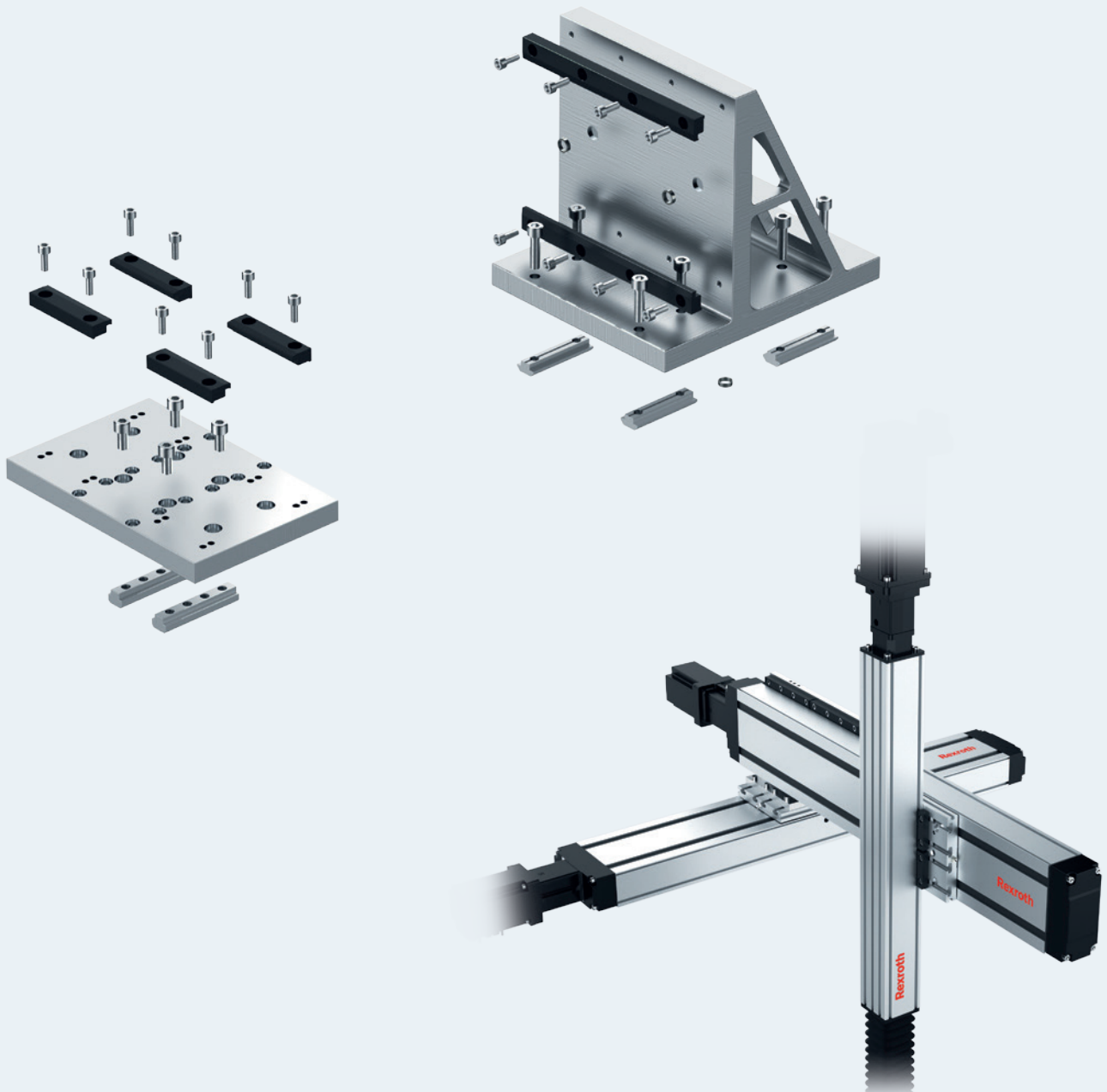


Connection technology for Linear Motion Systems

1.3





The easy way to connect your linear motion systems – fast, flexible and accurate!

Minimum mounting times, maximum efficiency, connection kits reduce your effort significantly at the installation stage. The mechanical systems have positive-locking interfaces throughout. They can be quickly and accurately connected together without time-consuming alignment.

The result:

Users can respond flexibly to different handling applications and requirements.

- Please configure linear motion systems using the product catalogs and combine them with the connection kits from this catalog.
- Connection kit dimensioning

The connection kits are designed for geometric compatibility. The connection kits need to be technically checked for load-bearing capability according to the application.

Contents

4	Combination options for X-Z linear motion systems
6	Combination options for X-Y linear motion systems
10	How to find the connection kit you need
25	Notes
27	Permissible loads of the connection kits
34	Combination options for X-Z configurations
46	Combination options for X-Y configurations
60	Combination options with profiles
70	Cable drag chains

Combination options for X-Z linear motion systems

x-axis

Compact Module CKx

z-axis

Compact Module CKx



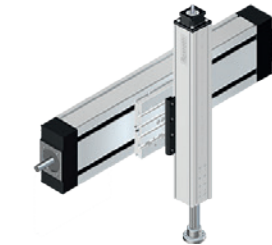
☞ 34

Compact Module CKx



☞ 35

Feed Module VKK



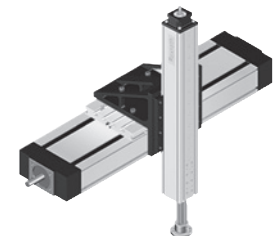
☞ 38

Feed Module VKK



☞ 39

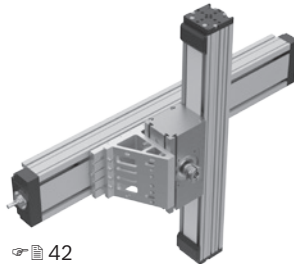
Feed Module VKK



☞ 40

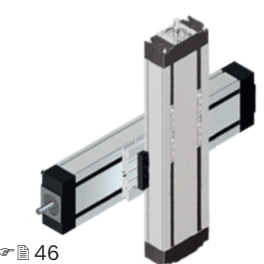
Compact Module CKx

Omega Module OBB



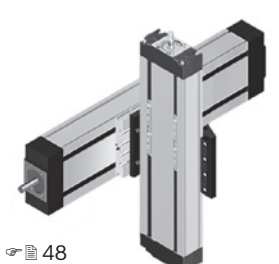
☞ 42

Compact Module CKx



☞ 46

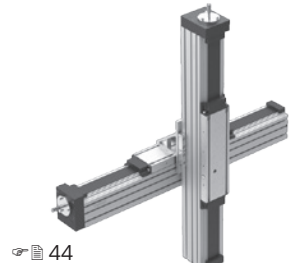
Compact Module CKx



☞ 48

Linear Module MKx

Linear Module MKx



☞ 44

x-axis

Ball Rail Table TKK

z-axis

Ball Rail Table TKK



Omega Module OBB

Feed Module VKK



Combination options for X-Y linear motion systems

x-axis

Compact Module CKx

Linear Module MKx

Ball Rail Table TKK

y-axis

Compact Module CKx



🔗 46

Compact Module CKx



🔗 48

Compact Module CKx



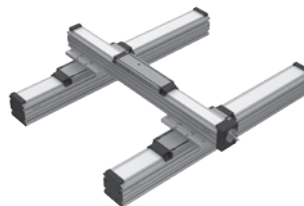
🔗 50

Compact Module CKx (2X-Y)



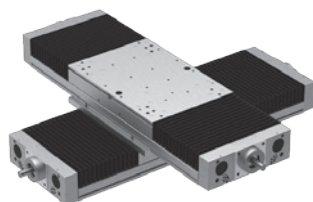
🔗 52

Linear Module MKx (2X-Y)



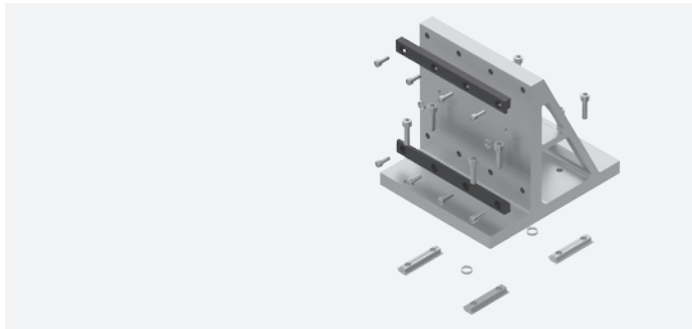
🔗 56

Ball Rail Table TKK

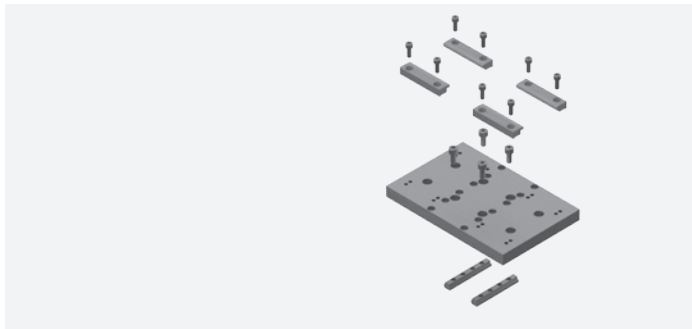


🔗 58

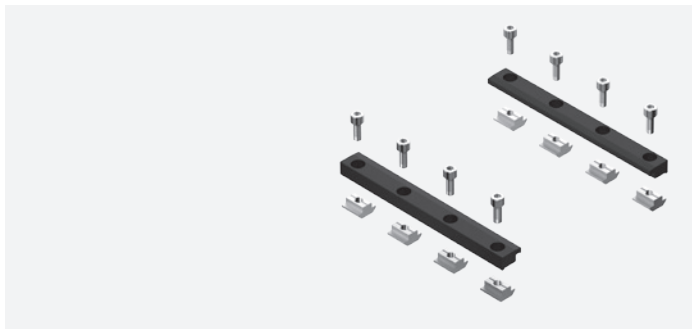
Connection technology for linear motion systems – the fast and easy way to combine electromechanical components



▲ **Angle bracket connection kit**



▲ **Plate connection kit**



▲ **Connection kit**

The well-thought-out and standardized mechanical interface further enhances the modularity and efficiency of the linear motion system building system.

The electromechanical linear motion system components fit perfectly thanks to the positive locking interface.

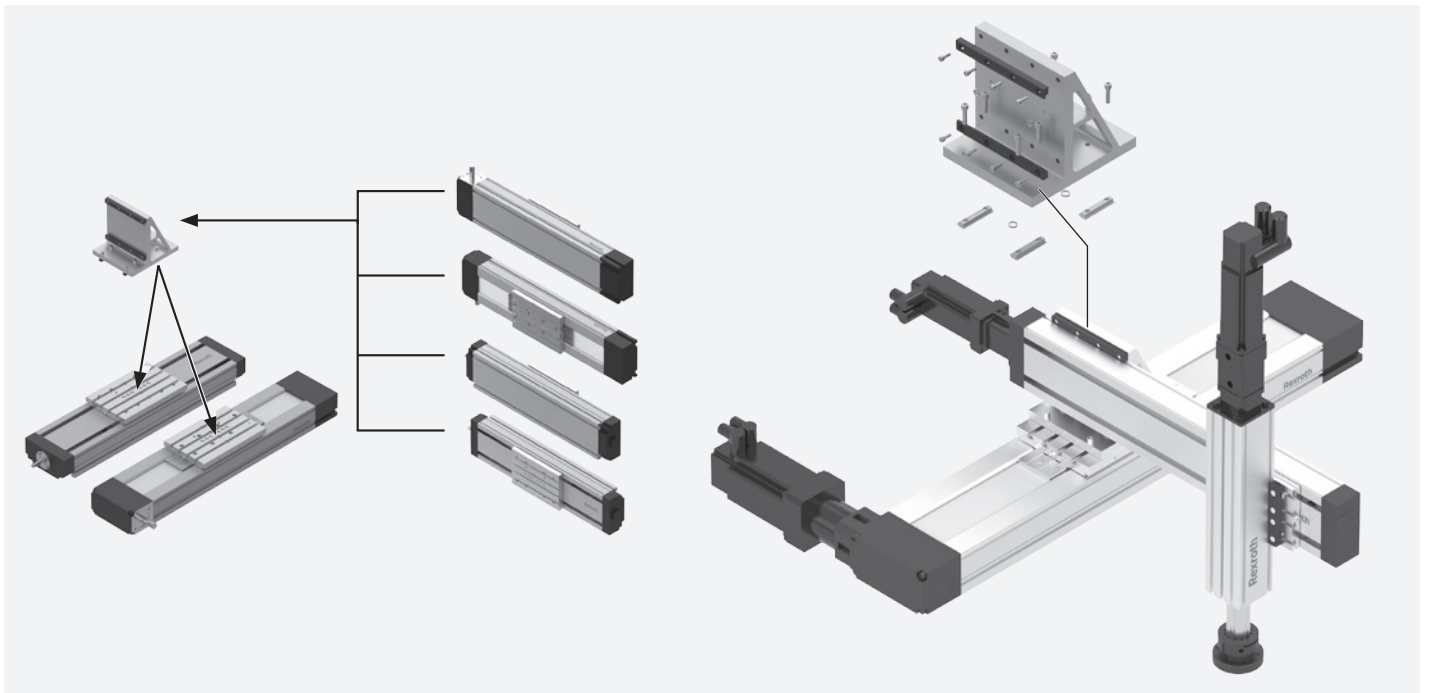
As a result, users can put together complete systems quickly and easily to meet their own specific handling tasks. The innovative locating grid and centering ring technology ensures unrivaled precision and reproducibility when connecting various linear motion systems.

In terms of design and scope, the connection element portfolio is optimally adapted to match the components and each specific connecting task, enabling a very broad spectrum of combinations and assembly options. The entire range has been designed to minimize effort every step of the way.

The connection elements can also be used with further strut profile accessories to build frames and supporting structures. The linear motion system building system also includes adapters for integrating cable drag chains and guide channels.

If desired, systems can also be delivered completely pre-assembled.

Linear motion system – connection technology



Build powerful handling systems easily and flexibly –
with connection technology from Rexroth

Advantages:

- ▶ Easy and fast assembly thanks to direct connections or pre-fabricated assemblies
- ▶ Positive-locking and force-fit connections by means of centering elements
- ▶ Optimized execution and shape
- ▶ Weight-optimized
- ▶ Broad spectrum of combination options

Benefits:

- ▶ Reduced design and installation effort saves time and money
- ▶ High accuracy, durability, and reproducibility
- ▶ Minimized space requirement and weight, yet high stability and dynamics
- ▶ Flexible thanks to component commonality

How to find the connection kit you need

Perfectly combined – more than just on direction

Define the linear motion system in the product catalogs and find the required connection kit for your desired combination in this catalog.

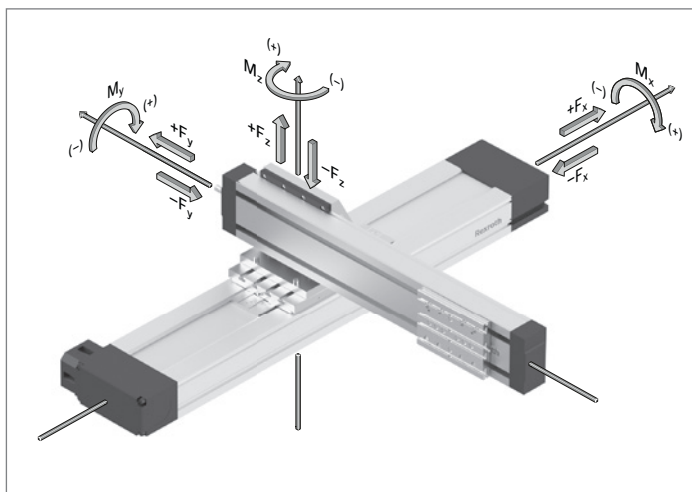
General Information

The following examples describe how linear motion systems are connected to a **linear gantry** (Part I) or a **3-dimensional gantry** (Part II). By combining several of these connections, complex multiaxis systems can be built with ease.



Installation position

The division into **X-Y** and **X-Z directions** in this catalog merely serves as classification criterion (e.g. for the direction of force). The products can be installed in any position.



in x-y-direction

x-axis

Compact Module CKx

y-axis

Compact Module CKx

Compact Module CKx

Compact Module CKx



in x-z-direction

x-axis

Compact Module CKx

z-axis

Omega Module OBB

Compact Module CKx

Compact Module CKx



Selecting the linear motion axis

At the beginning of planning a multi-axis combination, suitable individual axes are selected according to the load and application.
This is done according to the product catalog of the respective linear motion system.

Combining the linear motion axes

Based on the selected individual axes (components) and the intended connection type (X-Y, X-Z, etc.), certain product features (options) may be required. These are specified here in the “Connection technology for linear motion systems” catalog with the respective connection.

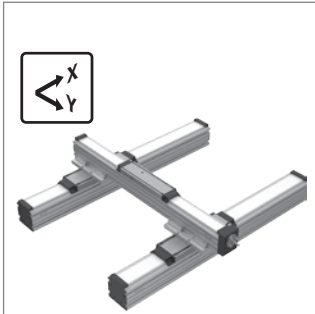
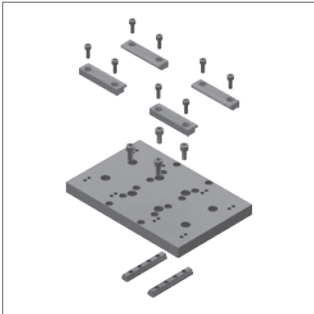
► Connection technology for linear motion systems catalog

Linear Module MKx – Linear Module MKx

**Connection with plate 2X-Y
(with clamping fixture)**

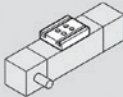
	Components	Carriage option
x-axis	MKx	Carriage, with T-slot
y-axis	MKx	any

Scope of supply
Connection plate, anchor strips, clamping fixtures, socket head cap screws



The required product features (options) need to be taken into account when configuring the individual linear motion axes (components).

► Product catalog "Configuration and ordering"

Short product name, length MKR-110-NN-2, ... mm			Guideway	Drive					Carriage				
Version													
					Gear ratio					L _{ca} = 210 mm		L _{ca} = 305mm	
				Drive journal	i = 1 ¹⁾	i = 1 ²⁾	i = 3	i = 5	i = 10	with T-slot	with thread	with T-slot	with thread
with gear unit (MG), gear reducer	MG01	MG02	01	Gear unit right/left	-	-	10			01	☒	11	☒
				Gear unit right/left	-	-	11 Gear unit with second journal						

✓ = possible selection

Identifying the connection kit

The connection elements therefore need to be identified when selecting the product. The **guideway** and **carriage** options are pertinent as these will be connected. Depending on the characteristics of the linear motion axes, both the same options (e.g. carriage on carriage) and different options (e.g. frame on carriage) can be combined.

► Product catalog “Configuration and ordering”

Short product name, length1) CKK-145-NN-1, ... mm		Guideway		Drive		Carriage										
Version		Standard		Center holes ²⁾		KGT d ₀ x P					without connection plate		with connection plate			
						Screw	Journal	20 x 5	20 x 20	25 x 10	20 x 40	L _{ca} = 49 mm	L _{ca} = 149 mm	L _{ca} = variable ³⁾	L _{ca} = 80 mm	L _{ca} = 190 mm
Without attachment	OF01	01	03	04		Ø14	21	22	23	-	01	02	05	40	41	
						Ø14 with keyway	14	15	16	-						
						Ø14	-	-	-	24						
						Ø14 with keyway	-	-	-	17	06	07	10	08	09	

 = selectable options

► Connection technology for linear motion systems catalog

Linear Module MKx – Compact Module CKx

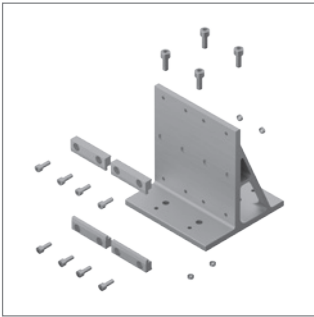
Connection via angle brackets 2X-Y
linear module - carriage with T-slot

For this connection, the appropriate order options must be selected when configuring the Compact Modules and Linear Modules, see Compact Modules and Linear Modules catalogs, "Configuration and ordering" section.

	Components	Guideway option	Carriage option
x-axis	MKx	any	Carriage with T-slot
y-axis	CKx	mounting-dependent	any

Scope of supply

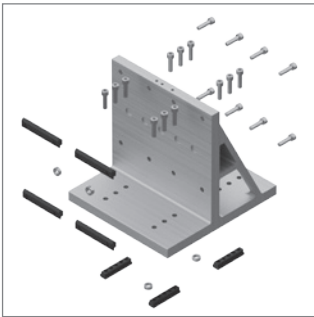
Connection bracket (material: Al), clamping fixtures (material: Al), screws, centering rings for CKx -200: Connection bracket (material: Al), screws, centering rings, washers, sliding blocks



▲ Angle bracket connection kit



▲ 2X-Y connection



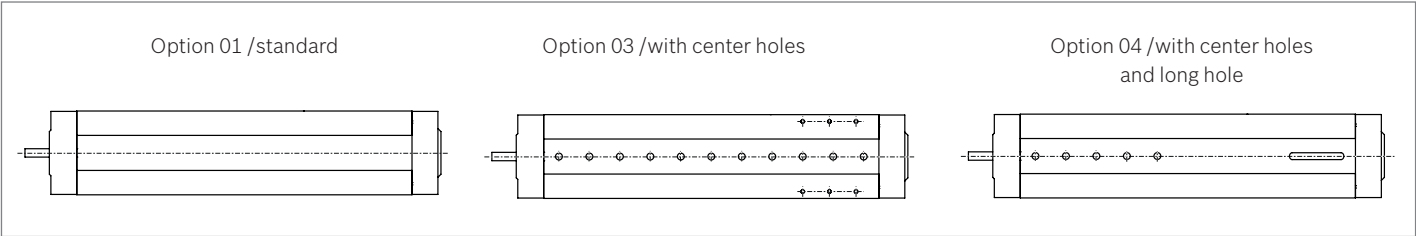
▲ CKx -200 adapted with sliding blocks

Easily connected: the interface with centering device

The use of standardized centering devices makes it possible to simplify mounting and to reproduce the system mounting in the event of an exchange. For this purpose, centering rings are included in the corresponding connection groups. For the selected linear motion systems, the appropriate options must then be selected in line with the product configuration.

Depending on the linear motion system, several options are suitable for the connection and the selection is dependent on the planned mounting. This applies to connections with compact modules, for example. One of the frame options shown below can be used accordingly. Here, the design engineer has all the freedom needed to adapt the product to the intended use. The use of centering rings is optional in terms of load capacity since the technical data for the assembly are determined without them.

► Product catalog “Guideway/carriage options”



► Connection technology for linear motion systems catalog

Compact Module CKx – Compact Module CKx

Direct connection X-Y
(Can also be used as an X-Z connection)
For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and ordering” section.

Carriage travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” (“09”)
y-axis	CKK, CKR	mounting-dependent	“41” (“09”)

Frame travels

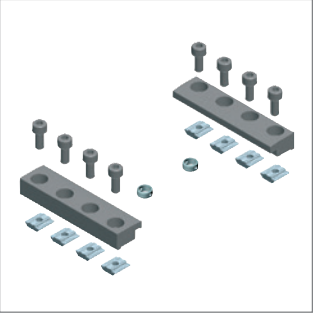
	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41”
y-axis	CKK, CKR	any	“41”



▲ Carriage travels



▲ Frame travels



▲ Clamping fixture connection kit

Checking the permissible loads of the connection kits

After the connection element has been selected, it needs to be checked in terms of its use using the technical data. The coordinate system of the respective version must be observed and, depending on the mounting direction, turned to the actual position in space, if necessary.

► Connection technology for linear motion systems catalog

Load calculation and comparison

$$\left| \frac{M_x}{M_{x \max}} \right| + \left| \frac{M_y}{M_{y \max}} \right| + \left| \frac{M_z}{M_{z \max}} \right| + \left| \frac{F_x}{F_{x \max}} \right| + \left| \frac{F_y}{F_{y \max}} \right| + \left| \frac{F_z}{F_{z \max}} \right| \leq CB$$

Specify the operating factor CB

Specify the operating factor CB according to the following table:

	Application examples	Operating factor CB
low dynamics	Door guides, guiding of protective enclosures	0.85
medium dynamics	Mounting devices	0.65
high dynamics	PCB assembly, applications with linear motor	0.50

Permitted values for connection kits

	Page	Part number	x-axis	y-axis	z-axis	F _{x max} (N)	F _{y max} (N)	F _{z max} (N)	M _{x max} (Nm)	M _{y max} (Nm)	M _{z max} (Nm)
	29	R039110251	CKx 70		CKx 70	3 300	3 300	3 500	270	150	90
		R039110253	CKx 90		CKx 70	3 500	5 600	3 500	620	150	150
		R039110254	CKx 90		CKx 90	2 500	5 600	2 500	460	130	180
		R039110322	CKx 110		CKx 90	2 500	5 600	2 500	500	130	170
		R039110257	CKx 110		CKx 110	5 600	5 600	6 100	730	400	200
		R039110319	CKx 145		CKx 110	6 100	8 100	6 100	1 400	380	350
		R039110259	CKx 145		CKx 145	6 100	8 100	6 100	1 500	500	420
		R039110321	CKx 200		CKx 145	6 100	13 950	6 100	2 000	860	740
		R039110323	CKx 200		CKx 200	6 900	13 950	6 900	3 700	1 200	940

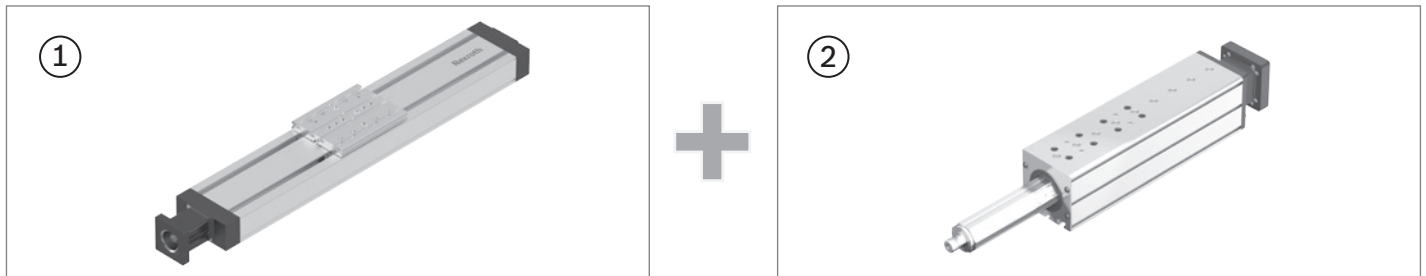
Example of how to identify the right connection kit - Part A

Linear gantry as an X-Z combination

Step 1 – Select the system

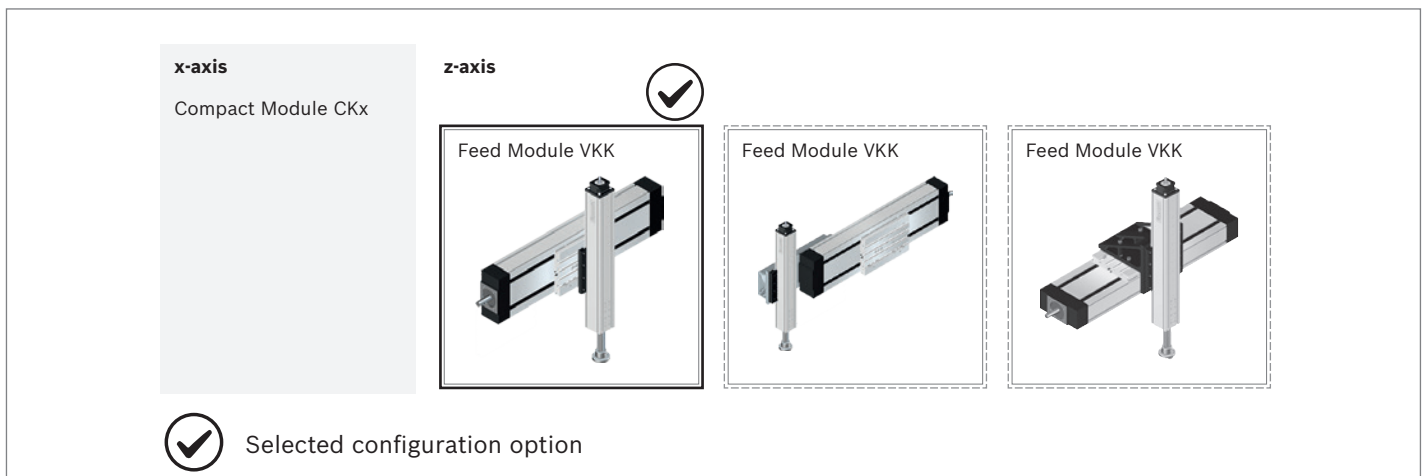
► Product catalog “configuration and ordering”

The two **CKK-145** and **VKK-070** linear motion systems were selected on the basis of the application and load as per the specifications in the respective product catalogs.

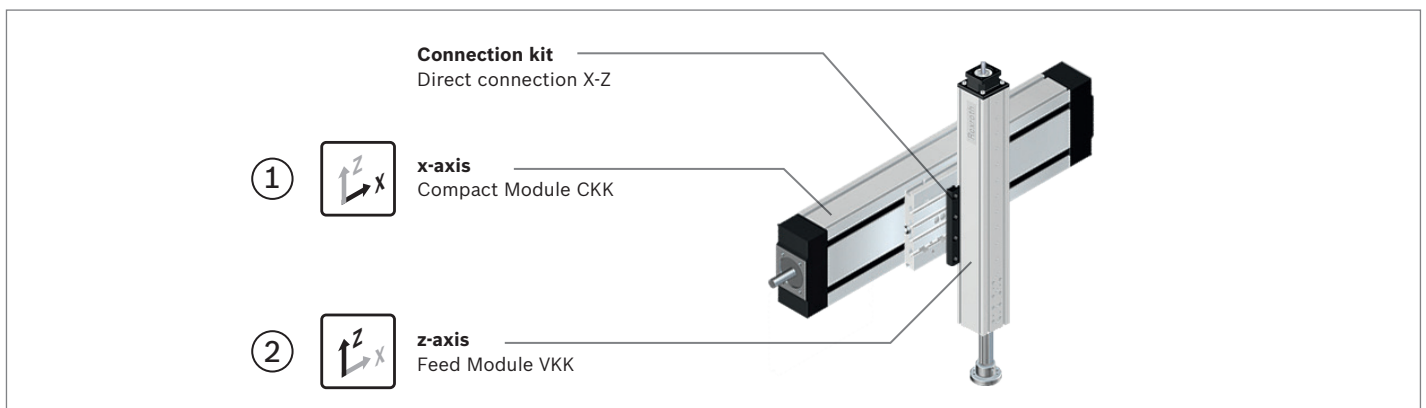


► Connection technology for linear motion systems catalog

Three configuration options are available for both of the linear motion systems selected.



