



Ajira
Engineering
Services



Ajira Engineering Services Pte Ltd (AES) is a high-synergy and innovative provider of products and services in the energy, oil and gas industry. Our company was established with the goal of bringing values and innovative solutions to the market and helping our clients stay ahead of the curve.

We offer a range of high-quality products and services, including oil conditioner/purifier, agitator, mixer and MRO services for rotating equipment. Our team of experts have years of experience in the industry and are dedicated to delivering customized solutions that meet the unique needs of each of our clients. In MRO services, we heavily emphasize on reverse engineering, re-engineering and localization of services to bring quick and cost-effective solutions to our clients.

Where are we?

Ajira Engineering Services Pte Ltd
UEN 202210563R

Conveniently headquartered in

 **Singapore**

Right in the middle of Asia Pacific





Meet Our Core Team

More than 80 years
combined experiences in
rotating equipment!



Technical Service Executive
Suganthan Arumugam



Operation Manager
Wilson Wong



Managing Director
Joris Maria van Workum



Technical Service Executive
Than Htike Zaw



Certification is conditional on maintaining the required performance standards throughout the certified period of registration
The British Assessment Bureau, 30 Tower View, Kings Hill, Kent, ME19 4LY

The management system of Certificate Number 2034548

AJIRA ENGINEERING SERVICES PTE LTD

1 Tuas View Place, #02-05 Westlink One, Singapore 637433

has been assessed and certified as meeting the requirements of

ISO 9001:2015

for the following activities

Sales, Installation and Services for Industrial Equipment in various Energy, Oil &
Gas and General Industries within the Region.

Further clarifications regarding the scope of this certificate and the applicability of requirements may be obtained by consulting the certifier



Valid from
Initial Certification: 27 April 2023
Latest Issue: 27 April 2023
Expiry Date: 26 April 2026
subject to annual assessments

Authorised by

A handwritten signature in black ink, likely belonging to Mike Tims.

Mike Tims
Chief Executive Officer

www.british-assessment.co.uk

Certificate issued by Amtivo Group Limited, trading as British Assessment Bureau

To confirm the 'Live Status' of this certificate please use the 'Certificate Verification' tool located at www.british-assessment.co.uk



Date of issue: 19/04/2023



CERTIFICATE

The Workplace Safety and Health Council
is pleased to certify that

AJIRA ENGINEERING SERVICES PTE. LTD.

has fulfilled the requirements to attain bizSAFE Level 4

This certificate is valid till 17/04/2026

A handwritten signature in black ink, likely belonging to Christopher Koh.

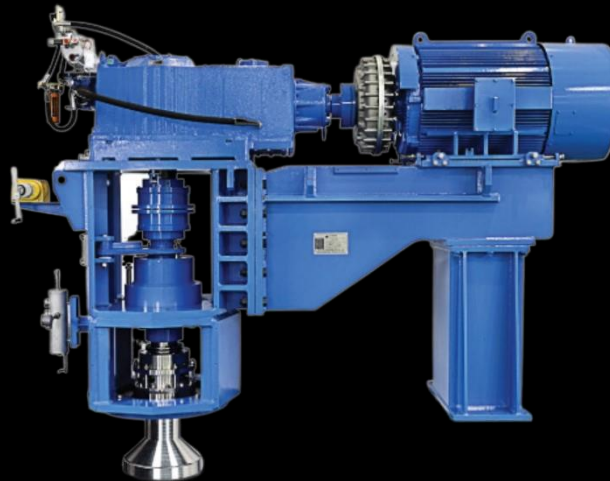
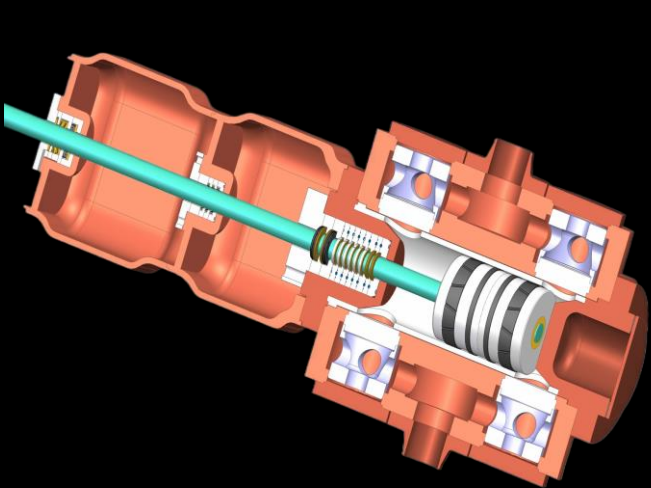
Christopher Koh
General Manager
Workplace Safety and Health Council

