

Linear actuators with toothed belt drive

and profile rail guide



Material:

Body, extruded aluminium section.
Bearing housing and slide, aluminium.
Profile guide rail and guide carriage, steel.
Toothed belt, polyurethane with steel cord reinforcement.

Version:

Body natural colour anodised
Bearing housing and slide, black anodised.
Tracks of the profile guide rail, inductively hardened and ground.

Sample order:

nIm 20300-1060X1000

Note:

Compact and flexible linear actuators with toothed belt drive. The body consists of a self-supporting aluminium extruded section with integrated profile guide rail. This rail system is able to absorb highest forces from all directions, is low-wear, and is optimised for moving large masses.

Slots are located on the outer sides of the aluminium profile, ensuring easy, reliable assembly and enabling accessories mounted. Proximity switches can be positioned and fastened in the upper T-slot. The aluminium profile is fully compatible with our standard I series profiles.

The steel cord reinforced toothed belt enables high power transmission with alternating loads, and simultaneously ensures excellent positioning accuracy with low wear and very little noise generation. The toothed belt runs on the upper side of the aluminium profile in guide slots, thus protecting all parts housed within the profile from dirt.

With its symmetrical design, the linear actuator enables motors and transmissions to be attached to all four sides of the bearing housing. The open ends of the unused hollow shafts on the bearing housing can be sealed using the optional protective caps 20300.

An additional centring hole is located on each tapped hole on the upper side of the slide. Other connecting elements can be precisely mounted on the slide in combination with the centring rings 20240.

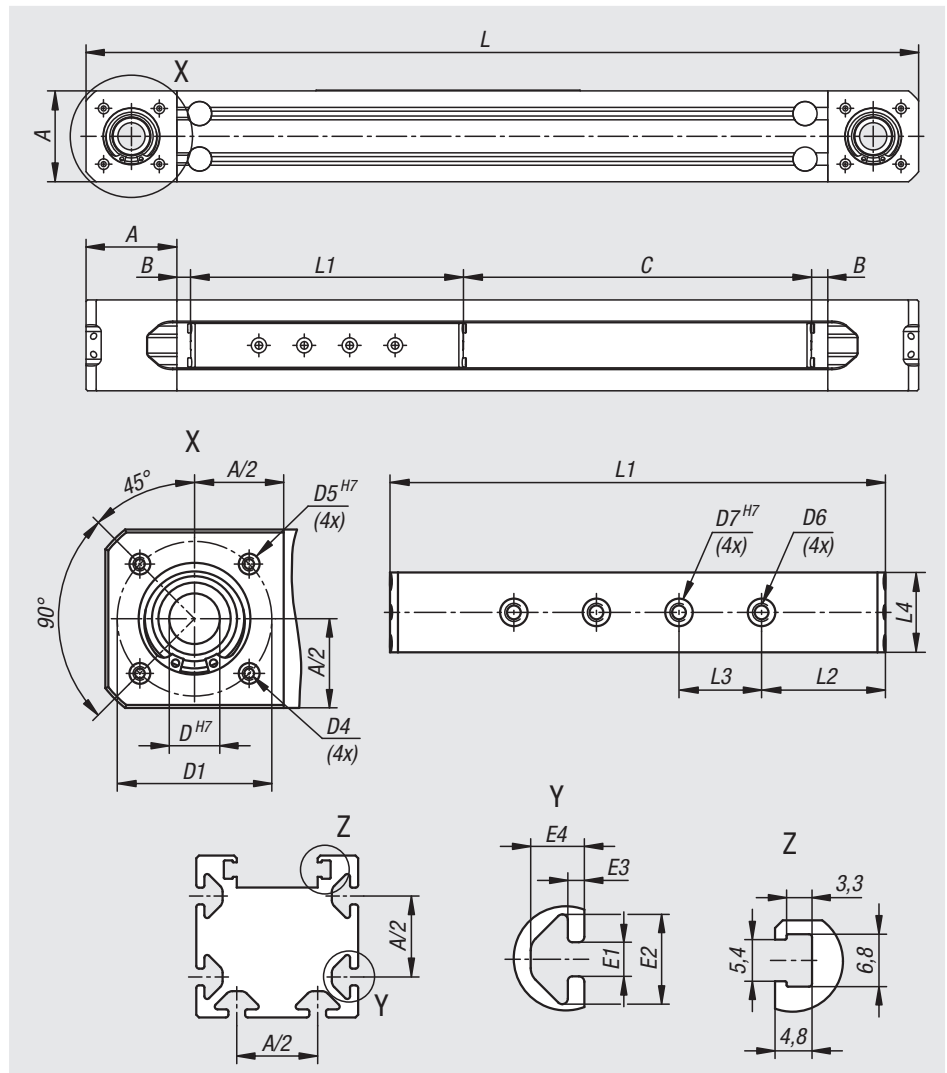
Load specifications apply for dynamic loading.

