

The Rotary Inground Advantage: Rotary® Lift vs. Challenger Lift

Rotary invented the environmentally friendly inground Smartlift® over 15 years ago. Since then it's become the number one choice for inground lifts worldwide with over **50,000 units** installed.

When you choose Smartlift, you choose:

The Industry Leader

1. Rotary Lift's more than 85 years of experience designing & building inground lifts
2. Experience of over 50,000 installed units
3. The BEST network of sales and service support in the industry. Period.

Testing and Certification

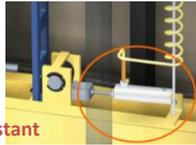
4. Internally tested lifts to 20,000 cycles at capacity load
5. Third-party ALI/ETL tested and certified lifts

Superior by Design

6. **PATENTED** faster serviceability vs. the competition
 - Easy Access™ cylinders (reduce downtime by up to 75% and save up to **\$557**)
 - Patented Stainless steel and polymer internal air lock cylinder
 - Easily accessible grease fittings for easy and quick routine lubrication
7. **Exclusive Smartguard® plungers vs. chrome plated** (see reverse side for more)

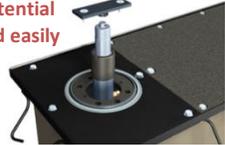


All components are accessible from surface level.



Corrosion resistant locking system

Working end of cylinder is at the top – away from potential debris and moisture and easily accessible for service



More choices to suit your shop's needs

8. **The ability to customize your lift to fit your shop's needs:**
 - exclusive TRIO™ superstructure with choice of adapters
 - versatile Movable Pad for quick service on unibody vehicles
 - Wall, pedestal or bench mounted controls
 - Earth shattering speed with Shockwave™ equipped lifts

Your Choice of Capacity and Superstructure

10k w/ TRIO and RA Adapters



12k w/ TA Truck Adapters



8k w/ Movable Pad



TRIO™ gives Your Choice of Adapters with



Flip-Up Frame Adapter



Rubber Round Adapter



TA Truck Adapter

Rotary Smartguard® vs. Challenger's Chrome Plated Plungers

With the recent introduction of Challenger Lift's EV Series inground lift with chrome plated plungers, claims have been made, by the competition, that this coating is superior to Rotary Lift's exclusive Smartguard treated plungers. The following information offers proof from third-party validation that this is not true. In fact, Smartguard is and remains the preferred plunger material on the market today.

Experts in the field of metal surface preparation **disagree that chrome is superior to Smartguard**. When compared, **Smartguard outperforms chrome plating** with the following characteristics:

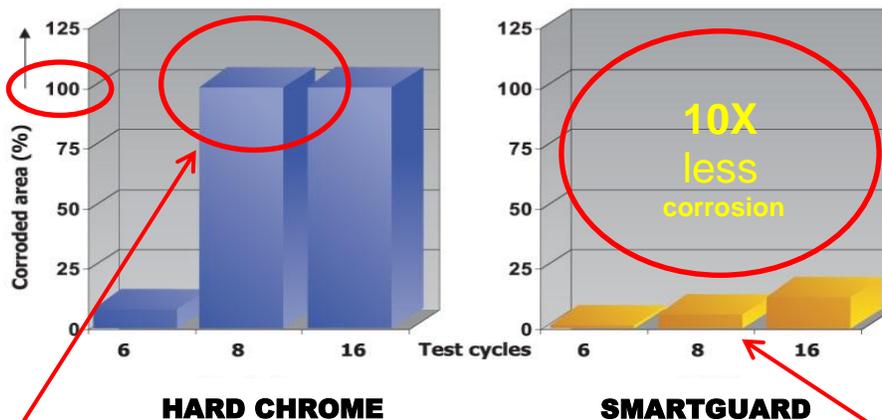
**Smartguard
is Superior to
Chrome!**

- Excellent corrosion protection
- Superior adhesive wear resistance thanks to the ceramic characteristics of the surface.
- No peeling or flaking since the layer is formed directly from the base material.
- No micro cracks.
- Low coefficient of friction.
- Higher environmental favorability; no hex chrome exposure.