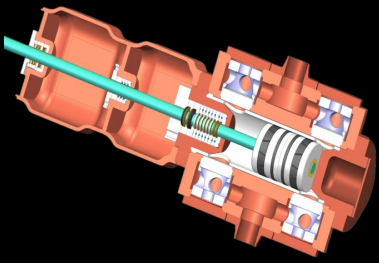
Certificate No. E42531



Ajira Engineering Services

Company Profile





Rotating Equipment

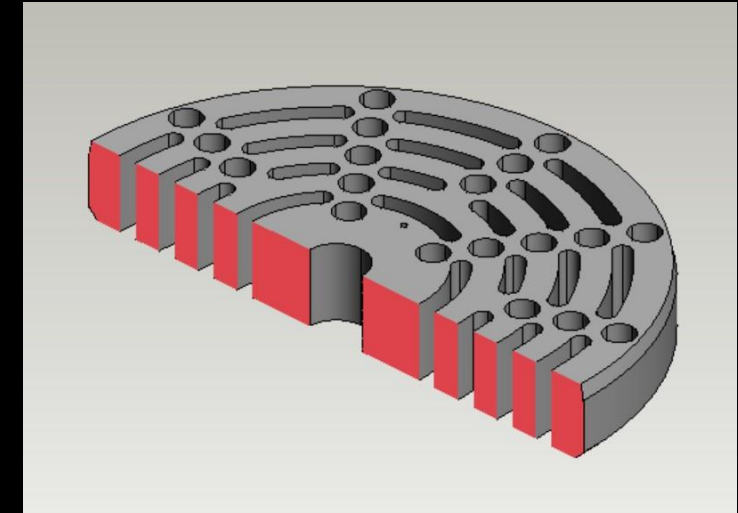
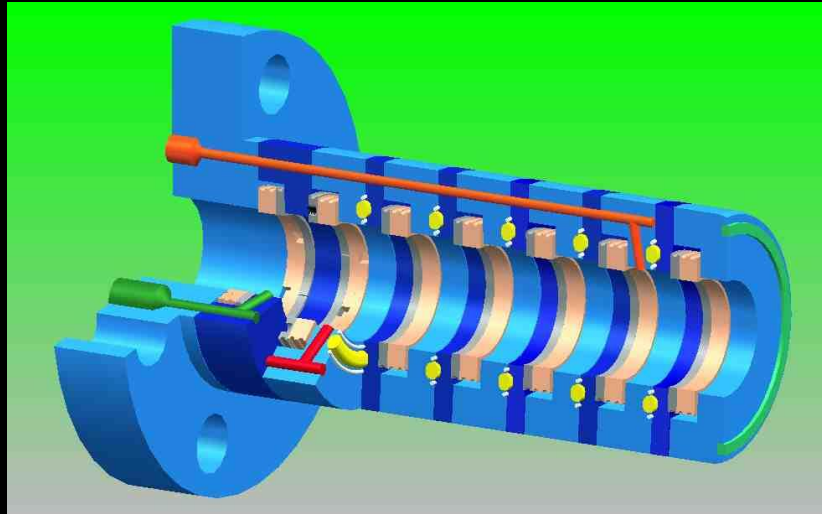
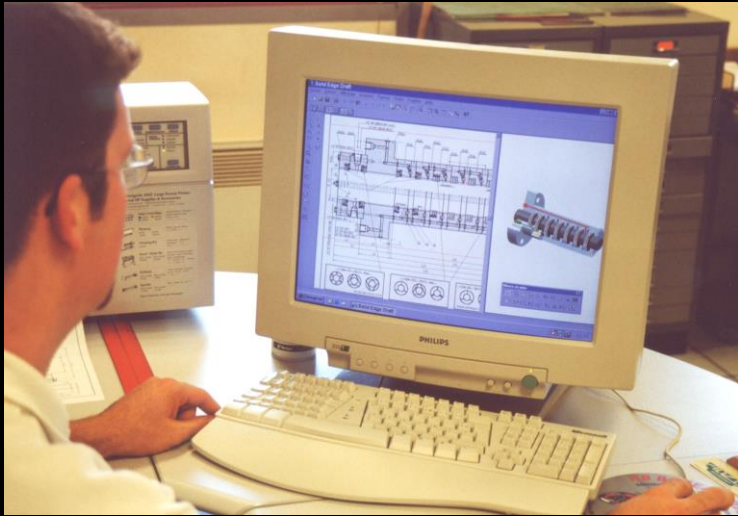


Full range of Reciprocating Compressor Wear Parts

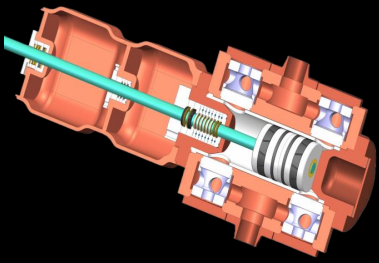
Reversed or Re-Engineering by our in-house engineers



with application, dimensional & materials knowledge



Our experience about material behavior in various application help us design tailor made wear parts specifically for each compressor



Rotating Equipment



Full range of Reciprocating Compressor Wear Parts

Reversed or Re-Engineering by our in-house engineers



with application, dimensional & materials knowledge

Complete Valves and Valve Part Sets



Stuffing Boxes and Internal Sets



Teflons, Scrapers & other wear parts

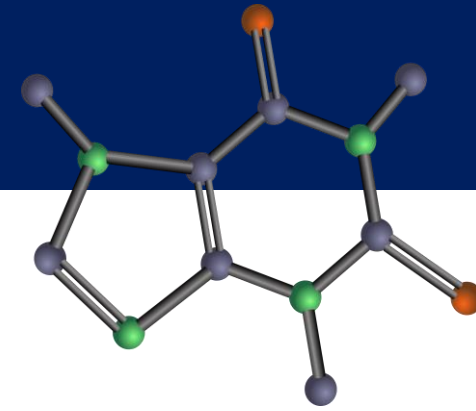


Our experience about material behavior in various application help us design tailor made wear parts specifically for each compressor

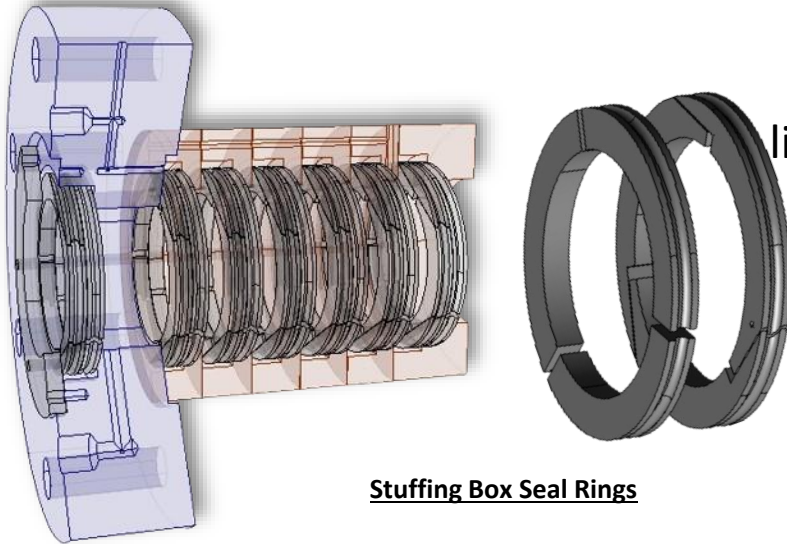
SEALS AND TEFLON

High Performance Materials

Polytetrafluoroethylene (PTFE) seals are an essential component in various industrial applications, renowned for their exceptional sealing properties and resistance to extreme conditions.



PTFE is a high-performance synthetic fluoropolymer known for its non-stick and low-friction characteristics. PTFE seals are used to prevent the leakage of gases or liquids in systems where the reliability and longevity are paramount. These seals find applications in industries where they excel at maintaining a tight seal in corrosive environments, high temperatures, and aggressive chemicals. Their versatility, durability, and ability to function effectively in challenging conditions make PTFE seals a preferred choice for engineers and manufacturers.



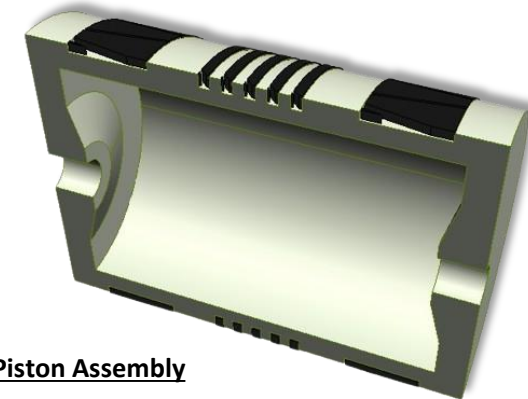
Stuffing Box Seal Rings

At Ajira, we have a wide range of compounds with polymer matrix and fillers selected to radically improve its wear resistance and creep resistance. The compounds produced also have better heat stability and optimal friction properties which are particularly suited to non-lube service.