The following connection was selected as suitable for the example application



Step 2 – Identify the connection kit

The appropriate connection kit for the selected combination now needs to be identified.
 The coordinate system in the configuration diagram indicates which axis is meant in the table.

► Connection technology for linear motion systems catalog

Compact Module CKx – Feed Module VKK

Direct connection X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Carriage option
x-axis	CKK, CKR	"41"("09")

Scope of supply

Clamping fixtures (material: Al), sliding blocks, screws, centering rings

Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension z-axis	Feed Module z-axis	Part number	m (kg)
70	CKK/CKR -070	50	VKK -050	R039120238	0.18
90	CKK/CKR -090	50	VKK -050	R039120239	0.30
		70	VKK -070	R039120046	
110	CKK/CKR -110	50	VKK -050	R039120239	
		70	VKK -070	R039120046	
145	CKK/CKR -145	70	VKK -070	R039120047	
		100	VKK -100	R039120048	0.40

= selected connection kit

Check component x-axis / CKK-145

The limit conditions of the CKK “carriage” option are checked here using the Connection technology catalog. Depending on the component, more than one option can be selected here. Depending on the selected drive version - either **carriage version “41”** or **“09”** is absolutely necessary for the intended X-Z connection.

► Product catalog “Configuration and ordering”

Short product name, length1) CKK-145-NN-1, ... mm		Guideway			Drive					Carriage				
Version		Standard		Center holes ²⁾	KGT d ₀ x P					without connection plate		with connection plate		
					Screw journal	20 x 5	20 x 20	25 x 10	20 x 40	L _{ca} = 49 mm	L _{ca} = 149 mm	L _{ca} = variable ³⁾	L _{ca} = 80 mm	L _{ca} = 190 mm
Without attachment	OF01	01	03	04	Ø14	21	22	23	–	01	02	05	40	41
					Ø14 with keyway	14	15	16	–					
					Ø14	–	–	–	24	06	07	10	08	09
					Ø14 with keyway	–	–	–	17					

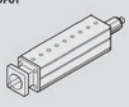
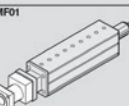
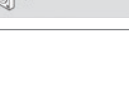
✓

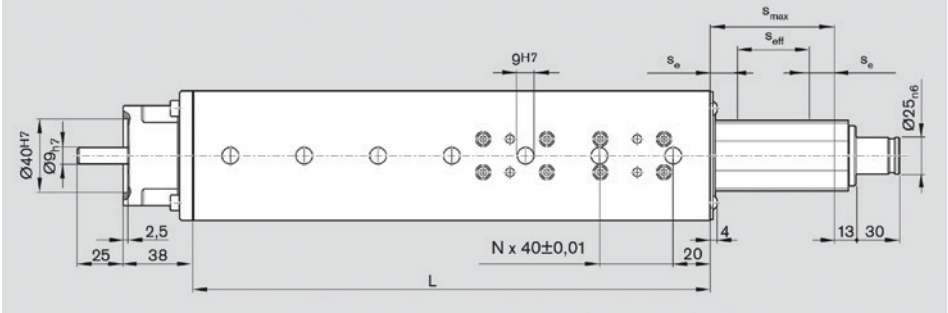
= selectable options

Check component z-axis / VKK-070

The guideway option is pertinent for the connection here. It always comes with center holes as standard. In the Connection technology catalog, there is **no specification** given because every standard option is suitable.

► Product catalog "Configuration and ordering"

Part number, length R1462 300 00, ... mm		Guideway
Version		
OF01 with BASA, without motor mount		OF01 L = 280 mm 12
		OF01 L = 320 mm 13
MF01 with BASA and motor mount		MF01 L = 400 mm 15



Step 3 – Check the permissible loads of the connection kits

► Connection technology for linear motion systems catalog

Load calculation and comparison

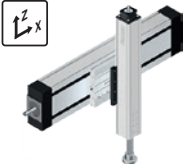
$$\left| \frac{M_x}{M_{x \max}} \right| + \left| \frac{M_y}{M_{y \max}} \right| + \left| \frac{M_z}{M_{z \max}} \right| + \left| \frac{F_x}{F_{x \max}} \right| + \left| \frac{F_y}{F_{y \max}} \right| + \left| \frac{F_z}{F_{z \max}} \right| \leq CB$$

Specify the operating factor CB

Specify the operating factor CB according to the following table:

	Application examples	Operating factor CB
low dynamics	Door guides, guiding of protective enclosures	0.85
medium dynamics	Mounting devices	0.65
high dynamics	Printed circuit board assembly	0.50

Permitted values for connection kits

	Page	Part number	x-axis	y-axis	z-axis	F _{x max} (N)	F _{y max} (N)	F _{z max} (N)	M _{x max} (Nm)	M _{y max} (Nm)	M _{z max} (Nm)
	29	R039120238	CKx 70		VKK 50	1 600	13 300	1 600	200	55	415
		R039120239	CKx 90		VKK 50	2 800	25 600	2 800	420	95	700
		R039120046	CKx 90		VKK 70	2 800	25 600	2 800	420	125	970
		R039120239	CKx 110		VKK 50	2 800	25 600	2 800	490	95	700
		R039120046	CKx 110		VKK 70	2 800	25 600	2 800	490	125	970
		R039120047	CKx 145		VKK 70	4 000	32 700	4 000	1 000	200	1 400
		R039120048	CKx 145		VKK 100	4 000	32 700	4 000	1 000	250	1 900

 = required connection kit

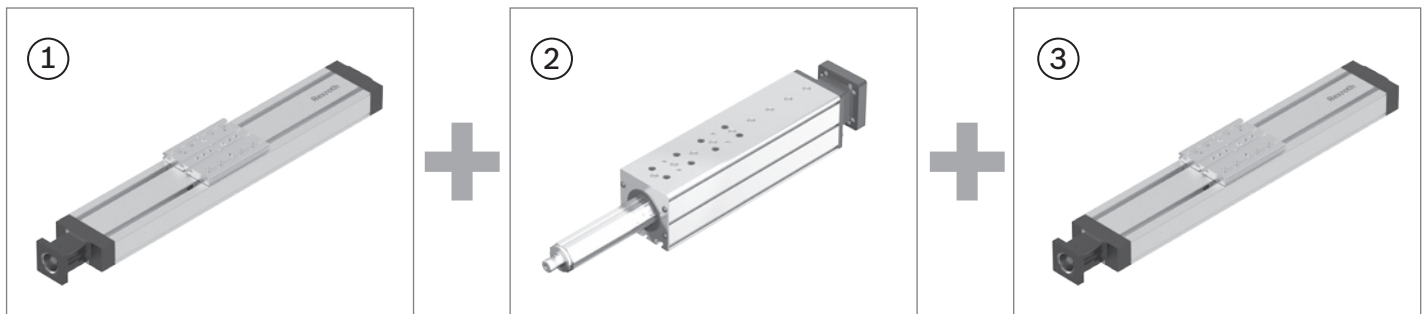
Example II – How to identify the right connection kit

3-dimensional gantry as a X-Y-Z combination

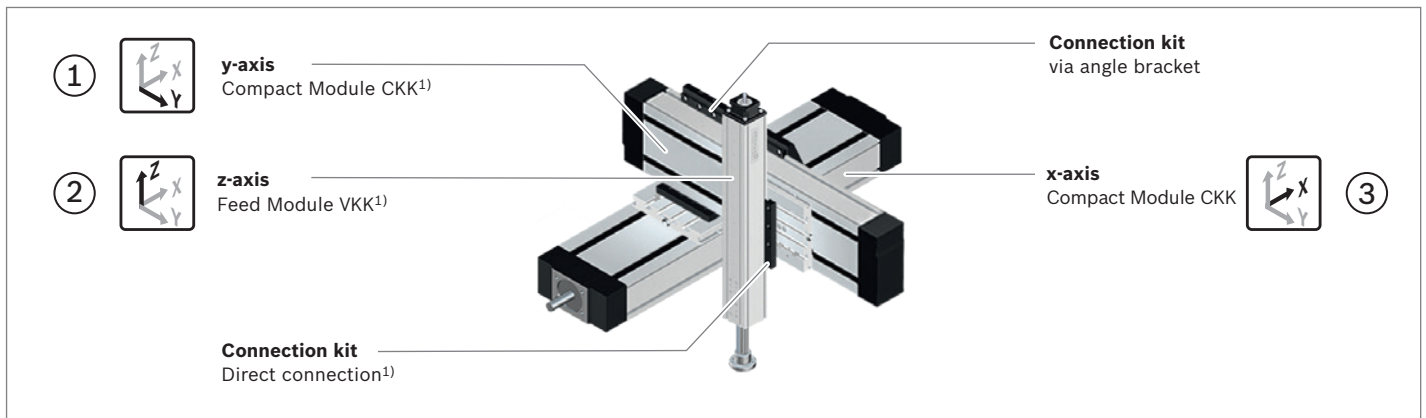
Step 1 – Select the system

The following linear motion systems were selected on the basis of the application and load as per the specifications in the respective product catalogs: 2x **CKK-145** and **VKK-070**.

► Product catalog “Configuration and ordering”



The following connection was selected from the available assemblies.



¹⁾ These components were already selected/checked in Part A

Step 2 – Identify and check the connection kit

The appropriate connection kits for the selected combinations now need to be identified.
 The coordinate system in the configuration diagram indicates which axes are meant in the table.
The two components to be connected must always be considered separately.

Selecting and checking the connection kit

CKK-145 with CKK-145

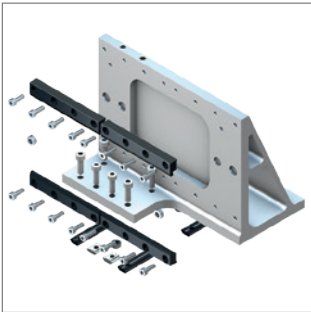
► Connection technology for linear motion systems catalog

Compact Module CKx – Compact Module CKx

**Connection via bracket X-Y
(reinforced right-hand version)**

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” (“09”)
y-axis	CKK, CKR	mounting-dependent	any



Scope of supply

Connection bracket (material: Al), clamping fixtures
 (material: Al), sliding blocks, screws, centering rings

Connection kit

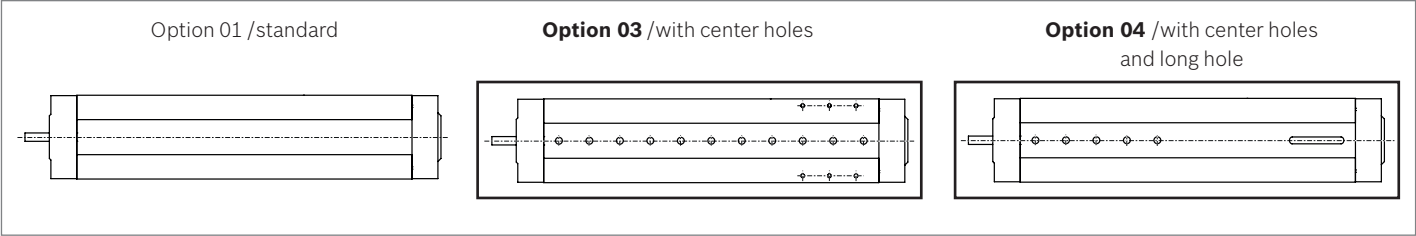
Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension y-axis	Compact Module y-axis	Bracket orientation	Part number
70	CKK/CKR -070	70	CKK/CKR -070	Right-hand	R039110280
90	CKK/CKR -090	70	CKK/CKR -070	Right-hand	R039110278
		90	CKK/CKR -090	Right-hand	R039110174
110	CKK/CKR -110	90	CKK/CKR -090	Right-hand	R039110174
		110	CKK/CKR -110	Right-hand	R039110175
145	CKK/CKR -145	110	CKK/CKR -110	Right-hand	R039110176
		145	CKK/CKR -145	Right-hand	R039110177



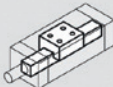
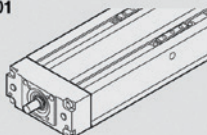
= selected connection kit

In the connection element catalog, the specification for the guideway option is **“mounting-dependent”**.
 Basically, each of the available standard options for the CKK can be used. However, to use the centering devices,
option “03” or “04” need to be selected. Here it depends on the application as to which version is appropriate for the
 planned combination.

► Product catalog Connection technology for linear motion systems



► Product catalog “Configuration and ordering”

Short product name, length1) CKK-145-NN-1, ... mm		Guideway		Drive					Carriage				
Version		 Standard Center holes ²⁾		 KGT d ₀ x P					 without connection plate with connection plate				
				Screw journal	20 x 5	20 x 20	25 x 10	20 x 40	L _{ca} = 49 mm	L _{ca} = 149 mm	L _{ca} = variable ³⁾	L _{ca} = 80 mm	L _{ca} = 190 mm
Without attachment	 OF01	01		Ø14	21	22	23	–	01	02	05	40	41
				Ø14 with keyway	14	15	16	–					
				Ø14	–	–	–	24	06	07	10	08	09
				Ø14 with keyway	–	–	–	17					
				 = selectable options									

Selecting and checking the connection kit

CKK-145 with VKK-070

► Connection technology for linear motion systems catalog

Compact Module CKx – Feed Module VKK

Direct connection X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Carriage option
x-axis	CKK, CKR	“41” (“09”)

Scope of supply

Clamping fixtures (material: Al), sliding blocks, screws, centering rings

Connection kit

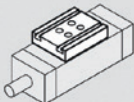
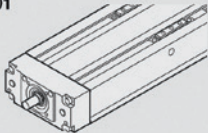
Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension z-axis	Feed Module z-axis	Part number	m (kg)
70	CKK/CKR -070	50	VKK -050	R039120238	0.18
90	CKK/CKR -090	50	VKK -050	R039120239	0.30
		70	VKK -070	R039120046	
110	CKK/CKR -110	50	VKK -050	R039120239	
		70	VKK -070	R039120046	
145	CKK/CKR -145	70	VKK -070	R039120047	
		100	VKK -100	R039120048	0.40

= selected connection kit

Only the version of the carriage option for the CKK-145 axis needs to be observed here:
 Depending on the selected drive version - either **carriage version “41”** or **“09”** is absolutely necessary
 for the intended connection.

To conclude, the permissible load for the second connection assembly then needs to be checked

► Product catalog “Configuration and ordering”

Short product name, length1) CKK-145-NN-1, ... mm		Guideway		Drive		Carriage									
Version		 Standard Center holes ²⁾		 KGT d ₀ x P		 without connection plate with connection plate									
				Screw journal	20 x 5	20 x 20	25 x 10	20 x 40	L _{ca} = 49 mm	L _{ca} = 149 mm	L _{ca} = variable ³⁾	L _{ca} = 80 mm	L _{ca} = 190 mm		
Without attachment	OF01 	01	03	04	Ø14	21	22	23	-	01	02	05	40	41	☒
					Ø14 with keyway	14	15	16	-						
					Ø14	-	-	-	24						
					Ø14 with keyway	-	-	-	17						
										06	07	10	08	09	☒

☒ = selectable options

With regard to the z-axis (VKK-070), no restrictions are made because all versions are permitted.

Step 3 – Check the permissible loads of the connection kits

Load calculation and comparison

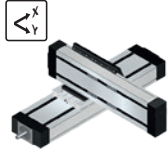
$$\left| \frac{M_x}{M_{x \max}} \right| + \left| \frac{M_y}{M_{y \max}} \right| + \left| \frac{M_z}{M_{z \max}} \right| + \left| \frac{F_x}{F_{x \max}} \right| + \left| \frac{F_y}{F_{y \max}} \right| + \left| \frac{F_z}{F_{z \max}} \right| \leq CB$$

Specify the operating factor CB

Specify the operating factor CB according to the following table:

	Application examples	Operating factor CB
low dynamics	Door guides, guiding of protective enclosures	0.85
medium dynamics	Mounting devices	0.65
high dynamics	Printed circuit board assembly	0.50

Permitted values for connection kits

	Page	Part number	x-axis	y-axis	z-axis	F _x max (N)	F _y max (N)	F _z max (N)	M _x max (Nm)	M _y max (Nm)	M _z max (Nm)
	32	R039110280	CKx 70	CKx 70		3 300	3 300	5 600	270	720	110
		R039110278	CKx 90	CKx 70		5 600	5 600	5 600	250	1 100	180
		R039110174	CKx 90	CKx 90		5 600	5 600	3 300	180	1 350	210
		R039110174	CKx 110	CKx 90		5 600	5 600	3 300	180	1 350	210
		R039110175	CKx 110	CKx 110		5 600	5 600	5 600	370	1 500	225
		R039110176	CKx 145	CKx 110		8 100	8 100	8 100	625	2 500	410
		R039110177	CKx 145	CKx 145		8 100	8 100	8 100	705	2 500	410

✓ = required connection kit

CKK-145 with VKK-070

► Connection technology for linear motion systems catalog

Load calculation and comparison

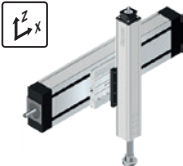
$$\frac{|M_x|}{|M_{x \max}|} + \frac{|M_y|}{|M_{y \max}|} + \frac{|M_z|}{|M_{z \max}|} + \frac{|F_x|}{|F_{x \max}|} + \frac{|F_y|}{|F_{y \max}|} + \frac{|F_z|}{|F_{z \max}|} \leq CB$$

Specify the operating factor CB

Specify the operating factor CB according to the following table:

	Application examples	Operating factor CB
low dynamics	Door guides, guiding of protective enclosures	0.85
medium dynamics	Mounting devices	0.65
high dynamics	Printed circuit board assembly	0.50

Permitted values for connection kits

	Page	Part number	x-axis	y-axis	z-axis	F _{x max} (N)	F _{y max} (N)	F _{z max} (N)	M _{x max} (Nm)	M _{y max} (Nm)	M _{z max} (Nm)
	29	R039120238	CKx 70		VKK 50	1 600	13 300	1 600	200	55	415
		R039120239	CKx 90		VKK 50	2 800	25 600	2 800	420	95	700
		R039120046	CKx 90		VKK 70	2 800	25 600	2 800	420	125	970
		R039120239	CKx 110		VKK 50	2 800	25 600	2 800	490	95	700
		R039120046	CKx 110		VKK 70	2 800	25 600	2 800	490	125	970
		R039120047	CKx 145		VKK 70	4 000	32 700	4 000	1 000	200	1 400
		R039120048	CKx 145		VKK 100	4 000	32 700	4 000	1 000	250	1 900

 = required connection kit

Notes

Intended Use

- ▶ Linear motion systems and the connection technology for linear motion systems are intended for positioning in space under external loads.
- ▶ The product is intended for professional use and not for private use.
- ▶ Intended use includes having read and understood this documentation, the instructions for the product, the “Safety instructions for linear motion systems” document, and especially the section “Safety instructions”.
- ▶ The product is exclusively intended for incorporation into a final machine or system or for assembling with other components to build a final machine or system.

Misuse

Use of the product in any other way than as described under “Intended Use” is considered to be misuse and is therefore not permitted. If unsuitable products are installed or used in safety-critical applications, this may lead to uncontrolled operating statuses in the application which can cause personal injury and/or damage to property. The product may only be used in safety-critical applications if this use has been expressly specified and permitted in the product documentation.

Bosch Rexroth AG will not accept any liability for injury or damage caused by misuse of the product. The risks associated with any misuse of the product shall be borne by the user alone

Misuse of the product includes:

- ▶ the transport of persons

General Safety Instructions

- ▶ The safety rules and regulations of the country in which the product is used must be complied with.
- ▶ All current and applicable accident prevention and environmental regulations must be adhered to.
- ▶ The product may only be used when it is in technically perfect condition.
- ▶ The technical data and environmental conditions stated in the product documentation must be complied with.
- ▶ The product must not be put into service until it has been verified that the final product (for example a machine or system) into which the product has been installed complies with the country-specific requirements, safety regulations and standards for the application.
- ▶ The product is never allowed to be disassembled. Excluded from this are the activities described in the product instructions.
- ▶ All notices on the product itself must be complied with.
- ▶ Only use accessories and spare parts approved by the manufacturer.
- ▶ The special safety requirements for specific sectors (e.g. crane construction, theaters, food technology) set forth in laws, directives and standards must be complied with.
This also includes, for example, falling loads that pose a potential hazard for people.
- ▶ The following standards must be complied with: DIN 637, ISO 3408 and DIN 69051

Directives and Standards

Rexroth linear motion systems are suitable for use in various applications and industries. The various industries must comply with a series of standards and guidelines.

These requirements can vary significantly worldwide. It is therefore essential to understand the legislation and standards that apply in each particular region.

EN ISO 12100

This standard describes the safety of machinery – general principles for design, risk assessment and risk reduction. It gives a general overview and contains a guide to the major developments governing machines and their intended use.

Directive 2006/42/EC

The European Machinery Directive describes the basic safety and health requirements for the design and manufacture of machinery. The manufacturer of a machine or his authorized representative has a duty to ensure that a risk assessment has been performed in order to determine the health and safety requirements which have to be fulfilled for that machine. The machine must be designed and built taking into account the results of the risk assessment.

Directive 2001/95/EC

This directive covers general safety requirements for any product placed on the market and intended for consumers, or likely to be used by consumers under reasonably foreseeable conditions, including products that are made available to consumers in the context of service provision for use by them

Directive 85/374/EEC

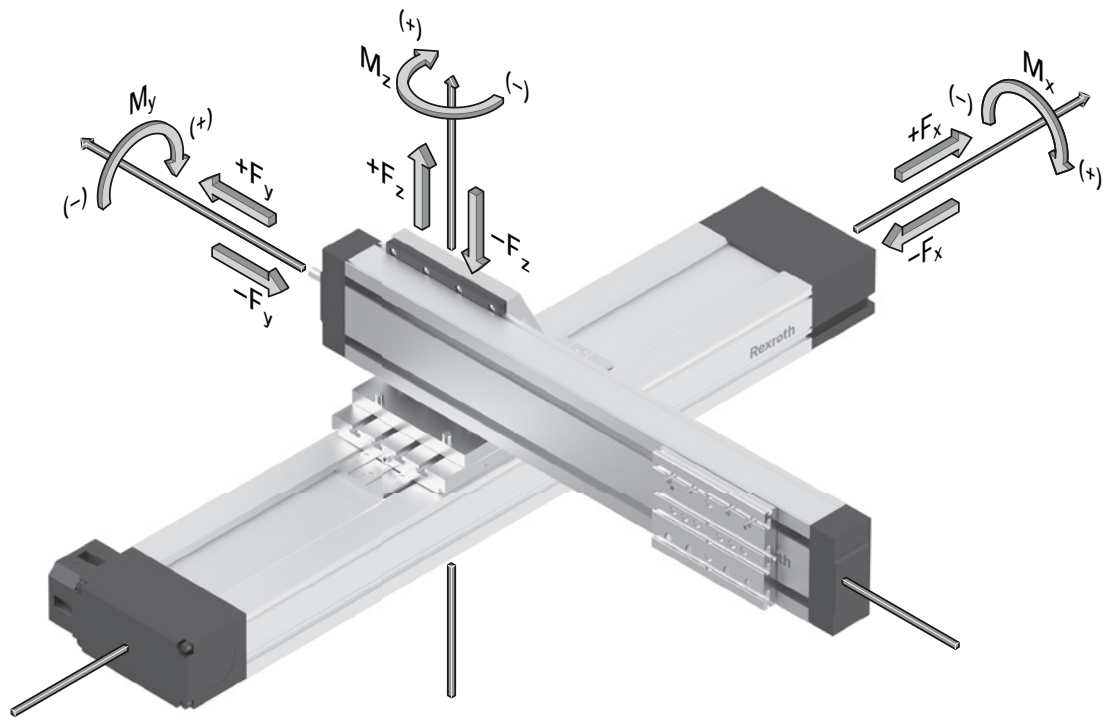
This directive concerns the liability for defective products and applies to industrially manufactured movable objects, irrespective of whether or not they have been incorporated into another movable or immovable object.

Directive 76/769/EEC

This directive describes the restrictions on the marketing and use of certain dangerous substances and preparations. “Substances” means chemical elements and their compounds as they occur in the natural state or as produced by industry. “Preparations” means mixtures or solutions composed of two or more substances.

Permissible loads of the connection kits

The permissible loads of the individual axes must not be exceeded. This must be checked before selecting the connection kits. In some attachment variations, the permissible loads for the individual axis represent the upper load capability limits. Such connection kits are not listed in the following tables.



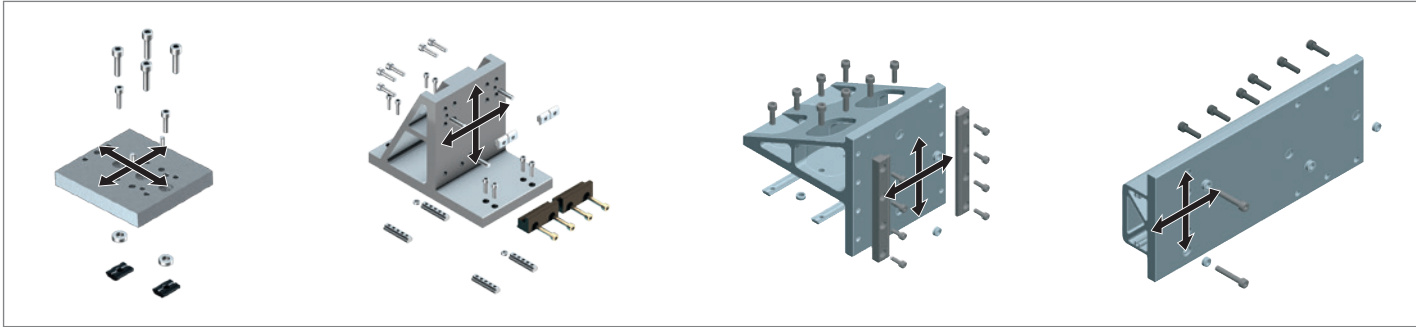
The permissible load values of the connection elements serve as guideline values. In the case of critical applications or applications with high dynamic loads (> 50% of the permissible loads), the connection kits must be recalculated according to the application requirements. For the external loads of a linear motion axis and the connection kits, not only the process forces but the inertial forces of the products used must always be determined and taken into consideration.

Define the forces and load moments

All external forces and load moments must be referred to the origin of the coordinate system. These values must be specified by the customer.

Define the coordinate system

The origin of the coordinate system for the calculation of the applied forces and moments lies at the center of the connection element, on the clamping surface of the moved linear axis.



Load calculation and comparison

$$\frac{|M_x|}{|M_{x \max}|} + \frac{|M_y|}{|M_{y \max}|} + \frac{|M_z|}{|M_{z \max}|} + \frac{|F_x|}{|F_{x \max}|} + \frac{|F_y|}{|F_{y \max}|} + \frac{|F_z|}{|F_{z \max}|} \leq CB$$

Specify the operating factor CB

Specify the operating factor CB according to the following table:

	Application examples	Operating factor CB
low dynamics	Door guides, guiding of protective enclosures	0.85
medium dynamics	Mounting devices	0.65
high dynamics	PCB assembly, applications with linear motor	0.50

Basic principles

The permitted values shown in the tables apply under the following conditions:

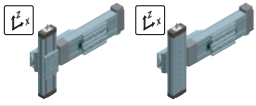
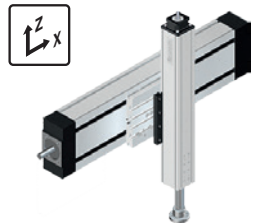
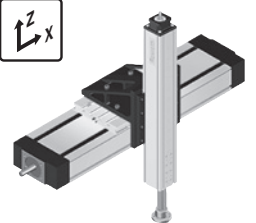
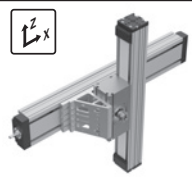
- Screws have been tightened using a torque wrench as specified in the table below
- Mounting screws of strength class 8.8 have been used (are included)
- Screws have been lightly lubricated
- Friction coefficient $\mu = 0.125$
- Screw connections have been calculated in accordance with VDI guideline 2230

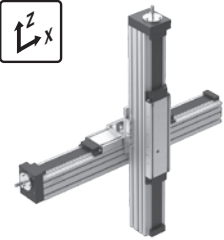
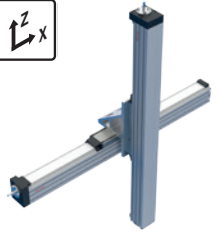
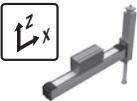
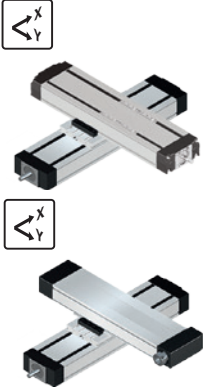
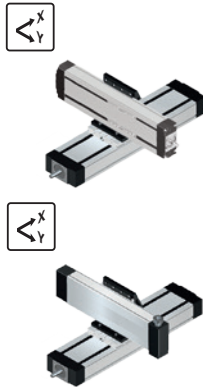
Tightening torques

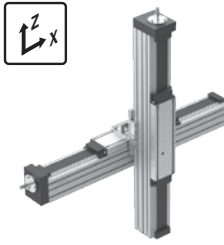
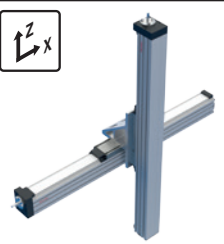
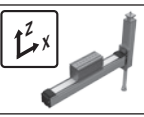
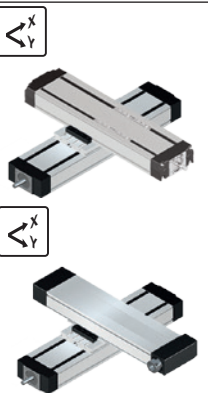
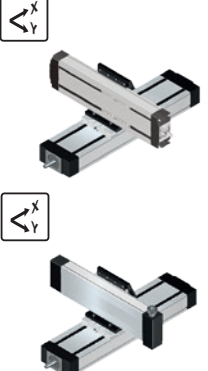
Screw thread		M2	M2.5	M3	M4	M5	M6	M8	M10	M12
Tightening torque	(Nm)	0.4	0.7	1.3	2.7	5.5	9.5	23	46	80
μ : 0.125; strength class: 8.8										

All screws that are not coated with a threadlocking adhesive on delivery must be secured against loosening with a suitable threadlocking adhesive (e.g. Loctite 242).

