



Boost efficiency – with the item Automation System

Linear Unit KGT 6 60 P20

Drive Sets KGT 6 60

item MotionKits Linear Unit KGT 6 60 P20



Length advantage

Compact housing with long stroke/travel distance

High levels of precision and dynamics

Quiet, low-vibration running



Linear Unit KGT 6 60 P20 Drive Sets KGT 6 60

Compact, precise and dynamic! Linear Unit KGT 6 60 P20 combines a ball screw drive that has a stroke of up to 2600 mm with a strong carriage, and does so in the smallest of installation spaces.

In applications with a long travel distance, travelling spindle supports keep everything running smoothly and precisely without sacrificing dynamics. Radial stabilisers on the inside of the axis provide perfect support for the specially shaped spindle regardless of the stroke length and carriage position.

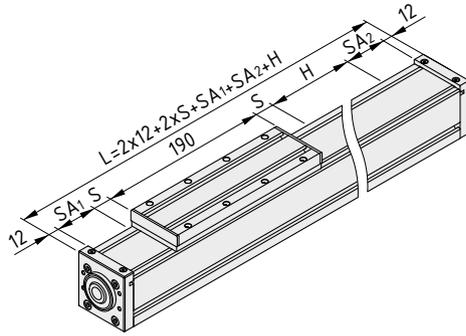
Thanks to its installation dimensions of just 60x60 mm and two Line 6 grooves on its side flanks, Linear Unit KGT 6 60 is very easy to integrate into constructions. Featuring a spindle lead of 20 mm per revolution, the system can reach a speed of up to 1 m/s, even at maximum stroke. Acceleration is up to 15 m/s².

The carriage runs on two recirculating ball units that exhibit minimal reversal play during a change of direction. This enables reliable positioning with a repeatability of 0.01 mm at a high feed force of up to 1000 N. The powerful ball screw unit is thus ideal as a single axis for moving tools and workpieces with absolute precision. When combined with additional KGT 6 60 units and other item Linear Units, the spindle axis can be used to build precise and strong 2D and 3D gantries.

An unbroken cover strip conceals the inner workings and therefore provides protection from soiling. The spindle is low-maintenance and features lifetime lubrication.

These plug-and-play solutions can be connected to item Motors in 40 mm and 60 mm sizes without the need for additional machining. Drive Set KGT 6 60 universal is available for use with other drives.

The whole selection and design process can be completed in next to no time when using item MotionDesigner[®]. The software maps out the entire system to suit your transport task. The Linear Unit is supplied as a ready-to-install solution in a custom length.



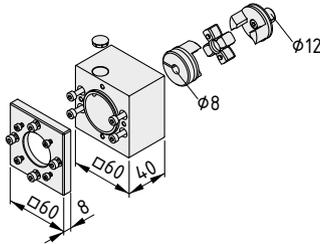
Linear Unit KGT 6 60 P20



Maximum stroke H_{max}	2600	mm
Safety clearance S	26	mm
Basic mass (when stroke length = 0 mm) m_1	2.6	kg
Mass per mm of stroke m_2	4.6	g/mm
Total mass $m =$	$m_1 + H * m_2$	
Repeatability	0.01	mm
Maximum acceleration	15	m/s^2
Maximum travelling speed	1	m/s
Feed constant	20	mm/r

1 pce.

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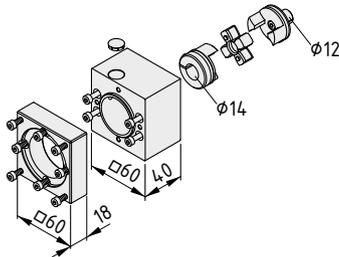
Drive Set KGT 6 60 SE 40



Coupling Housing KGT 6 60, Al
 Adapter plate KGT 6 60 SE 40, Al
 Expanding hub coupling half D30/D12, St and Al
 Coupling Insert D30, PU, blue
 Coupling halves D30/D8, Al
 4 Hexagon Socket Head Cap Screws DIN 912 M3x10, St, bright zinc-plated
 4 Hexagon Socket Head Cap Screws DIN 912 M4x12, St, bright zinc-plated
 4 Hexagon Socket Head Cap Screws DIN 912 M4x40, St, bright zinc-plated
 Cap D30F, PA, grey
 Tightening torque, expanding hub screw: 2.8 Nm
 Tightening torque, clamping hub screw: 2 Nm
 $\eta = 100\%$ $m = 407.0$ g