Common filler used in PTFE:

- Glass
- Minerals
- Polyimide
- Molybdenum Disulfide (MoS₂)
- Carbon
- Polyester
- PEEK
- Graphite
- Bronze



Piston Assembly

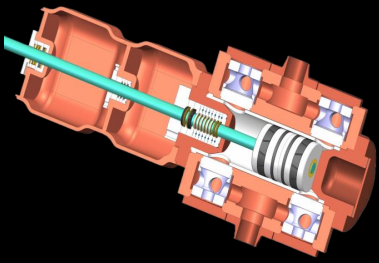
www.ajira.sg

SEALS AND TEFLON

High Performance Materials

Properties and Applications

		Galaxy	Gemini	Astro	Nova	Nova+	Stellar	Nebula	Nebula+	Orion	Luna
Properties	Filler	Carbon graphite	Glass fibers, graphite and MoS2	Bronze and polymers	Coke (special carbon) + special ceramic	Coke (special carbon) + special ceramic.	Low creep PTFE compound	PEEK	Propriety PEEK	Propriety PTFE	Carbon and High-performance polymers
	Wear Resistant	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★	★★★★
	Tensile strength, Mpa	★★★	★★★	★★★	★★★	★★★	★★★	★★★★★	★★★★★	★★★	★★★
	Working Temperature	150°C - 180°C	150°C - 180°C	150°C - 180°C	150°C - 180°C	150°C - 180°C	150°C - 180°C	-30°C - 250°C	-30°C - 260°C	150°C - 180°C	-100°C - 180°C
	Maximum Temperature	220°C	220°C	220°C	220°C	220°C	220°C	300°C	300°C	220°C	-180°C - 250°C
Application	Lubricated	✓	✓	✓	✓	✓		✓	✓		
	Non-Lubricated	✓		✓	✓	✓	✓	✓	✓	✓	✓
	Air	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hydrocarbon	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Wet			✓	✓	✓		✓	✓		
	Dry			✓	✓	✓	✓	✓	✓	✓	✓



Rotating Equipment



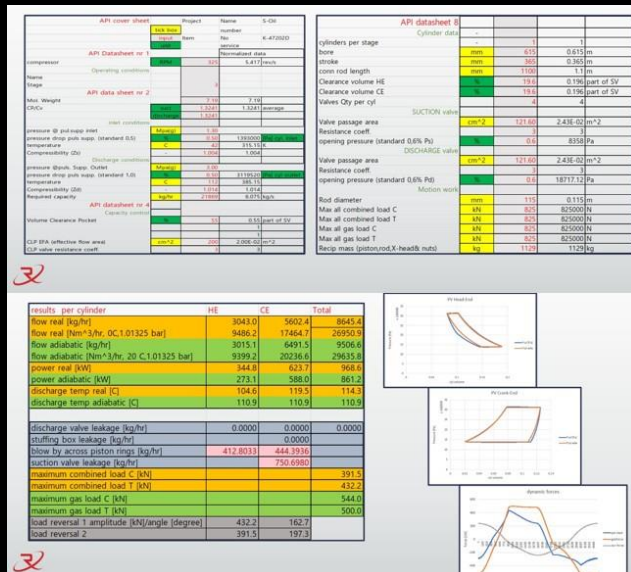
Performance review calculations and Rerates / Modifications

For reciprocating compressors that are running outside  original datasheet operating conditions and gas compositions

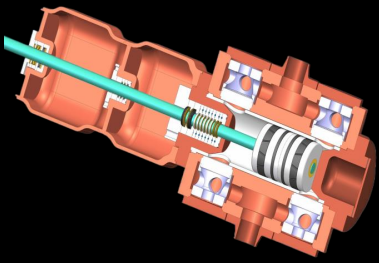
Performance and Design Reviews

On-Site Performance Reviews (Windrock)

In-House Specialist Design Engineers



Compressor performance calculation program, design and new operating conditions reviews, pulsation and mechanical response studies, etc.



Rotating Equipment

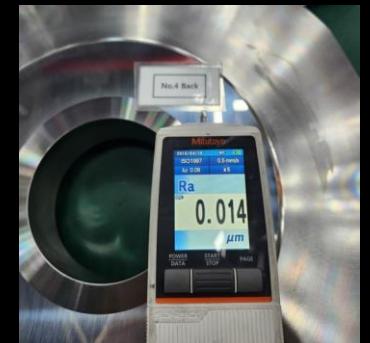
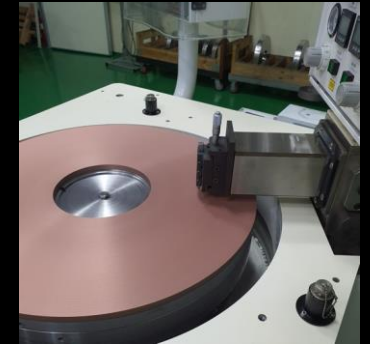


Hyper compressor products and services

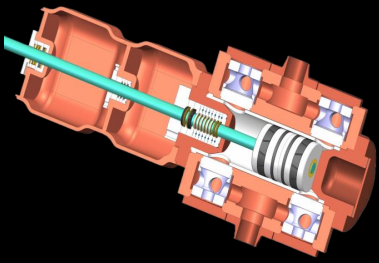
Hyper Packing cups renew, repair and reconditioning



through our partner Taesan Rotatment Corporation



Also supply of complete new hyper packing cups - and Hyper valve reconditioning available in Korea



Rotating Equipment



On-site Services

Service Engineers for Supervision



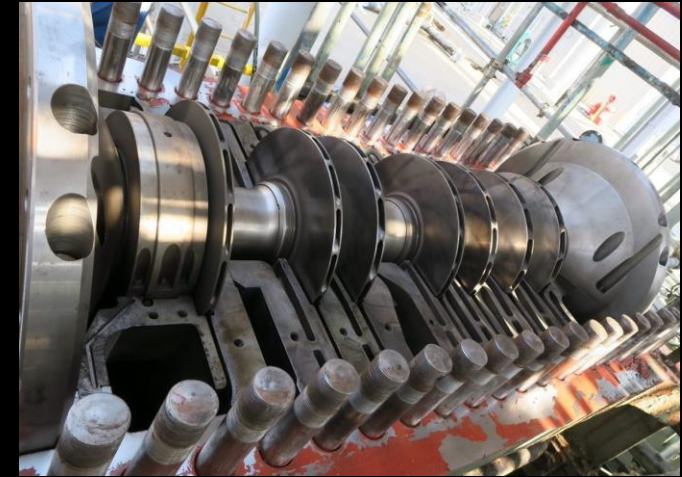
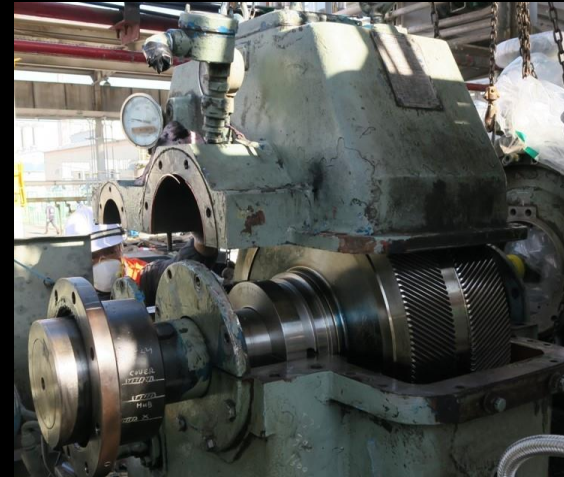
Complete Overhaul Team with Tools

