# www.rodavigo.net +34 986 288118 Servicio de Att. al Cliente

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

A linear guide is a category of rolling guidance systems. By using unlimited recirculating stainless steel balls that operate 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 lifespan.

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 pads absorption and retention capabilities, results in a product that features a long operation life and long-term lubrication.

Following are the results of **cpc**'s in-house testing.

#### AR15 Lubrication Storage Pad Testing Data

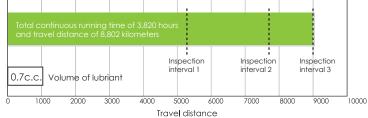
Tested products: AR15 blocks with lubrication storage pads, 8 pieces, and AR15 rails, N accuracy grade, 1500mm Length, 4 pieces

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 400C)
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

Lubrication storage pad Standard End Seal



### Inspection intervals 1 and 2: Lubrication Maintained



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

Plastic parts and end seal in good condition



Plastic parts in aood condition





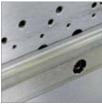
End seal in good condition

Testing equipment

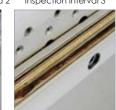


Test results at inspection intervals

Inspection intervals 1 and 2 Inspection interval 3



No wear on rail profile



Some rail profiles have dried lubricant present.



Dried lubricant residue and breakage on the upward lubrication storage pads



Dried lubricant residue and akaae on the do vard lubrication storage pads.

#### 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 relubrication and thus lengthens the operational life of the linear guide.

## LINEAR MOTION TECHNOLOGY

	Linear C	uide Service	Life Calculatio	n and I	Model Selec	ction	
Company /				Date (DD/MM/YEAR) /			
Address /				Tel /			
Contact / Department /				Machine Model /			
Application(Axial) / Amount required per Machines /				Sample Required Date (DD/MM/YEAR)/			
Application Drawing Provided	? []	res No			Production Date (DD/MM/YEAR)/		
Assembly Specification / Way of Asse							
Horizontal Verti	cal Hangi	ng on the Ceiling	Inclined 1(Degree:	) Incl	ined 2(Degree:		
Rails per Axial	[]I(1)		(2)		3)	Other	
Blocks per Rail	1	2		3		Other	
Distribution of Blocks (mm)	<i>l</i> o:	(Distance) (Distance) the sam	e rail)	<i>l</i> 1:		(Distance Between Adjacent Blocks on different rails )	
Center of Mass of load(mm)	<i>l</i> mx: <i>l</i> my: <i>l</i> mz:						
Mass of Load (kg) (Please include mounting plate weight)							
Driver Position (mm)	ℓdz:	Ldy:					
External Force Applying Position (mm)	ℓ <sub>Fx</sub> :	ℓ <sub>Fy</sub> :		ℓ <sub>Fz</sub> : _		_	
Axial Component (N)	Fx:	Fy:					
One Rail Per Axial	Drive Mechanism				External Force tr, tr, F <sub>2</sub> Fr		
Two Rails Per Axial	Lens La		Center of Mass Drive Mechanism	2		Bernal Forces	
	[	_	tion Specification				
Drive Mechanism	Linear Motor	on Manual	v Pneumatic (	Cylinder	Belt	Hydraulic cylinder	
	Stroke Distance			Maximu	m Speed (m/sec	:):	
	Acceleration (m/sec <sup>2</sup> ):				Deceleration (m/sec <sup>2</sup> ):		
Specification	Stroke Time (sec	,			Frequency (hr <sup>1</sup> ):		
	Daily Operation Time (hr):				Expected Service Life (Year):		
Environment and Lubrication Requirements							
Environment	General   Clean room(Grade/Class)   Vacuum / Low Pressure     Small Amount of Dust (Substance)   Large Amount of Dust (Substance)   Vacuum / Low Pressure     Liquid (Substance)   Special Gas (Substance)   Other						
cpc Initial Lubrication		ed (Regular Amount)	Pre-lubricate		,	None Other	
Customer Initial Lubrication	Apply Antin Cpc Greas	e only	Apply Grease	e, Remo	ove <mark>cpc</mark> Grease A t Customer's Greas ent:)	And Other	
End User Re- lubrication Method	🗌 Manual	Ce	entral Oiling System	None		Other	