

cpc AR/HR Z Series Lubrication Storage Pad Testing Report

A linear guide is a category of rolling guidance, by using unlimited re-circulating stainless steel balls operate between the race ways of the rail and the block, result in the moving table achieving high precision and low friction linear movement. If the linear guide do not have sufficient lubrication, rolling friction will increase, cause wear and shortened linear guide life span in long term operation.

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

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

The following is the **cpc** in-house life test results:

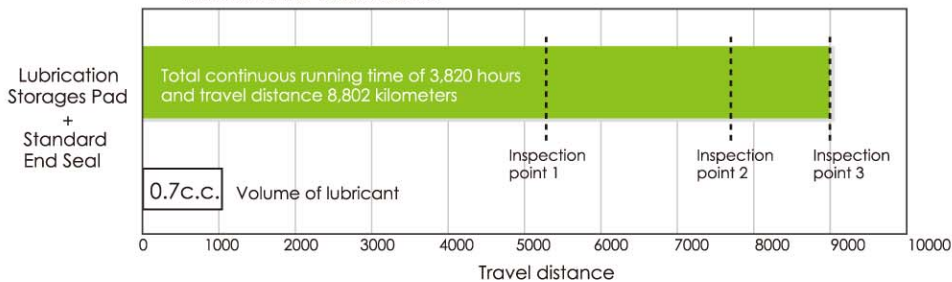
AR15 Lubrication Storage Pad Testing Data

Testing products : AR15-Blocks with Lubrication Storage Pad 8pcs,
AR15-Rail-N-class-L1500mm 4pcs

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 result

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



■ Testing equipment



■ Testing result of inspection point

Inspection point 1 and 2



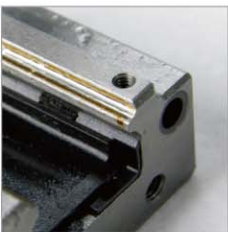
No wear on rail profile

Inspection point 3



some rail profiles have dried lubricant residue present

Inspection point 1 and 2 : Lubrication result



- Upward Lubrication Storage Pad in good condition
- lubricant supply in good condition
- Running profile of rail no wear out



- Downward Lubrication Storage Pad in good condition
- lubricant supply in good condition

Inspection point 3 : Lubrication result

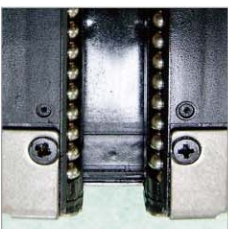


- Dried lubricant residue started appearing broken on upward Lubrication Storage pad of the tested blocks



- Dried lubricant residue started appearing broken on downward Lubrication Storage pad of 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 8802 kilometers.

Out of 8 test guides, dried lubricant residue appeared on 2 blocks and 1 rail. Dried lubricant residue is indicative of a need for re-lubrication.

The test results indicated that the lubrication pad design effectively extends re-lubrication requirement and thus lengthens linear operational life.