Major Overhaul Reciprocating Compressor

Valve Parts

Gearbox Inspection

Major Overhaul Centrifugal Compressor



Our Technical Service Executive have decades of experience in Installation & Maintenance of Rotation Equipment



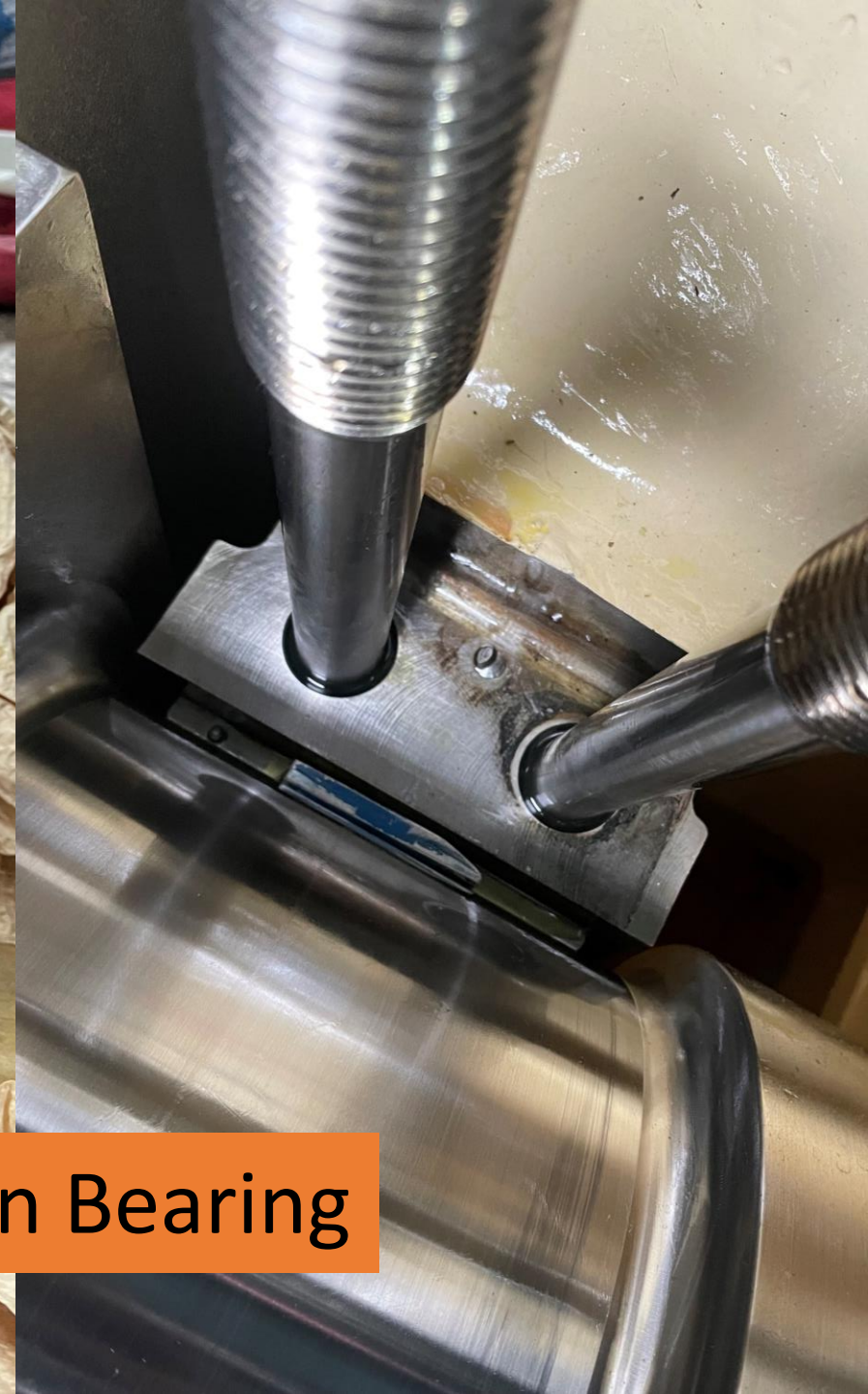
MITSUI C35-3

TOP Overhaul + Troubleshooting on Main Bearing



MITSUI C35-3

TOP Overhaul + Troubleshooting on Main Bearing





Elliot Ebara 29M9-7

Major Overhaul



mitsui 2MBL

Major Overhaul + Change Cylinder Block



Nuovo Pignone 2HB

Major Overhaul





Nuovo Pignone 2HC

Top Overhaul



Elliot Ebara 38MB4

Major Overhaul in iSpray workshop



NASH Pumps

Onsite Alignment





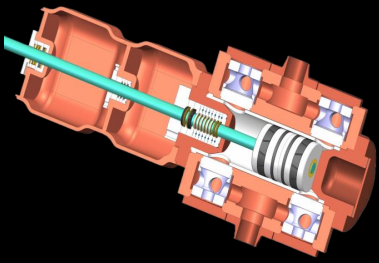
MAN Screw Compressor

Major Overhaul in iSpray Workshop

MITSUI Compressor C25-2

Troubleshooting Onsite





Rotating Equipment



One of the many Workshop activities

Valve reconditioning from incoming inspection up to blasting, machining, assembly and leak testing

It all starts with a set of incoming valves



Incoming Inspection



Dismantling



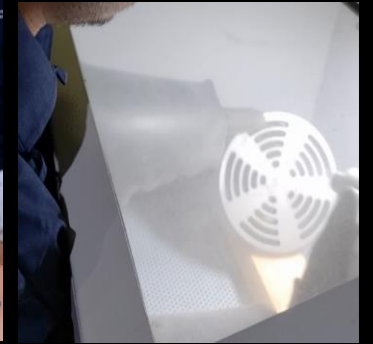
Visual Inspection



Dimensional Inspection



Sand Blasting



Prepare for Machining



Check after Machining




QC before Assembling



Assembling Preparation



Valve Leak Test



This suction valve
passed liquid test but
fails the pneumatic
test.



