



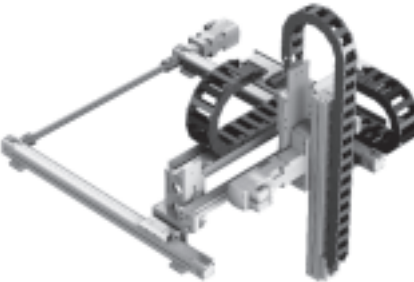
- Modular
- Simple and time-saving project engineering
- Fast system assembly

Multi-axis modular system

Key features



The concept		
The multi-axis modular system for handling and assembly technology includes basic, connection and installation components for assembling multi-axis systems. These standardised axis combinations are the product of over ten years experience in the designing	of handling systems. The concept of the multi-axis modular system is based on a modular design with axis modules along the X-, Y- and Z-axes. These modules all have the same interfaces, which means they can be combined together.	Standard solutions with specifications on stroke, working load and intermediate positions offer practical module combinations. The advantages of this modularity are as follows: • Simple and time-saving project engineering • Fast system assembly • Availability of CAD data for standard designs

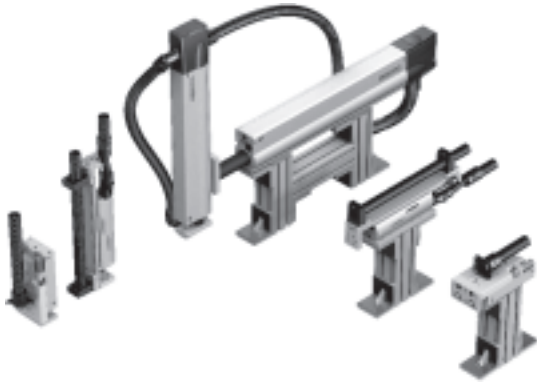
Selection matrix		
Pick & place	Linear gantries	3-Dimensional gantries
Pneumatic	Pneumatic/electrical	
 → 5 / 3.3-40	 → 5 / 3.3-58	 → 5 / 3.3-72
Pneumatic with end position controller SPC11 (Soft Stop)		
	 → 5 / 3.3-58	
Electrical with spindle or toothed belt axis		
	 → 5 / 3.3-58	 → 5 / 3.3-72