Permitted values for connection kits

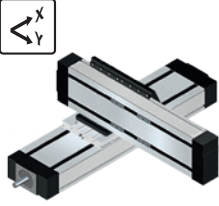
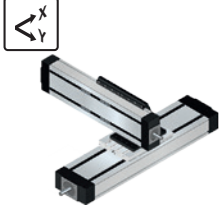
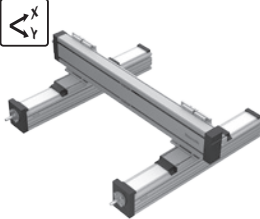
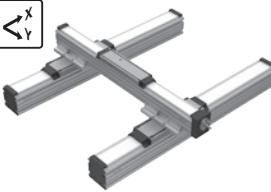
	Page	Part number	x-axis	y-axis	z-axis	F _x max (N)	F _y max (N)	F _z max (N)	M _x max (Nm)	M _y max (Nm)	M _z max (Nm)
	34	R039120227	CKx 90		CKx 70	2 500	20 000	2 500	750	110	440
		R039120198	CKx 110		CKx 90	3 300	26 000	3 300	650	180	750
		R039120199	CKx 145		CKx 110	6 100	49 000	6 100	2 100	400	1 000
	35	R039110251	CKx 70		CKx 70	3 300	3 300	3 500	270	150	90
		R039110253	CKx 90		CKx 70	3 500	5 600	3 500	620	150	150
		R039110254	CKx 90		CKx 90	2 500	5 600	2 500	460	130	180
		R039110322	CKx 110		CKx 90	2 500	5 600	2 500	500	130	170
		R039110257	CKx 110		CKx 110	5 600	5 600	6 100	730	400	200
		R039110319	CKx 145		CKx 110	6 100	8 100	6 100	1 400	380	350
		R039110259	CKx 145		CKx 145	6 100	8 100	6 100	1 500	500	420
		R039110321	CKx 200		CKx 145	6 100	13 950	6 100	2 000	860	740
		R039110323	CKx 200		CKx 200	6 900	13 950	6 900	3 700	1 200	940
	38	R039120238	CKx 70		VKK 50	1 600	13 300	1 600	200	55	415
		R039120239	CKx 90		VKK 50	2 800	25 600	2 800	420	95	700
		R039120046	CKx 90		VKK 70	2 800	25 600	2 800	420	125	970
		R039120239	CKx 110		VKK 50	2 800	25 600	2 800	490	95	700
		R039120046	CKx 110		VKK 70	2 800	25 600	2 800	490	125	970
		R039120047	CKx 145		VKK 70	4 000	32 700	4 000	1 000	200	1 400
		R039120048	CKx 145		VKK 100	4 000	32 700	4 000	1 000	250	1 900
	39	R039120228	CKx 70		VKK 50	390	3 100	55 600	3 300	2 500	440
		R039120227	CKx 90		VKK 50	830	6 600	21 800	670	670	110
		R039120206	CKx 90		VKK 70	830	6 600	21 800	670	670	110
		R039120207	CKx 110		VKK 70	1 400	11 300	21 800	520	550	85
		R039120208	CKx 110		VKK 100	1 400	11 300	55 600	3 300	1 900	445
		R039120209	CKx 145		VKK 100	2 000	16 300	32 700	3 100	1 400	445
	40	R039110251	CKx 70		VKK 50	2 200	2 200	3 500	280	310	90
		R039110253	CKx 90		VKK 50	2 300	3 700	3 500	620	310	150
		R039110317	CKx 90		VKK 70	1 600	3 700	2 500	465	110	180
		R039110316	CKx 110		VKK 50	2 800	3 700	4 200	700	185	170
		R039110318	CKx 110		VKK 70	2 800	3 700	4 200	740	190	170
		R039110319	CKx 145		VKK 70	4 000	5 400	6 100	1 400	900	355
		R039110320	CKx 145		VKK 100	4 000	5 400	6 100	1 400	650	355
		R039110321	CKx 200		VKK 100	4 000	9 200	6 100	2 000	600	740
	42	R039110298	CKx 90		OBB -055	5 600	6 100	5 600	190	165	980
		R039110298	CKx 110		OBB -055	5 600	6 100	5 600	190	165	980
		R039110300	CKx 145		OBB -055	6 100	6 100	6 100	190	240	980
		R039110301	CKx 145		OBB -085	8 100	8 100	8 100	355	380	1 300
		R039110302	CKx 200		OBB -120	8 100	13 900	8 100	785	535	4 400

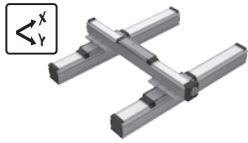
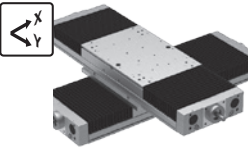
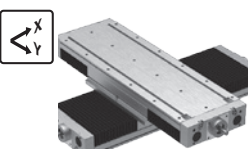
	Page	Part number	x-axis	y-axis	z-axis	$F_{x \max}$ (N)	$F_{y \max}$ (N)	$F_{z \max}$ (N)	$M_{x \max}$ (Nm)	$M_{y \max}$ (Nm)	$M_{z \max}$ (Nm)
	44	R039110060	MKx 80		MKx 65	2 100	2 100	4 000	500	360	70
		R039110060	MKx 80		MKx 80	2 100	2 100	4 000	500	380	70
		R039110055	MKx 110		MKx 80	3 000	3 000	4 000	1 000	380	150
		R039110053	MKx 110		MKx 110	3 000	3 000	6 100	1 000	400	150
		R039110052	MKx 145		MKx 110	5 200	5 200	6 100	2 400	400	330
		R039110052	MKx 165		MKx 110	5 200	5 200	6 100	2 500	400	370
		R039110050	MKx 165		MKx 165	5 200	5 200	8 700	2 500	420	370
	45	R039110058	MKx 80		MKx 65	4 200	2 100	2 100	60	220	390
		R039110059	MKx 80		MKx 80	4 200	2 100	2 100	70	220	390
		R039110054	MKx 110		MKx 80	4 200	3 000	3 000	100	280	730
		R039110053	MKx 110		MKx 110	6 100	2 100	5 200	200	410	1 400
		R039110052	MKx 145		MKx 110	6 100	5 200	5 200	330	740	2 400
		R039110052	MKx 165		MKx 110	5 100	5 200	2 100	330	250	2 400
		R039110050	MKx 165		MKx 165	8 700	5 200	5 200	370	420	2 500
	43	R039110283	OBB -055		VKK 50	45 000	6 400	6 400	255	1 400	1 400
		R039110284	OBB -085		VKK 70	45 000	6 400	6 400	310	1 900	1 900
		R039110285	OBB -120		VKK 100	65 400	9 300	9 300	560	560	3 800
	46	R039120238	CKx 70	CKx 70		1 600	1 600	13 300	200	560	73
		R039120239	CKx 90	CKx 70		2 800	2 800	22 600	420	960	125
		R039120045	CKx 90	CKx 90		1 600	1 600	13 300	250	670	87
		R039120239	CKx 110	CKx 70		1 600	1 600	13 300	290	560	74
		R039120045	CKx 110	CKx 90		1 600	1 600	13 300	290	670	87
		R039120046	CKx 110	CKx 110		2 800	2 800	22 600	490	1 400	180
		R039120242	CKx 145	CKx 90		1 600	1 600	13 300	400	670	90
		R039120047	CKx 145	CKx 110		4 000	4 000	32 700	1 000	2 000	270
		R039120048	CKx 145	CKx 145		4 000	4 000	32 700	1 000	2 600	335
		R039120049	CKx 200	CKx 145		4 000	4 000	32 700	1 330	2 600	345
		R039120145	CKx 200	CKx 200		6 900	6 900	55 600	2 200	6 100	790
	48	R039110252	CKx 70	CKx 70		3 300	3 300	3 500	150	720	110
		R039110324	CKx 90	CKx 70		5 600	3 500	3 500	140	1 000	210
		R039110255	CKx 90	CKx 90		5 600	4 200	4 200	220	1 400	210
		R039110255	CKx 110	CKx 90		5 600	4 200	4 200	220	1 400	210
		R039110325	CKx 90	CKx 110		5 600	4 200	4 200	270	1 400	210
		R039110256	CKx 110	CKx 110		5 600	5 600	6 100	400	1 500	220
		R039110326	CKx 145	CKx 110		8 100	6 100	6 100	400	2 400	410
		R039110327	CKx 110	CKx 145		5 600	4 200	4 200	410	1 700	250
		R039110258	CKx 145	CKx 145		8 100	6 100	6 100	500	2 400	410
		R039110328	CKx 200	CKx 145		13 900	6 100	6 100	500	3 900	1 000
		R039110329	CKx 200	CKx 200		13 900	6 900	6 900	610	4 100	1 000

	Page	Part number	x-axis	y-axis	z-axis	F _{x max} (N)	F _{y max} (N)	F _{z max} (N)	M _{x max} (Nm)	M _{y max} (Nm)	M _{z max} (Nm)
	44	R039110060	MKx 80		MKx 65	2 100	2 100	4 000	500	360	70
		R039110060	MKx 80		MKx 80	2 100	2 100	4 000	500	380	70
		R039110055	MKx 110		MKx 80	3 000	3 000	4 000	1 000	380	150
		R039110053	MKx 110		MKx 110	3 000	3 000	6 100	1 000	400	150
		R039110052	MKx 145		MKx 110	5 200	5 200	6 100	2 400	400	330
		R039110052	MKx 165		MKx 110	5 200	5 200	6 100	2 500	400	370
		R039110050	MKx 165		MKx 165	5 200	5 200	8 700	2 500	420	370
	45	R039110058	MKx 80		MKx 65	4 200	2 100	2 100	60	220	390
		R039110059	MKx 80		MKx 80	4 200	2 100	2 100	70	220	390
		R039110054	MKx 110		MKx 80	4 200	3 000	3 000	100	280	730
		R039110053	MKx 110		MKx 110	6 100	2 100	5 200	200	410	1 400
		R039110052	MKx 145		MKx 110	6 100	5 200	5 200	330	740	2 400
		R039110052	MKx 165		MKx 110	5 100	5 200	2 100	330	250	2 400
		R039110050	MKx 165		MKx 165	8 700	5 200	5 200	370	420	2 500
	43	R039110283	OBb -055		VKK 50	45 000	6 400	6 400	255	1 400	1 400
		R039110284	OBb -085		VKK 70	45 000	6 400	6 400	310	1 900	1 900
		R039110285	OBb -120		VKK 100	65 400	9 300	9 300	560	560	3 800
	46	R039120238	CKx 70	CKx 70		1 600	1 600	13 300	200	560	73
		R039120239	CKx 90	CKx 70		2 800	2 800	22 600	420	960	125
		R039120045	CKx 90	CKx 90		1 600	1 600	13 300	250	670	87
		R039120239	CKx 110	CKx 70		1 600	1 600	13 300	290	560	74
		R039120045	CKx 110	CKx 90		1 600	1 600	13 300	290	670	87
		R039120046	CKx 110	CKx 110		2 800	2 800	22 600	490	1 400	180
		R039120242	CKx 145	CKx 90		1 600	1 600	13 300	400	670	90
		R039120047	CKx 145	CKx 110		4 000	4 000	32 700	1 000	2 000	270
		R039120048	CKx 145	CKx 145		4 000	4 000	32 700	1 000	2 600	335
		R039120049	CKx 200	CKx 145		4 000	4 000	32 700	1 330	2 600	345
		R039120145	CKx 200	CKx 200		6 900	6 900	55 600	2 200	6 100	790
	48	R039110252	CKx 70	CKx 70		3 300	3 300	3 500	150	720	110
		R039110324	CKx 90	CKx 70		5 600	3 500	3 500	140	1 000	210
		R039110255	CKx 90	CKx 90		5 600	4 200	4 200	220	1 400	210
		R039110255	CKx 110	CKx 90		5 600	4 200	4 200	220	1 400	210
		R039110325	CKx 90	CKx 110		5 600	4 200	4 200	270	1 400	210
		R039110256	CKx 110	CKx 110		5 600	5 600	6 100	400	1 500	220
		R039110326	CKx 145	CKx 110		8 100	6 100	6 100	400	2 400	410
		R039110327	CKx 110	CKx 145		5 600	4 200	4 200	410	1 700	250
		R039110258	CKx 145	CKx 145		8 100	6 100	6 100	500	2 400	410
		R039110328	CKx 200	CKx 145		13 900	6 100	6 100	500	3 900	1 000
		R039110329	CKx 200	CKx 200		13 900	6 900	6 900	610	4 100	1 000

1) Carriage with threads

2) Carriage with T-slots

	Page	Part number	x-axis	y-axis	z-axis	$F_{x \max}$ (N)	$F_{y \max}$ (N)	$F_{z \max}$ (N)	$M_{x \max}$ (Nm)	$M_{y \max}$ (Nm)	$M_{z \max}$ (Nm)
	50	R039110280	CKx 70	CKx 70		3 300	3 300	5 600	270	720	110
		R039110278	CKx 90	CKx 70		5 600	5 600	5 600	250	1 100	180
		R039110174	CKx 90	CKx 90		5 600	5 600	3 300	180	1 350	210
		R039110174	CKx 110	CKx 90		5 600	5 600	3 300	180	1 350	210
		R039110175	CKx 110	CKx 110		5 600	5 600	5 600	370	1 500	225
		R039110176	CKx 145	CKx 110		8 100	8 100	8 100	625	2 500	410
		R039110177	CKx 145	CKx 145		8 100	8 100	8 100	705	2 500	410
	51	R039110281	CKx 70	CKx 70		3 300	3 300	5 600	270	720	110
		R039110279	CKx 90	CKx 70		5 600	5 600	5 600	250	1 100	180
		R039110180	CKx 90	CKx 90		5 600	3 300	3 300	180	1 300	210
		R039110180	CKx 110	CKx 90		5 600	3 300	3 300	180	1 300	210
		R039110181	CKx 110	CKx 110		5 600	5 600	5 600	370	1 500	225
		R039110182	CKx 145	CKx 110		8 100	8 100	8 100	620	2 500	410
		R039110183	CKx 145	CKx 145		8 100	8 100	8 100	700	2 500	410
	52	R039110211	MKx 40 ¹⁾	CKx 70		1 600	1 600	2 800	120	290	25
		R039110212	MKx 40 ¹⁾	CKx 90		1 600	1 600	1 600	89	240	25
		R039110264	MKx 65 ¹⁾	CKx 90		3 000	1 600	1 600	94	670	130
		R039110266	MKx 65 ¹⁾	CKx 110		3 000	3 000	4 000	275	880	130
		R039110268	MKx 80 ¹⁾	CKx 110		3 400	3 400	4 000	275	970	150
		R039110270	MKx 80 ¹⁾	CKx 145		3 400	3 400	4 000	340	970	150
		R039110272	MKx 110 ¹⁾	CKx 145		5 300	4 000	4 000	340	1 700	280
		R039110274	MKx 110 ¹⁾	CKx 200		7 900	6 900	6 900	610	2 750	470
	54	R039110265	MKx 65 ²⁾	CKx 90		3 500	1 600	1 600	94	670	129
		R039110267	MKx 65 ²⁾	CKx 110		3 500	3 500	4 000	275	740	129
		R039110269	MKx 80 ²⁾	CKx 110		3 500	3 500	4 000	275	810	150
		R039110271	MKx 80 ²⁾	CKx 145		3 500	3 500	4 000	340	860	150
		R039110273	MKx 110 ²⁾	CKx 145		6 900	4 000	4 000	340	1 800	390
		R039110275	MKx 110 ²⁾	CKx 200		6 100	6 100	6 100	610	3 100	470
		R039110276	MKx 165 ²⁾	CKx 200		10 400	6 900	6 900	610	4 100	890
	56	R039120001	MKx 165	MKx 110		6 900	6 900	55 600	3 500	2 800	600
		R039120004	MKx 110	MKx 80		4 000	4 000	32 700	1 700	1 400	300
		R039120050	MKx 165	MKx 165		10 400	10 400	83 400	5 000	3 700	670
		R039120051	MKx 165	MKx 145		10 400	10 400	73 400	5 000	3 700	670
		R039120056	MKx 80	MKx 65		4 000	4 000	32 700	1 000	1 000	160
		R039120056	MKx 80	MKx 80		4 000	4 000	32 700	1 000	1 000	160
		R039120057	MKx 65	MKx 65		4 000	4 000	32 700	780	820	130

	Page	Part number	x-axis	y-axis	z-axis	$F_{x \max}$ (N)	$F_{y \max}$ (N)	$F_{z \max}$ (N)	$M_{x \max}$ (Nm)	$M_{y \max}$ (Nm)	$M_{z \max}$ (Nm)
	57	R039120000	MKx 165	MKx 165		10 400	10 400	83 500	5 000	2 800	670
		R039120002	MKx 165	MKx 110		6 100	6 100	49 000	4 600	2 000	670
		R039120003	MKx 110	MKx 110		6 100	6 100	49 000	2 000	1 400	300
		R039120055	MKx 145	MKx 110		10 400	10 400	83 500	4 800	3 600	650
 	58	R039120011	TKK 155	TKK 155		6 100	6 100	49 000	2 800	1 400	350
		R039120012	TKK 155	TKK 155		4 000	4 000	32 700	2 200	1 700	350
		R039120013	TKK 225	TKK 155		4 000	4 000	32 700	1 600	1 600	440
		R039120014	TKK 225	TKK 155		4 000	4 000	32 700	1 600	1 600	400
		R039120015	TKK 225	TKK 225		8 100	8 100	65 400	4 200	3 200	630
		R039120016	TKK 225	TKK 225		6 900	6 900	55 600	4 200	3 200	630
		R039120017	TKK 325	TKK 225		6 900	6 900	55 600	4 000	3 700	1 000
		R039120018	TKK 325	TKK 225		6 900	6 900	55 600	4 000	3 700	1 000
		R039120019	TKK 325	TKK 325		12 100	12 100	97 400	6 400	7 900	1 400
		R039120020	TKK 325	TKK 325		13 900	13 900	111 300	10 100	7 600	1 400
		R039120021	TKK 455	TKK 325		10 600	10 600	85 000	6 400	7 650	1 700
		R039120022	TKK 455	TKK 325		10 600	10 600	85 000	9 200	7 650	2 000

Compact Module CKx – Compact Module CKx

End-face connection X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Components and Ordering” section.

Carriage travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	“03”	any
z-axis	CKK, CKR	“03”	any

Frame travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	“03”	any
z-axis	CKK, CKR	any	“41”/“09”

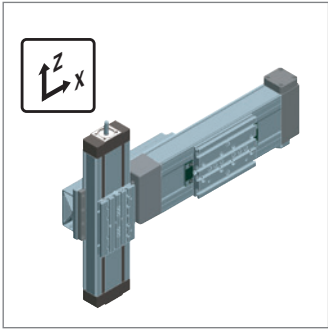
Scope of supply

Connection plate (material: Al), clamping fixtures (material: Al), screws, centering rings

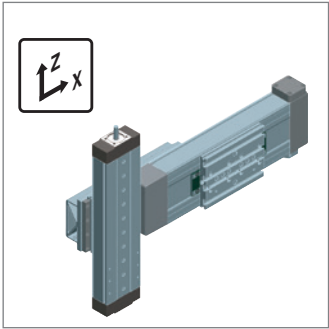
Connection kit

Profile nominal dimension	Compact Module	Profile nominal dimension	Compact Module	Part number	A	B	C	D	E	F	m
x-axis	x-axis	z-axis	z-axis		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(kg)
90	CKK/CKR -090	70	CKK/CKR -070	R039120227	103.0	155.0	110.0	89.0	20.0	40.0	1.4
110	CKK/CKR -110	90	CKK/CKR -090	R039120198	120.0	180.0	110.0	109.0	40.0	40.0	1.6
145	CKK/CKR -145	110	CKK/CKR -110	R039120199	145.0	219.0	111.0	144.0	80.0	50.0	3.1

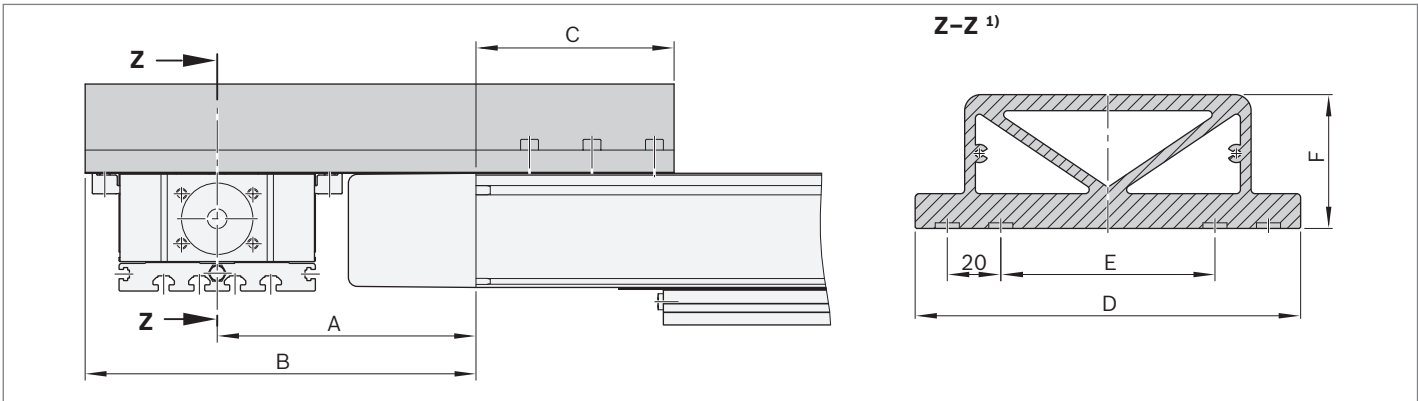
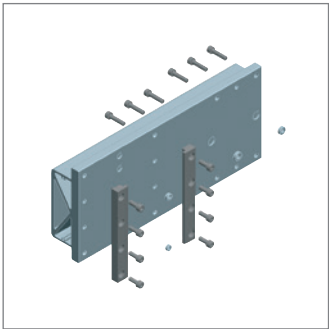
Permissible loads  29



▲ Carriage travels



▲ Frame travels



1) Shown without Compact Module

Compact Module CKx – Compact Module CKx

Connection via bracket X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41”/“09”
z-axis	CKK, CKR	“03”	any

Frame travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41”/“09”
z-axis	CKK, CKR	any	“41”/“09”

Scope of supply

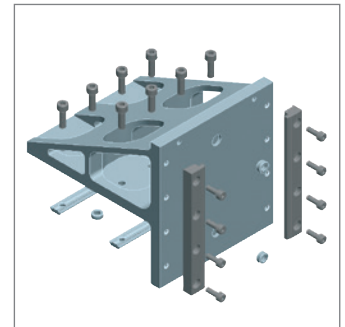
Angle bracket (material: Al), clamping fixtures (material: Al), sliding blocks, screws, centering rings



▲ Carriage travels



▲ Frame travels

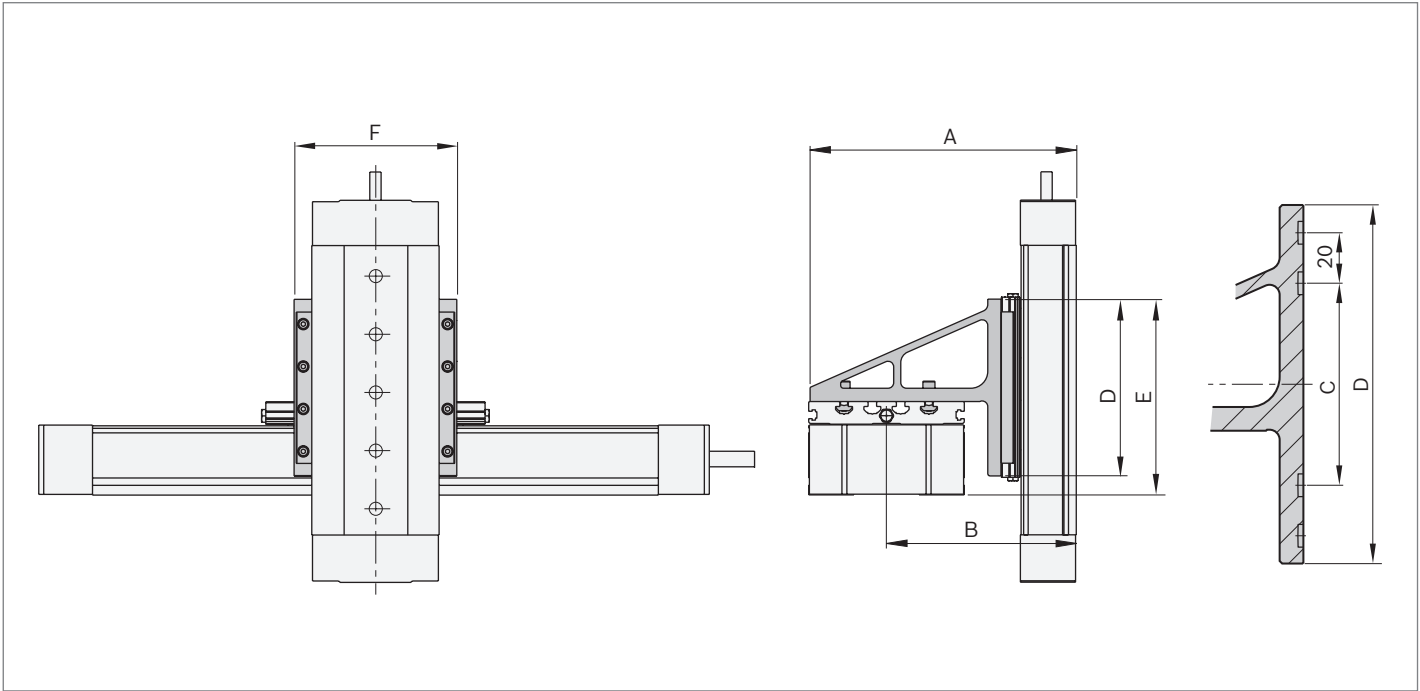


Connection kit

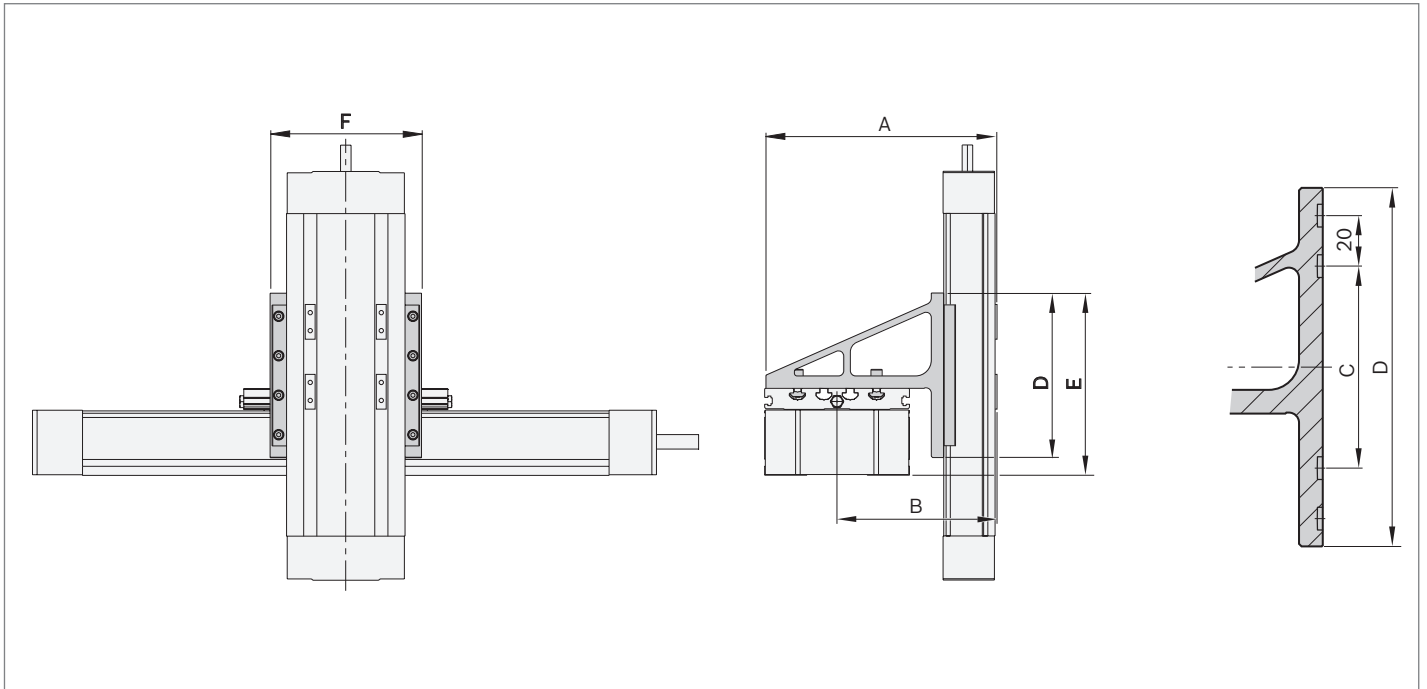
Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension z-axis	Compact Module z-axis	Part number
70	CKK/CKR -070	70	CKK/CKR -070	R039110251
90	CKK/CKR -090	70	CKK/CKR -070	R039110253
		90	CKK/CKR -090	R039110254
110	CKK/CKR -110	90	CKK/CKR -090	R039110322
		110	CKK/CKR -110	R039110257
145	CKK/CKR -145	110	CKK/CKR -110	R039110319
		145	CKK/CKR -145	R039110259
200	CKK/CKR -200	145	CKK/CKR -145	R039110321
		200	CKK/CKR -200	R039110323

