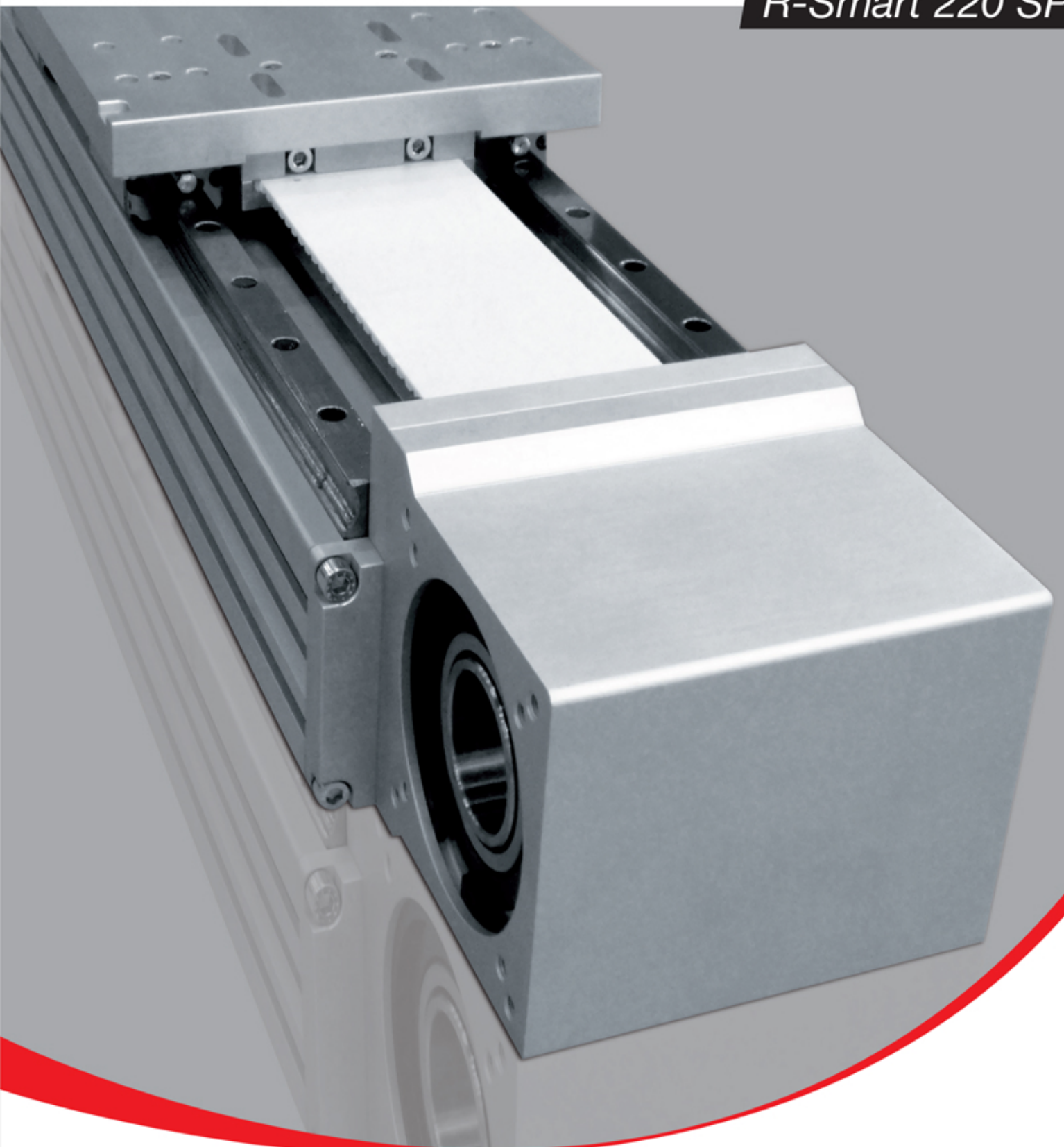


**ROLLON**<sup>®</sup>  
Linear Evolution

R-Smart 220 SP



# R-Smart 220 SP

## Technical Details



With its concept of linear units, the Smart Series maximizes effectiveness while using optimal manufacturing and assembly techniques and complying with the highest quality standards. The Smart Series features extruded, self-supporting aluminium profiles on which recirculating ball bearing linear guides with high load capacities and ball chain technology are mounted. Power is transmitted using a steel-reinforced polyurethane toothed belt with AT tooth profile. Use of these components ensures a very favorable price for performance ratio with high cost effectiveness during its operational life.

