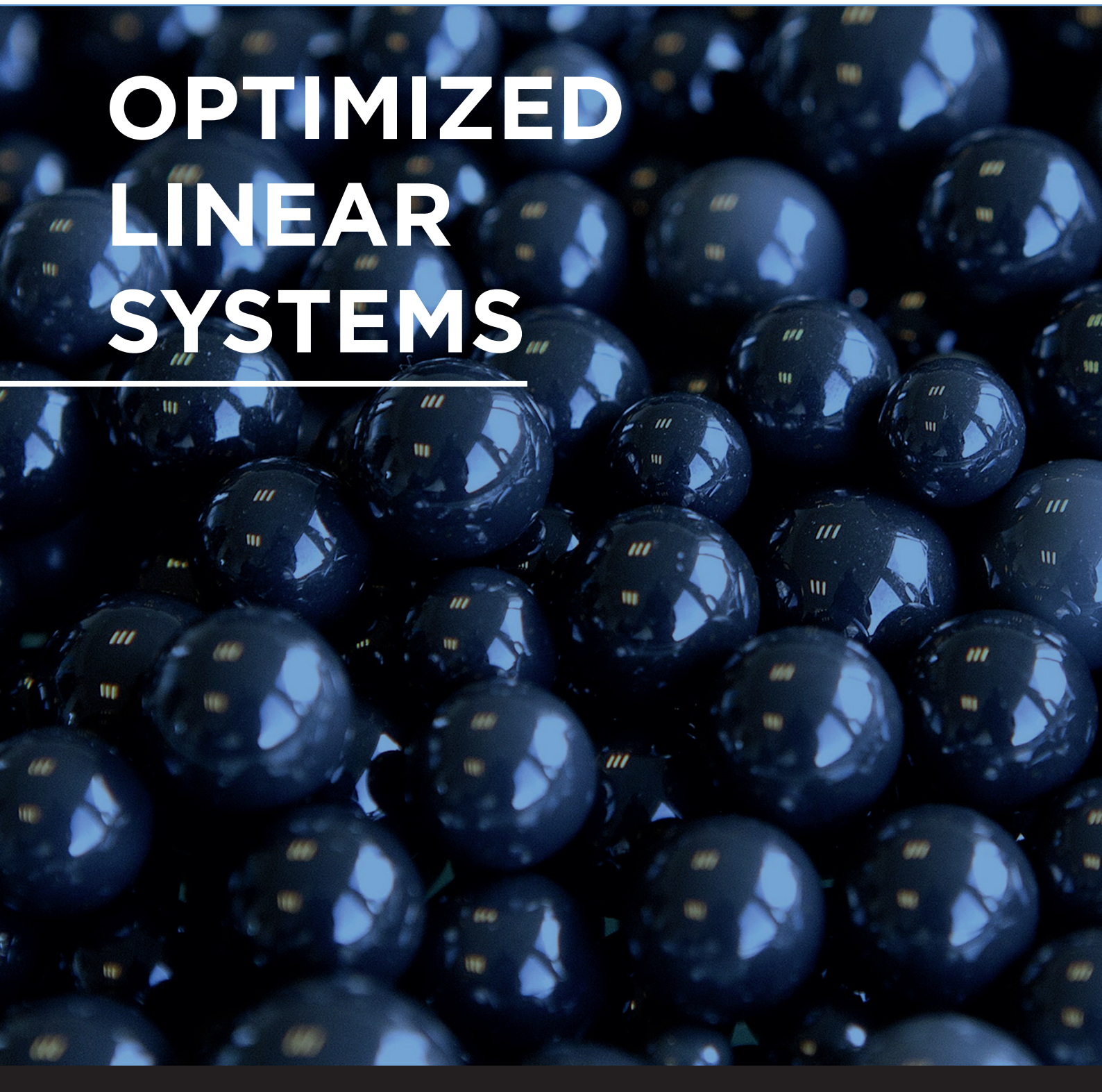


ROLLCO

OPTIMIZED LINEAR SYSTEMS



Upgraded Linear Systems

Linear rail guides, ball screws and other components within ball rail systems will perform much better after an upgrade with ceramic balls and coating solutions. Thanks to a cooperation with CeramicSpeed we can offer upgrades of your systems.