Furthermore, data shows that despite what the competitor claims, **chrome plated parts corrode at a rate that's nearly 10X greater** than comparable parts treated with Smartguard in a typical "salt spray" corrosion test:

SALT SPRAY TEST

**CASS salt spray test in accordance with
DIN EN ISO 9227 on hard chrom plated and
Smartguard treated piston rods made from SAE 1045**



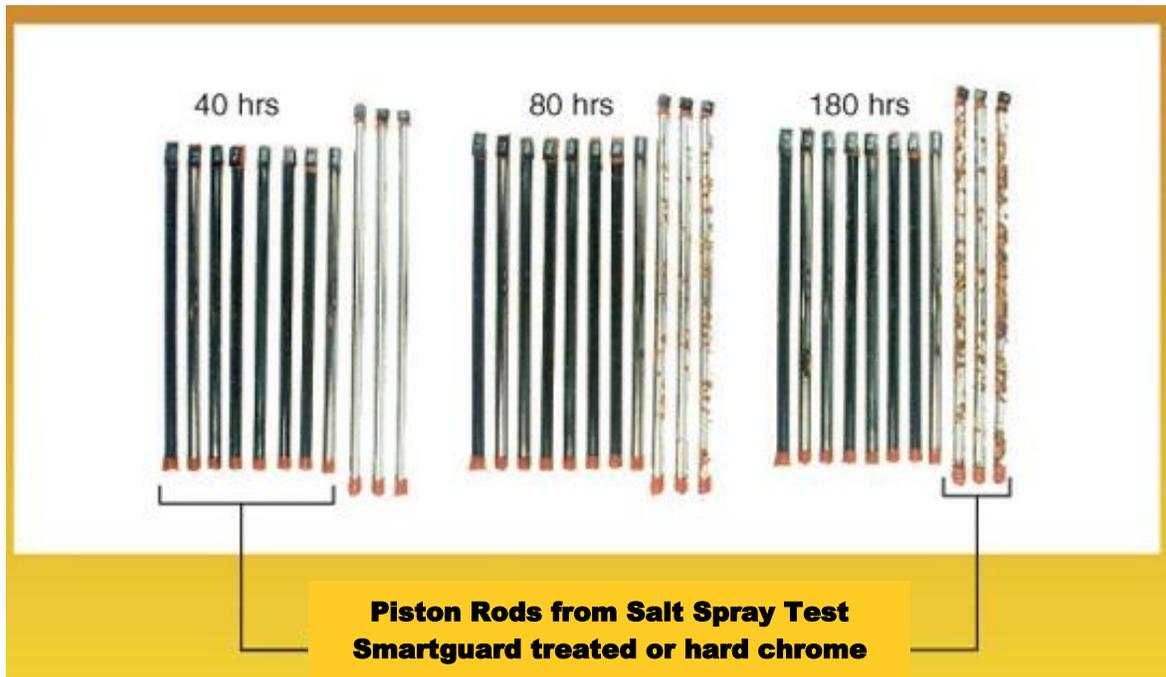
**After just 8 hrs in the salt
spray, hard chrome is
100% corroded!**

**What will happen in a
harsh automotive shop
environment?**

**After 8 hrs, Smartguard is
less than 10% corroded!**

**That's performance you
can count on for years to
come!**

EVIDENCE OF CORROSION IN CHROME



Source: www.northeastcoating.com

The Environmental Effect

The process which produces **Smartguard** plungers is environmentally sound, posing no toxic threats to humans or the environment.

Smartguard®



- The process produces no harmful gas emissions
- A non-toxic sludge is produced as solid waste and can be disposed of in a landfill
- No carcinogenic materials or by-products are produced

The same cannot be said for the Challenger's chrome plating. In fact, **the process required to hard chrome plate is hazardous to humans and the environment.** Consider the following –

Chrome Plating



"The chrome plate itself is not toxic, but most chrome plating, and all hard chrome plating, is done out of baths of hexavalent chromic acid. This material is considered carcinogenic by the U.S. Government, and has been known to be toxic and the cause of chrome sores, chrome ulcers, and perforated septums since 1928."

