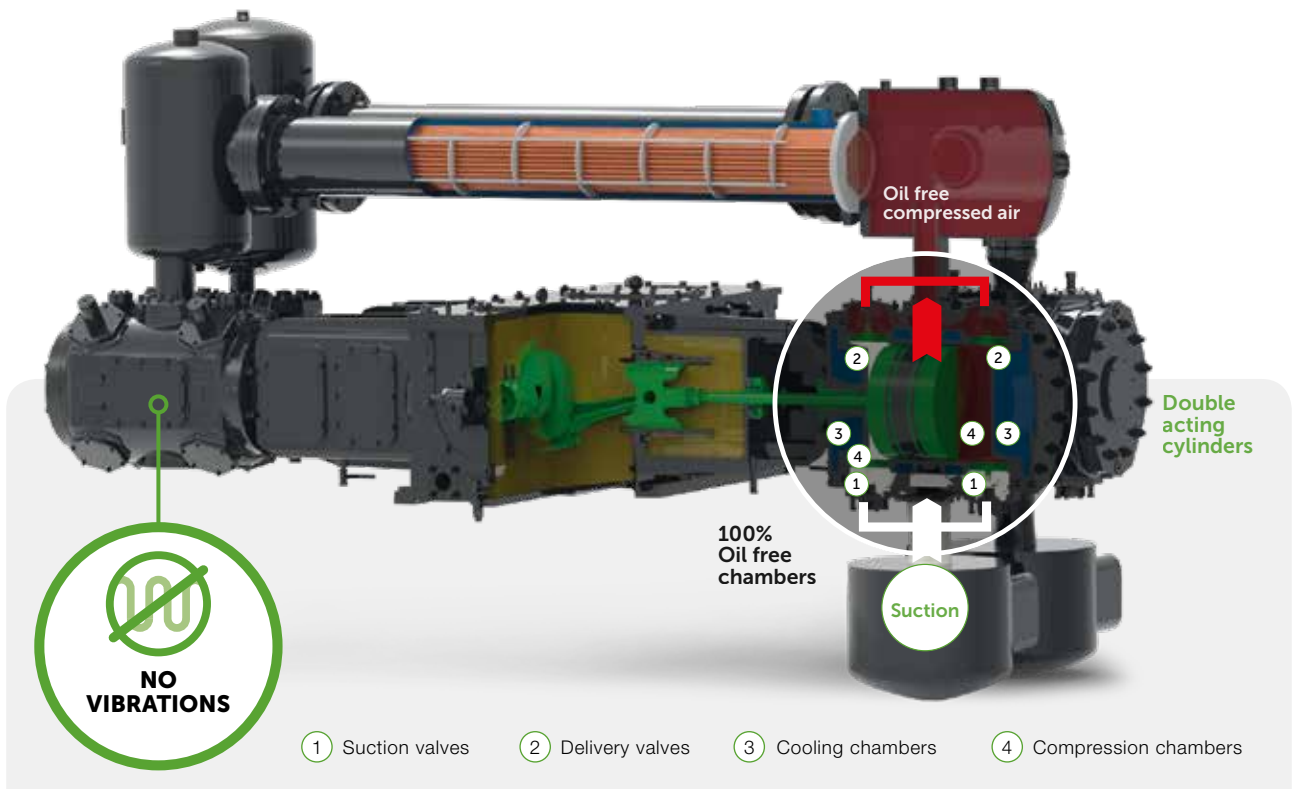
More CAPACITY for the same MOTOR

Thanks to its new technology and design **HORIZON** is the market benchmark in terms of efficiency. Both its specific consumption (kWh/Nm³) and the flow per installed power are better than any other compressor in the market.