1 set

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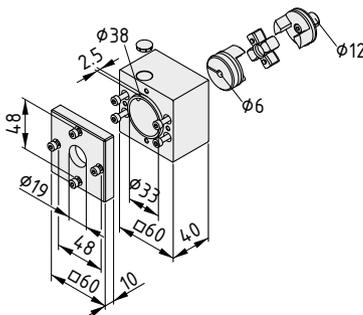
Drive Set KGT 6 60 SE 60



Coupling Housing KGT 6 60, Al
 Adapter plate KGT 6 60 SE 60, Al
 Expanding hub coupling half D30/D12, St and Al
 Coupling Insert D30, PU, blue
 Coupling halves D30/D14, Al
 4 Hexagon Socket Head Cap Screws DIN 912 M4x12, St, bright zinc-plated
 4 Hexagon Socket Head Cap Screws DIN 912 M4x18, St, bright zinc-plated
 4 Hexagon Socket Head Cap Screws DIN 912 M4x40, St, bright zinc-plated
 Cap D30F, PA, grey
 Tightening torque, expanding hub screw: 2.8 Nm
 Tightening torque, clamping hub screw: 2 Nm
 $\eta = 100\%$ $m = 460.0$ g

1 set

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Drive Set KGT 6 60 - universal



Coupling Housing KGT 6 60, Al
 Adapter plate KGT 6 60 Universal, Al
 Expanding hub coupling half D30/D12, St and Al
 Coupling Insert D30, PU, blue
 D30/D6 coupling halves, Al - reborable up to max. $\varnothing 16$ mm
 4 Hexagon Socket Head Cap Screws DIN 912 M4x12, St, bright zinc-plated
 4 Hexagon Socket Head Cap Screws DIN 912 M4x40, St, bright zinc-plated
 Cap D30F, PA, grey
 Tightening torque, expanding hub screw: 2.8 Nm
 Tightening torque, clamping hub screw: 2 Nm
 $\eta = 100\%$ $m = 427.0$ g

1 set

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Good to go

All components in one turnkey package

In three standard lengths

Attractive package price



item MotionKits Linear Unit KGT 6 60 P20

Everything included! item MotionKit Linear Unit KGT 6 60 P20 is an all-in-one package for automation projects that includes Linear Unit KGT 6 60 with a Motor, Drive Set, Controller and cables. The item MotionKit is available in three set stroke lengths (600, 1400 and 2600 mm) for an attractive package price.

As a turnkey solution, item MotionKit Linear Unit KGT 6 60 P20 is available directly and can be easily factored into projects thanks to its three standard lengths.

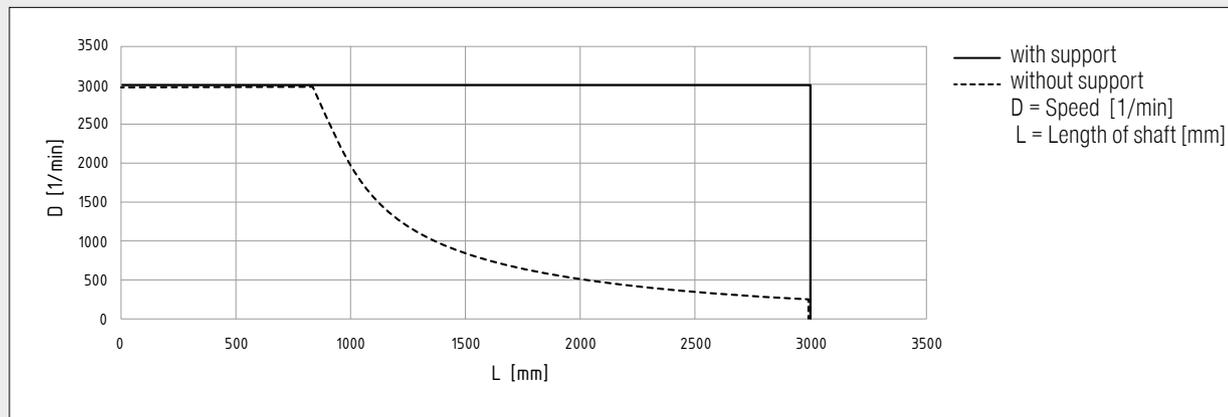
It provides all the benefits of the item Automation System in an all-in-one package. The Linear Unit is easy to program and the item Controller can be used with or without an overarching PLC. item MotionSoft® makes it easier to commission automation systems and independently optimizes controller settings. The interchangeable carriage plate with grooves allows users to connect a whole range of end devices or handling systems.