Permissible loads  29

Frame travels



Profile nominal dimension x-axis	Profile nominal dimension z-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	m (kg)
70	70	R039110251	139.5	106.5	40.0	105.0	105.0	100.0	0.6
90	70	R039110253	157.5	114.5	40.0	106.0	118.0	100.0	0.8
	90	R039110254	174.0	131.0	40.0	117.5	133.5	115.0	1.1
110	90	R039110322	188.0	137.0	40.0	125.0	138.0	115.0	1.2
	110	R039110257	200.0	149.0	80.0	142.0	155.0	145.0	1.6
145	110	R039110319	241.0	172.0	80.0	155.0	183.0	145.0	2.6
	145	R039110259	261.5	193.5	80.0	155.0	183.0	180.0	3.2
200	145	R039110321	332.0	235.0	80.0	200.0	277.0	190.0	6.8
	200	R039110323	373.5	279.0	80.0	270.0	288.5	250.0	9.8

Carriage travels

Profile nominal dimension x-axis	Profile nominal dimension z-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	m (kg)
70	70	R039110251	127.0	94.0	40.0	105.0	105.0	100.0	0.6
90	70	R039110253	145.0	93.5	40.0	106.0	118.0	100.0	0.8
	90	R039110254	158.0	115.0	40.0	117.5	133.5	115.0	1.1
110	90	R039110322	172.0	121.0	40.0	125.0	138.0	115.0	1.2
	110	R039110257	184.0	133.0	80.0	142.0	155.0	145.0	1.6
145	110	R039110319	225.0	156.0	80.0	155.0	183.0	145.0	2.6
	145	R039110259	241.5	173.5	80.0	155.0	183.0	180.0	3.2
200	145	R039110321	312.0	215.0	80.0	200.0	277.0	190.0	6.8
	200	R039110323	346.5	252.0	80.0	270.0	288.5	250.0	9.8

Compact Module CKx – Feed Module VKK

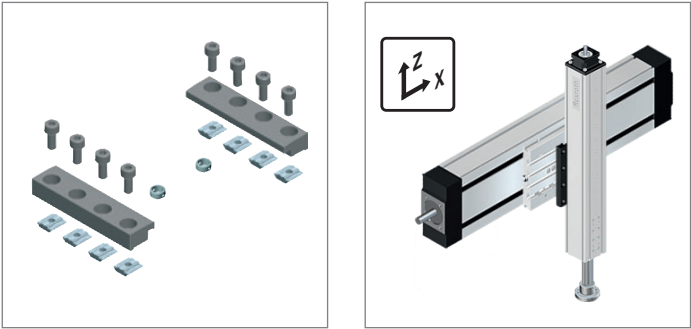
Direct connection X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Carriage option
x-axis	CKK, CKR	“41”/“09”

Scope of supply

Clamping fixtures (material: Al), sliding blocks, screws, centering rings



Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension z-axis	Feed Module z-axis	Part number	m (kg)
70	CKK/CKR -070	50	VKK -050	R039120238	0.18
90	CKK/CKR -090	50	VKK -050	R039120239	0.30
		70	VKK -070	R039120046	
110	CKK/CKR -110	50	VKK -050	R039120239	0.30
		70	VKK -070	R039120046	
145	CKK/CKR -145	70	VKK -070	R039120047	0.40
		100	VKK -100	R039120048	

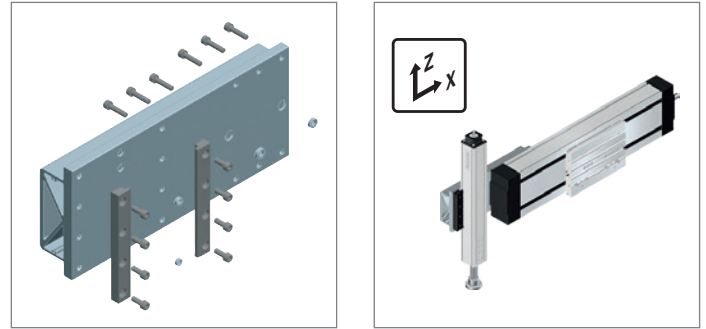
Permissible loads 29

Compact Module CKx – Feed Module VKK

End-face connection X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Guideway option
x-axis	CKK, CKR	"03"



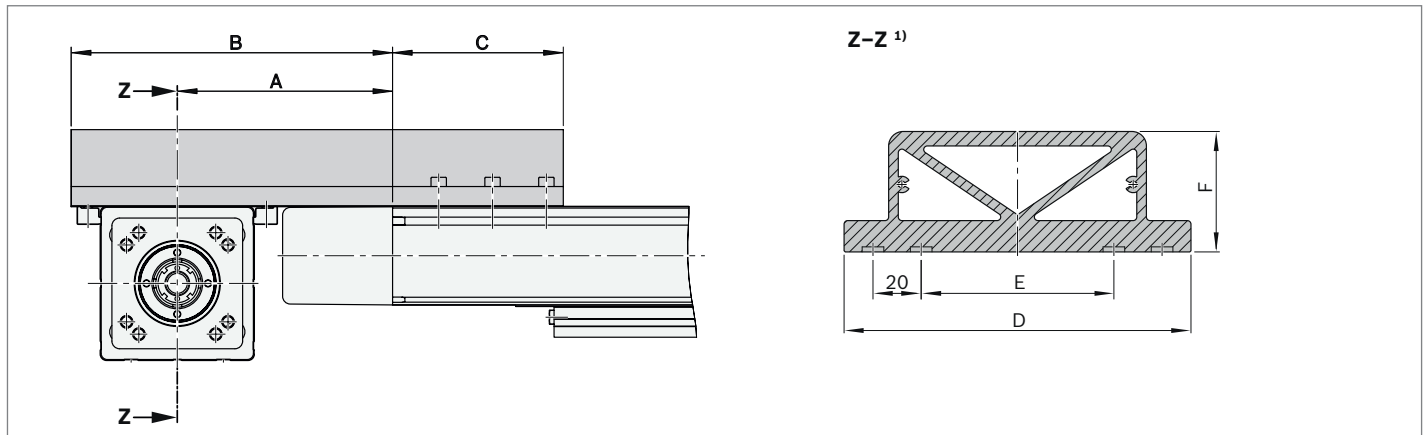
Scope of supply

Connection plate (material: Al), clamping fixtures (material: Al), screws, centering rings

Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension z-axis	Feed Module z-axis	Part number
70	CKK/CKR -070	50	VKK -050	R039120228
90	CKK/CKR -090	50	VKK -050	R039120227
		70	VKK -070	R039120206
110	CKK/CKR -110	70	VKK -070	R039120207
		100	VKK -100	R039120208
145	CKK/CKR -145	100	VKK -100	R039120209

Permissible loads 29



¹⁾ Shown without Feed Module

Profile nominal dimension x-axis	Profile nominal dimension z-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	m (kg)
70	50	R039120228	83.0	122.0	69.0	69.5	20.0	15.0	0.7
90	50	R039120227	103.0	155.0	110.0	89.0	20.0	40.0	1.4
	70	R039120206	103.0	157.0	110.0	89.0	20.0	40.0	1.4
110	70	R039120207	129.0	198.0	110.0	109.0	40.0	40.0	1.8
	100	R039120208	129.0	198.0	110.0	109.0	40.0	40.0	1.8
145	100	R039120209	140.0	209.0	111.0	144.0	80.0	50.0	3.0

Compact Module CKx – Feed Module VKK

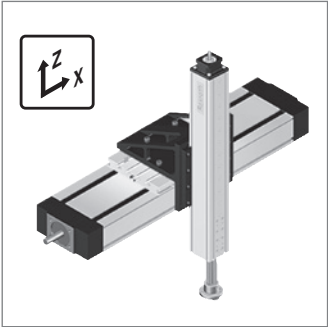
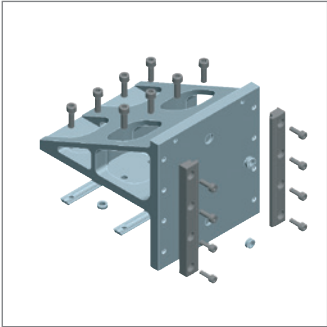
Connection via bracket X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Carriage option
x-axis	CKK, CKR	“41”/“09”

Scope of supply

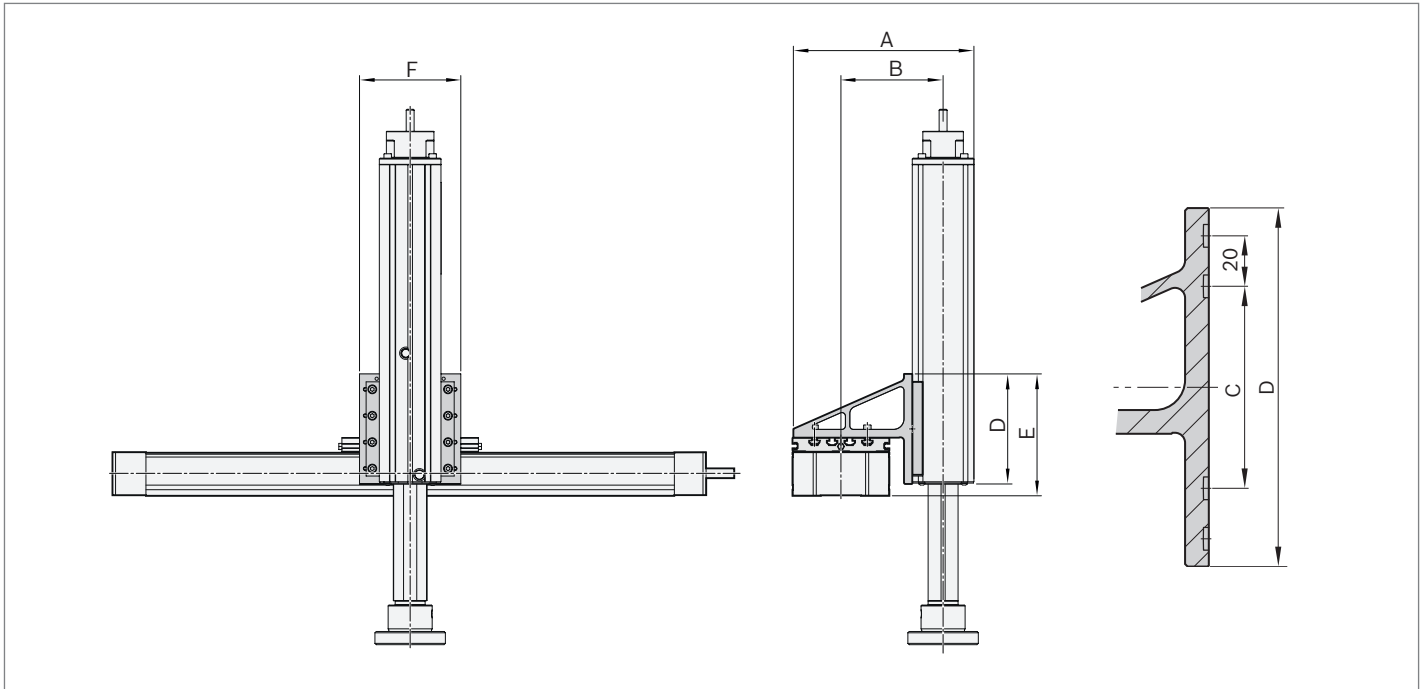
Angle bracket (material: Al), clamping fixtures (material: Al), sliding blocks, screws, centering rings



Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension z-axis	Feed Module z-axis	Part number
70	CKK/CKR -070	50	VKK -050	R039110251
90	CKK/CKR -090	50	VKK -050	R039110253
		70	VKK -070	R039110317
110	CKK/CKR -110	50	VKK -050	R039110316
		70	VKK -070	R039110318
145	CKK/CKR -145	70	VKK -070	R039110319
		100	VKK -100	R039110320
200	CKK/CKR -200	100	VKK -100	R039110321

Permissible loads ⓘ 29



Profile nominal dimension x-axis	Profile nominal dimension z-axis	Part number	A	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	m (kg)
70	50	R039110251	145.0	87.0	40.0	105.0	105.0	100.0	0.6
90	50	R039110253	163.0	95.0	40.0	106.0	118.0	100.0	0.8
	70	R039110317	188.0	110.0	40.0	117.5	133.5	115.0	1.1
110	50	R039110316	182.0	106.0	40.0	125.0	138.0	115.0	1.2
	70	R039110318	202.0	116.0	40.0	125.0	138.0	115.0	1.2
145	70	R039110319	245.0	141.0	80.0	155.0	183.0	145.0	2.6
	100	R039110320	275.0	156.0	80.0	155.0	183.0	145.0	2.6
200	100	R039110321	347.0	200.0	80.0	200.0	277.0	190.0	6.8

Compact Module CKx – Omega Module OBB

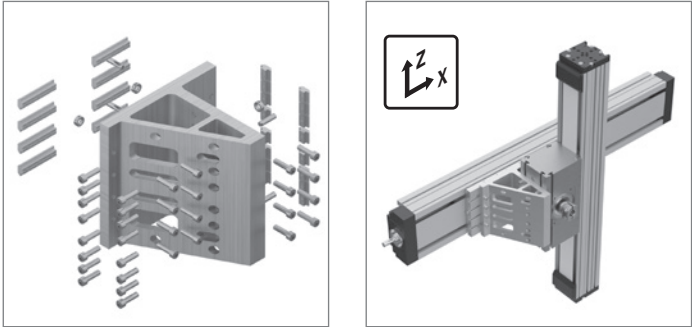
Connection via bracket X-Z

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

	Components	Carriage option
x-axis	CKK, CKR	“41”

Scope of supply

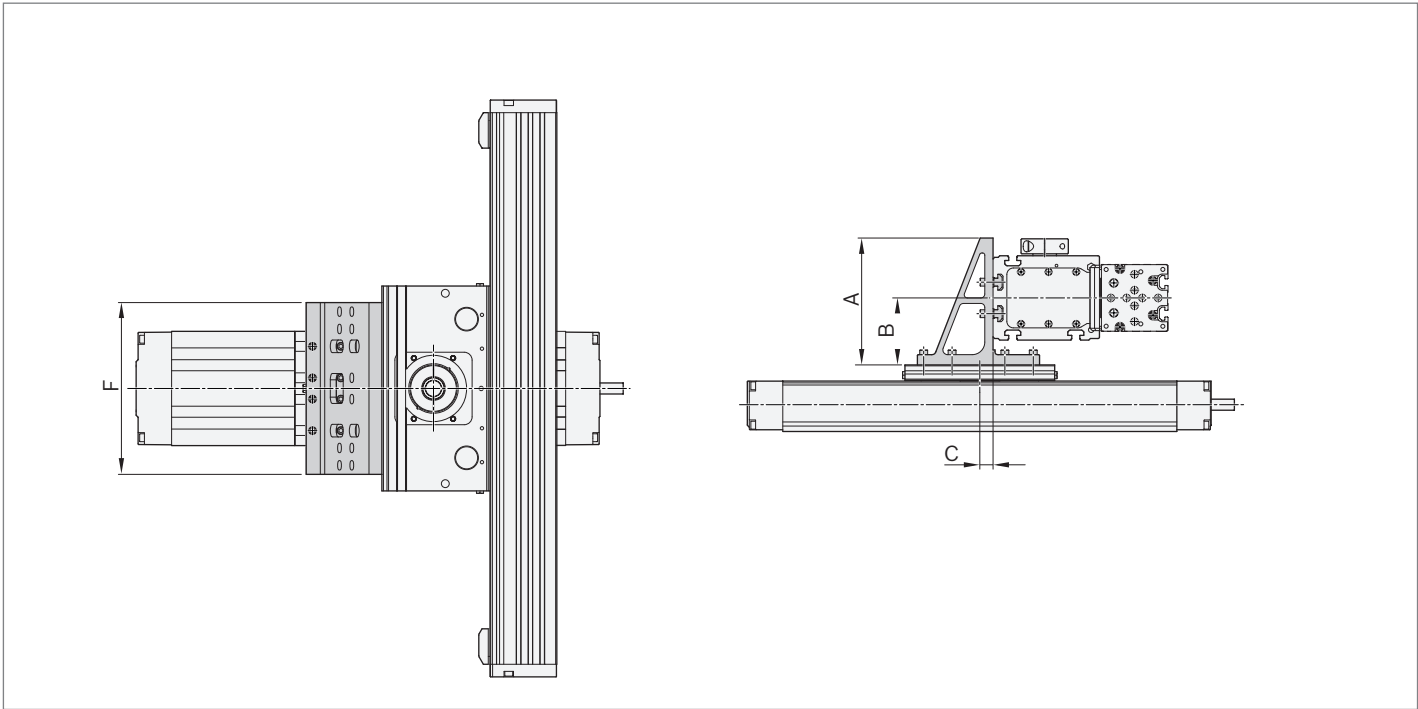
Angle bracket (material: Al), sliding blocks, screws, centering rings, straight pins



Connection kit

Profile nominal dimension	Compact Module	Profile nominal dimension	Omega Module OBB	Part number	A	B	C	F	m
x-axis	x-axis	z-axis	z-axis			(mm)	(mm)	(mm)	(kg)
90	CKK/CKR -090	55	OBB -055	R039110298	100.0	57.5	4.0	140.0	1.08
110	CKK/CKR -110	55	OBB -055	R039110298	100.0	57.5	-6.0	140.0	1.08
145	CKK/CKR -145	55	OBB -055	R039110300	100.0	57.5	-24.5	140.0	1.12
		85	OBB -085	R039110301	161.0	85.0	2.0	218.0	3.67
200	CKK/CKR -200	120	OBB -120	R039110302	196.5	106.5	-2.5	220.0	7.29

Permissible loads ⓘ 29

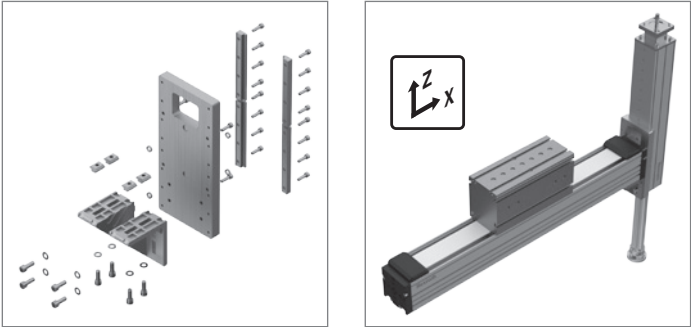


Omega Module OBB – Feed Module VKK

Connection via bracket X-Z

Scope of supply

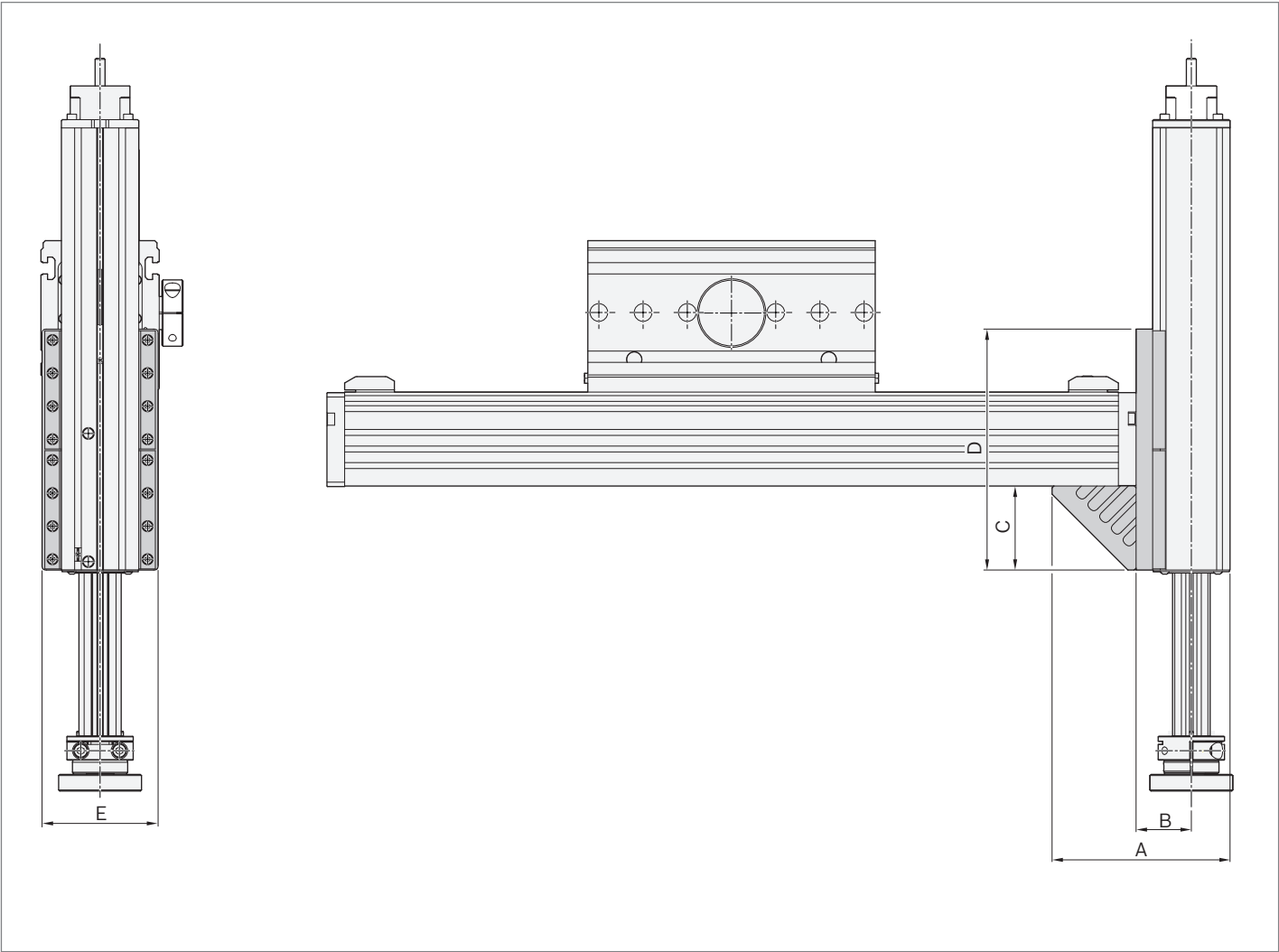
End-face plate (material: Al), angle bracket (material: Al), threaded anchor strips, screws, centering rings



Connection kit

Profile nominal dimension	Omega Module	Size	Feed Module	Part number	A	B	C	D	E	m
x-axis	x-axis	z-axis	z-axis		(mm)	(mm)	(mm)	(mm)	(mm)	(kg)
55	OBB -055	50	VKK -050	R039110283	110.0	36.0	40.0	160.0	78.0	0.62
85	OBB -085	70	VKK -070	R039110284	161.0	50.0	76.0	218.0	105.0	2.00
120	OBB -120	100	VKK -100	R039110285	215.0	69.0	96.0	290.0	135.0	3.65

Permissible loads 30

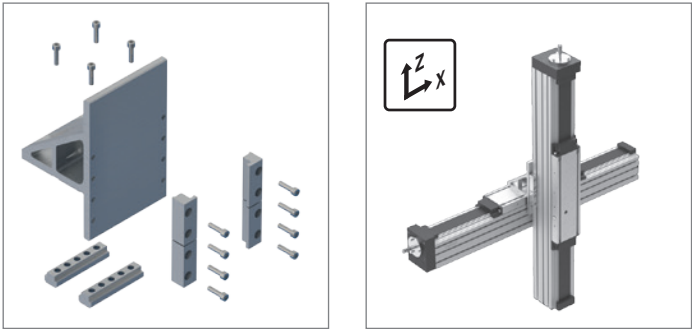


Linear Module MKx – Linear Module MKx

Connection via bracket X-Z
 Carriage travels

Linear Module version for x-axis:
 ► Carriage with T-slots

Scope of supply
 Angle bracket, threaded anchor strips, clamping fixtures, socket head cap screws

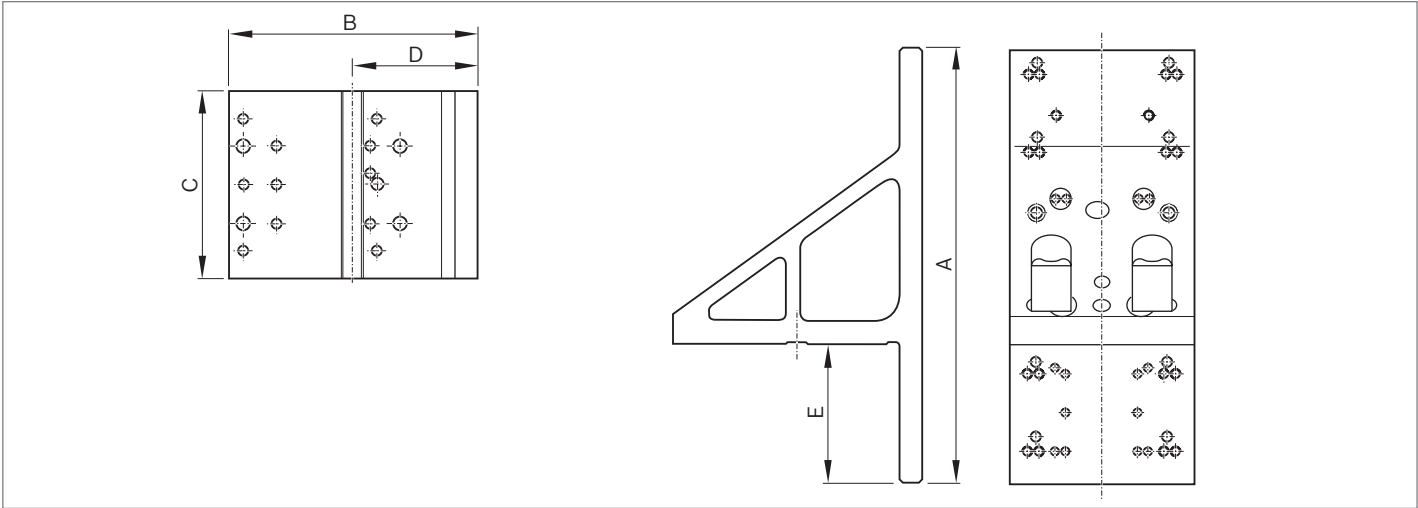


▲ Carriage travels

Connection kit

Profile nominal dimension x-axis	Linear Module x-axis	Profile nominal dimension z-axis	Linear Module z-axis	Part number
80	MKK/MKR -080, MLR -080	65	MKK/MKR -065	R039110060
		80	MKK/MKR -080, MLR -080	
110	MKK/MKR -110, MLR -110	80	MKK/MKR -080, MLR -080	R039110055
		110	MKK/MKR -110, MLR -110	R039110053
145	MKR -145	110	MKK/MKR -110, MLR -110	R039110052
165	MKK/MKR -165	110	MKK/MKR -110, MLR -110	R039110052
		165	MKK/MKR -165	R039110050

Permissible loads ⓘ 30



Profile nominal dimension x-axis	Profile nominal dimension z-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	m (kg)
80	65	R039110060	279.0	160.0	120.0	99.5	89.0	2.50
	80							
110	80	R039110055	279.0	160.0	120.0	107.5	89.0	2.50
	110	R039110053						
145	110	R039110052	327.5	224.0	165.0	141.0	106.0	5.80
165	110	R039110052	327.5	224.0	165.0	143.0	106.0	5.80
	165	R039110050						

Linear Module MKx – Linear Module MKx

Connection via bracket X-Z

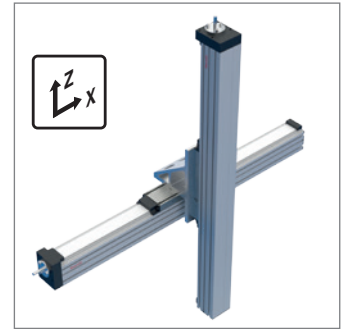
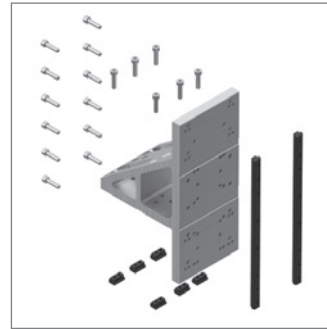
Frame travels

Linear Module version for x-axis and z-axis:

- Carriage with T-slots

Scope of supply

Angle bracket, threaded anchor strips, socket head cap screws

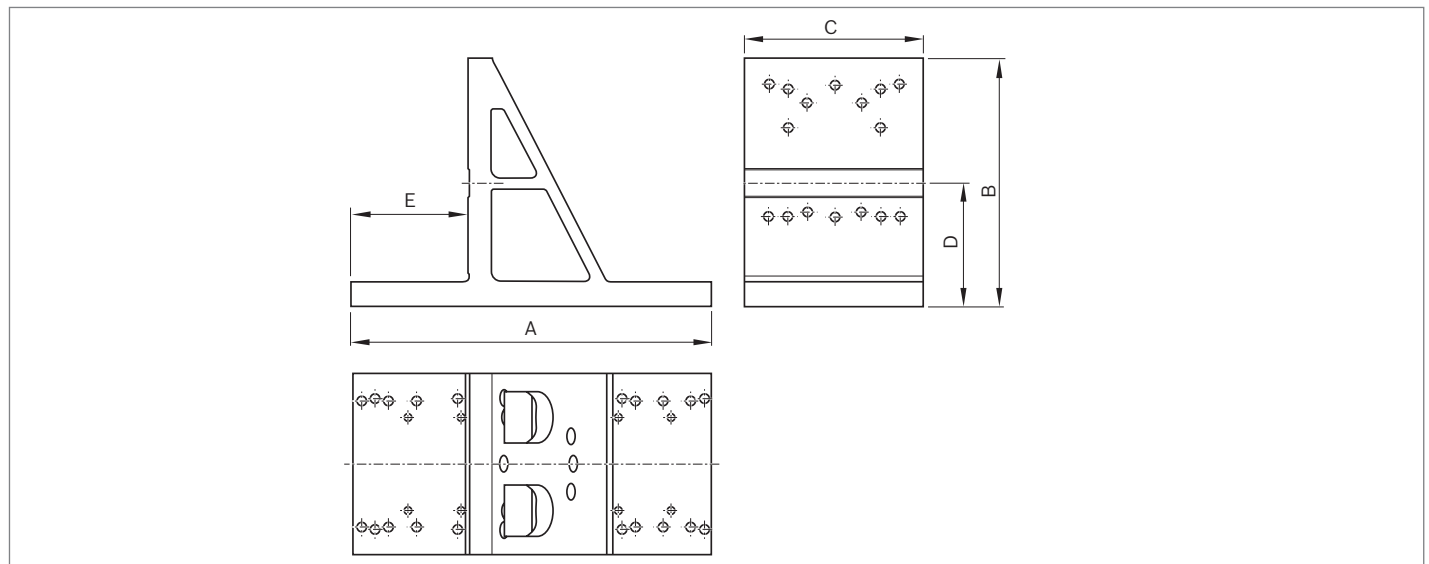


▲ Frame travels

Connection kit

Profile nominal dimension x-axis	Linear Module x-axis	Profile nominal dimension z-axis	Linear Module z-axis	Part number
80	MKK/MKR -080, MLR -080	65	MKK/MKR -065	R039110058
		80	MKK/MKR -080, MLR -080	R039110059
110	MKK/MKR -110, MLR -110	80	MKK/MKR -080, MLR -080	R039110054
		110	MKK/MKR -110, MLR -110	R039110053
145	MKR -145	110	MKK/MKR -110, MLR -110	R039110052
165	MKK/MKR -165	110	MKK/MKR -110, MLR -110	R039110052
		165	MKK/MKR -165	R039110050