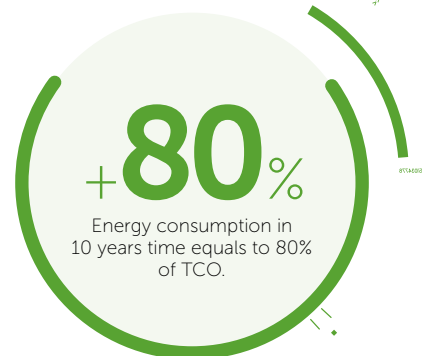
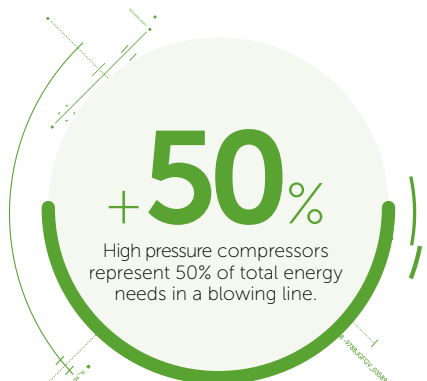
MAINTENANCE

Less spare parts
Longer service cycle

HORIZON design minimizes the number of wearing parts. Additionally the new components applied in this range assure the longest service cycle. The modularity of **HORIZON** offers interchangeable parts both for wearing and mechanical transmission parts.



- ① Suction valves
- ② Delivery valves
- ③ Cooling chambers
- ④ Compression chambers



HIGH END

CONFIGURATION



*THE ONLY OIL-FREE
COMPRESSOR THAT COMBINES
THE BEST TECHNOLOGICAL
FEATURES IN THE MARKET*

HORIZONTAL OPPOSED

Balanced forces, no vibrations

DOUBLE ACTING

Robust and efficient cylinder design

DIRECT COUPLED MOTOR

Efficient and reliable transmission

MODULAR and COMPACT DESIGN

Full range of compressors up to 6.000 m³/h capacity



HORIZONTAL OPPOSED

HORIZON operates virtually without vibrations.

- Cylinders are horizontally opposed, with crankpins displaced by 180°, cancelling out the inertia loads.
- Virtually without vibration.
- Longer life of mechanical parts as they do not transmit excessive force or produce fatigue on structural parts of the compressor, 20 years machine lifetime.
- Providing stability of the high pressure air pipes.
- No anti-vibration pads or special foundations are required, + 2 kg/cm².
- Excellent adaptation to frequency converter up to 55%.
- Compressor and all peripheral components are on skid.



DOUBLE ACTING

HORIZON design gives optimum performance.

- Double-acting cylinders minimise air leaks.
- Less mechanical losses and lower differential pressures.
- Achieving lower operation temperatures at each compression stage. Less energy wasted.
- Longer valves, rings and gaskets durability, no premature wearing.
- When unloaded, venting the intercoolers is not required, meaning efficiency increase and lower energy consumption.
- High performance cooling chamber with no valves in cylinder heads.
- A minimum of 2 suction / 2 discharge valves per stage, preventing one valve failure stopping the machine.

PERFECT VOLUMETRIC DESIGN

Blue

The generated heat is removed immediately and effectively by the water chambers to reach the isothermal cycle.