"In the USA there are many environmental issues surrounding chrome plating. In general, the solution itself is considered hazardous under OSHA and the Superfund Amendments and Reauthorization Act due to acute (corrosive) and chronic (carcinogenic) health hazards." Source: www.finishing.com

Inground Lift Comparison						EnviroLift AquaVantage CL Challenger Lifts		QC series CL Challenger Lifts		CL Challenger Lifts	
Attribute	Rotary Lift SL210	Rotary Lift SL210-RA	Rotary Lift SL212	Rotary Lift SL210-Shockwave™ Equipped	Challenger AV1020WW w/ AquaVantage™	Challenger EV1020	Challenger EV1020 QC	Challenger EV1220	Challenger EV1520		
Performance Specifications						Performance Specifications					
Rated Capacity	10,000 lbs	10,000 lbs	12,000 lbs	10,000 lbs	10,000 lbs	10,000 lbs.	10,000 lbs.	12,000 lbs.	15,000 lbs.		
PSI required to lift capacity load	90 psi (required for lock release only)				200 psi	75 - 125 psi	75 - 125 psi	75 - 125 psi	75 - 125 psi		
CFM requirements (per lift)	.01 cfm				3.5 cfm @ 200 psi						
Compressor Requirements	standard shop compressor				7.5 HP Duplex compressor	standard shop compressor	standard shop compressor	standard shop compressor	standard shop compressor		
Electrical Consumption	.01 kWh per cycle		.01 kWh per cycle	.173 kWh (charger)	?	?	?	?	?		
Energy Consumption	2.0 Hp (15 amps at 208 volts)		2.0 Hp (15 amps at 208 volts)	5.0 Hp (3.15 amps at 115 volts)	9.1 Hp (to compress air to 200 psi)	2.0 Hp	3.0 Hp	2.0 Hp	2.0 Hp		
Spotline™ laser guided spotting	optional equipment	optional equipment	optional equipment	STANDARD equipment	not available	not available	not available	not available	not available		
Temperature operational range	(-32)° - 236° F (with ISO32 BioFluid)				41° - 104° F	?	?	?	?		
System Fluid Capacity	19 qts				26.4 gallons of chemically treated water	12 qts	12 qts	12 qts	13		
Fluid type	ATF, ISO32 Hydraulic Oil or BioFluid				water with anti algae/anti freeze additives	Oil or ATF	Oil or ATF	Oil or ATF	Oil or ATF		
Lower to lock function?	Yes				No	Yes	Yes	Yes	Yes		
Plunger material	8 1/2" Smartguard™ steel				8 1/4" Anodized Aluminum	8 1/2" Chrome plated	8 1/2" Chrome plated	8 1/2" Chrome plated	8 1/2" Chrome plated		
Cycle tested design?	Yes. Smartlift has been cycle tested to 20,000 cycles at capacity load				No mention of cycle testing by Challenger.	No mention of cycle testing by Challenger.	No mention of cycle testing by Challenger.	No mention of cycle testing by Challenger.	No mention of cycle testing by Challenger.		
Manufacturing Considerations						Manufacturing Considerations					
Plunger preparation considerations	Smartguard process is environmentally sound, posing no toxic threats to humans or the environment. End result is a high quality, corrosion resistant structural piece.				Aluminum plungers are susceptible to dings scratches and corrosion, thus reducing their lifespan.	The Chrome plating process produces highly toxic and carcinogenic by products that are hazardous to humans and the environment. Additionally, chrome is 10x more susceptible to corrosion than Smartguard and are prone to microscopic cracking which leads to accelerated deterioration.					
ISO9001 certified manufacturing facilities	Yes				No	No	No	No	No		
Lift built in company owned manufacturing facilities	Yes				No	unknown	unknown	unknown	unknown		
Made in the USA	Yes				No	unknown origin	unknown origin	unknown origin	unknown origin		
Gold Label Certified	Yes				Yes	Yes	No	Yes	Yes		
Dimensional Data						Dimensional Data					
Adapter Type	Frame contact Flip-up	Adjustable Rubber Pad	Stackable Truck Adapters	Frame contact Flip-up (RA and M-pad available)	Adjustable Rubber Pad	Adjustable Rubber Pad	Adjustable Rubber Pad	Adjustable Rubber Pad	Adjustable Rubber Pad		