Temperature range:

-20°C to +70°C.

On request:

Other lengths (travel C max. 4000 mm).



Accessories:

Protective caps. Slot table, motor adapter set, synchronisation set and proximity switch, see table.

Technical data:

Safety rating IP50.

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Order No.	Size	Matching cap	Matching slot table	Matching coupling set	Matching synchronisation set	Suitable proximity switch
20300-1060X0200	60	20300-91060	20310-06174	20320-604710	20330-6016X	83000-05-015
20300-1060X0500	60	20300-91060	20310-06174	20320-604710	20330-6016X	83000-05-015
20300-1060X1000	60	20300-91060	20310-06174	20320-604710	20330-6016X	83000-05-015
20300-1060X1500	60	20300-91060	20310-06174	20320-604710	20330-6016X	83000-05-015
20300-1080X0300	80	20300-91080	20310-08230	20320-806960	20330-8025X	83000-05-015
20300-1080X0500	80	20300-91080	20310-08230	20320-806960	20330-8025X	83000-05-015
20300-1080X1000	80	20300-91080	20310-08230	20320-806960	20330-8025X	83000-05-015
20300-1080X1500	80	20300-91080	20310-08230	20320-806960	20330-8025X	83000-05-015

Order No.	Size	Slot width	A	B	C (travel)	D	D1	D4	D5	D6	D7	E1	E2	E3	E4	L	L1	L2	L3	L4
20300-1060X0200	60	6	60	25	200	17	52	M4	7	M6	10	6,2	16,3	3	9,75	550	180	45	30	29
20300-1060X0500	60	6	60	25	500	17	52	M4	7	M6	10	6,2	16,3	3	9,75	850	180	45	30	29
20300-1060X1000	60	6	60	25	1000	17	52	M4	7	M6	10	6,2	16,3	3	9,75	1350	180	45	30	29
20300-1060X1500	60	6	60	25	1500	17	52	M4	7	M6	10	6,2	16,3	3	9,75	1850	180	45	30	29
20300-1080X0300	80	8	80	30	300	24	76	M6	10	M8	13	8	20	4,5	12,25	760	240	60	40	45
20300-1080X0500	80	8	80	30	500	24	76	M6	10	M8	13	8	20	4,5	12,25	960	240	60	40	45
20300-1080X1000	80	8	80	30	1000	24	76	M6	10	M8	13	8	20	4,5	12,25	1460	240	60	40	45
20300-1080X1500	80	8	80	30	1500	24	76	M6	10	M8	13	8	20	4,5	12,25	1960	240	60	40	45

Order No.	Size	Repeat accuracy	Max. speed m/s	Max. acceleration m/sc	Weight of carriage kg	Weight Stroke 0 kg	Weight per 1000 mm stroke kg	Fx N	Fy dynamic N	Fz dynamic N
20300-1060X0200	60	±0,05	3	80	0,30	2,34	4,82	844	1384	1384
20300-1060X0500	60	±0,05	3	80	0,30	2,34	4,82	844	1384	1384
20300-1060X1000	60	±0,05	3	80	0,30	2,34	4,82	844	1384	1384
20300-1060X1500	60	±0,05	3	80	0,30	2,34	4,82	844	1384	1384
20300-1080X0300	80	±0,05	5	50	0,87	5,33	8,39	1572	3662	3662
20300-1080X0500	80	±0,05	5	50	0,87	5,33	8,39	1572	3662	3662
20300-1080X1000	80	±0,05	5	50	0,87	5,33	8,39	1572	3662	3662
20300-1080X1500	80	±0,05	5	50	0,87	5,33	8,39	1572	3662	3662

Order No.	Size	Mx dynamic Nm	My dynamic Nm	Mz dynamic Nm	Iy cm ⁴	Iz cm ⁴	Toothed belt type	Constant feed mm/rev	Idle torque Nm	Max. driving torque M Nm	Typical payload kg
20300-1060X0200	60	8	42	42	43,26	57,88	32AT5	101	0,3	14	15
20300-1060X0500	60	8	42	42	43,26	57,88	32AT5	101	0,3	14	15
20300-1060X1000	60	8	42	42	43,26	57,88	32AT5	101	0,3	14	15
20300-1060X1500	60	8	42	42	43,26	57,88	32AT5	101	0,3	14	15
20300-1080X0300	80	27	146	146	127,09	184,78	50AT5	146	0,7	38	50
20300-1080X0500	80	27	146	146	127,09	184,78	50AT5	146	0,7	38	50
20300-1080X1000	80	27	146	146	127,09	184,78	50AT5	146	0,7	38	50
20300-1080X1500	80	27	146	146	127,09	184,78	50AT5	146	0,7	38	50