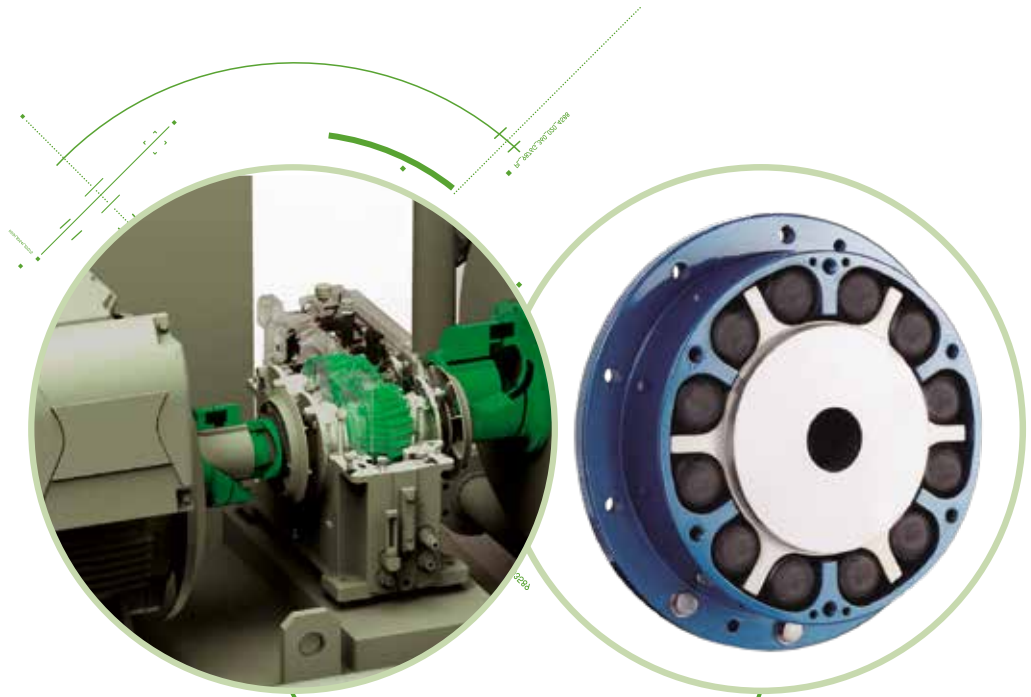
Red

Compression chambers' design allows the uniform and stable air distribution with less load losses.



“

+15% PROVEN ENERGY SAVINGS THANKS TO HORIZON TECHNOLOGY



▲ **HORIZON 3000**
450kW

Direct coupling

The gear reducer allows compressor's speed adjustment to the installation's necessities.

HIGH END

CONFIGURATION



DIRECT COUPLED MOTOR

HORIZON is fitted with the most reliable and efficient direct coupled transmission.

- Direct coupling means 5% energy saving comparing with other energy transmission methods.
- Virtually absence of mechanical energy losses.
- Longer duration of shaft alignment.
- Without belts there are no maintenance needs.
- Absence of radial forces, implying:
 - Longer life for the motor.
 - Longer life for compressor and for motor bearings, with longer lubrication intervals (20.000 hours).
- No more manual tensioning requirements for reliable operation.



MODULAR AND COMPACT DESIGN

HORIZON assures smooth and easy installation.

- Self-contained sets, even with peripherals pre-connected.
- Single inlet and outlet points for water and electricity.
- Centralized control for the entire ensemble.
- Fitting all the skids in standard container sizes.
- Interchangeable parts among different models.
- Easy mobility and relocation.
- Small size wearing parts. Cylinders at man hand level.
- No cranes for maintenance.



HORIZON 900
132kW

All in one package,
fitting in standard
containers.

Directly attached to the floor.
No vibration pads needed.

PREMIUM

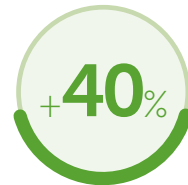
FEATURES



HORIZON IS EQUIPPED WITH STATE OF THE ART TECHNOLOGY



Compressors work unloaded avg. 30% of the time, being their regulation capacity a key energy driver.



40% of the energy generated during the compression can be recovered through a proper heat recovery system.



FREQUENCY CONVERTER

Perfect and wide adaptation
High regulation range

HORIZON takes full advantage of the energy saving by the frequency converter.

- Average 20% energy saving when regulating.
- Up to 60% energy saving at low regulation regime.
- Regulation span reaching 55% of the compressor capacity.
- Absence of intensity starting peaks: starting = nominal intensity.

- Allows more starts per hour.
- Minimizes pressure fluctuation when regulating:
 - Additional energy saving.
 - Stable pressure on the pipe line.
- Mechanical protection for the compressor:
 - Lower starting torques.
 - Less unloaders actions.
- Optimum $\cos\phi$.
- Integrated supply with the electric cabinet.
- Harmonic protection in different filtering degrees.
- Furnished with new equipment, or retrofitted at a later date.