Permissible loads 30



Profile nominal dimension x-axis	Profile nominal dimension z-axis	Part number	A	B (mm)	C (mm)	D (mm)	E (mm)	m (kg)
80	65	R039110058	279.0	160.0	120.0	99.5	89.0	2.50
	80	R039110059						
110	80	R039110054	279.0	160.0	120.0	107.5	89.0	2.50
	110	R039110053						
145	110	R039110052	327.5	224.0	165.0	143.0	106.0	5.80
165	110	R039110052						
	165	R039110050						

Compact Module CKx – Compact Module CKx

Direct connection X-Y

(Can also be used as an X-Z connection)
 For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” / “09”
y-axis	CKK, CKR	mounting-dependent	any

Frame travels

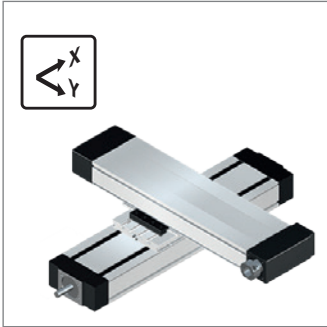
	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” / “09”
y-axis	CKK, CKR	any	“41” / “09”

Scope of supply

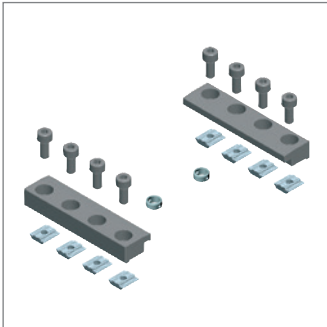
Clamping fixtures (material: Al), sliding blocks, screws, centering rings



▲ Carriage travels



▲ Frame travels

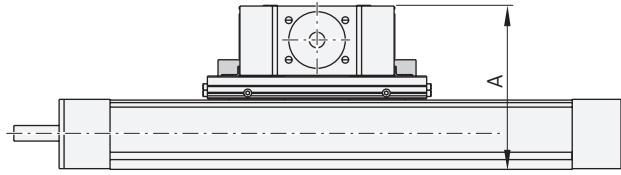


Connection kit

Profile nominal dimension	Compact Module	Profile nominal dimension	Compact Module	Part number
x-axis	x-axis	y-axis	y-axis	
70	CKK/CKR -070	70	CKK/CKR -070	R039120238
90	CKK/CKR -090	70	CKK/CKR -070	R039120239
		90	CKK/CKR -090	R039120045
110	CKK/CKR -110	70	CKK/CKR -070	R039120239
		90	CKK/CKR -090	R039120045
		110	CKK/CKR -110	R039120046
145	CKK/CKR -145	90	CKK/CKR -090	R039120242
		110	CKK/CKR -110	R039120047
		145	CKK/CKR -145	R039120048
200	CKK/CKR -200	145	CKK/CKR -145	R039120049
		200	CKK/CKR -200	R039120145

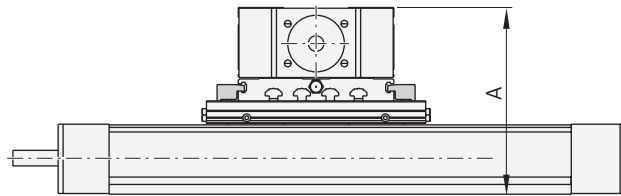
Permissible loads ⓘ ⓘ 30

Carriage travels



Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	m (kg)
70	70	R039120238	76.5	0.18
90	70	R039120239	88.0	0.20
	90	R039120045	96.0	0.20
110	70	R039120239	98.0	0.30
	90	R039120045	106.0	0.20
	110	R039120046	116.0	0.30
145	90	R039120242	125.0	0.30
	110	R039120047	135.0	0.30
	145	R039120048	150.0	0.40
200	145	R039120049	192.0	0.40
	200	R039120145	227.0	0.80

Frame travels



Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	m (kg)
70	70	R039120238	89.0	0.18
90	70	R039120239	100.5	0.20
	90	R039120045	112.0	0.20
110	70	R039120239	98.0	0.30
	90	R039120045	122.0	0.20
	110	R039120046	132.0	0.30
145	90	R039120242	125.0	0.30
	110	R039120047	151.0	0.30
	145	R039120048	170.0	0.40
200	145	R039120049	212.0	0.40
	200	R039120145	254.0	0.80

Compact Module CKx – Compact Module CKx

Connection via bracket X-Y

(Can also be used as an X-Z connection)

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” / “09”
y-axis	CKK, CKR	mounting-dependent	any

Frame travels

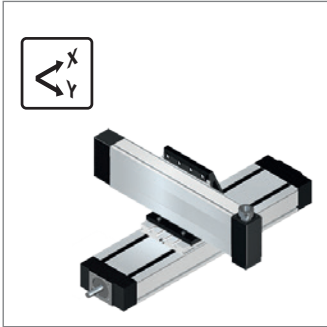
	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” / “09”
y-axis	CKK, CKR	any	“41” / “09”

Scope of supply

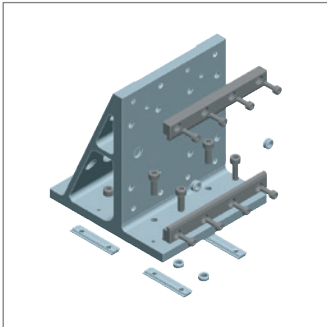
Connection bracket (material: Al), clamping fixtures (material: Al), sliding blocks, screws, centering rings



▲ Carriage travels



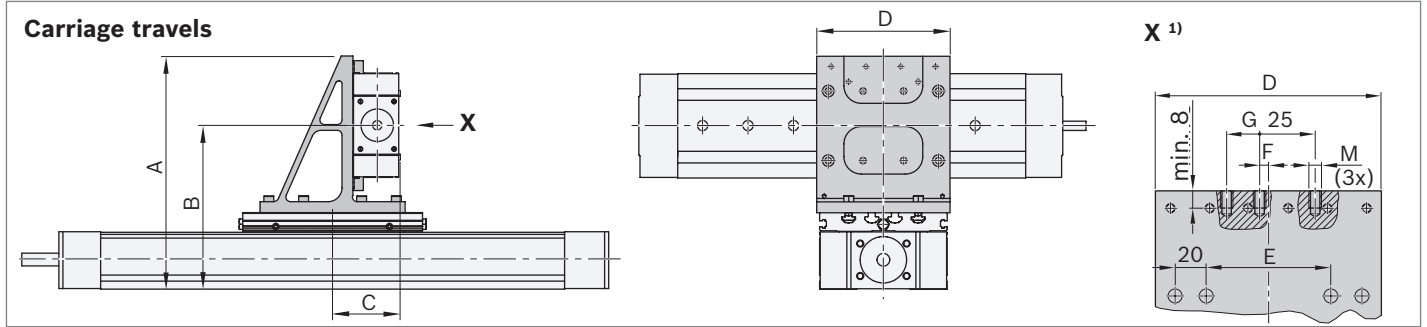
▲ Frame travels



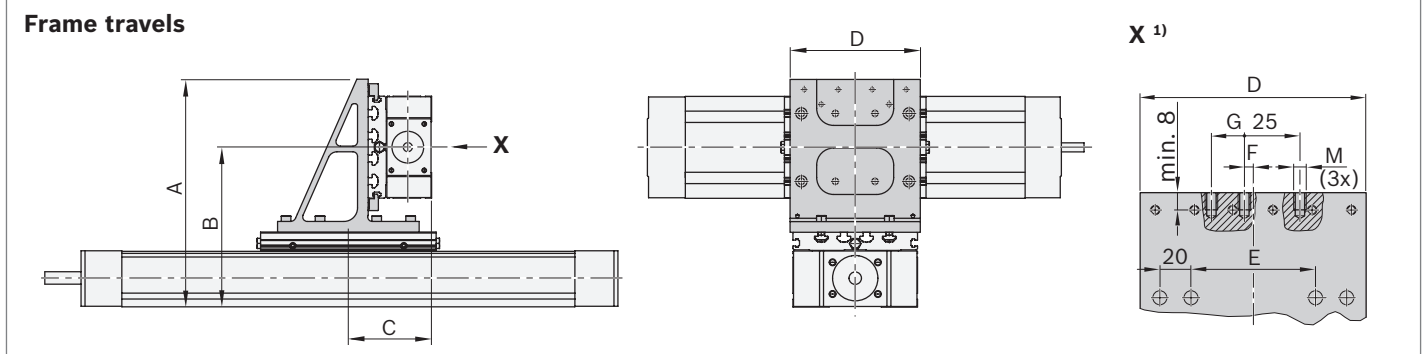
Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension y-axis	Compact Module y-axis	Part number
70	CKK/CKR -070	70	CKK/CKR -070	R039110252
90	CKK/CKR -090	70	CKK/CKR -070	R039110324
		90	CKK/CKR -090	R039110255
		110	CKK/CKR -110	R039110325
110	CKK/CKR -110	90	CKK/CKR -090	R039110255
		110	CKK/CKR -110	R039110256
		145	CKK/CKR -145	R039110327
145	CKK/CKR -145	110	CKK/CKR -110	R039110326
		145	CKK/CKR -145	R039110258
200	CKK/CKR -200	145	CKK/CKR -145	R039110328
		200	CKK/CKR -200	R039110329

Permissible loads ⓘ 30


¹⁾ Shown without Compact Module

Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	M	m (kg)
70	70	R039110252	157.0	107.0	44.0	105.0	40.0	13.0	13.5	M5	0.7
90	70	R039110324	191.0	131.0	49.5	110.0	40.0	3.5	13.5	M6	1.1
	90	R039110255	191.0	131.0	57.5	110.0	40.0	3.5	13.5	M6	1.1
	110	R039110325	216.0	142.0	67.5	110.0	40.0	3.5	13.5	M6	1.3
110	90	R039110255	201.0	141.0	46.5	110.0	40.0	3.5	13.5	M6	1.1
	110	R039110256	226.0	152.0	68.0	145.0	80.0	5.5	13.5	M6	1.7
	145	R039110327	266.5	174.5	85.5	145.0	80.0	5.5	13.5	M6	2.6
145	110	R039110326	250.0	176.0	71.0	150.0	80.0	5.5	13.5	M6	2.6
	145	R039110258	286.0	193.5	86.0	150.0	80.0	5.5	13.5	M6	2.8
200	145	R039110328	337.0	244.5	93.0	195.0	80.0	12.5	-13.5	M6	7.2
	200	R039110329	373.5	279.0	126.5	250.0	80.0	12.5	-13.5	M6	10.0

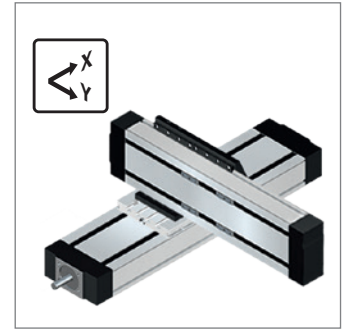
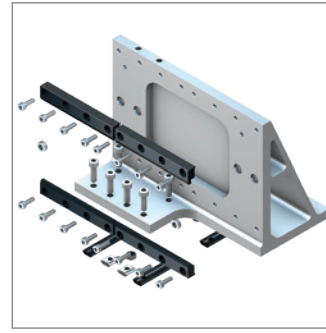

¹⁾ Shown without Compact Module

Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	M	m (kg)
70	70	R039110252	157.0	107.0	56.5	105.0	40.0	13.0	13.5	M5	0.7
90	70	R039110324	191.0	131.0	62.0	110.0	40.0	3.5	13.5	M6	1.1
	90	R039110255	191.0	131.0	73.5	110.0	40.0	3.5	13.5	M6	1.1
	110	R039110325	216.0	142.0	83.5	110.0	40.0	3.5	13.5	M6	1.3
110	90	R039110255	201.0	141.0	62.5	110.0	40.0	3.5	13.5	M6	1.1
	110	R039110256	226.0	152.0	84.0	145.0	80.0	5.5	13.5	M6	1.7
	145	R039110327	266.5	174.5	105.5	145.0	80.0	5.5	13.5	M6	2.6
145	110	R039110326	250.0	176.0	87.0	150.0	80.0	5.5	13.5	M6	2.6
	145	R039110258	286.0	193.5	106.0	150.0	80.0	5.5	13.5	M6	2.8
200	145	R039110328	337.0	244.5	113.0	195.0	80.0	12.5	-13.5	M6	7.2
	200	R039110329	373.5	279.0	153.5	250.0	80.0	12.5	-13.5	M6	10.0

Compact Module CKx – Compact Module CKx

Connection via bracket X-Y (reinforced right-hand version)

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.



	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” / “09”
y-axis	CKK, CKR	mounting-dependent	any

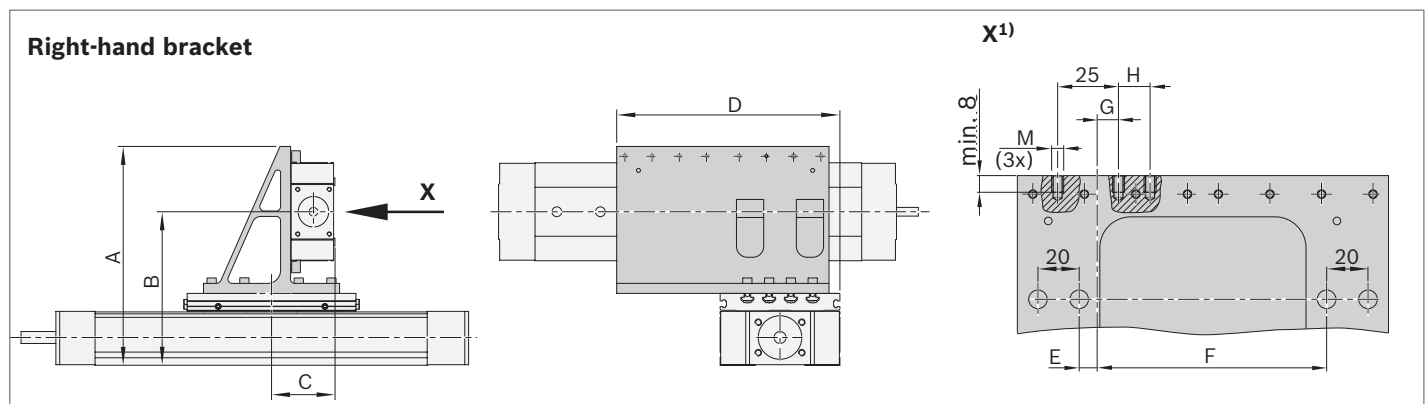
Scope of supply

Connection bracket (material: Al), clamping fixtures (material: Al), sliding blocks, screws, centering rings

Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension y-axis	Compact Module y-axis	Bracket orientation	Part number
70	CKK/CKR -070	70	CKK/CKR -070	Right-hand	R039110280
90	CKK/CKR -090	70	CKK/CKR -070	Right-hand	R039110278
		90	CKK/CKR -090	Right-hand	R039110174
110	CKK/CKR -110	90	CKK/CKR -090	Right-hand	R039110174
		110	CKK/CKR -110	Right-hand	R039110175
145	CKK/CKR -145	110	CKK/CKR -110	Right-hand	R039110176
		145	CKK/CKR -145	Right-hand	R039110177

Permissible loads 32



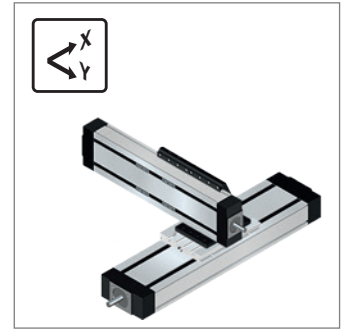
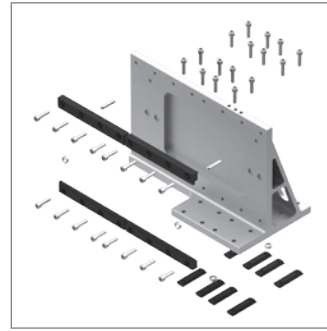
¹⁾ Shown without Compact Module

Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	M	m (kg)
70	70	R039110280	159.5	109.5	43.0	162.0	4.0	96.0	9.0	13.5	M5	1.0
90	70	R039110278	171.0	121.0	43.0	162.0	14.0	86.0	-1.0	13.5	M5	1.0
	90	R039110174	191.0	131.0	57.5	180.0	15.0	105.0	5.0	13.5	M6	1.5
110	90	R039110174	201.0	141.0	57.5	190.0	15.0	105.0	5.0	13.5	M6	1.5
	110	R039110175	226.0	152.0	68.0	220.0	25.0	135.0	5.0	-13.5	M6	2.0
145	110	R039110176	249.0	176.0	70.5	290.0	40.0	160.0	12.5	-13.5	M6	4.0
	145	R039110177	285.5	193.5	85.5	290.0	40.0	160.0	12.5	-13.5	M6	4.4

Compact Module CKx – Compact Module CKx

Connection via bracket X-Y (reinforced left-hand version)

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.



	Components	Guideway option	Carriage option
x-axis	CKK, CKR	any	“41” / “09”
y-axis	CKK, CKR	mounting-dependent	any

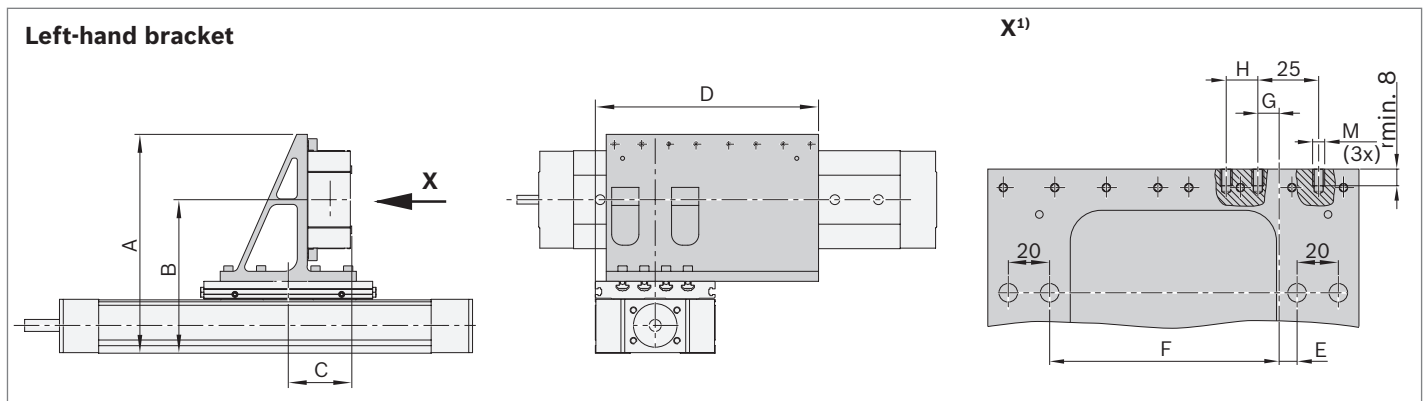
Scope of supply

Connection bracket (material: Al), clamping fixtures (material: Al), sliding blocks, screws, centering rings

Connection kit

Profile nominal dimension x-axis	Compact Module x-axis	Profile nominal dimension y-axis	Compact Module y-axis	Bracket orientation	Part number
70	CKK/CKR -070	70	CKK/CKR -070	Left-hand	R039110281
90	CKK/CKR -090	70	CKK/CKR -070	Left-hand	R039110279
		90	CKK/CKR -090	Left-hand	R039110180
110	CKK/CKR -110	90	CKK/CKR -090	Left-hand	R039110180
		110	CKK/CKR -110	Left-hand	R039110181
145	CKK/CKR -145	110	CKK/CKR -110	Left-hand	R039110182
		145	CKK/CKR -145	Left-hand	R039110183

Permissible loads 32



¹⁾ without Compact Module

Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	M	m (kg)
70	70	R039110281	159.5	109.5	43.0	162.0	4.0	96.0	9.0	13.5	M5	1.0
90	70	R039110279	171.0	121.0	43.0	162.0	14.0	86.0	-1.0	13.5	M5	1.0
	90	R039110180	191.0	131.0	57.5	180.0	15.0	105.0	5.0	13.5	M6	1.5
110	90	R039110180	201.0	141.0	57.5	190.0	15.0	105.0	5.0	13.5	M6	1.5
	110	R039110181	226.0	152.0	68.0	220.0	25.0	135.0	5.0	-13.5	M6	2.0
145	110	R039110182	249.0	176.0	70.5	290.0	40.0	160.0	12.5	-13.5	M6	4.0
	145	R039110183	285.5	193.5	85.5	290.0	40.0	160.0	12.5	-13.5	M6	4.4

Linear Module MKx – Compact Module CKx

Connection via brackets 2X-Y

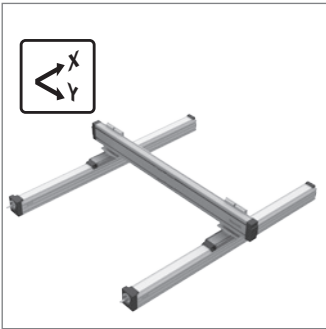
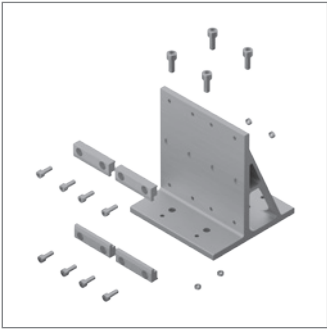
Linear Module MKx carriage with threads

For this connection, the appropriate order options must be selected when configuring the Compact Modules and Linear Modules, see Compact Modules and Linear Modules catalogs, “Configuration and Ordering” section.

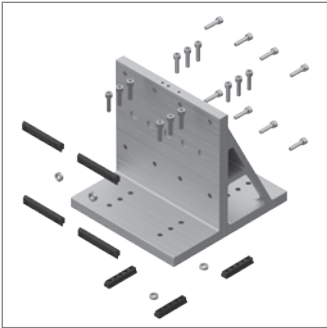
	Components	Guideway option	Carriage option
x-axis	MKx	any	long version, if selectable
y-axis	CKx	“03” / “04”	any

Scope of supply

Connection bracket (material: Al), clamping fixtures (material: Al), screws, centering rings
 for CKx -200: Connection bracket (material: Al), screws, centering rings, washers, sliding blocks



▲ 2X-Y connection

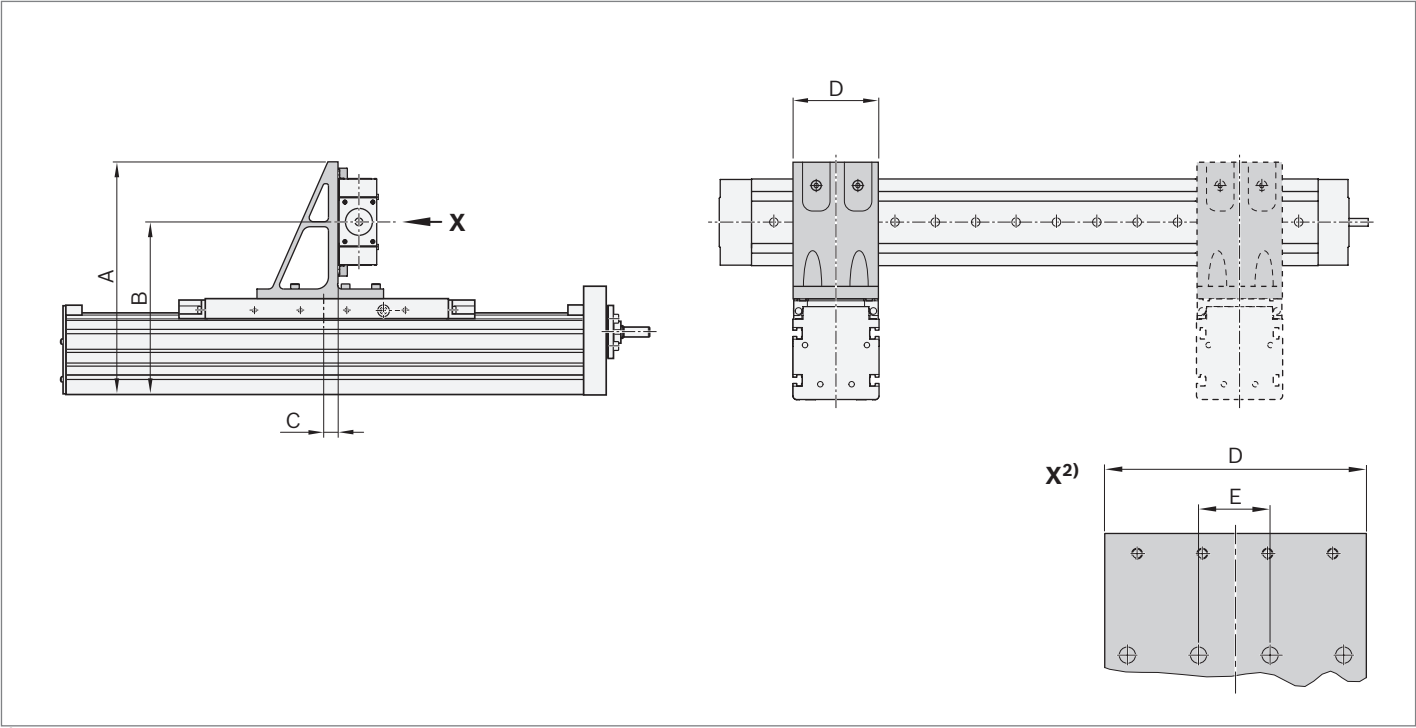


▲ CKx -200 adapted with sliding blocks

Connection kit

Profile nominal dimension	Linear Module	Profile nominal dimension	Compact Module	Part number ¹⁾
x-axis	x-axis	y-axis	y-axis	
40	MKK/MKR -040	70	CKK/CKR -070	R039110211
		90	CKK/CKR -090	R039110212
65	MKK -065	90	CKK/CKR -090	R039110264
		110	CKK/CKR -110	R039110266
80	MKK/MKR -080	110	CKK/CKR -110	R039110268
		145	CKK/CKR -145	R039110270
110	MKR -110	145	CKK/CKR -145	R039110272
		200	CKK/CKR -200	R039110274

¹⁾ Please order 2 units for 2X-Y connections



2) without Compact Module

Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	m (kg)
40	70	R039110211	169.5	119.5	-6.0	80.0	20.0	0.60
	90	R039110212	187.0	127.0	5.0	92.0	40.0	0.90
65	90	R039110264	221.5	161.0	2.0	140.0	40.0	1.25
	110	R039110266	245.5	171.0	2.0	145.0	40.0	1.50
80	110	R039110268	260.5	186.0	23.0	145.0	40.0	2.80
	145	R039110270	301.0	208.5	26.0	175.0	40.0	
110	145	R039110272	330.0	237.5	31.0	175.0	40.0	8.80
	200	R039110274	377.0	285.0	38.0	245.0	40.0	

Linear Module MKx – Compact Module CKx

Connection via brackets 2X-Y

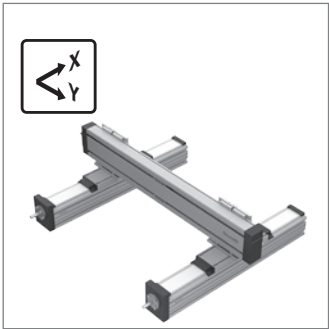
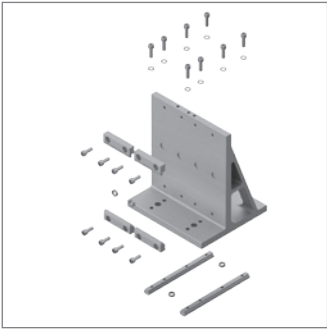
Linear Module MKx - carriage with T-slots

For this connection, the appropriate order options must be selected when configuring the Compact Modules and Linear Modules, see Compact Modules and Linear Modules catalogs, “Configuration and Ordering” section.

