



# cpc AR/HR Z Series Lubrication Storage Pad Testing Report

A linear guide is a category of rolling guidance. By using unlimited recirculating stainless steel balls operating between the raceways of the rail and the runner block, the carriage achieves high precision and low friction linear movement. If the linear guides do not have sufficient lubrication, rolling friction will increase, causing wear and shortened linear guide life span.

cpc has added and embedded PU lubricant storage pads to prolong the life of the linear guide; the pads directly contact and lubricate the rolling balls. This design supplies sufficient lubrication even in short stroke operations.

cpc's design, due to the embedded pad's absorption and retension capabilities, results in a product that features a long operational life and long-term lubrication.

The following are the results of cpc's in-house testing.

## AR15 Lubrication Storage Pad Testing Data

Tested products: AR15 blocks with lubrication storage pads, 8 pieces, and AR15 rails, N accuracy grade, 1500mm Length, 4 pieces

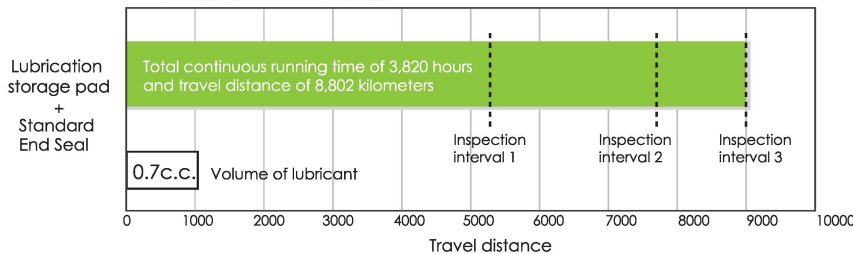
Testing condition	
Rating load capacities(each Block)	1.8KN(C=9KN · C0=17.5KN)
Stroke	0.96m
Max running speed	1m/s
Lubricant	DAPHNE SUPER MULTI 68 (Viscosity64.32 CST 40OC)
Lubrication period	No lubrication added during testing period

## ■ Testing equipment

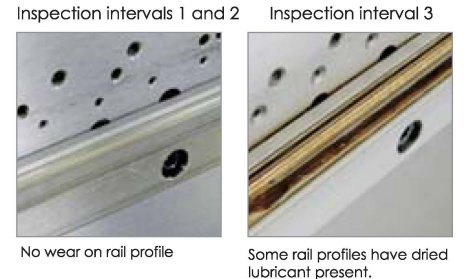


## ■ Testing result

Dried lubricant residue started appearing on rail profile, PU pads, and ball retainer of the tested blocks



## ■ Test results at inspection intervals



### Inspection intervals 1 and 2: Lubrication Maintained



- Upward lubrication storage pads in good condition.
- Lubricant supply in good condition.
- No wear on the running profile of the rail.



- Downward lubrication storage pads in good condition.
- Lubricant supply in good condition.

### Inspection interval 3: Lubricant residue



- Dried lubricant residue started appearing broken on the upward lubrication storage pads from the tested blocks.



- Dried lubricant residue started appearing broken on the downward lubrication storage pads from the tested blocks.

### Plastic parts and end seal in good condition



Plastic parts in good condition



End seal in good condition

## ■ Test Summary

Total continuous running time of 3820 hours and travel distance of 8802 kilometers.

Out of eight test blocks, dried lubricant residue appeared on 2 blocks and 1 rail. Dried lubricant residue is indicative of a need for re-lubrication.

The test results indicate that the lubrication pad design effectively extends the time between re-lubrication and thus lengthens the operational life of the linear guide.

memo

