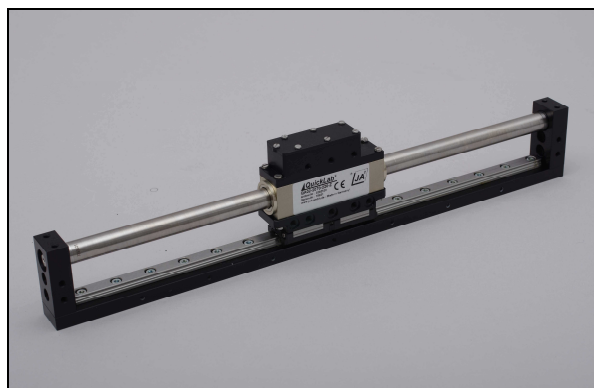


QuickLab[®] Miniatur Linear Guides QA02 with tubular Linear Servo Drives

The **QuickLab[®]** series is a modul kit system, which can be used in applications under IP20-protection conditions. With a basic width of only 22 mm, it covers the need for miniaturized 1-axis and multi-axis handling systems. Typical applications can be found in laboratory automation, the pharmaceutical industry, testing technology and optics.

The linear guides QA02 are based on precision linear guides equipped with two ball bearing carriages. Despite the low moving mass, this results in a high degree of torsional rigidity. Ball chains in the ball circulation are responsible for a high top speed, a high acceleration, a low noise level and a long service life. Tubular ironless linear motors are built into the linear guides. They have single-cable technology with an optimized, compact and direct connection technology. Motor cables for cable chains are available up to a length of 30 m.



QuickLab[®] Linear Guides QA02

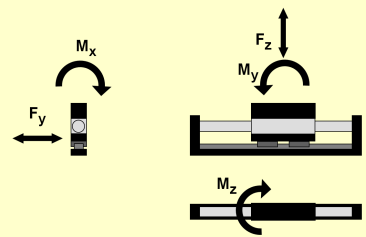
- ready-to-use linear guides with integrated **QUICKSHAFT[®]** linear servo drives
- miniaturized precise linear guides with two ball bearing carriages
- very low moving mass
- speed up to 3 m/s & acceleration up to 50 m/s²
- typical payloads up to 2 kg
- position accuracy +/- 50 µm
- modular mechanical interface

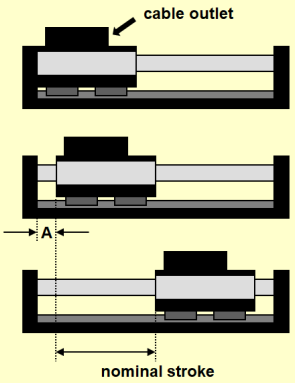
Technical Data **QuickLab[®]** Linear Guides QA02-2070

Guide Type	QA02-2070-080	QA02-2070-120	QA02-2070-160	QA02-2070-220
Technical Data				
type of motor	LM2070-080	LM2070-120	LM2070-160	LM2070-220
peak force / cont. force [N]	27,6 / 9,2			
nominal stroke [mm]	80	120	160	220
max. mechanical stroke [mm]	108	144	180	240
dimension A ¹⁾ [mm]	14	12	10	10
moving mass stator is moving [g]	224			
moving mass stator fixed [g]	352	414	474	576
max. speed [m/s]	3			
max. acceleration [m/s ²]	up to 50 (dep. on moving mass)			
dimensions W x H [mm]	22 x 69,4			
total length [mm]	206	242	278	338
total mass [g]	587	646	706	808
operating temperature [°C]	-20 to +125			
protection level	IP20			

¹⁾ Dimension A ref. to QuickShaft[®] datasheet

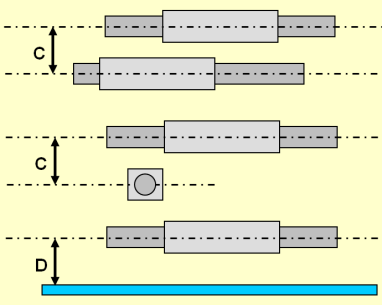
Technical Data Linear Guides QA02-2070

Guide Type	QA02-2070-080	QA02-2070-120	QA02-2070-160	QA02-2070-220
Technical Data				
F_y [N] / F_z [N]	110 / 110			
M_x [Nm] / M_y [Nm] / M_z [Nm]	22 / 44 / 51			
milage [km]	> 50.000			
	Displayed performance applies at maintenance intervalls every 5.000 km or every 6 month! Lubrication: THK-grease AFB for general applications Klübersynth UH1 14-151 for FDA applications			

Guide Type	QA02-2070
Stroke Range	
	homing on negative mechanical stop position 0 mm dimension A position at maximal stroke nominal stroke

STEP files on demand!

Minimal Mounting Distances

Guide Type	QA02-2070	
minimal mounting distances		
motor to motor in parallel configuration C [mm]	35	
motor to motor in 90° configuration C [mm]	30	
motor to ferromagnetic material D [mm]	20	
motor to conductive material D [mm]	10	
motor to non conductive material D [mm]	6	

Elektrical Data & Connectors **Linear Guides QA02-2070**

Guide Type	QA02-2070-080	QA02-2070-120	QA02-2070-160	QA02-2070-220
Technical Data				
type of motor	LM2070-080-01	LM2070-120-01	LM2070-160-01	LM2070-220-01
peak force [N]	27,6			
cont. force [N]	9,2			
force constant [N/A]	11,64			
peak current [A]	2,4			
resistance phase - phase [Ω]	10,83			
positioning sensor	hall sensors analog, 0 - 5 V, A, B, C			
position resolution [mm] ¹⁾	0,005			
position repeatability [mm]	± 0,05			
linearity [mm]	± 0,3	± 0,4	± 0,5	± 0,6
connector	connector option „Z“ direct plug in connector with chain cable			
diameter motor cable [mm]	9,5			
min. bending radius [mm]	60			
max. length of motor cable [m] ¹⁾	30			

¹⁾ ref. LinMot® positioning controller**Options & Positioning Controllers****Options**

- MagSpring® adapter AD53 & AD54 inkl. mounting
- external sensor AD56 inkl. mounting
- FDA grease AD60
- guides with longer strokes on demand

Positioning Controllers

brand		
LinMot®	FAULHABER®	TECHNOSOFT®

Technical changes reserved!
QuickShaft® is a registered trademark
of Dr. Fritz Faulhaber GmbH & Co. KG!
Rev.: 22.04.2022
js020321.doc