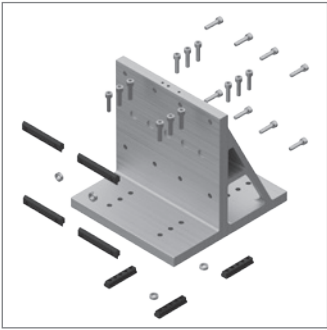
	Components	Guideway option	Carriage option
x-axis	MKx	any	long version, if selectable
y-axis	CKx	mounting-dependent	any

Scope of supply

Connection bracket (material: Al), clamping fixtures (material: Al), screws, centering rings, washers, sliding blocks for CKx -200: Connection bracket (material: Al), screws, centering rings, washers, sliding blocks



▲ 2X-Y connection



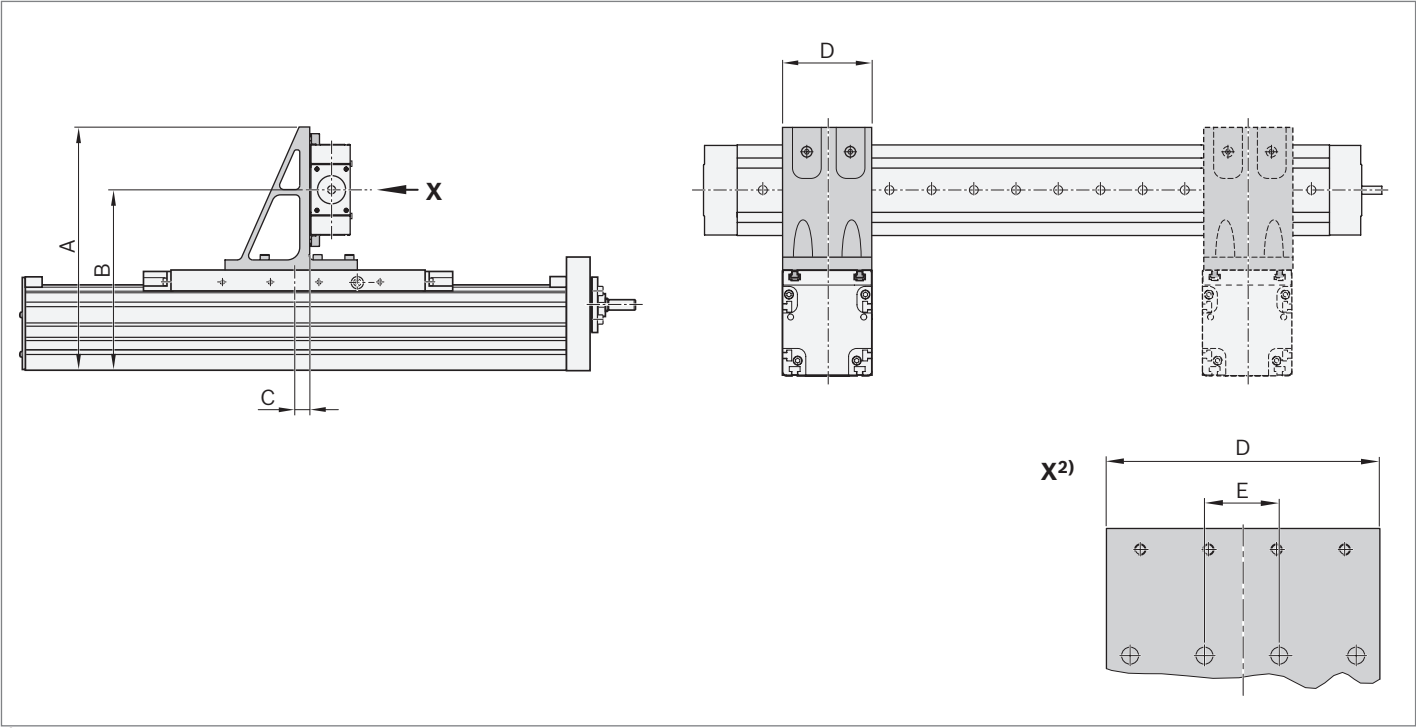
▲ CKx -200 adapted with sliding blocks

Connection kit

Profile nominal dimension x-axis	Linear Module x-axis	Profile nominal dimension y-axis	Compact Module y-axis	Part number ¹⁾
65	MKK/MKR -065	90	CKK/CKR -090	R039110265
		110	CKK/CKR -110	R039110267
80	MKK/MKR -080, MLR -080	110	CKK/CKR -110	R039110269
		145	CKK/CKR -145	R039110271
110	MKK/MKR -110, MLR -110	145	CKK/CKR -145	R039110273
		200	CKK/CKR -200	R039110275
165	MKK/MKR -165	200	CKK/CKR -200	R039110276

¹⁾ Please order 2 units for 2X-Y connections

Permissible loads ⓘ 32



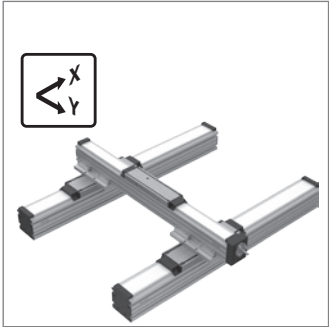
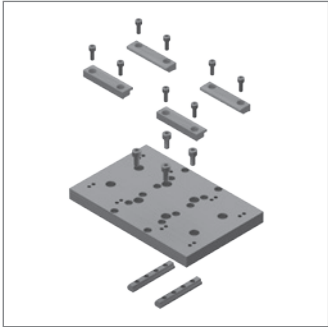
2) without Compact Module

Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	m (kg)
65	90	R039110265	221.5	161.0	2.0	140.0	40.0	1.30
	110	R039110267	245.5	171.0	2.0	145.0	40.0	1.60
80	110	R039110269	260.5	186.0	23.0	145.0	40.0	2.90
	145	R039110271	301.0	208.5	26.0	175.0	40.0	
110	145	R039110273	330.0	237.5	31.0	175.0	40.0	9.00
	200	R039110275	377.0	285.0	38.0	245.0	40.0	
165	200	R039110276	443.0	351.0	0.0	245.0	40.0	9.40

Linear Module MKx – Linear Module MKx

**Connection with plate 2X-Y
(with clamping fixture)**

	Components	Carriage option
x-axis	MKx	Carriage, with T-slot
y-axis	MKx	any



Scope of supply

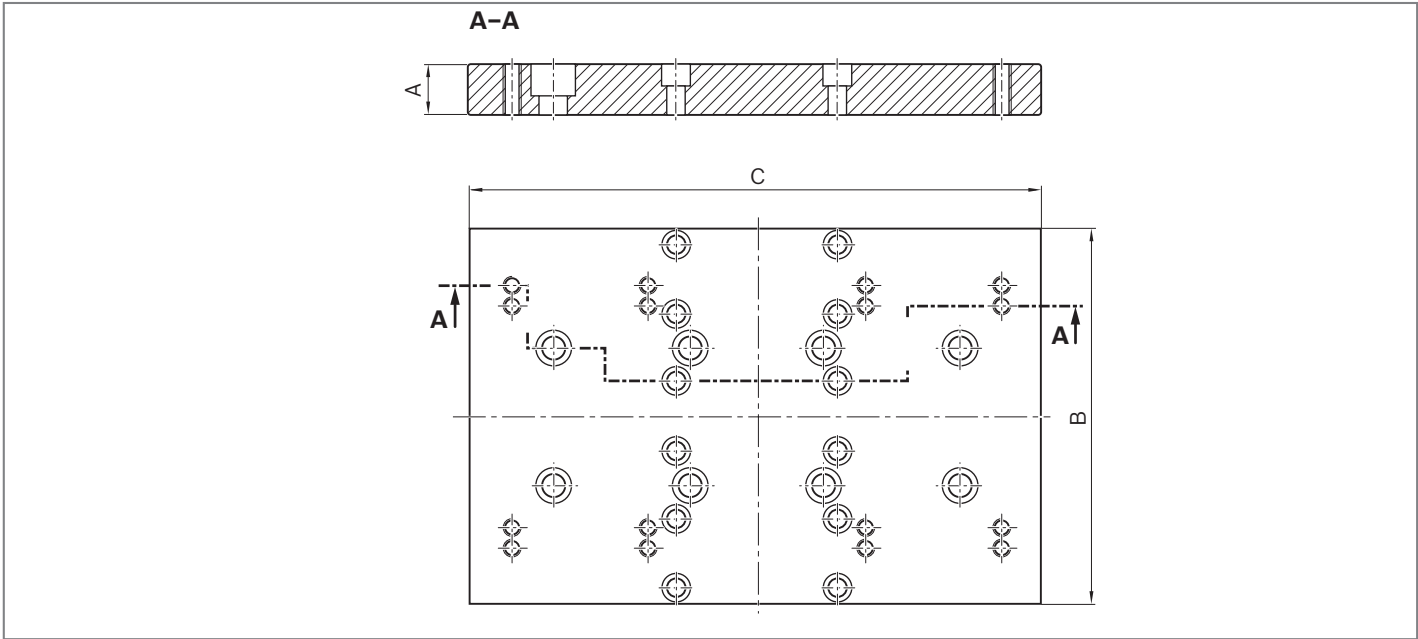
Connection plate, anchor strips, clamping fixtures, socket head cap screws

Connection kit

Profile nominal dimension	Linear Module	Profile nominal dimension	Linear Module	Part number ¹⁾	A	B	C	m
x-axis	x-axis	y-axis	y-axis		(mm)	(mm)	(mm)	(kg)
65	MKK/MKR -065	65	MKK/MKR -065	R039120057	18.0	115.0	196.0	1.20
80	MKK/MKR -080, MLR -080	65	MKK/MKR -065	R039120056	18.0	138.0	210.0	1.45
		80	MKK/MKR -080, MLR -080	R039120056				
110	MKK/MKR -110, MLR -110	80	MKK/MKR -080, MLR -080	R039120004	18.0	138.0	220.0	1.50
165	MKK/MKR -165	110	MKK/MKR -110, MLR -110	R039120001	25.0	163.0	320.0	3.50
		145	MKR -145	R039120051				
		165	MKK/MKR -165	R039120050				

¹⁾ Please order 2 units for 2X-Y connections

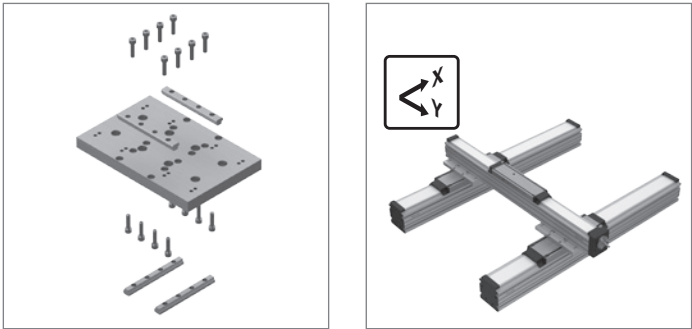
Permissible loads ⓘ 32



Linear Module MKx – Linear Module MKx

Connection with plate 2X-Y
(without clamping fixture)

	Components	Carriage option
x-axis	MKx	Carriage, with T-slot
y-axis	MKx	any



Scope of supply

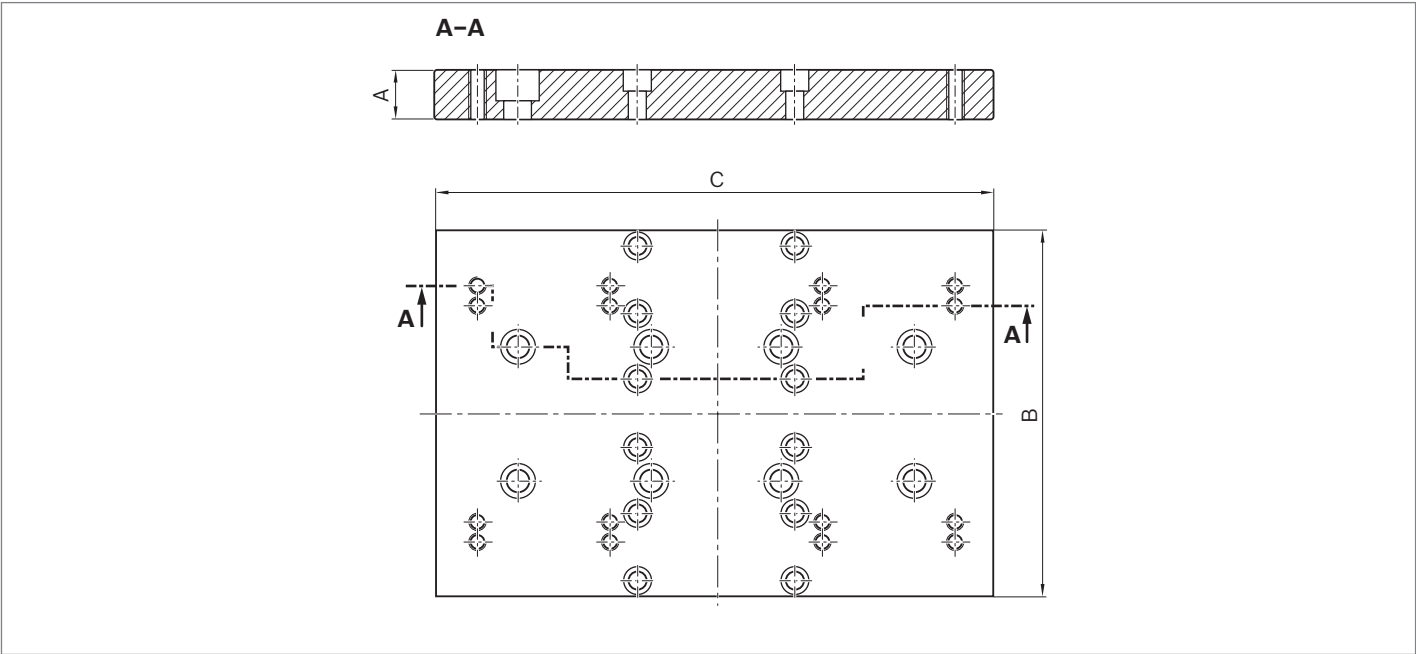
Connection plate, threaded anchor strips, socket head cap screws

Connection kit

Profile nominal dimension	Linear Module	Profile nominal dimension	Linear Module	Part number ¹⁾	A	B	C	m
x-axis	x-axis	y-axis	y-axis		(mm)	(mm)	(mm)	(kg)
110	MKK/MKR -110, MLR -110	110	MKK/MKR -110, MLR -110	R039120003	18.0	138.0	220.0	1.50
145	MKR -145	110		R039120055	25.0	230.0	360.0	5.60
165	MKK/MKR -165	110		R039120002	25.0	163.0	320.0	3.50
		165	MKK/MKR -165	R039120000				

¹⁾ Please order 2 units for 2X-Y connections

Permissible loads  33



Ball Rail Table TTK – Ball Rail Table TTK

Connection with plate X-Y

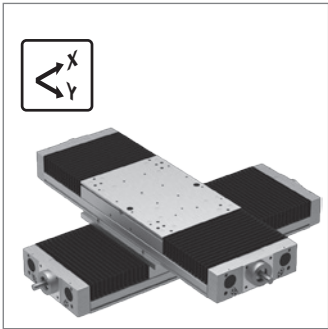
(Can also be used as an X-Z connection)

For this connection the appropriate order options must be selected when configuring the Ball Rail Tables, see Ball Rail Tables catalog, “Configuration and ordering” section.

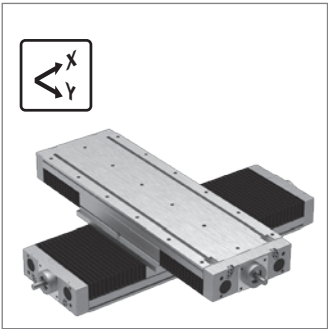
		Guideway option	Carriage option
Carriage travels	y-axis	flat version	any
Frame travels	y-axis	any	long version

Scope of supply

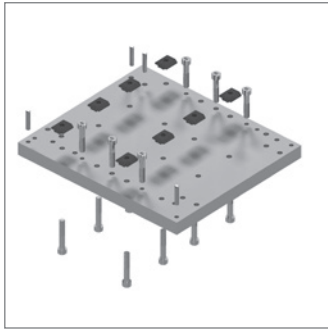
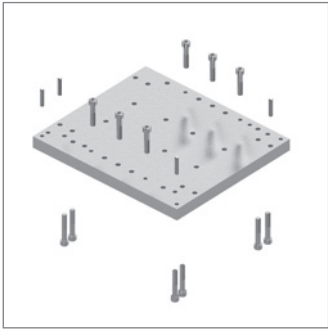
Cross-plate, straight pins, socket head cap screws, slotted nuts



▲ Carriage travels



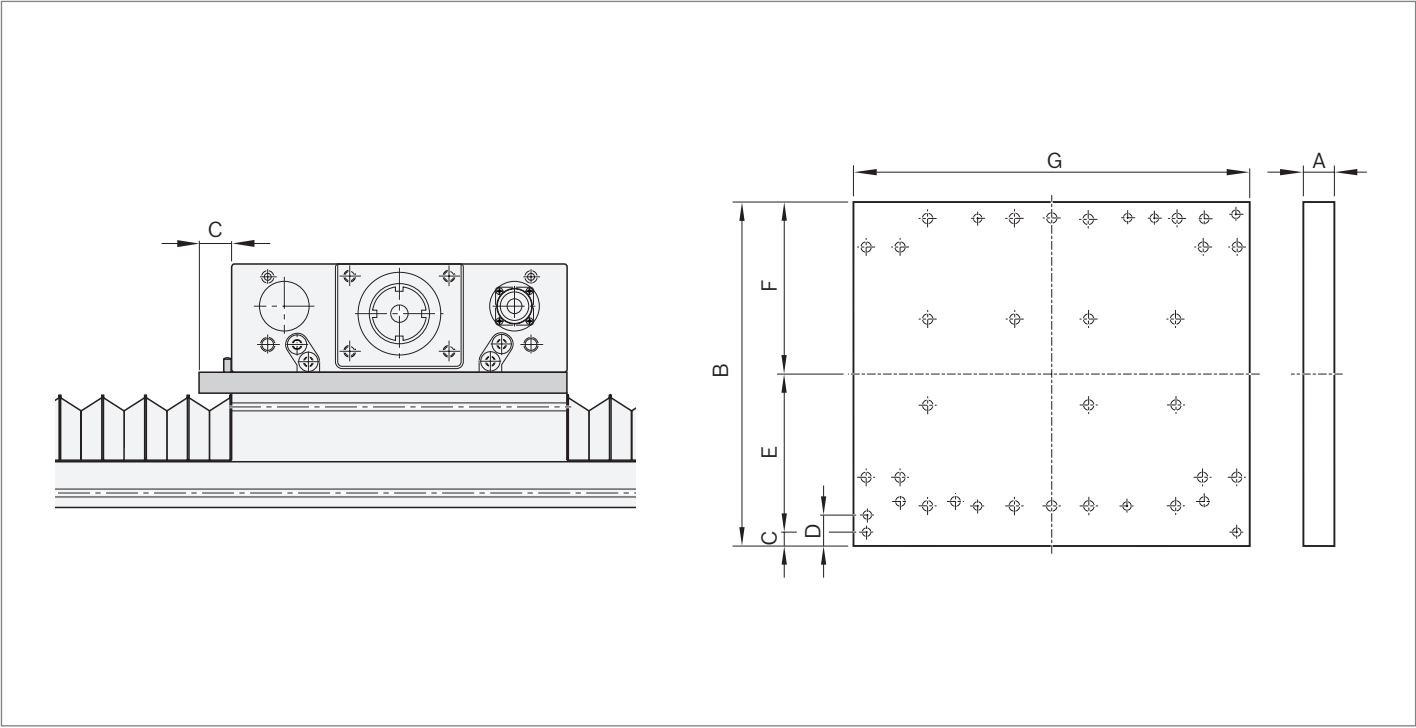
▲ Frame travels



Connection kit

Profile nominal dimension x-axis	Ball Rail Table x-axis	Profile nominal dimension y-axis	Ball Rail Table y-axis	Part number	Connection type
155	TKK 15-155 AL	155	TKK 15-155 AL	R039120011	Carriage travels
		155	TKK 15-155 AL	R039120012	Frame travels
225	TKK 20-225 AL	155	TKK 15-155 AL	R039120013	Carriage travels
		155	TKK 15-155 AL	R039120014	Frame travels
		225	TKK 20-225 AL	R039120015	Carriage travels
		225	TKK 20-225 AL	R039120016	Frame travels
325	TKK 30-325 AL	225	TKK 20-225 AL	R039120017	Carriage travels
		225	TKK 20-225 AL	R039120018	Frame travels
		325	TKK 30-325 AL	R039120019	Carriage travels
		325	TKK 30-325 AL	R039120020	Frame travels
455	TKK 35-455 AL	325	TKK 30-325 AL	R039120021	Carriage travels
		325	TKK 30-325 AL	R039120022	Frame travels

Permissible loads
 
33



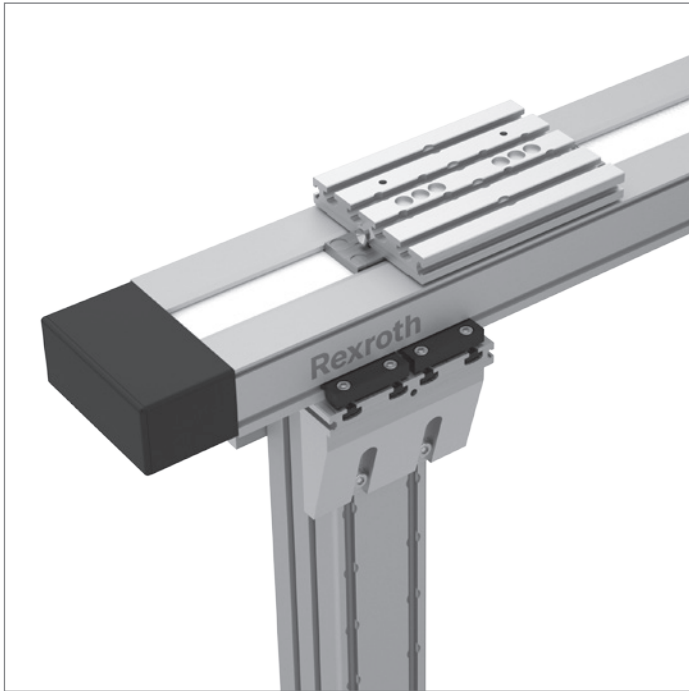
Profile nominal dimension x-axis	Profile nominal dimension y-axis	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	m (kg)
155	155	R039120011	18	165	11.0		77.5	76.5	220	1.8
		R039120012								
225	155	R039120013	18	220		32.5	77.5	110.0	220	2.4
		R039120014								
	225	R039120015	18	240	16.0		112.5	111.5	320	3.8
		R039120016								
325	225	R039120017	18	320		47.5	112.5	160.0	320	5.0
		R039120018								
	325	R039120019	25	340	16.0		162.5	161.5	450	10.5
		R039120020								
455	325	R039120021	25	400		37.5	162.5	200.0	450	12.5
		R039120022								

Combination options with profiles

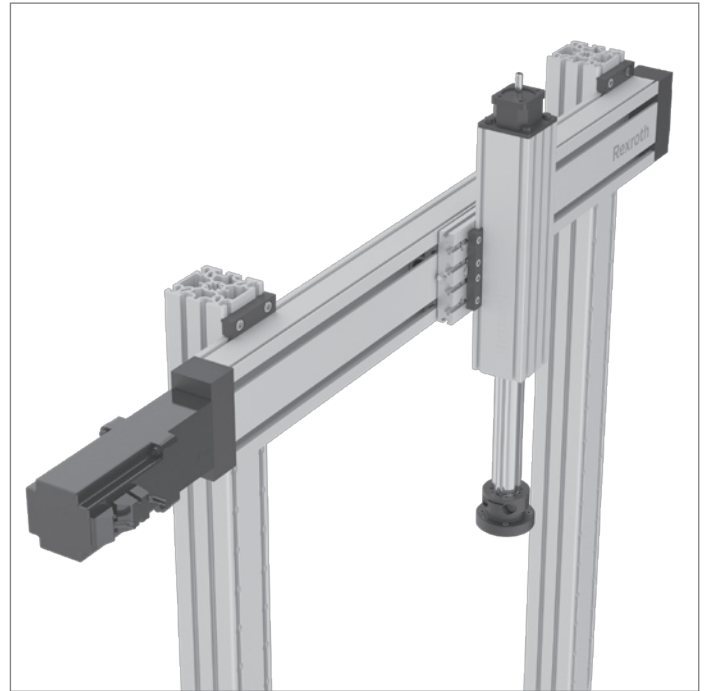
Rexroth offers multiple options for fastening axis systems to a base frame.

Strut profiles for constructing all kinds of frames, feet for simple fastening to the base frame

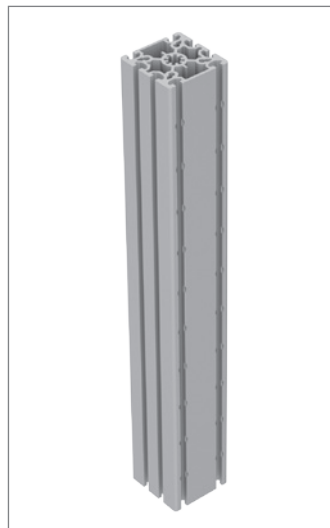




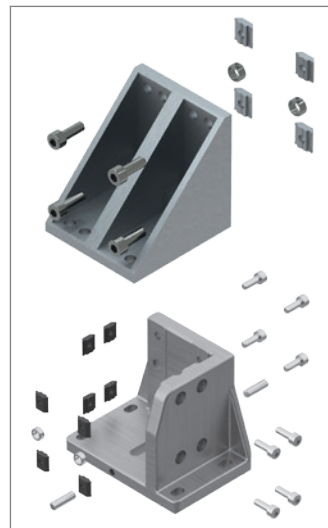
End-face attachment of the linear motion system



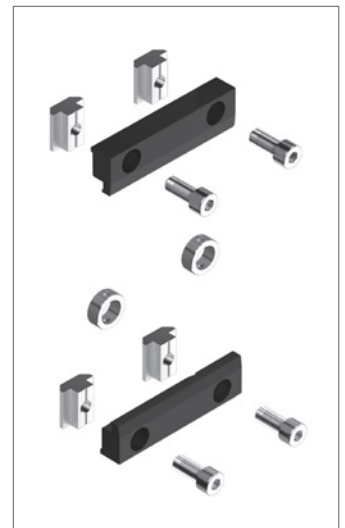
Side mounting of the linear motion system


Strut profile:

- ▶ Space-saving and rigid design
- ▶ Positive-locking connection (centering rings)
- ▶ Compatible with Basic Mechanical Elements (MGE) from Rexroth, profile size PB 30 and PB 45

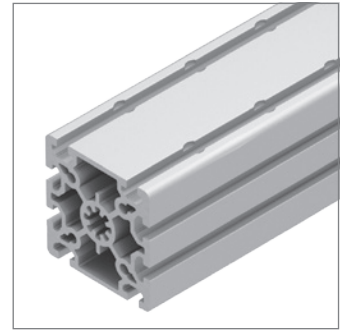

Foot:

- ▶ Simple connection of strut profile to base frame
- ▶ Positive-locking connection (centering rings)
- ▶ Compatible with Basic Mechanical Elements (MGE) from Rexroth, profile size PB 30, PB 40 and PB 45


Connection kit:

- ▶ Direct mounting
- ▶ Positive-locking connection (centering rings)
- ▶ No alignment necessary
- ▶ minimized installation effort

- Aluminum profile, clear anodized
- Space-saving and rigid design
- Standardized modular dimensions/spacing
- Positive-locking connection (centering rings)
- Compatible with Basic Mechanical Elements (MGE) from Rexroth



2 for sliding block 8 mm

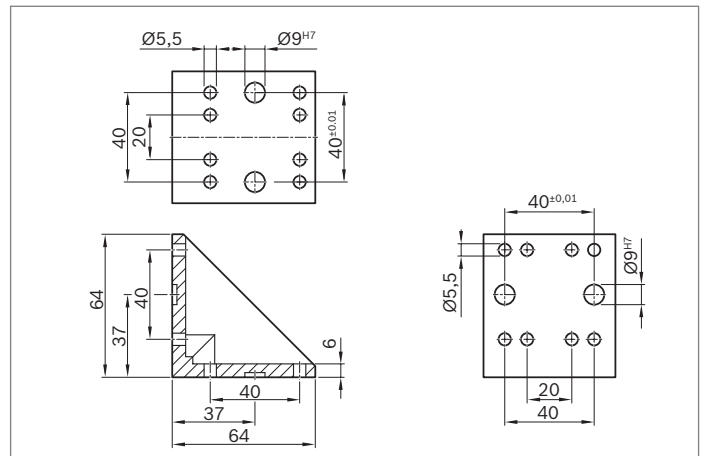
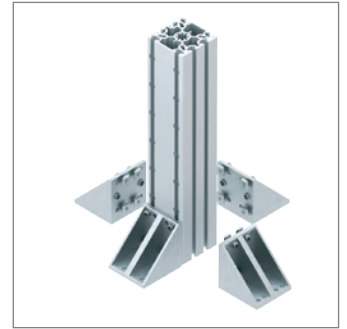
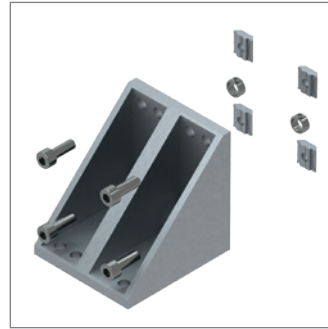
Strut profile	Profile nominal dimension	Part number	Length	m	Planar moment of inertia $I_x = I_y$
	Strut profile		L_{max} (mm)	variable	(kg) (kg/m) (cm ⁴)
60 x 60	60	R037531036	4000		15.6 48.6
		R037531037		○ 3.9	
90 x 90	90	R037541030	4000		31.2 230.0
		R037541032		○ 7.8	

Foot for profile size 60 x 60

Simple connection of strut profile to base frame
Compatible with Basic Mechanical Elements (MGE)
from Rexroth, profile size PB 20 and PB 40

Scope of supply

Foot angle bracket (material: Al), sliding blocks, screws,
centering rings



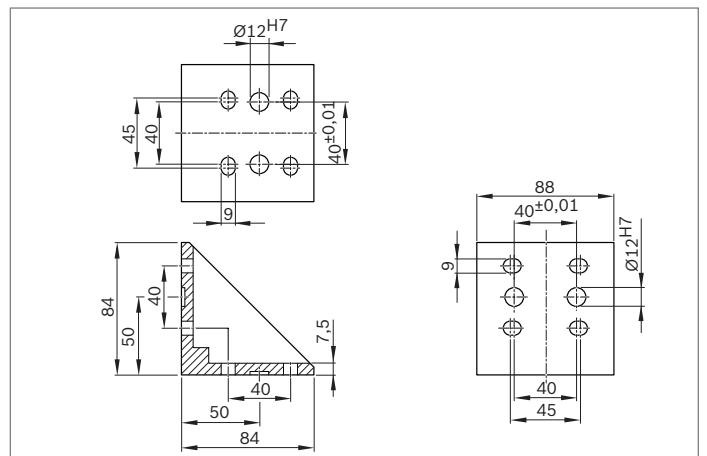
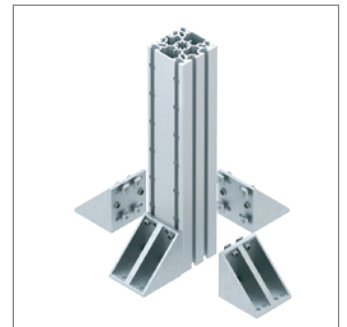
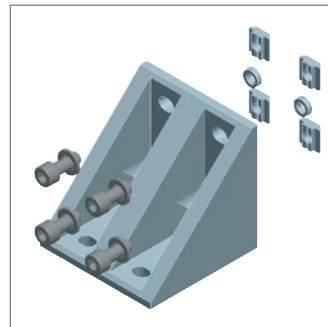
Part number	m
	(kg)
R037530013	0.21