### Aluminium Profile

The material used is anodised aluminium extruded from 6060 alloy. Dimensional tolerances comply with UNI 3879. The extruded profile is also provided with T-slots for easy insertion of the unit and the component parts.

### Recirculating Ball Bearing Guide

The recirculating ball bearing guides with high capacity load ratings are mounted to dedicated slots in the aluminium profile. The carriage of the linear unit is installed on the preloaded recirculating ball bearing runner blocks, which with their four rows of balls provide equal loading in all four directions: up, down, and side-to-side.

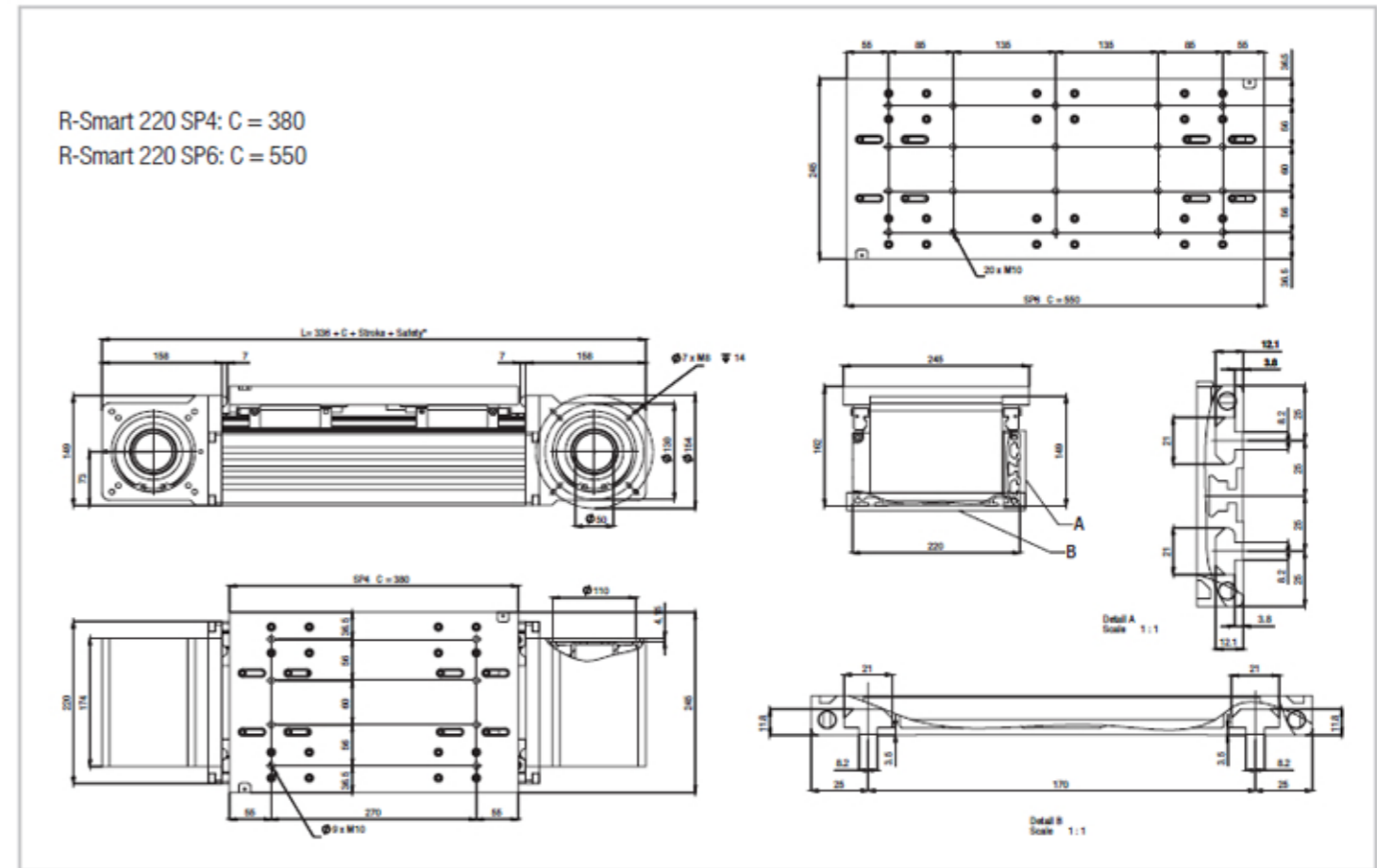
The linear guide ball rows are equipped with a ball chain. The polymer ball chain makes sure that the ball rolling elements, while moving through the recirculating ball runner blocks, are kept spaced-apart from each other and are driven on the rails.

