

Technical drawing of the B50 actuator assembly, showing three views: front, side, and end view.

Front View:

- Total length = Stroke + 290
- Stroke = 140
- Dimensions: 75, 50, 21.92 (TK31), 21.92, M4, 6 deep, 50, 60.

Side View:

- Dimensions: 75, 50, 22 (34), 5.5, 17.5, 30, 38, 12, 6, 7 deep, 100.
- Notes: $\phi 24 F8$, $\phi 12 H7$, $\phi 12 h6$, with feather key DIN 6885 4x4x14.

End View:

- Dimensions: 70, 50, 40, 50, 64, 76, 32, 32, 100 ± 0.02 , 120.
- Notes: $\phi 4 H7, 8 \text{ deep}$, M4, 6 deep, M4, 10 deep, 40 ± 0.02 , M5, 10 deep.

Notes:

- Data in brackets refer to version GX
- Mounting elements see page B50

Technical Data	ARS
Max. speed:	3.00 m/s
Max. acceleration:	30 m/s ²
Repeat accuracy:	± 0.08 mm
Idle torque:	1.50 Nm
Moment of inertia:	3.00 · 10 ⁻⁴ kgm ²
Drive element:	Toothed belt 20 AT5-E
Stroke per revolution:	110 mm

Forces and moments



A 3D perspective diagram of a beam element. The beam is represented by a long, thin rectangular block. A central section of the beam is highlighted with a slightly different shading. At the center of this section, a coordinate system is defined. The forces and moments acting on the beam are represented by arrows originating from this central point. The forces are labeled $+F_x$ (pointing along the positive x-axis), $+F_y$ (pointing along the positive y-axis), and $+F_z$ (pointing along the positive z-axis). The moments are labeled $+M_x$ (curved arrow around the x-axis), $+M_y$ (curved arrow around the y-axis), and $+M_z$ (curved arrow around the z-axis). The x-axis is aligned with the longitudinal axis of the beam.

d) Maximum value (see diagram "F_x-v-Diagram")

The graph shows the x-component of the force F_x in Newtons (N) as a function of the traversing speed v in meters per second (m/s). The force decreases as the speed increases. The curve starts at $v = 0.4$ m/s with $F_x = 700$ N and ends at $v = 3.0$ m/s with $F_x = 505$ N.

Traversing speed v [m/s]	Force F_x [N]
0.4	700
0.5	680
1.0	630
1.5	590
2.0	560
2.5	530
3.0	505

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