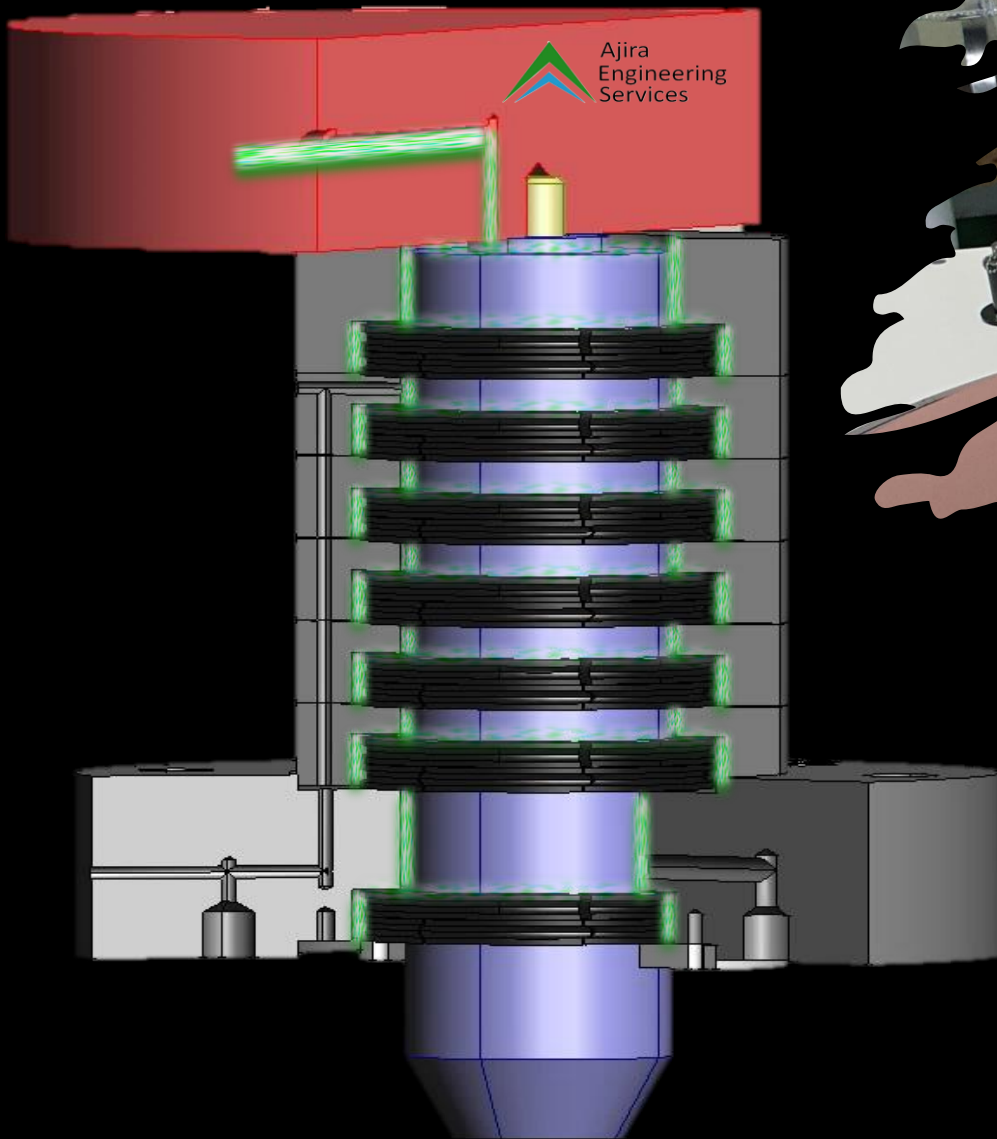
COOK Compressor Valve

Reconditioning in Workshop



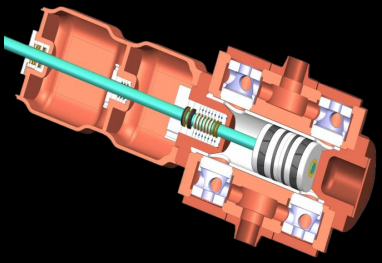
Stuffing Box

Reconditioning in Workshop



Stuffing Box
Reconditioning





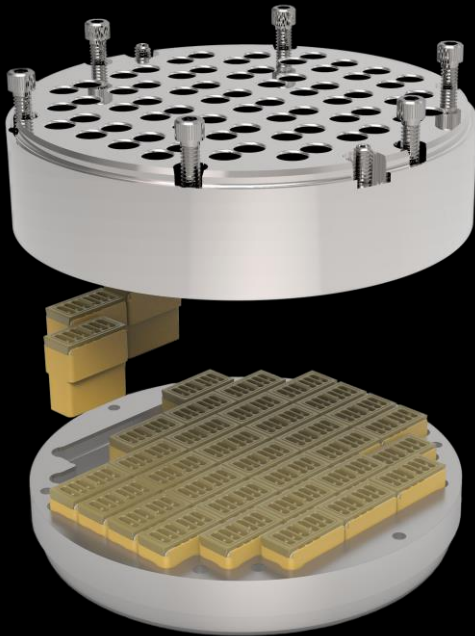
Rotating Equipment



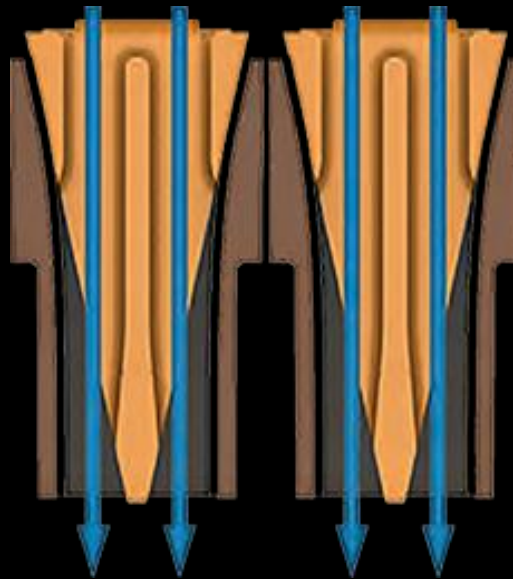
Game Changing StraightFlo™ Valves

Drop-in replacement for conventional valves with exceptional benefits for reciprocating compressors

Modular StraightFlo™ Design



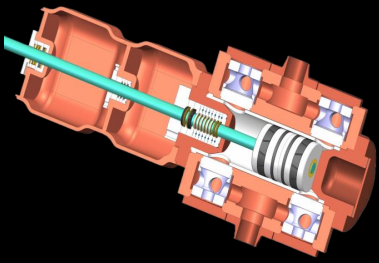
Reed Valve Modules



Complete assembly with unloader



This revolutionary technology is patented around the world and offers significant improvements over conventional valves



