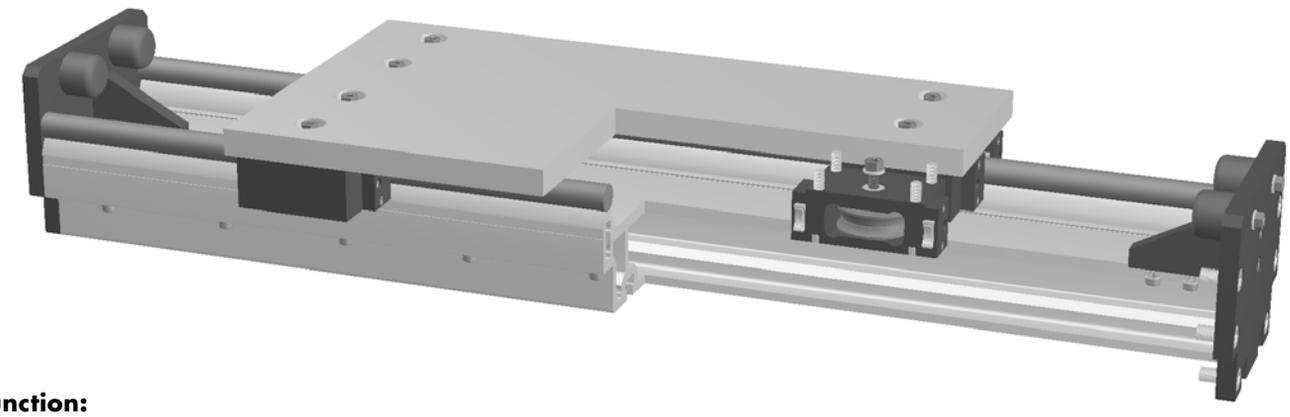
Positioning system ALLR 203, 204

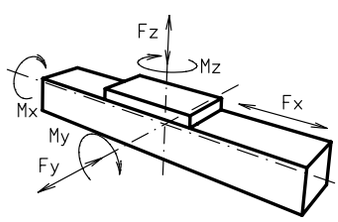
Roller guide unit without drive



Function:
This unit consists of an aluminium profile with hardened steel spindles mounted on top of the profil. The carriage has internal linear ball bearings, that can be adjusted free of play. The unit is without drive.

Fitting position: As required. Max. length 7.600 mm without joints.
Carriage mounting: By tapped holes.
Unit mounting: By T-slots and mounting sets. The linear axis can be combined with any T-slot profile.
Carriage support: In the standard version, the carriage runs on 8 rollers which can be adjusted and serviced at a central servicing position. For longer carriages the number of rollers can be increased.

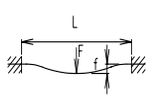
Forces and torques



Size	ALLR 203		ALLR 204	
Forces/Torques	static	dynamic	static	dynamic
F_y (N)	23000	18400	30000	24000
F_z (N)	11000	8800	16250	13000
M_x (Nm)	1200	950	1870	1500
M_y (Nm)	1870	1500	3000	2400
M_z (Nm)	3800	3100	5600	4500
All forces and torques related to the following: existing values / values of table	$\frac{Fy}{Fy_{dyn}} + \frac{Fz}{Fz_{dyn}} + \frac{Mx}{Mx_{dyn}} + \frac{My}{My_{dyn}} + \frac{Mz}{Mz_{dyn}} \leq 1$			
Geometrical moments of inertia of aluminium profile				
I_x mm^4	$2{,}26 \times 10^7$		$2{,}98 \times 10^7$	
I_y mm^4	$8{,}75 \times 10^7$		$10{,}22 \times 10^7$	
Elastic modulus N/mm^2	70000		70000	

Formula: ALLR

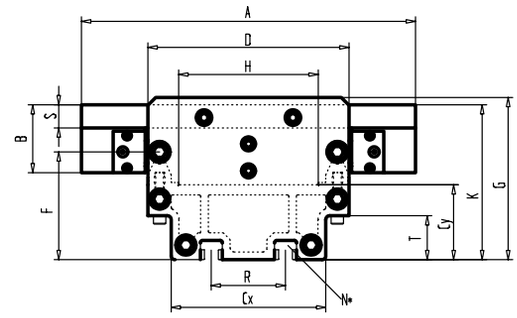
$$f = \frac{F * L^3}{E * I * 192}$$

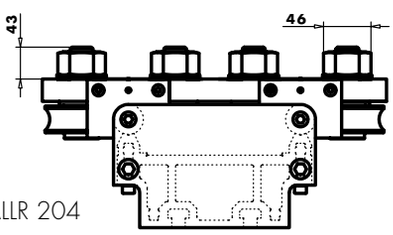


f = deflection (mm)
F = load (N)
L = free length (mm)
E = elastic modulus 70000 (N/mm^2)
I = second moment of area (mm^4)

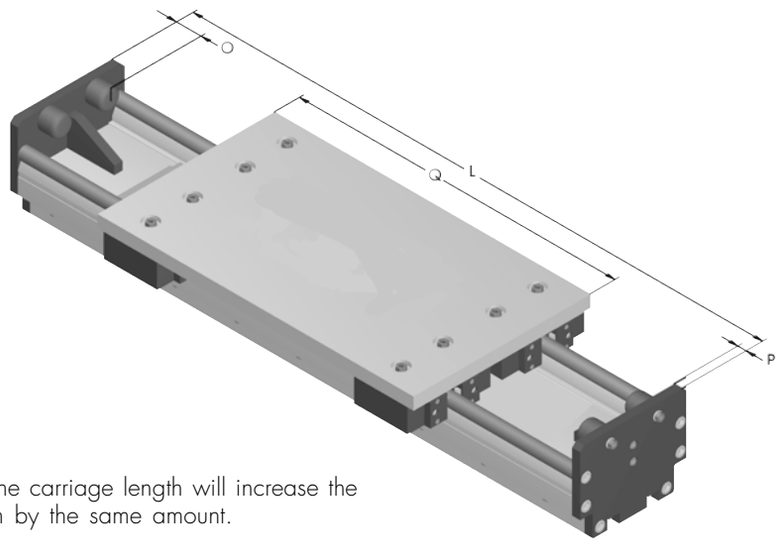
Positioning system ALLR 203, 204

Dimensions (mm)





ALLR 204



Increasing the carriage length will increase the basic length by the same amount.

Size ❒	Basic length L	A	B	Cx	Cy	D	F	G	H	K	N for	O	P	Q	R	S	T	Basic weight	Weight per 100 mm
ALLR 203	580	432	88	200	97	260	139,6	210	180,5	200,5	M16	60	20	460	96	30	57	64 kg	3,9 kg
ALLR 204	610	480	102,5	200	97	260	139,6	210	180,5	217,5	M16	60	20	490	96	30	57	65 kg	4,8 kg

Guide rod size
(3) ∅=30 **(4)** ∅=40

0 **Choice of guide body profile:**
(0) Standard **(1)** stainless guide rods **(2)** stainless guide rods and screws **(3)** stainless guide rods, rollers and screws

Basic length + stroke = total length

ALLR20	3	0	0	0	0	0	0	2000
Pos.	1	2	3	4	5	6	7	

Sample ordering code:
ALLR203, guide rods 30 mm, standard body profile, 1420 mm stroke.