Foot for profile size 90 x 90

Simple connection of strut profile to base frame
Compatible with Basic Mechanical Elements (MGE)
from Rexroth, profile size PB 40 and PB 45

Scope of supply

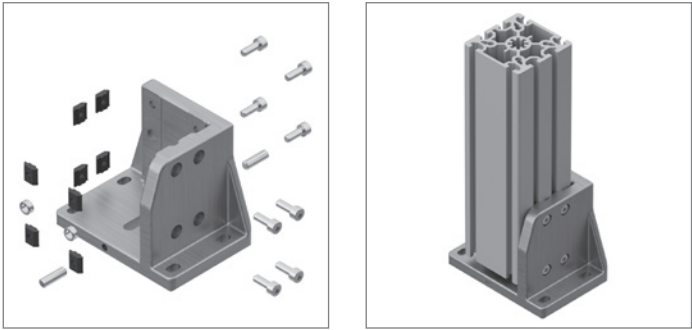
Foot angle bracket (material: Al), sliding blocks, screws,
centering rings



Part number	m
	(kg)
R037540013	0.71

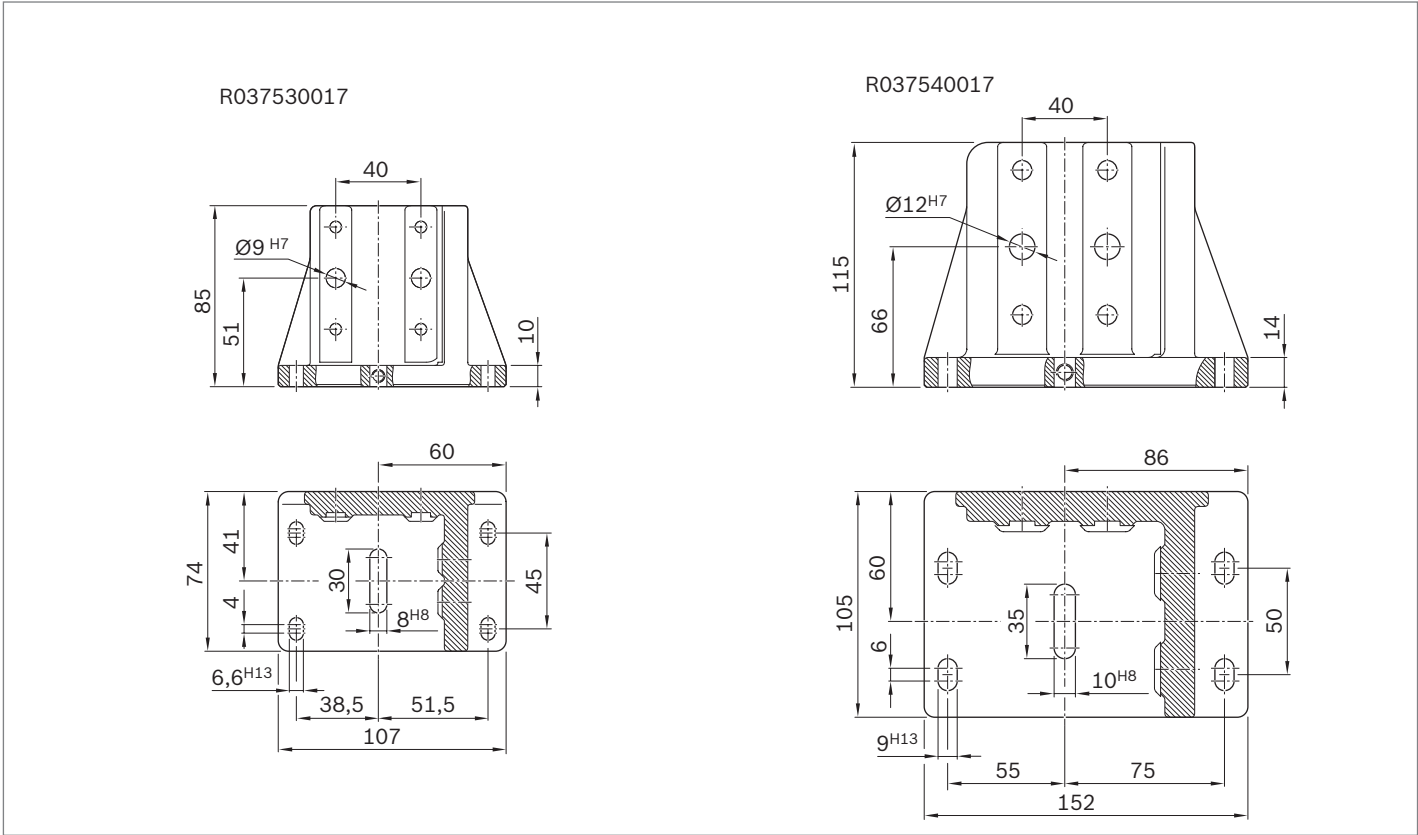
Foot (with webs), adjustable version

Simple connection of strut profile to base frame.
Adjustable in one axial direction.
The base of the adjustable foot can be aligned in one axial direction. The foot has a groove milled along the centerline of its base (8^{H8} for profile 60 x 60 and 10^{H8} for profile 90 x 90). The groove has been widened at each end and provided with threads. Using the pins provided, the foot can be aligned to any required elements at the installation location, such as a key or locating pin.



Scope of supply

Foot (material: Al), sliding blocks, screws, centering rings



Foot	Part number	m (kg)
For profile 60 x 60	R037530017	0.6
For profile 90 x 90	R037540017	1.6

Strut Profile – Linear Motion System

Direct connection

Side mounting of modules

Direct mounting

Positive-locking connection (centering rings)

No alignment necessary

Minimizes installation effort

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

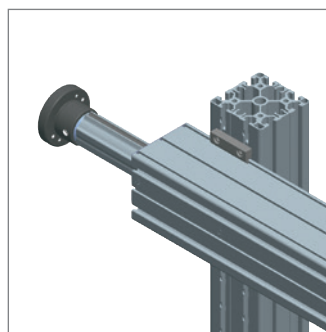
Components	Guideway option	Carriage option
CKK, CKR	mounting-dependent	any

Frame travels

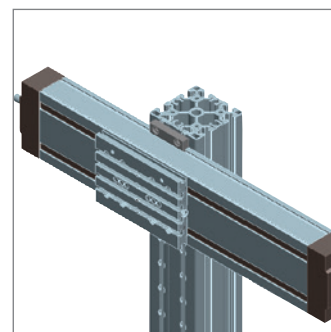
Components	Guideway option	Carriage option
CKK, CKR	any	“41” / “09”

Scope of supply

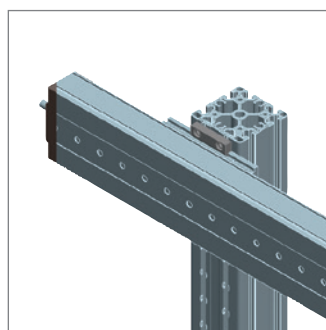
Clamping fixtures (material: Al), sliding blocks, screws, centering rings



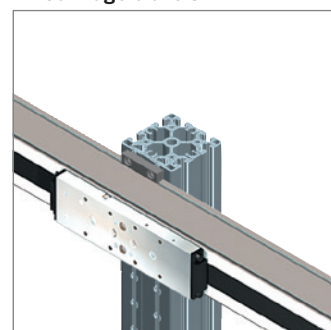
▲ Feed Module VKK



▲ Compact Module CKx – Carriage travels



▲ Compact Module CKx – Frame travels



▲ Linear Module MKx



Connection kit

Profile nominal dimension, linear motion system	Linear motion system	Profile nominal dimension, profile	Profile	Part number
40	MKK/MKR -040	60	Strut profile 60	R039120232
50	VKK -050	60	Strut profile 60	R039120232
70	CKK/CKR -070	60	Strut profile 60	R039120232
	VKK -070	90	Strut profile 90	R039120142
90	CKK/CKR -090	60	Strut profile 60	R039120233
		90	Strut profile 90	R039120141
100	VKK -100	90	Strut profile 90	R039120143
110	CKK/CKR -110	90	Strut profile 90	R039120142
145	CKK/CKR -145	90	Strut profile 90	R039120143

Strut Profile – Linear Motion System

End-face connection

- Positive-locking connection (centering rings)
- No alignment necessary
- Minimizes installation effort

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

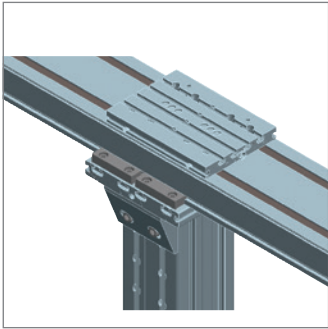
Components	Guideway option	Carriage option
CKK, CKR	mounting-dependent	any

Frame travels

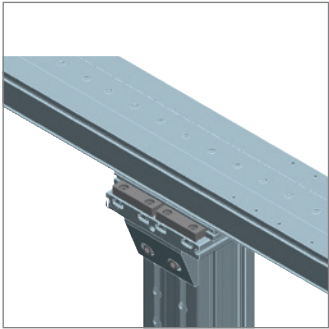
Components	Guideway option	Carriage option
CKK, CKR	any	“41” / “09”

Scope of supply

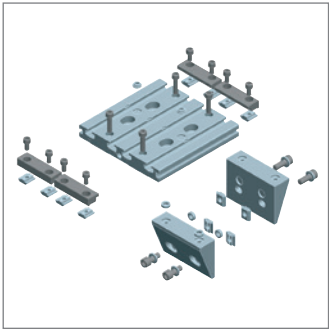
- Plate (material: Al), angle bracket, clamping fixtures (material: Al), sliding blocks, screws, centering rings

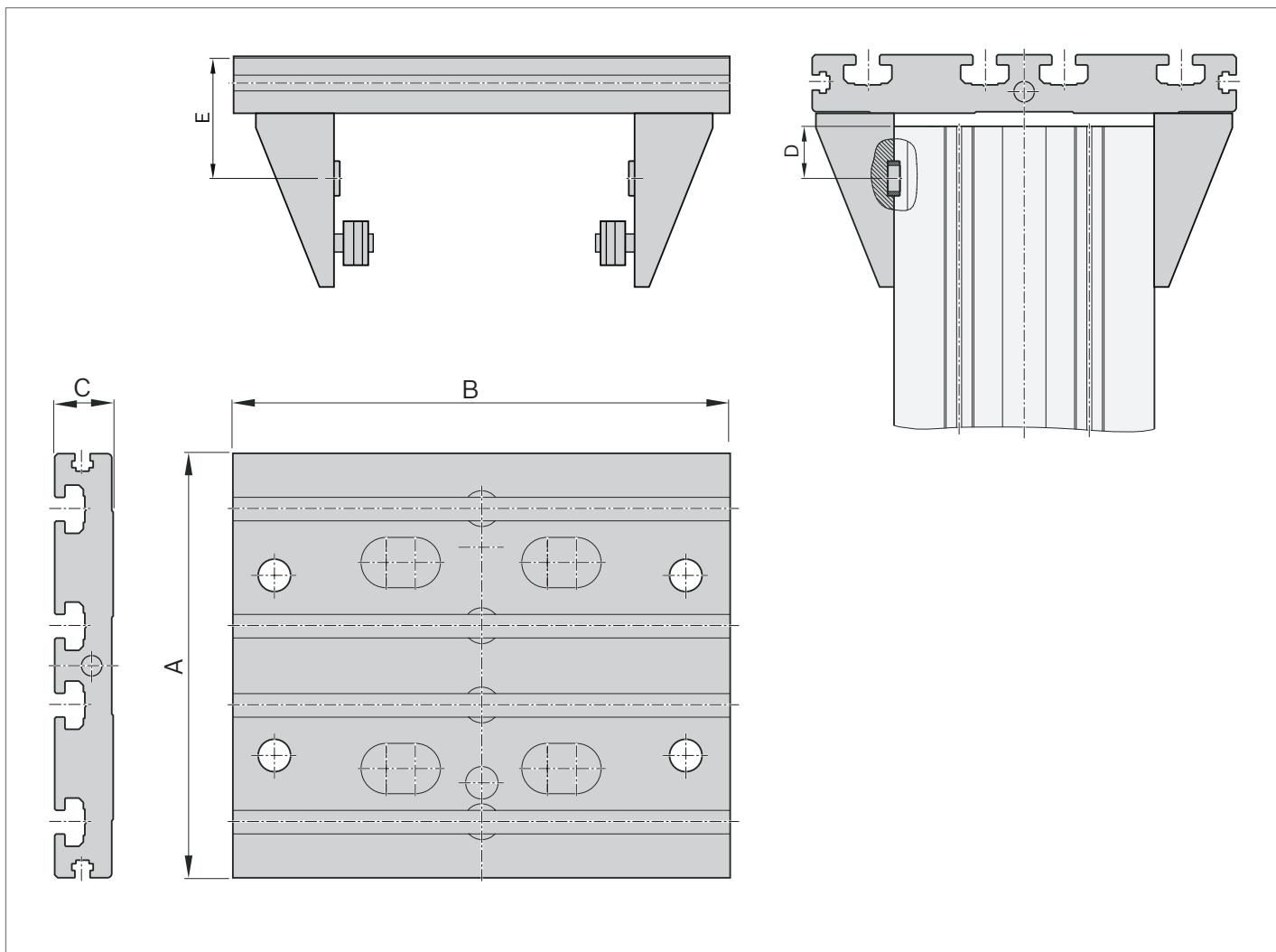


▲ Carriage travels



▲ Frame travels





Connection kit

Profile nominal dimension	Linear motion system	Profile nominal dimension	Strut profile	Part number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	m (kg)
40	MKK/MKR -040	60	60	R037520012	90	115	16	min. 7/max. 12	30.0	0.7
		90	90	R037520005	145	145	20	min. 9/max. 22	42.5	1.6
50	VKK -050	60	60	R037520012	90	115	16	min. 7/max. 12	30.0	0.7
		90	90	R037520005	145	145	20	min. 9/max. 22	42.5	1.6
70	CKK/CKR -070	60	60	R037520012	90	115	16	min. 7/max. 12	30.0	0.7
		90	90	R037520005	145	145	20	min. 9/max. 22	42.5	1.6
	VKK -070	60	60	R037540012	90	115	16	min. 7/max. 12	30.0	0.7
		90	90	R037540005	145	145	20	min. 9/max. 22	20.0	1.5
90	CKK/CKR -090	60	60	R037530012	90	115	16	min. 7/max. 12	30.0	0.7
		90	90	R037530005	145	145	20	min. 9/max. 22	20.0	1.5
100	VKK -100	90	90	R037550005	145	180	20	min. 9/max. 22	20.0	1.8
110	CKK/CKR -110	90	90	R037540005	145	145	20	min. 9/max. 22	20.0	1.6
145	CKK/CKR -145	90	90	R037550005	145	180	20	min. 9/max. 22	20.0	1.8

MGE (Basic Mechanical Elements) – Linear Motion System

Direct connection

Designed for aluminum profiles from the MGE range with a modular dimension of 40 and 50 mm and a 10 mm T-slot

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

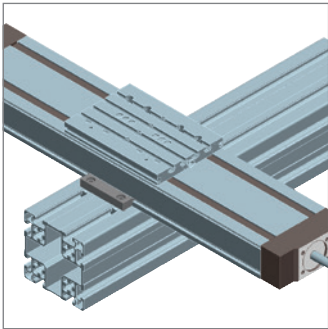
Components	Guideway option	Carriage option
CKK, CKR	mounting-dependent	any

Frame travels

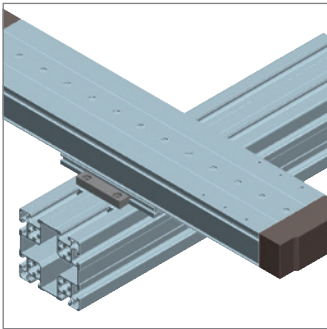
Components	Guideway option	Carriage option
CKK, CKR	any	“41” / “09”

Scope of supply

Clamping fixtures (material: Al), screws, sliding blocks



▲ Carriage travels



▲ Frame travels



Connection kit

Profile nominal dimension	Linear motion system	Profile nominal dimension	Profile	Part number
40	MKK/MKR -040	40	MGE profile 40	R039120236
50	VKK -050	40	MGE profile 40	R039120236
65	MKK/MKR -065	50	MGE profile 50	R039120086
70	VKK -070	40	MGE profile 40	R039120085
		50	MGE profile 50	R039120084
	CKK/CKR -070	40	MGE profile 40	R039120236
80	MKK/MKR -080	40	MGE profile 40	R039120087
	MLR -080	50	MGE profile 50	R039120086
90	CKK/CKR -090	40	MGE profile 40	R039120083
		50	MGE profile 50	R039120082
100	VKK -100	40	MGE profile 40	R039120085
		50	MGE profile 50	R039120084
110	CKK/CKR -110	40	MGE profile 40	R039120085
		50	MGE profile 50	R039120084
	MKK/MKR -110	40	MGE profile 40	R039120089
	MLR -110	50	MGE profile 50	R039120088
145	CKK/CKR -145	40	MGE profile 40	R039120085
		50	MGE profile 50	R039120084
	MKK/MKR -145	50	MGE profile 50	R039120090
165	MKK/MKR -165	50	MGE profile 50	R039120091

MGE (Basic Mechanical Elements) – Linear Motion System

Connection via plate

Designed for aluminum profiles from the MGE range with a modular dimension of 40, 45 and 50 mm and a 10 mm T-slot

For this connection, the appropriate order options must be selected when configuring the Compact Modules, see Compact Modules catalog, “Configuration and Ordering” section.

Carriage travels

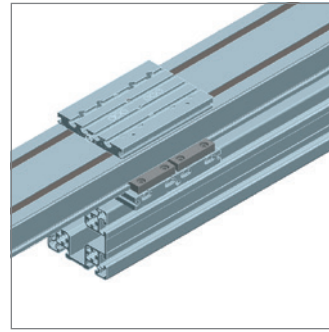
Components	Guideway option	Carriage option
CKK, CKR	mounting-dependent	any

Frame travels

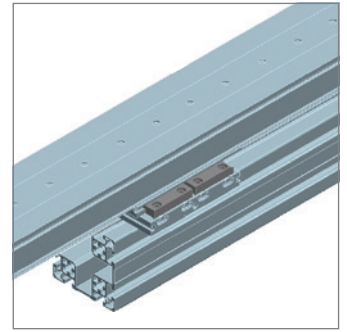
Components	Guideway option	Carriage option
CKK, CKR	any	“41” / “09”

Scope of supply

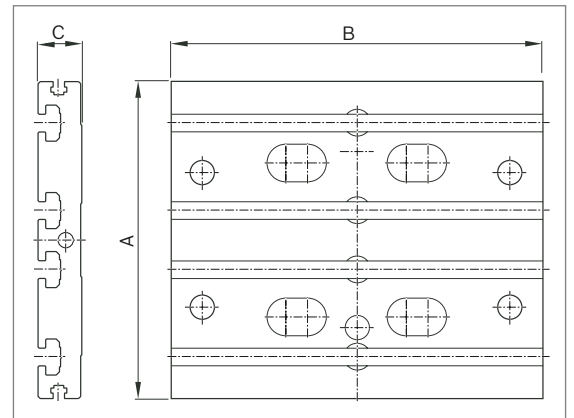
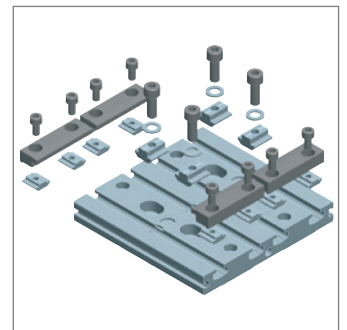
Plate (material: Al), clamping fixtures (material: Al), screws, sliding blocks, centering rings



▲ Carriage travels



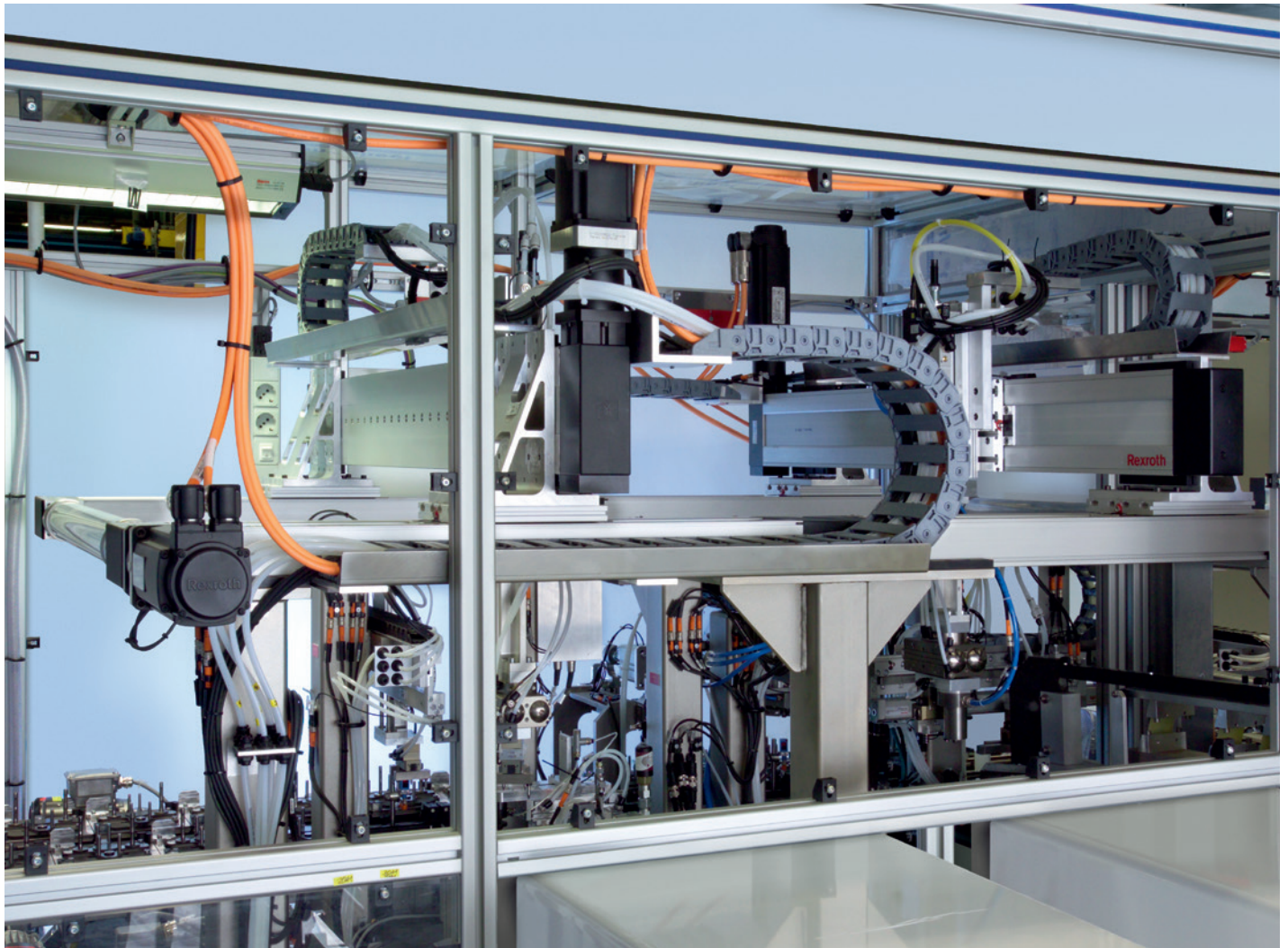
▲ Frame travels



Profile nominal dimension	Linear motion system	Profile nominal dimension	Profile	Part number	A (mm)	B (mm)	C (mm)	m (kg)
70	CKK/CKR -070, MKK/MKR -040, VKK -050	40	MGE profile 40	R039120237	90	115	16	0.5
		45	MGE profile 45					
		50	MGE profile 50					
90	CKK/CKR -090	40	MGE profile 40	R039120191	145	145	20	1.1
		45	MGE profile 45					
		50	MGE profile 50					
110	CKK/CKR -110, VKK -070	40	MGE profile 40	R039120192	145	145	20	1.2
		45	MGE profile 45					
		50	MGE profile 50					
145	CKK/CKR -145, VKK -100	40	MGE profile 40	R039120193	145	180	20	1.4
		45	MGE profile 45					
		50	MGE profile 50					

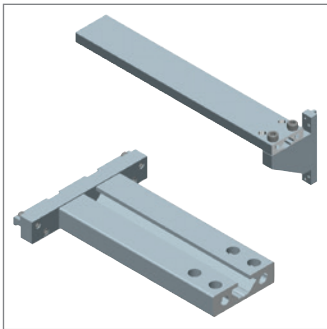
Cable drag chains

Rexroth offers a complete system solution to cover many applications areas: Cable drag chains, guide channels, and clamping profiles that can be combined at will to produce the desired configuration.

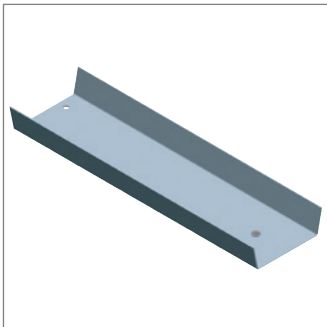


Cable drag chains, System MP in ESD design

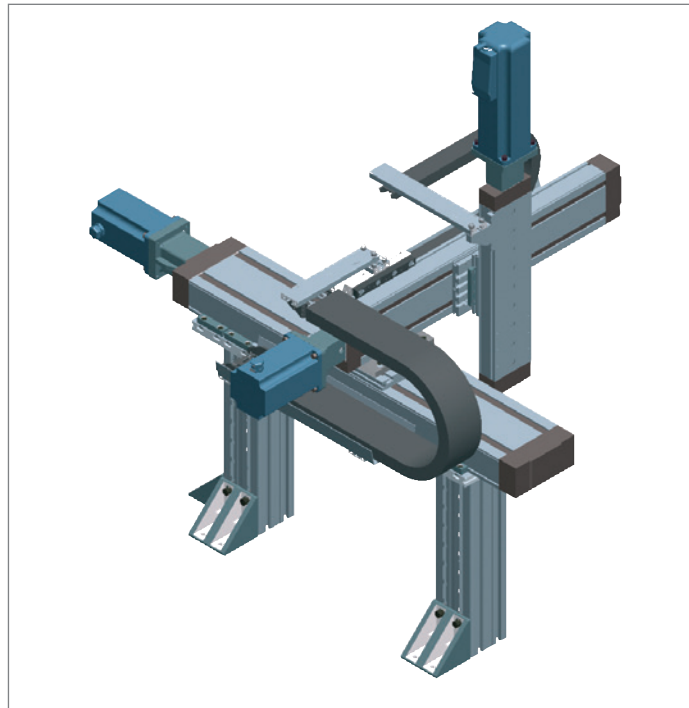
- ▶ Cable drag chains in 2 types with 3 sizes each
- ▶ Pre-tensioned
- ▶ Suitable for self-supporting installation
- ▶ Generally ESD-compatible
- ▶ Different number of separators, depending on the size
- ▶ Chain brackets complete with screws and sliding blocks
- ▶ Guide channels in corrosion-resistant steel sheet



▲ Clamping profiles



▲ Guide channels for cable drag chains

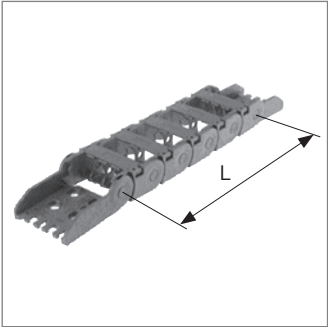


▲ Cable drag chains

Cable drag chain

System MP18.2

Radius 78 mm
 Pitch 33 mm
 Separators are installed at every 2nd chain link
 Ordering data: R039170001, 825 mm (25 chain links of 33 mm each)



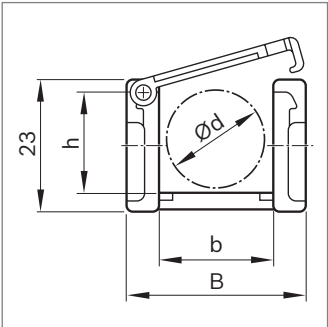
L = multiple of 33 mm pitch

Cable drag chain				Part number	No. of separators
Type	B (mm)	b x h (mm)	Ød (mm)		Every 2nd chain link
ESD-MP18025	38	25 x 18	max. 15	R039170000	1
ESD-MP18050	63	50 x 18	max. 15	R039170001	2
ESD-MP18070	83	70 x 18	max. 15	R039170002	3

Technical specifications

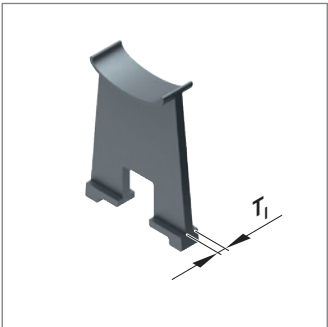
Travel distance, gliding	L _g	not recommended
Travel distance, self-supporting	L _f	see diagram
Travel distance, vertical, hanging	L _{vh}	8.0 m
Travel distance, vertical, upright	L _{vs}	3.0 m
Rotated 90°, unsupported	L _{90f}	0.5 m
Speed, unsupported	V _f	5.0 m/s
Acceleration, unsupported	a _f	5.0 m/s ²

Loading side: Inside flexure curve



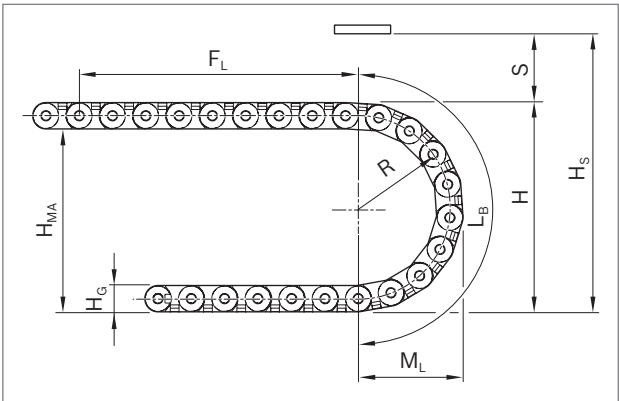
Separator

Type	T _I (mm)
TR14/18	1.5



Installation dimensions

Dimensions		(mm)
Radius	R	78
Height of chain link	H _G	23
Height of bend	H	179
Height of moving end connection	H _{MA}	156
Safety margin	S	30
Installation height	H _S	209
Arc projection	M _L	123
Bend length	L _B	314



Chain bracket

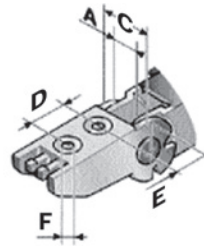
(included with the cable drag chain)

Scope of supply

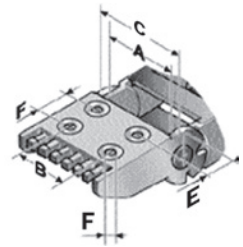
1 piece with bore, 1 piece with pivot pin screws
and sliding blocks

The chain brackets must be fastened using the included
screws. The cables or hoses must be fixed to the chain
bracket's integrated strain relief using cable binders.