Multi-axis modular system

Key features

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Pick & place



Linear gantries



3-Dimensional gantries

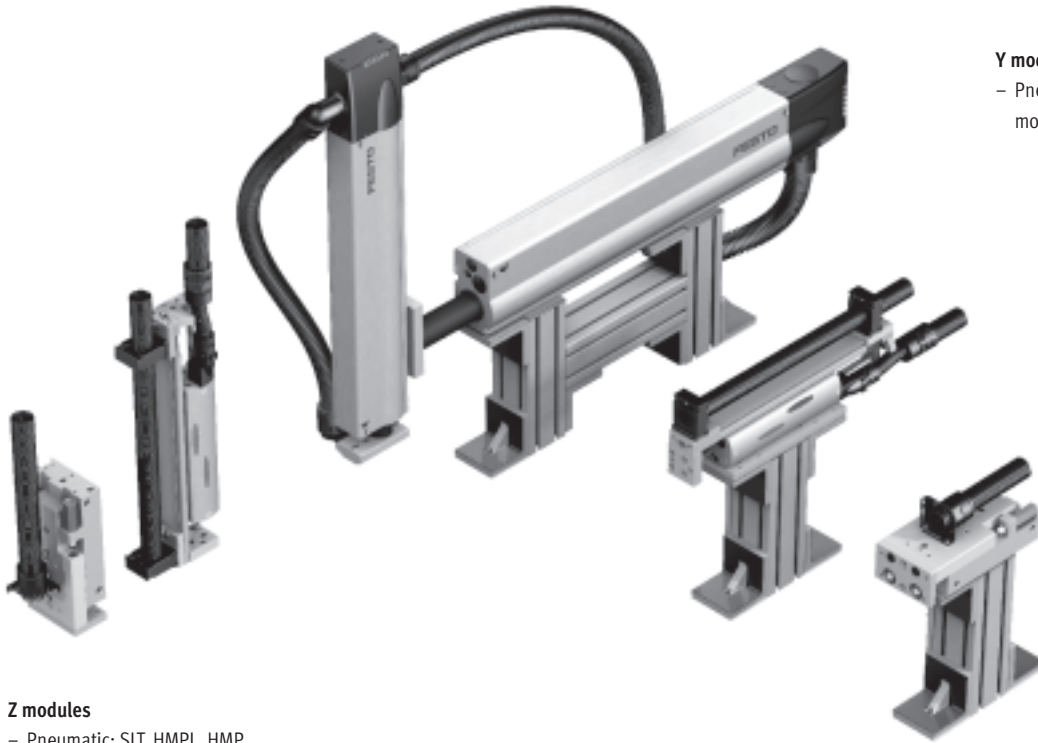


Pick & place

Key features

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Y and Z modules



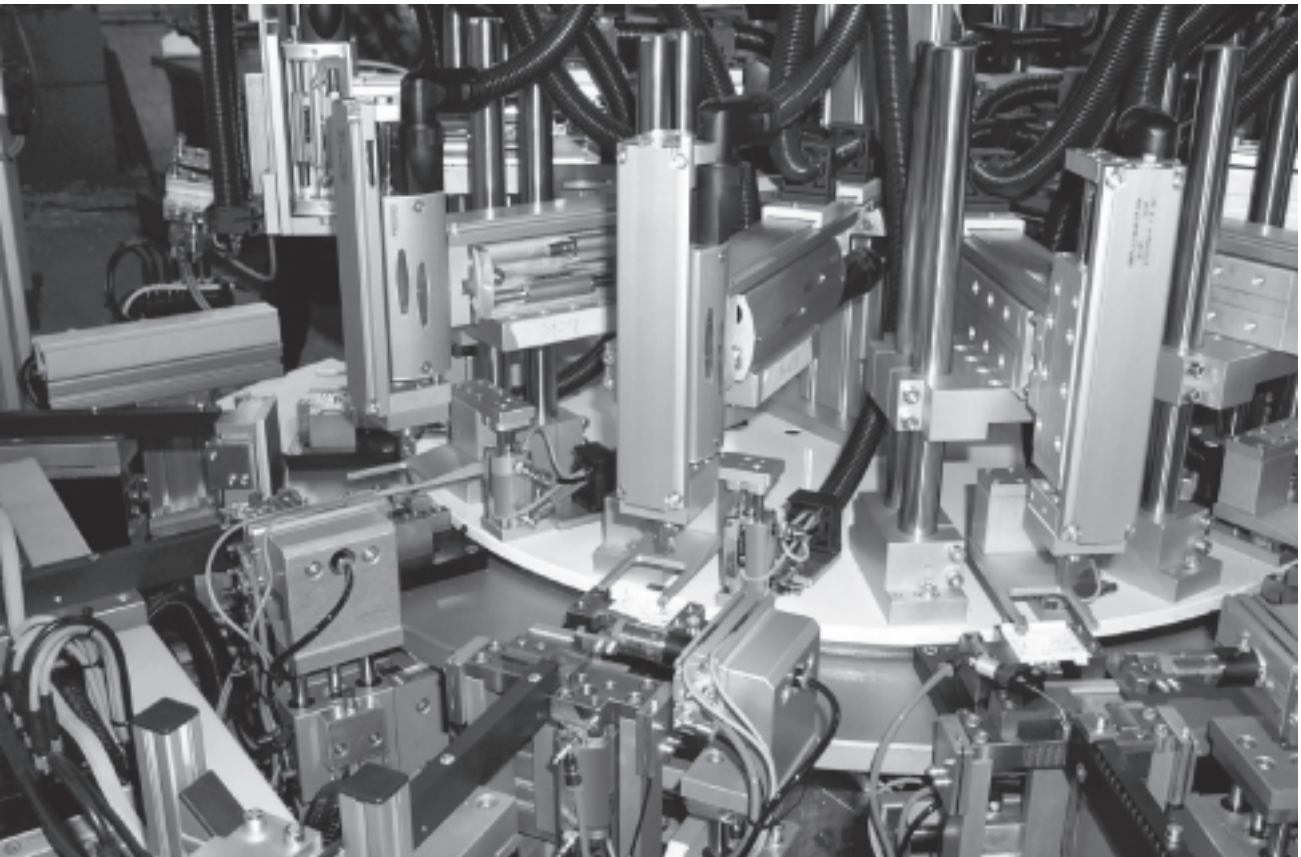
Y modules

- Pneumatic: SLT, HMPL, HMP mounted on basic components

Z modules

- Pneumatic: SLT, HMPL, HMP

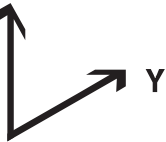
Application



Pick & place

Product range overview

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Selection aid						
Function	DGSL/DGSL	SLT/SLT	HMPL/HMPL	HM.../DGSL, SLT	HMP .../HMPL	HM.../HMP
Z 						
Y-axis	DGSL	SLT	HMPL	HMP, HME	HMP, HME	HMP, HME
Drive function	Pneumatic					
Options	Shock absorber, adjustable/non-ad-justable cushioning	Shock absorber, adjustable/non-ad-justable cushioning	Intermediate position, clamping cartridge	Intermediate position		
Z-axis	DGSL	SLT	HMPL	DGSL, SLT	HMPL	HMP
Drive function	Pneumatic					
Options	Shock absorber, adjustable/non-ad-justable cushioning	Shock absorber, adjustable/non-ad-justable cushioning	Intermediate position, clamping cartridge	Shock absorber, adjustable/non-ad-justable cushioning	Intermediate position, clamping cartridge	
Working load [kg]						
	1	■	■	■	■	■
	2	■	■	■	■	■
	3	■	■	■	■	■
	4	–	–	–	■	■
	6	–	–	–	■	■
	10	–	–	–	–	–
→ Page	5 / 3.3-42					

Pick & place

Selection aid for basic, connection and installation components