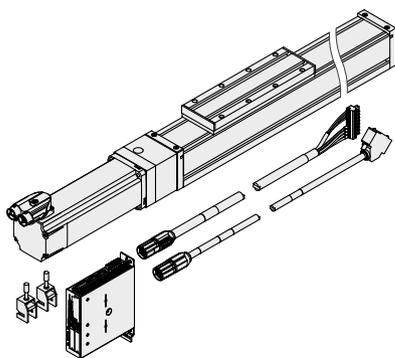
Simply download it! item MotionSoft® helps you get a Linear Unit with Controller up and running straight away:

item24.com/en/service/download-center.html

Maximum spindle speed with and without KGT 6 60 P 20 spindle supports



The spindle supports keep the maximum unsupported spindle length more or less constant. This means the critical speed of 3000 min⁻¹ is constant over the entire possible stroke range.



item MotionKit Linear Unit KGT 6 60 P20-600



Linear Unit KGT 6 60 P20 – 600 mm stroke
 Drive Set KGT 6 60 SE 60
 Motor SE 60-150-3-60-AK-B
 Controller C 1-02
 Power Cable SC1 05/5, orange
 Data Cable AKSC/5, green
 Shield Terminal Block D14, bright zinc-plated

1 set

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item MotionKit Linear Unit KGT 6 60 P20-1400



Linear Unit KGT 6 60 P20 – 1400 mm stroke
 Drive Set KGT 6 60 SE 60
 Motor SE 60-150-3-60-AK-B
 Controller C 1-02
 Power Cable SC1 05/5, orange
 Data Cable AKSC/5, green
 Shield Terminal Block D14, bright zinc-plated

1 set

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item MotionKit Linear Unit KGT 6 60 P20-2600



Linear Unit KGT 6 60 P20 – 2600 mm stroke
 Drive Set KGT 6 60 SE 60
 Motor SE 60-150-3-60-AK-B
 Controller C 1-02
 Power Cable SC1 05/5, orange
 Data Cable AKSC/5, green
 Shield Terminal Block D14, bright zinc-plated

1 set

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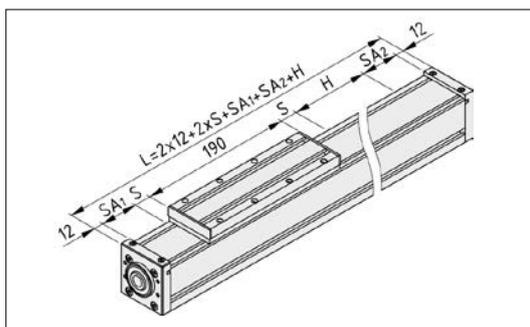
Product description

Compact, precise and dynamic. Linear Unit KGT 6 60 combines a ball screw drive that has a stroke of up to 2600 mm with a strong carriage, and does so in the smallest of installation spaces. In applications with a long travel distance, travelling spindle supports keep everything running smoothly and precisely without sacrificing dynamics. Mechanical coding on the inside of the axis provides perfect support for the specially shaped spindle with any stroke length and in any carriage position. Two Drive Sets are available that suit the performance spectrum of the mechanical axis and are fully prepared for combination with item Motors and item Controllers to produce customer-specific solutions. The universal Drive Set makes it possible to connect to third-party motors.