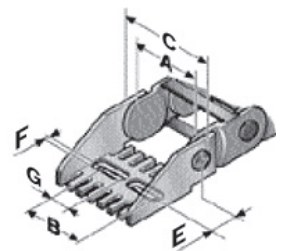
MP18025



MP18050/18070



MP3000



Chain type	Chain bracket	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
MP18025	KA/Z 18025	25.4	–	37	19	8.5	Ø 5.5	–
MP18050	KA/Z 18050	50.4	34	62	19	10.5	Ø 5.5	–
MP18070	KA/Z 18070	70.4	48	82	19	10.5	Ø 5.5	–
MP3002	KA/Z 3002	37.0	30	55	–	31.5	Ø 6.5	7.5
MP3003	KA/Z 3003	62.0	62	80	–	31.5	Ø 6.5	18.5
MP3005	KA/Z 3005	101.0	94	119	–	31.5	Ø 6.5	18.5

Technical data

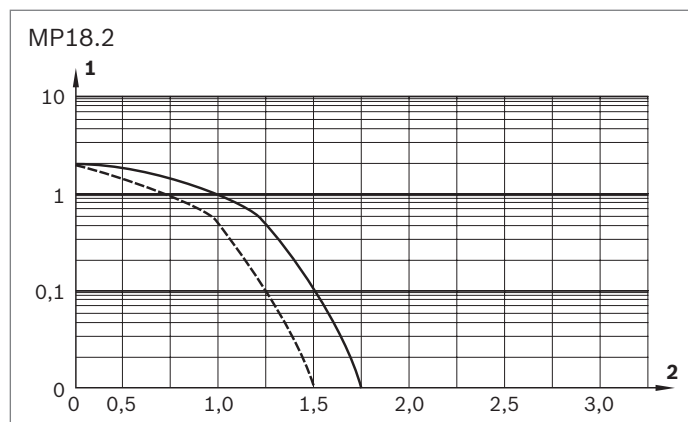
Unsupported length

F_{Lg} :

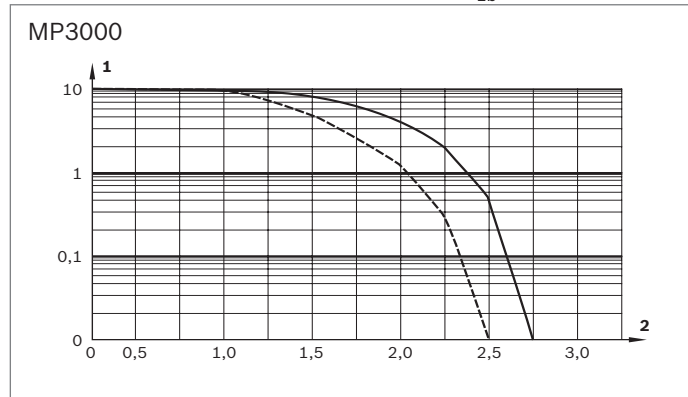
Ideal installation situation for high loads at the limit of the max. travel parameters. In this range the chain upper run is still biased, straight or has a max. sag of 10 – 50 mm depending on the type of chain.

F_{Lb} :

Satisfactory installation position for many applications working in the lower to middle range of the max. travel parameters. Depending on the chain type, the sag of the chain upper run is > 10 – 50 mm but less than the max. sag. If the sag is greater than F_{Lb} , the arrangement is unsuitable and should be avoided. Please choose a more stable cable drag chain.



1 Load (kg/m) ——— F_{Lg}
 2 Self-supporting length (m) - - - - F_{Lb}



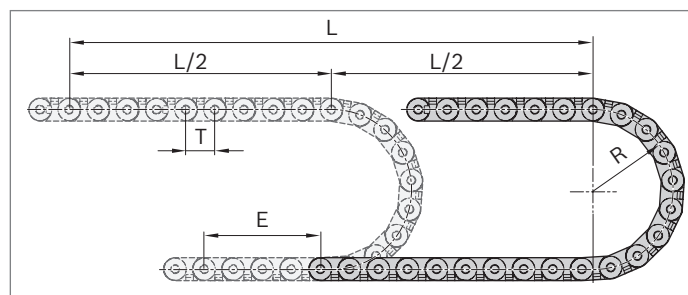
Determining the chain length

The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

$$L_K = \frac{L}{2} + \pi \cdot R + 2 \cdot T + E$$

MP18.2: ~ 1 m chain: 30 x 33 mm links

MP3000: ~ 1 m chain: 22 x 45 mm links



L_K = Chain length (mm)
 L = Travel distance (mm)
 R = Radius (mm)
 T = Pitch (mm)
 E = Distance between entry point and middle of travel distance (mm)

Guide channels

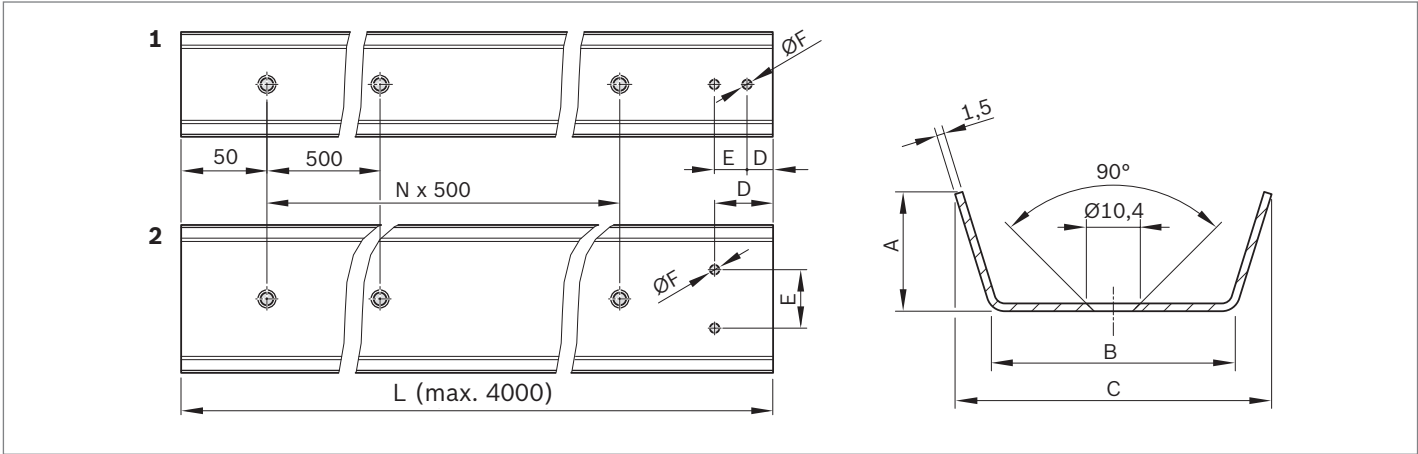
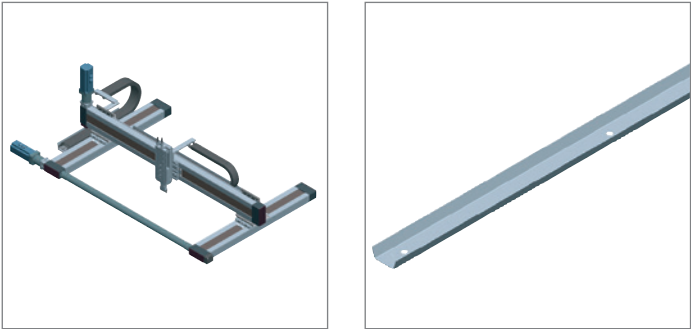
For cable drag chains

The guide channels are matched to the cable drag chains. For short travel distances they serve as a support for stacking the links and for long travel distances they also serves as guides. To minimize chain wear, stainless steel sheet was chosen as the material for the guide channels.

The mounting holes for the chain bracket are already integrated in the guide channel.

The guide channel has holes drilled at 500 mm intervals along the centerline for M5 countersunk screws.

It comes complete with the necessary countersunk screws and sliding blocks.



Version for chain type:

1 MP18025

2 MP18050, MP18070, MP3002, MP3003, MP3005

Chain type	Guide channel	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Part number (variable length)
MP18025	Chain guide for MP18025	23	47	61	15	19	Ø 5.5	R039170006
MP18050	Chain guide for MP18050	23	72	86	34	34	Ø 5.5	R039170007
MP18070	Chain guide for MP18070	23	92	106	34	48	Ø 5.5	R039170008
MP3002	Chain guide for MP3002	35	70	84	12.5	25	Ø 6.6	R039170009
MP3003	Chain guide for MP3003	35	95	109	12.5	45	Ø 6.6	R039170010
MP3005	Chain guide for MP3005	35	134	148	12.5	85	Ø 6.6	R039170011

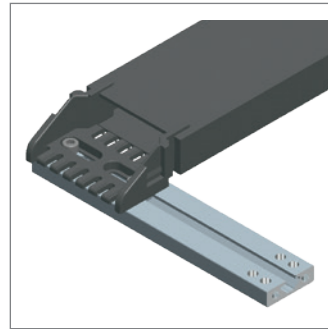
Attachment of cable drag chains

The following standardized interfaces were designed to facilitate connection of the cable drag chain or guide channel in a variety of ways. By combining these standard elements, it is possible to accommodate almost any desired connection configuration.

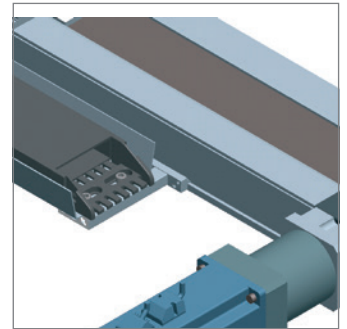
Cable drag chain node point

Scope of supply

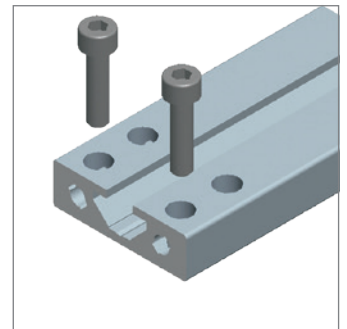
Profile (1x), socket head cap screws M6 (2x), sliding block M6 (2x), Screw DIN 7500 M5x25 (2x)



▲ Attachment of cable drag chains

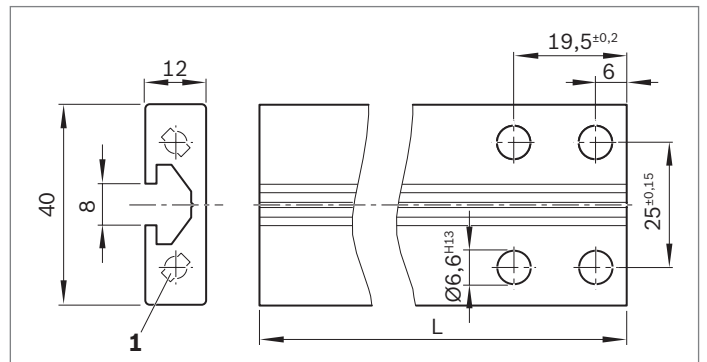


▲ Attachment of cable drag chain with guide channel



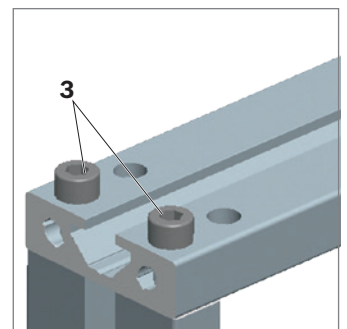
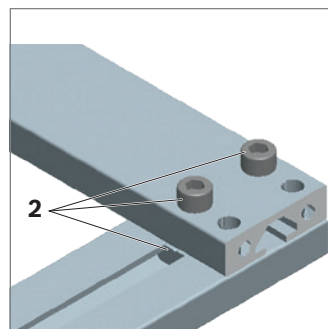
Profile (mm)	Length (mm) Variable	Part number	m (kg) (kg/m)
12x40	200	R039170012	0.18
	○	R039170013	0.90

1 For self-tapping screws M5



Examples

Any standard small parts not used must be disposed of appropriately!



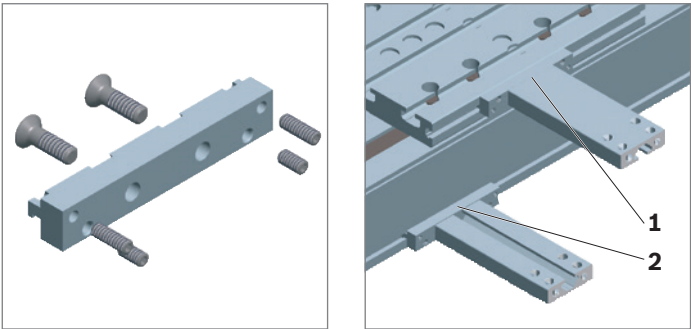
2 Screws M6x20, sliding blocks N8M6

3 Screws DIN7500 M5x25

Linear motion system node point

Scope of supply

Clamping profile (1x), countersunk screws per DIN 7500 M5 (2x), set screws (4x)



1 Attachment to the connection plate

Linear motion system	Profile nominal dimension	Part number
CKK/CKR	70	R039170014
	90	R039170014
	110	R039170015
	145	R039170015

2 Attachment to the frame

Linear motion system	Profile nominal dimension	Part number
CKK/CKR	70	R039170033
	90	R039170014
	110	R039170015
VKK	50	R039170033
	70	R039170015
	100	R039170015
MKK/MKR	40	R039170033

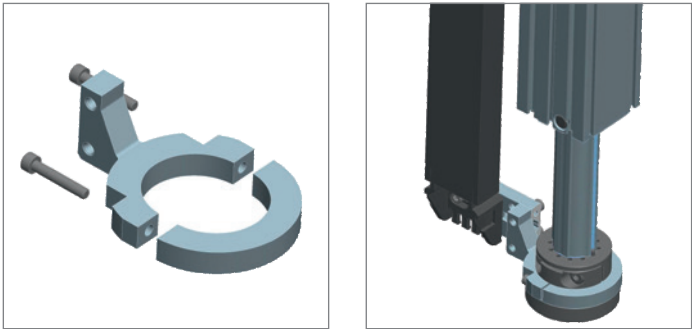
Examples



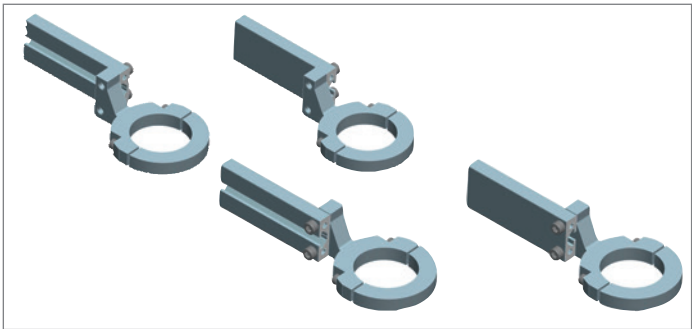
VKK node point

Scope of supply
Split clamp, screws (2x)

Part number	m (kg)
R039170019	0.12

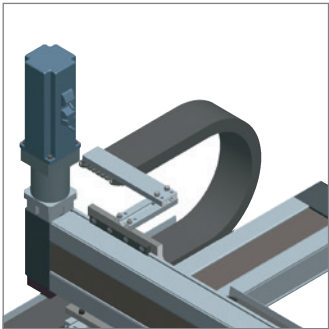
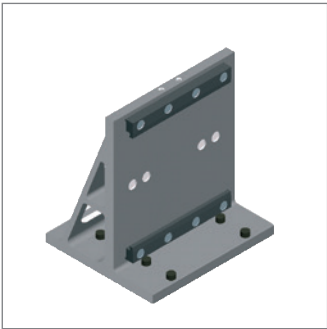


Examples



Angle node point

The threads in the end face are spaced so that the profile can be attached using the included screws without any further preparation.

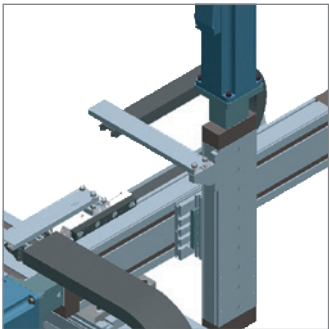
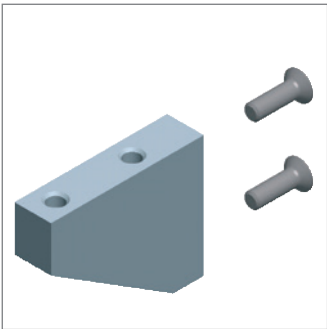


Angle bracket node point

Scope of supply

Bracket (1x), countersunk screws M5 (2x)

Part number
R039170017

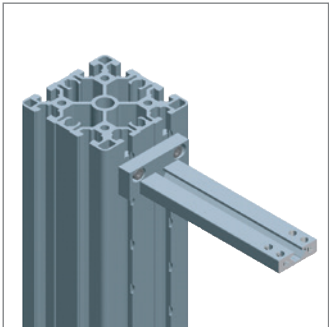
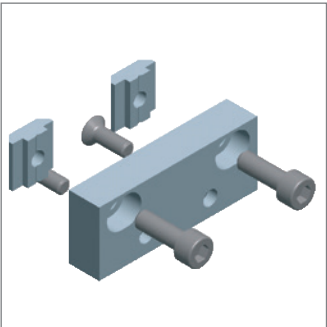


Strut node point

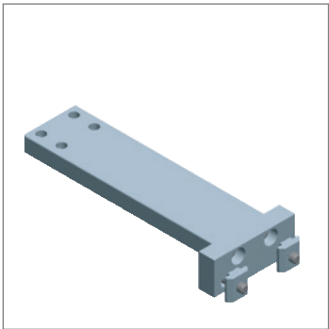
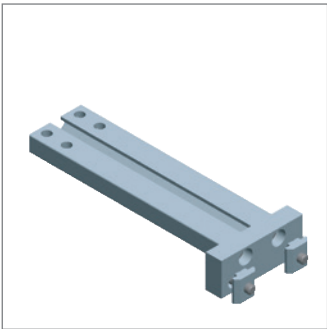
Scope of supply

Clamping profile (1x), socket head cap screws (2x), sliding blocks (2x), countersunk screws M5 per DIN 7500 (2x)

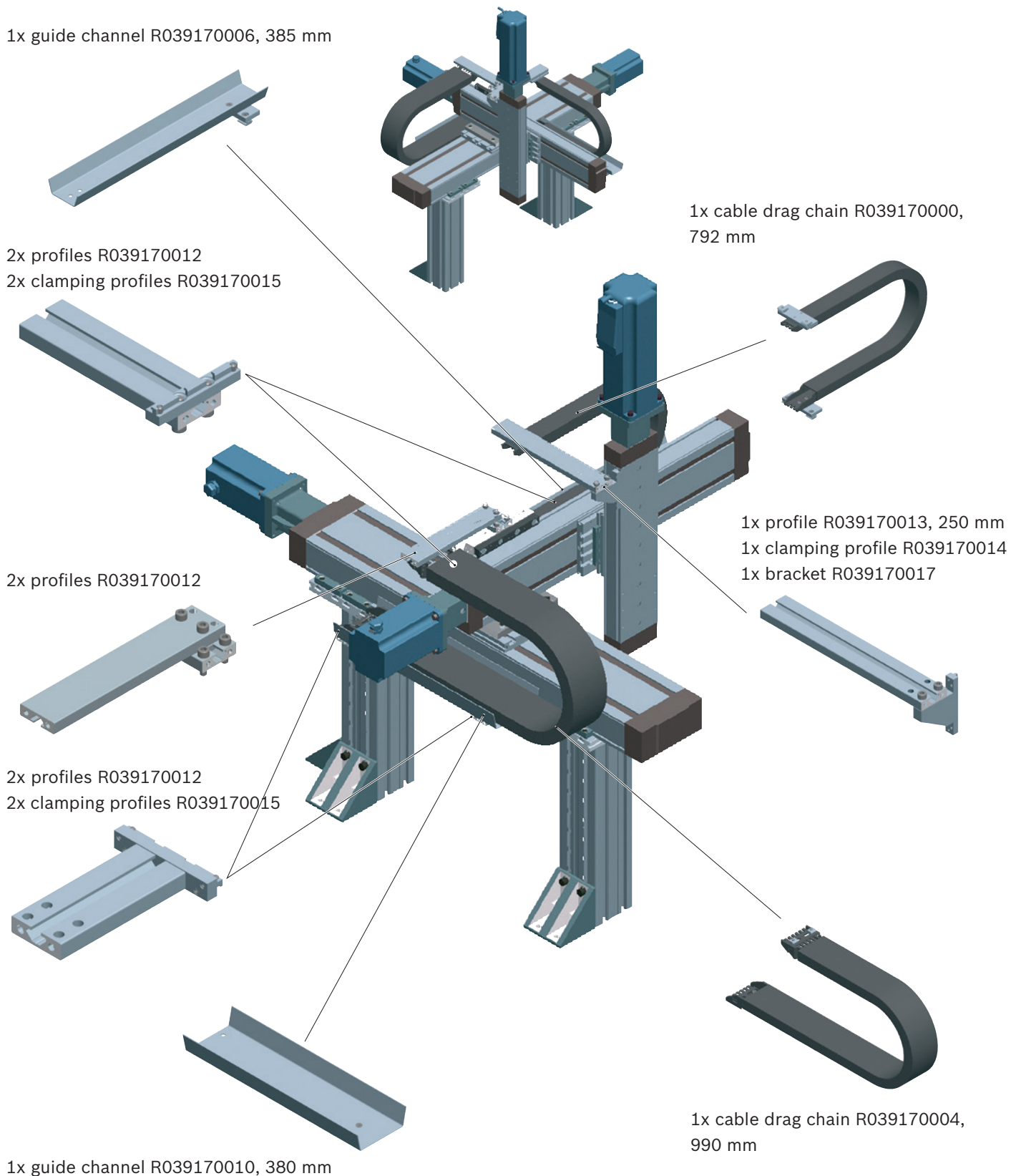
Strut profile	Part number
60	R039170032
90	R039170016



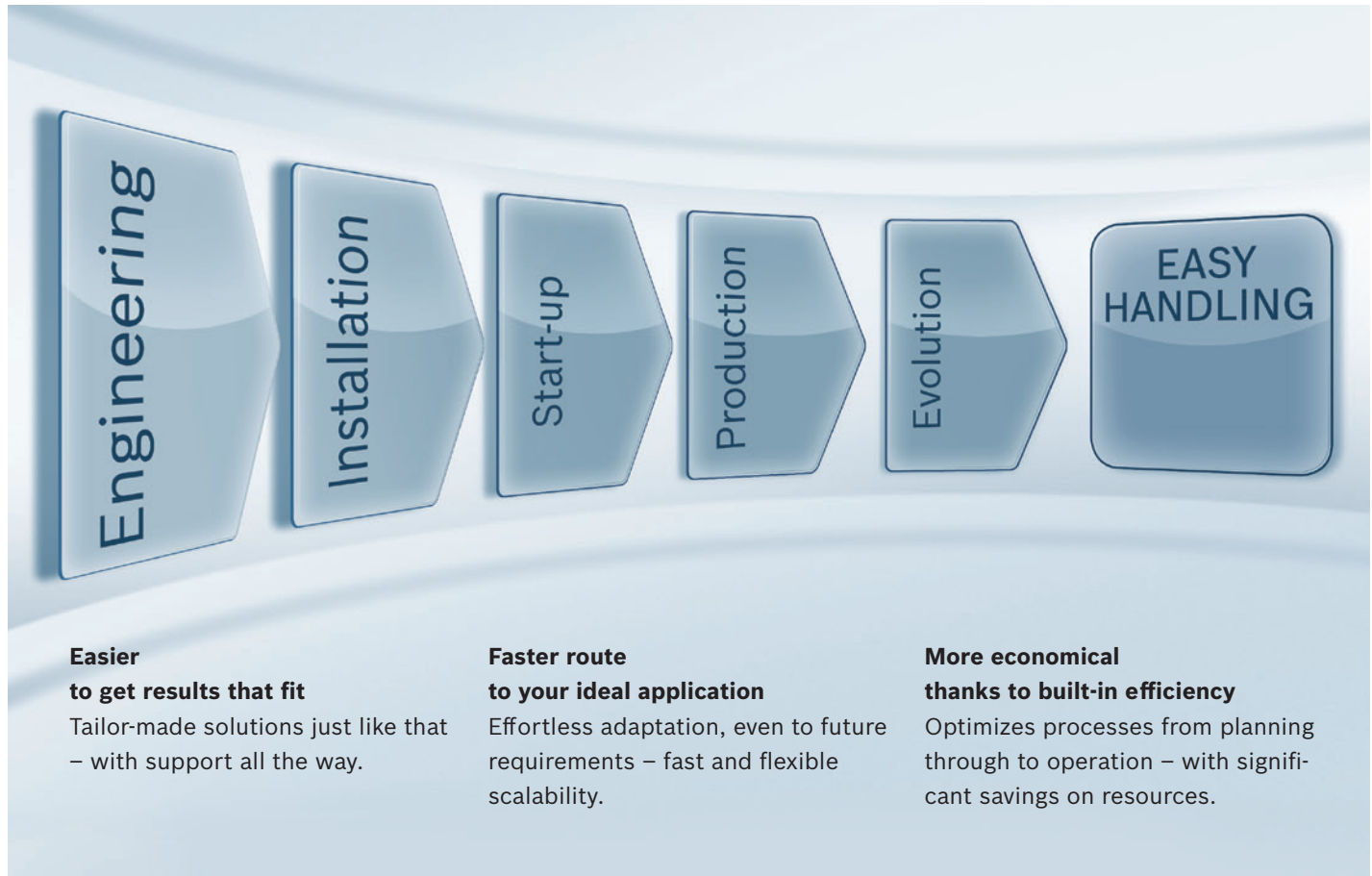
Examples



Ordering examples



EasyHandling – Easier. Faster. More Economical.



Planning – up to 70% faster

EasyHandling tools help users right from the component selection stage – by proposing solutions with all the necessary information on parts lists, technical data and CAD drawings.

Installation – saves up to 60% on time

Thanks to positive-locking interfaces, the mechanical components are perfectly aligned and accurately connected right away.

Start-up – reduces your effort by up to 90%

With the smart start-up assistant EasyWizard, parameterization and configuration take no time at all. Your handling system will be ready to go in just a few clicks.

Production – more economical and more efficient

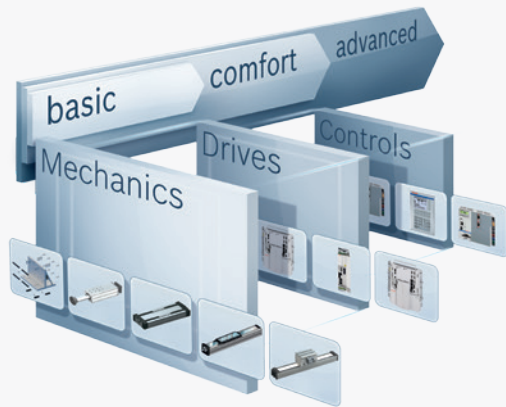
Rexroth enhances the system effectiveness still further with smart application tools: The drive controller software sends maintenance-related messages to the user based on operating hours and travel to help schedule servicing at the right intervals. The result: longer life and reduced risk of failure.

Future developments – continuous improvement

Prepare now for future market developments: One of the great features of EasyHandling systems is their openness. The flexibility of the mechanical and electrical components allows you to adapt quickly and efficiently to new production requirements.

EasyHandling – more than just a building system

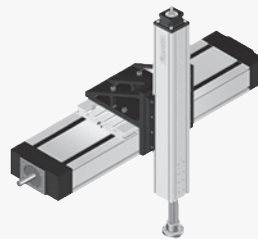
The modular system concept for perfect scalability



basic – made-to-measure mechanics

EasyHandling basic includes all mechatronic components for complete, custom **single and multiaxis linear motion systems**.

All of the component interfaces are systematically standardized, making it possible to combine them with ease. Practical tools and aids make selection and configuration even easier.



EasyHandling



comfort – get off to a faster start

EasyHandling comfort expands the basic component range by adding **powerful servo drives with multiple protocol capability**. The universal, smart control units are ideally suited for a variety of handling tasks. Unique: with the **EasyWizard start-up assistant**, linear motion systems are ready to use after entering just a few product-specific parameters.



EasyHandling



advanced – controls for demanding requirements

With its **individually scalable, high-performance Motion Logic solution**, EasyHandling advanced makes configuration and handling even easier. Predefined functions covering more than 90 percent of all handling applications eliminate the need for lengthy programming.



EasyHandling



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