Rotating Equipment



Unequalled Advantages of the StraightFlo™ valves

Technical Advantage Highlights

- **Drop in replacement** for existing reciprocating compressor valves.
- **5x – 15x better reliability (service interval). 2x improvement based on same operating conditions.**
 - Tolerant to liquids and solids.
 - Reduce emissions through longer MTBS.
 - 10X Lower vibration/noise levels.
- **Easiest valve** to service. 5 -10 minutes/valve on site.
 - Eliminates machining and special tooling
 - **No leak test** required at site
 - Eliminates transport & inspection

Economical Advantage Highlights

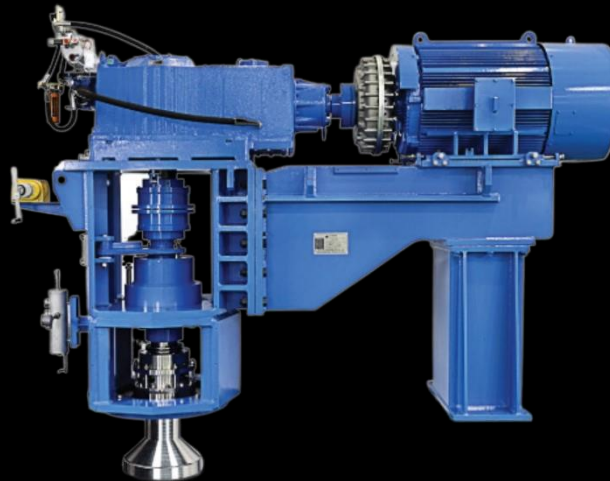
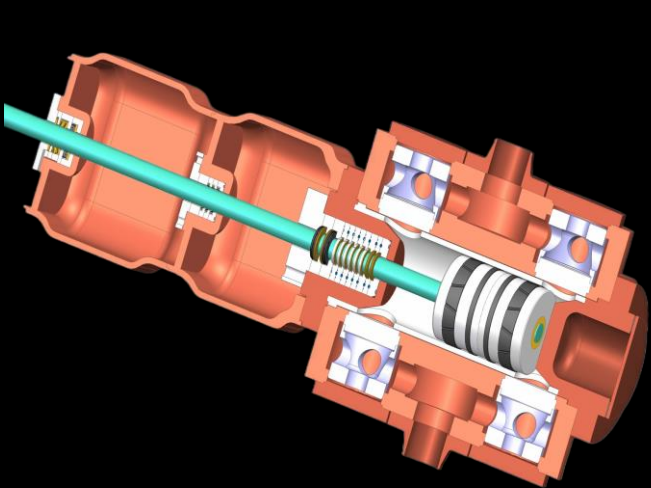
- **Substantial Reduction of inventory**
 - Stock 6 boxes of modules instead of racks and racks of fully assembled valves
- **3% – 15% lower compressor power/ greater throughput.**
 - Lower power cost, lower engine emissions.
 - Increased throughput.
- **Reduce downtime.** 5 -10 minutes/valve on site to renew modules. No leakage test required.
- **10 years Warranty on SST housing.**
- 5 year warranty on modules for slow speed (<600 rpm) good quality gas application

This revolutionary technology is patented around the world and offers significant improvements over conventional valves