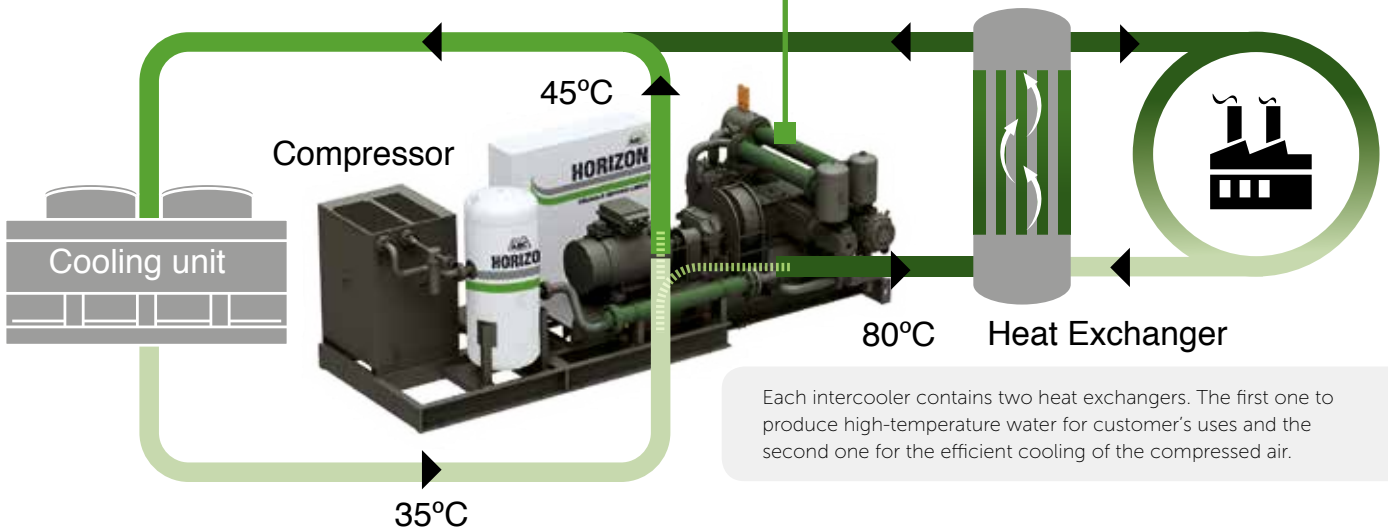
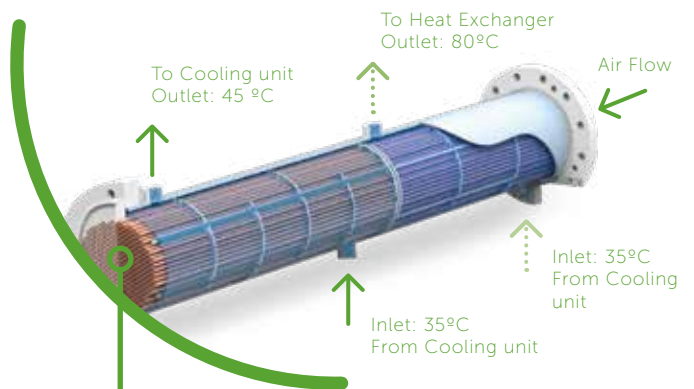
HEAT RECOVERY SYSTEM

Energy saving through heat recovery

HORIZON is able to collect hot water from all its coolers for a variety of plant uses.

- Average power saving of 20-40% through hot water supply.
- Providing hot water up to 80°C, in each of the stages. Customized solutions with water up to 90°C.
- Special compressor heat exchangers with double cooling modules.
- Customized final heat exchangers adapted to customer needs.
- Furnished with new equipment, or retrofitted at a later date.