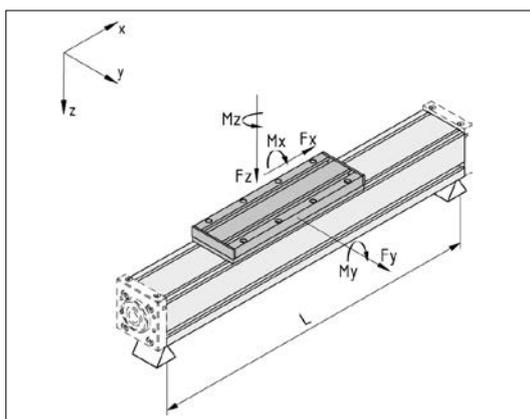
Three preconfigured Linear Units complete with Motor and Controller are available for the various stroke lengths. The variants are based on these basic mechanical components.

Linear Unit KGT 6 60 P20:

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Stroke range [mm]	SA ₁ [mm]	SA ₂ [mm]	S [mm]
0 - 1000	30	27	26
1001 - 1560	46	43	26
1561 - 2120	62	59	26
2121 - 2600	78	75	26



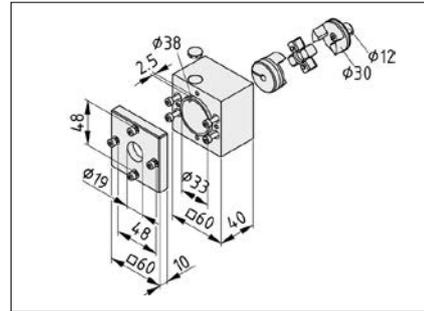
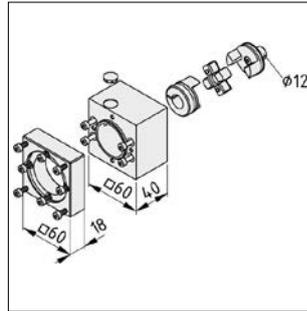
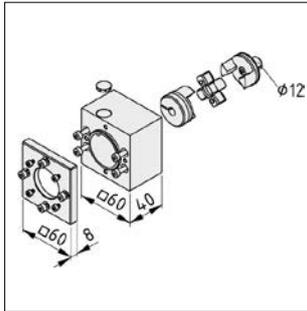
	Support width L _{max} at F _z max [mm]	Support width L _{max} at F _z max [mm]	F _y max [N]	F _z max [N]	M _x max [N]	M _y max [N]	M _z max [N]	Operating load F _x max [N]
Linear Unit KGT 6 60 P20	600	800	2000	2000	15	120	120	1000

Drive Set KGT 6 60 SE 40: Drive Set KGT 6 60 SE 60: Drive Set KGT 6 60 SE 60 - universal:

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Technical data

Maximum stroke:	2600mm
Safety clearance:	26mm
Basic mass:	2.635kg
Mass per mm of stroke:	3.592g/mm
Repeatability:	0.01mm
Maximum acceleration:	15m/s ²
Maximum speed:	1m/s
Feed:	20mm/revolution
Mounting dimension:	60mm x 60mm
Spindle lead:	20mm
Maximum operating load:	1000 N

Ambient conditions:

Storage temperature: -20°C to +70°C

Relative humidity: 5% to 85%

Linear Unit KGT 6 60 P20 is intended as a permanent fixture to be used in an area that is protected from the weather.

Do not install or use in close proximity to industrial plants that produce chemical emissions.

Do not install or use in an area that is regularly exposed to high-energy surges such as those caused by presses or heavy machinery, for example.

In case of doubt regarding resistance to certain chemicals such as test oil, alloyed oils, aggressive cleaning substances, solvents or brake fluid, we advise that you consult your specialist representative.

Consult the manufacturer if using in very salty air.

Deflection in the KGT 6 60 P20 should not exceed 1 mm over an axis of 1000 mm. In scenarios where high demands are placed on the system dynamics, supports should be added every 300 mm to 600 mm.