Ajira Engineering Services

Oil Purifier / Oil Conditioner







Oil Purifier equipment



With the worlds best patented technology

Fully supported by our principle



and manufacturer Samyoung Filtec

< 200ppm. Low boiling temp at 40 - 50°C



Moisture removal technology

Double high vacuum chamber

NAS Gr 4 . Up to 0.05µm filtration size



Particle Removal Technology

High pressure generator for oil impurity removal

Low noise < 75dB



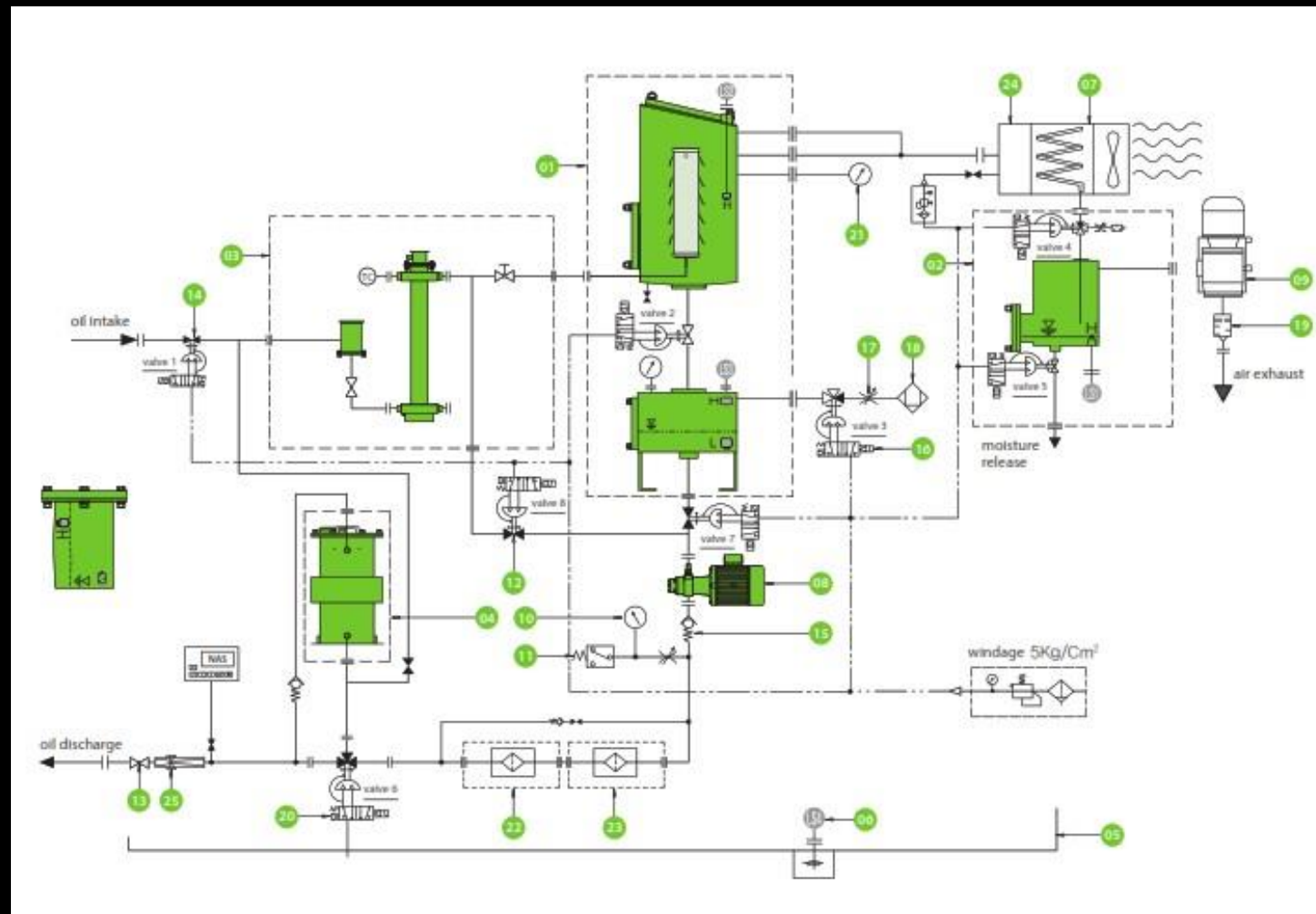
Microbubble Generation Technology

Flushing system for pipe piping with microbubbles

Viscosity up to 460 cst - Explosion Proof zone 2 available



Oil Purifier equipment



- | | |
|---------------------------------|---|
| 1 Vacuum Chamber Assembly | 14 Pneumatic ball valve (3PCS) |
| 2 Condensation Chamber Assembly | 15 Check Valve |
| 3 Heater Assembly | 16 Pneumatic 3way valve |
| 4 Electrical Filter | 17 Needle valve |
| 5 Base Assembly | 18 Air Breather |
| 6 Oil leak Prevention Device | 19 Mist trap |
| 7 Cooler | 20 Pneumatic 3way valve |
| 8 Pump & Motor | 21 Vacuum Gauge |
| 9 Vacuum Pump | 22 Filter Assembly |
| 10 Pressure Gauge | 23 Filter Assembly |
| 11 Pressure switch | 24 Voltex Assembly |
| 12 Pneumatic ball valve (3PCS) | 25 Micro Bubble Generator |
| 13 Ball valve | 26 Real-time contamination level monitoring Checker |

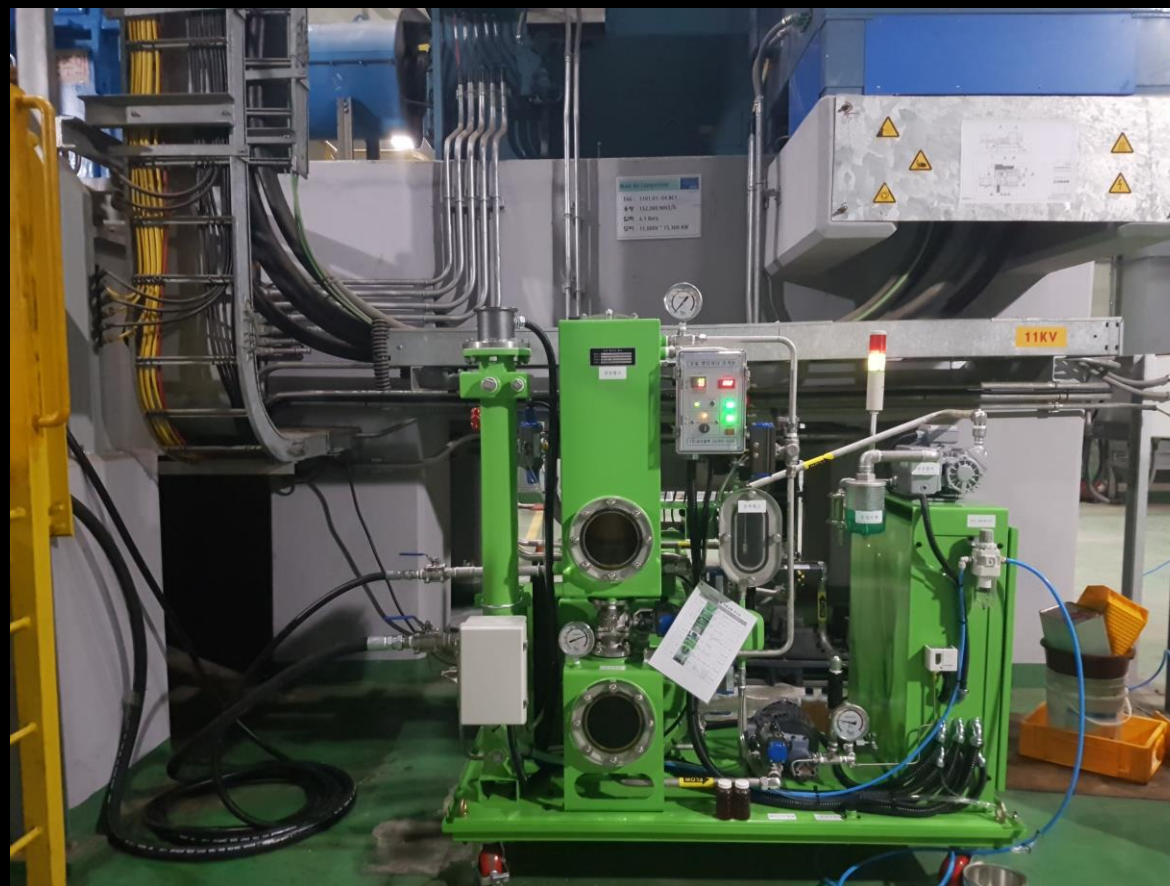


Oil Purifier equipment





Oil Purifier equipment





Oil Purifier equipment





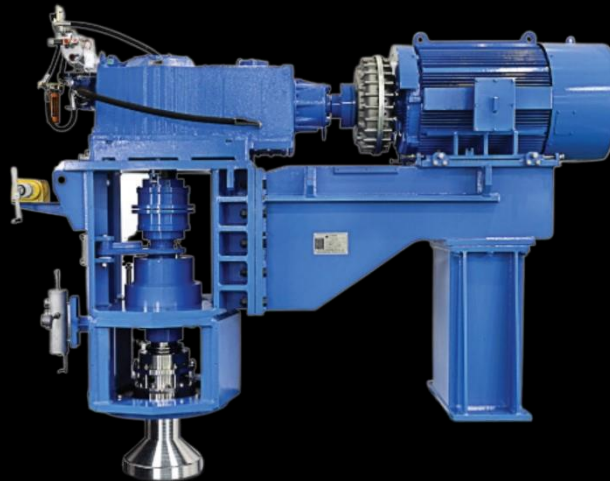
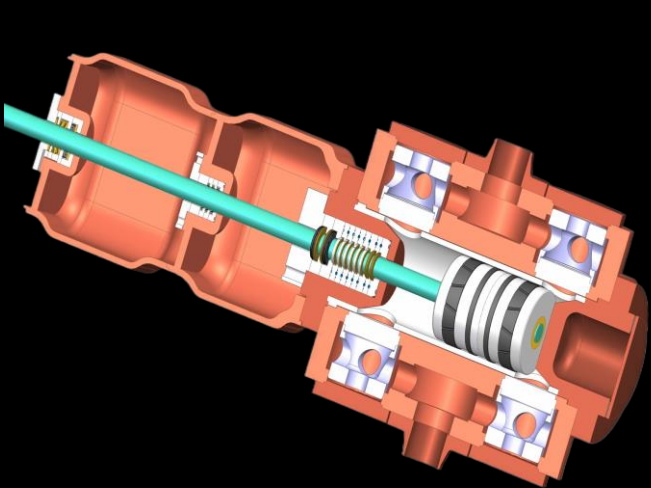
Oil Purifier equipment