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Y-axis				
Function	DGSL/DGSL		SLT/SLT	HMPL/HMPL
				
Pneumatic drives	Stroke [mm]	Type		
DGSL-16	30 ... 150	HMBSY-DGSL-1 ➔ 5 / 3.3-46	–	–
DGSL-20	30 ... 100	HMBSY-DGSL-2 ➔ 5 / 3.3-46	–	–
	125 ... 200	HMBSY-DGSL-3 ➔ 5 / 3.3-46	–	–
DGSL-25	30 ... 100	HMBSY-DGSL-4 ➔ 5 / 3.3-46	–	–
	125 ... 200	HMBSY-DGSL-5 ➔ 5 / 3.3-46	–	–
SLT-16	30 ... 150	–	HMBSY-SLT-1 ➔ 5 / 3.3-47	–
SLT-20	30 ... 100	–	HMBSY-SLT-2 ➔ 5 / 3.3-47	–
	125 ... 200	–	HMBSY-SLT-3 ➔ 5 / 3.3-47	–
SLT-25	30 ... 100	–	HMBSY-SLT-4 ➔ 5 / 3.3-47	–
	125 ... 200	–	HMBSY-SLT-5 ➔ 5 / 3.3-47	–
HMPL-16	50 ... 160	–	–	HMBSY-HMPL-1 HMBSY-HMPL-2 ➔ 5 / 3.3-48
HMPL-20	50 ... 200	–	–	HMBSY-HMPL-3 HMBSY-HMPL-4 ➔ 5 / 3.3-48

Pick & place

Selection aid for basic, connection and installation components

FESTO

Y-axis				
Function	HMP, HME/DGSL, SLT		HMP, HME/HMPL	HMP, HME/HMP
				
Pneumatic drives	Stroke [mm]	Type		
HMP-16	150 ... 250	HMBSY-HMP-1 ➔ 5 / 3.3-49	HMBSY-HMP-1 ➔ 5 / 3.3-49	–
	320	HMBSY-HMP-2 ➔ 5 / 3.3-49	HMBSY-HMP-2 ➔ 5 / 3.3-49	–
HMP-20	100 ... 250	HMBSY-HMP-3 ➔ 5 / 3.3-49	HMBSY-HMP-3 ➔ 5 / 3.3-49	HMBSY-HMP-3 ➔ 5 / 3.3-49
	320 ... 400	HMBSY-HMP-4 ➔ 5 / 3.3-49	HMBSY-HMP-4 ➔ 5 / 3.3-49	HMBSY-HMP-4 ➔ 5 / 3.3-49
HMP-25	100 ... 200	HMBSY-HMP-5 ➔ 5 / 3.3-50	–	HMBSY-HMP-5 ➔ 5 / 3.3-50
	250 ... 400	HMBSY-HMP-6 ➔ 5 / 3.3-50	–	HMBSY-HMP-6 ➔ 5 / 3.3-50
HMP-32	100 ... 200	–	–	HMBSY-HMP-7 ➔ 5 / 3.3-50
	250 ... 400	–	–	HMBSY-HMP-8 ➔ 5 / 3.3-50

