

Introduction

Why Split ?

In today's ever more sophisticated plant environment most bearings are still protected by solid rotary seals, either rubber based or polymeric. When the rotary seal either wears out unexpectedly or simply fails, a common occurrence with rubber seals, the most costly maintenance and operations event occurs, unscheduled equipment shutdown which reduces operational output and drives maintenance costs significantly higher. With the recent introduction of split rotary bearing seals the duration and cost of these events can be dramatically reduced because of the very short amount of time required to replace the seal. In most cases the failed seal **replacement time can be reduced by 80%**! Simple and easy to use, split rotary seals can **reduce operational downtime and maintenance costs**.

Why Double Split ?

The latest innovation in rotary seal technology is the introduction of double split rotary bearing seals. These seals take the already convenient split seal technology a dramatic step further by not only reducing equipment downtime and production losses but also by actually extending seal life. Double split seal designs provide the same advantages of ease of installation and reduced equipment downtime but also **increase the level of seal performance and dramatically extend seal life**.

Why AIGI's Patented Design ?

AIGI has taken double split rotary seal design to a new level with the introduction of its patented duo-lock and wedge cutting technologies. These technologies allow for the incorporation of two independent seal surfaces into the design which **dramatically improves sealing performance**. The duo-lock design **improves the overall elasticity of the seal** while the wedge cutting technology **significantly upgrades the integrity of the split joint**. These improvements significantly extend the seal performance, life and range of use for split rotary seals.



Locking Mechanism for Outer Ring

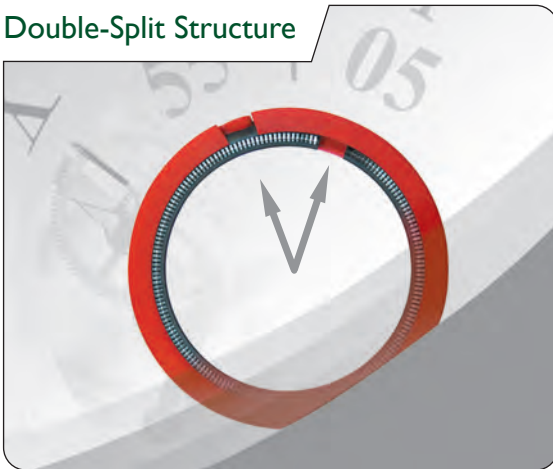


Wedge Mechanism for Inner Ring

Why do we call it “55” & “05” ?

The double split rotary seal developed by AIGI has engineered splits at 2 locations, 55’ and 5’ as viewed on a clock face. These precision joints provide double security by maintaining the seal’s elastic compensation ability as well as preventing leakage by the Id and OD faces.

Double-Split Structure



Duo-lock @ 55” & 05”

Ball & Socket Locking



Seal for Both Axial & Vertical Direction

Application



AIGI Patented Double Split Rotary Seals



AIGI 5505 Duo-Lock Split (Patented)

Polymeric material for medium speeds



AIGI 5505H Duo-Lock Split and Wedge-shaped Cutting (Patented)

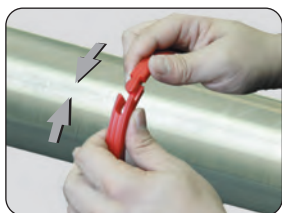
PTFE dynamic seal for high speeds

Installation Guide

AIGI 5505



1. Open the seal, install it around the shaft

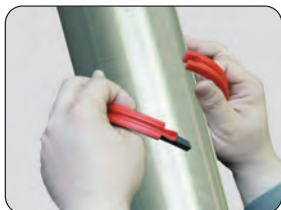


2. Connect and lock it



3. Replace the old seal, making sure the split joint faces upward

AIGI 5505H



1. Open the seal, install it around the shaft



2. Connect and lock it



3. Lock the spring



4. Replace the old seal, making sure the split joint faces upward



Features & Benefits

- Easy & fast installation
- No equipment disassembly required
- Low friction
- Reduces maintenance time by 80%

Design (AIGI 5505H)

- Two Engineered Splits at 55” and 5”
- Ball & Socket Duo-lock
- Inner & outer ring structure
- Unique Ball and Socket Joint Design on OD Ring



Benefits (AIGI 5505H)

- Double Security
 - Maintains Seal’s Elastic Compensation
 - No Leakage by the ID and OD Faces
- Creates reactive force to avoid relaxation
- Effective, long life sealing performance
- Duo-Lock split maintains joint integrity in vibrating equipment conditions

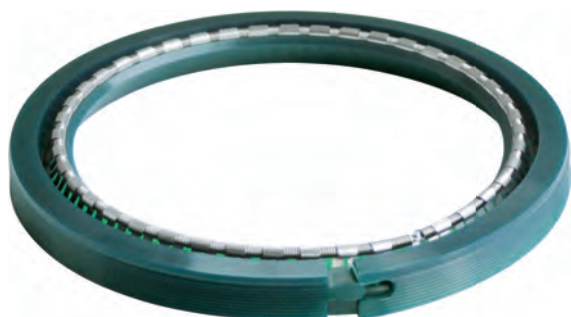
Application

- Low run out equipment

Technical Data

Item	Material	Temperature	Shaft Speed	Run Out
AIGI 5505	PU	-30 ~ 80°C	≤ 3m/s	≤ 0.2mm
AIGI 5505H	PTFE	-30 ~ 80°C	≤ 20m/s	≤ 0.1mm

Item	Shaft Diameter-d(mm)	Outer Diameter-D(mm)	Radial Width-H(mm)	Axial Thickness-L(mm)
AIGI 5505	d ≥ 20	D ≤ 400	10 ≤ H ≤ 50	L ≥ 11
AIGI 5505H	d ≥ 20	D ≤ 400	12.5 ≤ H ≤ 50	L ≥ 12



AIGI 5505Z Duo-Lock Split (Patented)
with finger spring support for large run out



AIGI 5505HZ Duo-Lock Split and Wedge-shaped Cutting (Patented)
NBR/FKM dynamic seal for high temperatures

Features & Benefits

- Easy & fast installation
- No equipment disassembly required
- Low friction
- Reduces maintenance time by 80%

Application

- Larger run out equipment



Technical Data

Item	Material	Temperature	Shaft Speed	Run Out
AIGI 5505Z	PU	-30~80°C	≤ 3m/s	≤ 2mm
AIGI 5505HZ-N	NBR	-35~110°C	≤ 10m/s	≤ 2mm
AIGI 5505HZ-V	FKM	-20~200°C	≤ 15m/s	≤ 2mm

Item	Shaft Diameter-d(mm)	Outer Diameter-D(mm)	Radial Width-H(mm)	Axial Thickness-L(mm)
AIGI 5505Z	d ≥ 200	D ≤ 2000	15 ≤ H ≤ 50	L ≥ 15
AIGI 5505HZ-N	d ≥ 200	D ≤ 1100	15 ≤ H ≤ 50	L ≥ 15
AIGI 5505HZ-V	d ≥ 200	D ≤ 580	7.5 ≤ H ≤ 50	L ≥ 15