### New Sizes with Wide Profile

- 100 mm to 6,000 mm stroke
- 0,1 mm max. repeatability
- 4.0 m/s max. rapid traverse speed
- 50 m/s<sup>2</sup> max. acceleration (5g's)
- Type of toothed belt: 100 AT 10
- Type of toothed belt pulley: Ø 102 – Z 32 zero clearance
- Linear advance = 320mm/rev
- Variable Weight =(Weight per 100mm stroke):2.45kg
- Simple structure for maximum effectiveness with high load capacities.
- Exceptional value with very favorable price/performance ratio
- Wide range of accessories available.

### Drive Belt

The Rollon linear units of the Smart Series comprise steel-reinforced polyurethane toothed belts with AT tooth profile. This type of toothed belt has proved to be the most suitable for transmitting motion in linear units in terms of permissible driving torques, compactness and low noise generation. When combined with zero-clearance toothed belt pulleys, it ensures that alternating loads are not affected by backlash on reversal. By exploiting the maximum toothed belt width through the profile and by setting optimal belt pretensioning, high speed and noise reduction, with minimal wear, can be achieved.

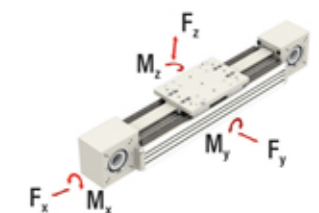


\*The safety stroke length is defined according to customer's requirements.

Product	Load capacities [N]			Moments [Nm]			Weight [kg]	
	F <sub>x</sub>	F <sub>y</sub>	F <sub>z</sub>	M <sub>x</sub>	M <sub>y</sub>	M <sub>z</sub>	Carriage	Zero Stroke Weight
	stat. / dyn.	stat. / dyn.	stat. / dyn.	stat. / dyn.	stat. / dyn.	stat. / dyn.		

R-Smart 220	SP4	theor.	9190 / 6890	158000 / 110000	158000 / 110000	13430 / 9350	17380 / 12100	17380 / 12100	12,1	41,13
		perm.*	7350 / 5510	31600 / 13200	31600 / 13200	2686 / 1122	3476 / 1452	3476 / 1452		
	SP6	theor.	9190 / 6890	237000 / 165000	237000 / 165000	20145 / 14025	30810 / 21450	30810 / 21450	16,95	49,93
		perm.*	7350 / 5510	47400 / 19800	47400 / 19800	4029 / 1683	6162 / 2574	6162 / 2574		

\*The values provided are empirical values which allow for reasonably long lifetime and satisfactory static safety.





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