Arm Type	two section Trio™ arm w/ integrated third stage	two section Trio™ arm w/ integrated third stage	3 piece 3-stage arms	two section Trio™ arm w/ integrated third stage	three piece 3-stage	three piece 3-stage	3-piece 3 stage	2-stage front and rear swing arms	2-stage drive-over front and rear swing arms		
Rise Height - floor to top of adapter in highest position	81"	75 7/8" (79 1/4" w/ 5" stackable adapter)	84 1/4"	81"	80"	73 3/4"	73 3/4"	81 1/4"	84 3/4"		
Drive-thru clearance	88"	88"	88"	88"	87"	87"	87"	87"	N/A		
Width Overall	108 7/8"	108 7/8"	98 1/2"	108 7/8"	110"	110"	110"	99"	71 1/2"		
Min Arm Reach	21 3/8"	19"	31 1/2"	21 3/8"	19 3/8"	19 5/8"	19 5/8"	32"	26 1/4"		
Max Arm Reach	47 7/16"	41 3/4"	48"	47 7/16"	42"	42"	42"	49 1/4"	43"		
Min Adapter Height	4 1/4"	3 5/8"	5 1/4"	4 1/4"	4 1/8"	3 7/8"	3 7/8"	5" - 7 1/4"	6 1/2" - 8 1/4"		
Max Adapter Height (w/out extensions)	10 1/2"	4 7/8"	13 1/4"	10 1/2"	7 3/8"	6"	6"	11" - 13 1/4"	14 1/2" - 16 3/4"		
Speed of Rise	45 seconds	45 seconds	54 seconds	17.56 seconds	approx. 40 seconds	40 seconds	27 seconds	60 seconds	60 seconds		
Speed of Descent	23 1/2 seconds	23 1/2 seconds	29 seconds	20.29 seconds	25 seconds to exhaust system air plus actual descent time		17 seconds				
Serviceability, Design and Support Considerations						Serviceability, Design and Support Considerations					
Easier to Service Cylinders	Patented EasyAccess™ cylinders reduce routine repair time by 75%				Servicing internal components requires "guts" to be pulled - resulting in downtime and added expense.	Servicing internal components requires "guts" to be pulled - resulting in downtime and added expense.					
Greasing Required	Yes. Grease zerks are on surface of guide barrels for easy access by shop technicians.				Yes. Zerks are 14" below grade inside of containment.	Yes. Zerk fitting are inside containment					
Easily removable non-skid cover plate for interior access with one piece leak-resistant seal	All fittings, hoses and lock cylinders are serviceable from the surface by removing the cover plate at full rise.				All fittings and "water control" valves are fixed at the bottom of the containment. Within surface reach only after pulling "guts"	Servicing internal components requires "guts" to be pulled - resulting in downtime and added expense.					
Cylinder Design	Cylinder specially designed to keep moisture and contaminants from being "inhaled" in cylinder, thus increasing service life.				Water cylinders are inverted and may allow contaminants from the bottom of the containment to enter plunger and cause damage.	non-breathing ram cylinder					
Air Latch Cylinder	Patented Polymer and Stainless Steel construction helps prevent corrosion and downtime. It is accessible from the surface and located on the top side of the equalizer bar.				"Lock Release Valve", made from painted steel, is not corrosion resistant and is contained within a steel enclosure on the bottom side of the equalizer mechanism.	Corrosion resistant stainless steel air lock					
Easy Access for Fluid Removal	Access hole in lift cover plate for easy fluid removal if necessary. No need to remove cover plate to inspect the containment.				No access hole in lift cover plate.	No access hole in lift cover plate.					
Units in Operation	Over 50,000 Smartlifts installed worldwide since 1995.				?	Lift Introduced in 2011	Lift introduced in 2012	Lift Introduced in 2011	Lift Introduced in 2011		
Warranty	Must be installed by RAI. 1yr labor, 2 yrs functional parts, 5 yrs structural parts (additional 3yrs parts warranty is available for \$150.00 USD)				1 year labor, 2 years parts	1 year labor, 2 years parts					