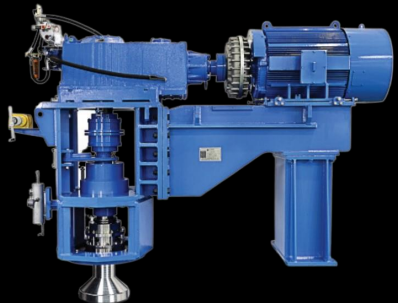




Ajira Engineering Services

Agitators & Mixers





Agitators & Mixers



With Easy Maintenance Features for End-users

Fully supported by our principle

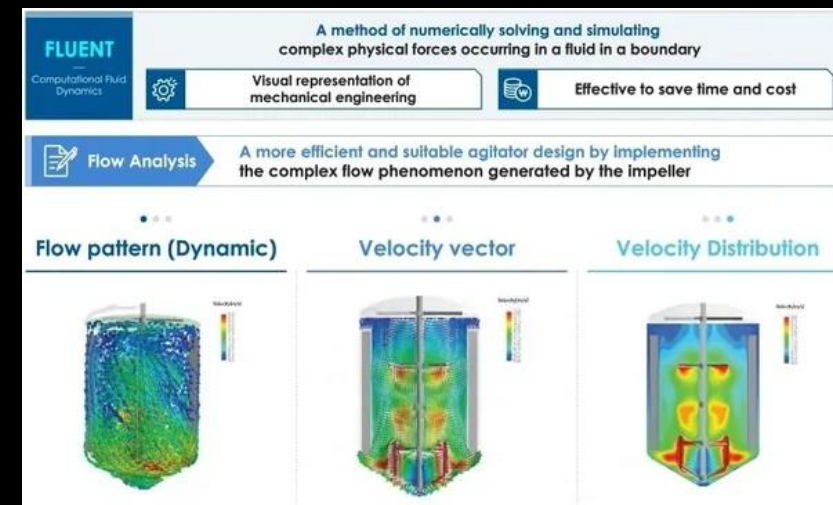


and manufacturer Agitech

Top, bottom and side mounted

Various designs impellers

Designs using CFD software

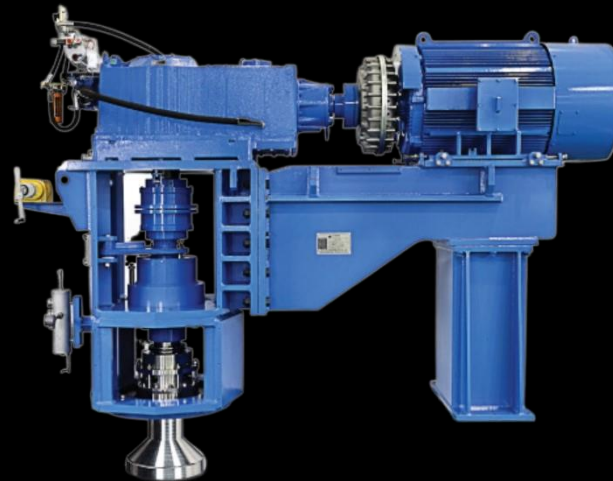
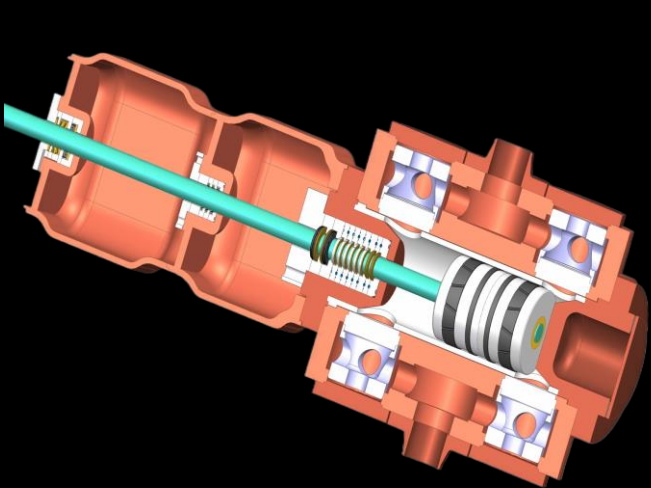


The EASY MAINTENANCE features make these Agitators an excellent REPLACEMENT for existing/old Agitators



Ajira Engineering Services

Heat Exchanger Solutions





Heat Exchanger Solutions



New equipment and various maintenance solutions for end-user

Fully supported by our principle and manufacturer



Kelvion (former GEA heat exchangers)

Air Cooled Condenser (ACC)



Air Fin Cooler (AFC)





Heat Exchanger Solutions



New equipment and various maintenance solutions for end-user

Fully supported by our principle and manufacturer

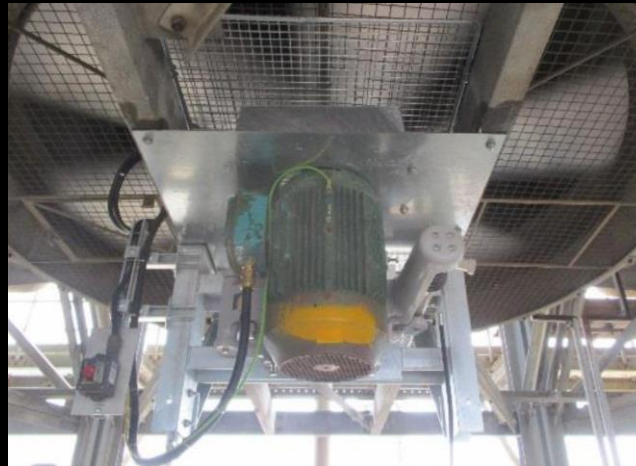


Kelvion (former GEA heat exchangers)

High pressure cleaning system



Efficiency Review and Revamping



Air Flow Measurement



Regular half yearly cleaning, revamping and groovy fin solutions can increase efficiency over 20% and reduce power consumption over 10%



Heat Exchanger Solutions



New equipment and various maintenance solutions for end-user

Fully supported by our principle and manufacturer



Kelvion (former GEA heat exchangers)

Fogging



Belt Tensioning System



High Efficiency Fan



High efficiency fan could improve flow by 10% to 50%.



Ajira Engineering Services

Thank you for your attention