HEAT EXCHANGERS 3-4 per compressor



GREEN WATER TECHNOLOGY

Reduce CO₂ footprint



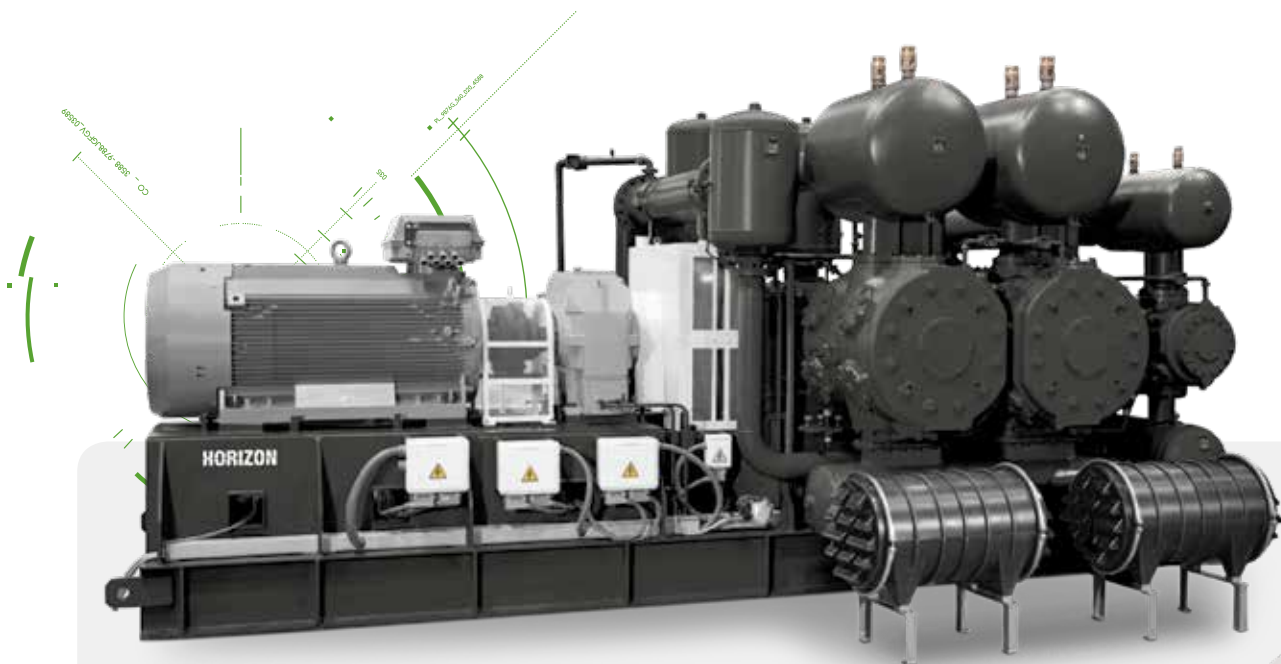
RANGE

PET-HIGH PRESSURE

HORIZON	CAPACITY		INSTALLED POWER	
	m ³ /h	cfm	kW	HP
HORIZON 400	425	250	75	100
HORIZON 500	500	294	90	125
HORIZON 600	630	371	90	125
HORIZON 800	750	441	110	150
HORIZON 900	870	512	132	180
HORIZON 1200	1.135	668	160	220
HORIZON 1400	1.400	824	200	270
HORIZON 1600	1.620	953	250	340
HORIZON 1800	1.780	1.047	280	380
HORIZON 2000	1.940	1.141	315	425
HORIZON 2100	2.090	1.229	315	425
HORIZON 2400	2.400	1.412	355	480
HORIZON 2700	2.650	1.559	400	545
HORIZON 3000	2.900	1.706	450	610

HORIZON PLUS	CAPACITY		INSTALLED POWER	
	m ³ /h	cfm	kW	HP
HORIZON PLUS 3200	3.120	1.835	450	610
HORIZON PLUS 3500	3.440	2.024	500	680
HORIZON PLUS 3800	3.810	2.241	560	760
HORIZON PLUS 4100	4.120	2.424	630	855
HORIZON PLUS 4400	4.360	2.565	630	855
HORIZON PLUS 4700	4.620	2.718	710	966
HORIZON PLUS 5000	5.000	2.941	800	1.080
HORIZON PLUS 5500	5.480	3.224	800	1.080
HORIZON PLUS 6000	6.000	3.529	900	1.215

- Designed up to 40 bar blowing
- Catalogue data for 35 bar according to ISO 1217 / 50Hz



HORIZON PLUS 6000
900kW

HORIZON PLUS 6000, the largest recip PET compressor.