These upgrades are particularly suitable for Rollco products:

- Ball Screws
- Linear Rail HRC/ARC/ERC
- Linear Rail SBI



Long Life Coating

Bearing rollers, races and other wear parts can acquire increased resistance to wear and thus service life, thanks to technical coatings. CeramicSpeed long life coating provide extremely high corrosion resistance and wear and friction-suppressant properties. Other benefits are reduced risks of micro pitting and increased resistance to contamination and fluctuating speed.

CorroCoat

For corrosive environments and can be used for all kind of steel types including stainless steel.

- 2-4 longer service life on wear parts
- Excellent corrosive protection
- Low friction coefficient
- Minimum rolling friction
- FDA / EN1935 approved
- Good wear resistance

	Hardened Steel	CorroCoat
Process		“Dipping”
Process temperature °C		<80
Color		Grey
Hardness, HV (vickers)	700	1200-1300 *
Thickness, µm	Solid	3-6
Coefficient of friction (against steel)	0,8	0,25
Operating temperature, °C		-230 to +800
Max. material length, mm		3000

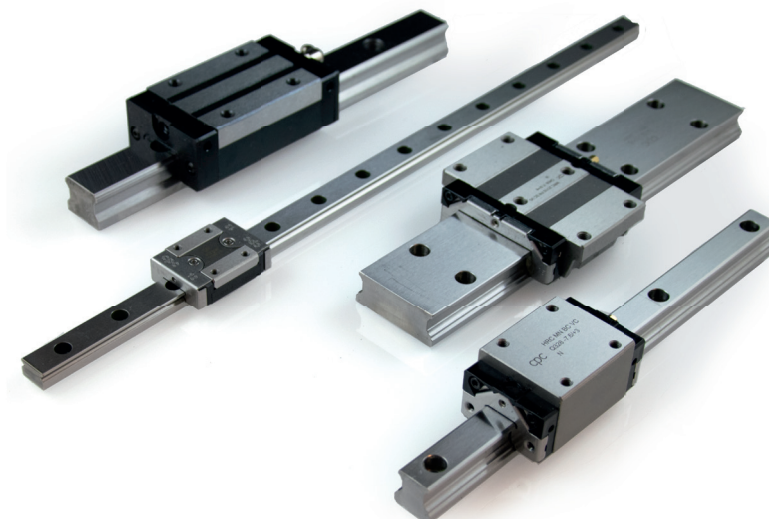
* Depending on material properties

Ceramic Balls

Ceramic balls are superior to steel balls in all physical measurable properties. This ensures many benefits in the bearing/linear systems. The increased hardness of the ball means that the contact area between the ball and the raceway is reduced leading to lower friction, higher potential speeds, and less energy waste. The hardness and the extremely smooth surface also make the balls far more durable than steel balls. Ceramics balls are available in a variety of material. We offer silicon nitride (Si_3N_4), which is considered to be the best.

- Extreme wear resistance
- Non-corrosive and stainless
- Lower friction coefficient
- Electrically insulating
- Lightweight
- Increased precision and stiffness - fewer vibrations
- Increased resistance to contamination
- Increased resistance to fluctuating speed (acceleration)
- Does not cause surface fatigue in the rings (micro pitting)

	Steel balls (100 Cr 6)	Ceramic balls (Si_3N_4)	Difference
Density, g/cm^3	7,6	3,2	58 % lighter
Hardness, HV Vickers	700	1600	128 % harder
Elastic modulus, GPa	190	310	63 % stiffer
Thermal expansion coefficient	12,3	3,7	- 70 %
Max. operating temperature, °C	320	1000	+ 680 °C
Surface finish grade 5, micron	0,02	0,005	400 % smoother
Life wear resistance	-	< 10x	<10x
Electrical resistivity, $\Omega\cdot\text{cm}$	10^{-9}	10^{14}	10^{16} = insulator 0 = superconductor



**ALWAYS THE RIGHT
SOLUTION AT THE RIGHT TIME.**

ROLLCO

LINEAR SOLUTIONS **YOUR** WAY

With reliability, competence and commitment Rollco rapidly delivers the right solutions and components to create safe and cost-effective automation and linear movement.

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