Shared HORIZON interchangeable
Same operational

GREEN & EASY

OPERATION



✓ INTERCHANGEABLE PARTS

- Whole high and low pressure range share mechanics.
- Minimized spare part stock and references.
- Increased safety and simplicity.

✓ LONGEST SERVICE CYCLE

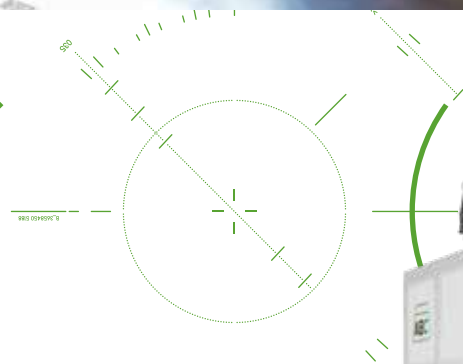
- Non stop running pattern from 8.000 to 12.000 hours.

✓ SIMPLE INSTALLATION

- No vibrations – no pads.
- No special foundations.
- Skid mounted and interconnected.

✓ QUICK MAINTENANCE

- No cranes needed.
- Cylinders at man hand level.
- Small parts.



✓ NO NOISE

- Customized soundproof cabinets down to 70 dBA
- Outdoor solutions under request.

HORIZON apps

· COMPRESSORS MANAGER

- Based on scada customized compressor system controls.
- Central command and compressor coordination.

· REMOTE MONITORING

- Online remote access to the compressor.
- Visualize all the operational parameters.
- Historical track for predictive diagnosis.

· EASY MAINTENANCE

- 4.0 PLC and touch panel.
- Automatic maintenance protocol management.
- Maintenance records and controls.

· MULTI INVERTER CONTROL

- Intelligent multi inverter system control.
- Dinamic master-slave software.
- Minimum unloaded time.
- Maximum usage of inverter capacity.



HORIZON PLUS 4700
710kW

RANGE

LOW PRESSURE

HORIZON	PRESSURE bar	CAPACITY		INSTALLED POWER	
		m ³ /h	cfm	kW	HP
HORIZON 600 LP	8	623	367	55	74
	10	617	363	55	74
	13	609	358	55	74
HORIZON 800 LP	8	772	454	75	100
	10	765	450	75	100
	13	755	444	75	100
HORIZON 900 LP	8	914	538	90	125
	10	908	534	90	125
	13	894	526	90	125
HORIZON 1000 LP	8	1.069	629	110	150
	10	1.059	623	110	150
	13	1.045	615	110	150
HORIZON 1200 LP	8	1.247	734	110	150
	10	1.235	727	132	180
	13	1.219	717	132	180
HORIZON 1500 LP	8	1.544	909	132	180
	10	1.530	901	160	220
	13	1.510	886	160	220
HORIZON 1700 LP	8	1.781	1.048	160	220
	10	1.765	1.039	160	220
	13	1.742	1.025	200	270
HORIZON 2000 LP	8	1.959	1.153	200	270
	10	1.942	1.143	200	270
	13	1.916	1.128	200	270
HORIZON 2100 LP	8	2.137	1.258	200	270
	10	2.118	1.247	200	270
	13	2.090	1.230	250	340



technology
parts
efficiency reliability

HORIZON 1000 LP
110kW



MAIN OFFICES

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Guayaquil **ECUADOR**
Havana **CUBA**
Lima **PERU**
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Manila **PHILIPPINES**
Karachi **PAKISTAN**
Dhaka **BANGLADESH**

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