Selection example

Project engineering produced the following drive combination:

Y-axis: HMP-16,
200 mm stroke
Z-axis: HMPL-16,
with intermediate position

Step 1

Define the drive type in the selection aids for the Y- or Z-axis. The associated bill of materials can be found on the specified page.

Y-axis: HMBSY-HMP-1
➔ 5 / 3.3-49
Z-axis: HMBSZ-HMPL-3 or 4
➔ 5 / 3.3-55

Step 2

The necessary basic, connection and installation components can be found in the bill of materials on the specified page.

Y-axis: HMBSY-HMP-1
Z-axis: HMBSZ-HMPL-4

Step 3

Technical data on the basic, connection and installation components can be found on the specified pages. Further accessories for the selected drives, for example proximity sensors, centring sleeves, etc. are documented with the drives.

Pick & place

Selection aid for basic, connection and installation components

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Z-axis				
Function	DGSL/DGSL	SLT/SLT	HMPL/HMPL	HMP, HME/DGSL
				
Pneumatic drives	Type			
DGSL-10	HMBSZ-DGSL-1 → 5 / 3.3-51	–	–	–
DGSL-16	HMBSZ-DGSL-2 → 5 / 3.3-51	–	–	HMBSZ-DGSL-4 → 5 / 3.3-52
DGSL-20	HMBSZ-DGSL-3 → 5 / 3.3-51	–	–	HMBSZ-DGSL-5 → 5 / 3.3-52
DGSL-25	–	–	–	HMBSZ-DGSL-6 → 5 / 3.3-52
SLT-10	–	HMBSZ-SLT-1 → 5 / 3.3-53	–	–
SLT-16	–	HMBSZ-SLT-2 → 5 / 3.3-53	–	–
SLT-20	–	HMBSZ-SLT-3 → 5 / 3.3-53	–	–
SLT-25	–	–	–	–
HMPL-12	–	–	HMBSZ-HMPL-1 HMBSZ-HMPL-2 → 5 / 3.3-55	–
HMPL-16	–	–		–
HMPL-20	–	–		–
HMP-16	–	–	–	–
HMP-20	–	–	–	–
HMP-25	–	–	–	–

Pick & place

Selection aid for basic, connection and installation components

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Z-axis			
Function	HMP, HME/SLT	HMP, HME/HMPL	HMP, HME/HMP
			
Pneumatic drives	Type		
SLT-16	HMBSZ-SLT-4 → 5 / 3.3-54	–	–
SLT-20	HMBSZ-SLT-5 → 5 / 3.3-54	–	–
SLT-25	HMBSZ-SLT-6 → 5 / 3.3-54	–	–
HMPL-16	–	HMBSZ-HMPL-3 HMBSZ-HMPL-4 → 5 / 3.3-55	–
HMPL-20	–	–	–
HMP-16	–	–	HMBSZ-HMP-1 → 5 / 3.3-56
HMP-20	–	–	HMBSZ-HMP-2 → 5 / 3.3-56
HMP-25	–	–	HMBSZ-HMP-3 → 5 / 3.3-56

Selection example

Project engineering produced the following drive combination:

Y-axis: HMP-16,
200 mm stroke
Z-axis: HMPL-16,
with intermediate position

Step 1

Define the drive type in the selection aids for the Y- or Z-axis. The associated bill of materials can be found on the specified page.

Y-axis: HMBSY-HMP-1
→ 5 / 3.3-49
Z-axis: HMBSZ-HMPL-3 or 4
→ 5 / 3.3-55

Step 2

The necessary basic, connection and installation components can be found in the bill of materials on the specified page.

Y-axis: HMBSY-HMP-1
Z-axis: HMBSZ-HMPL-4

Step 3

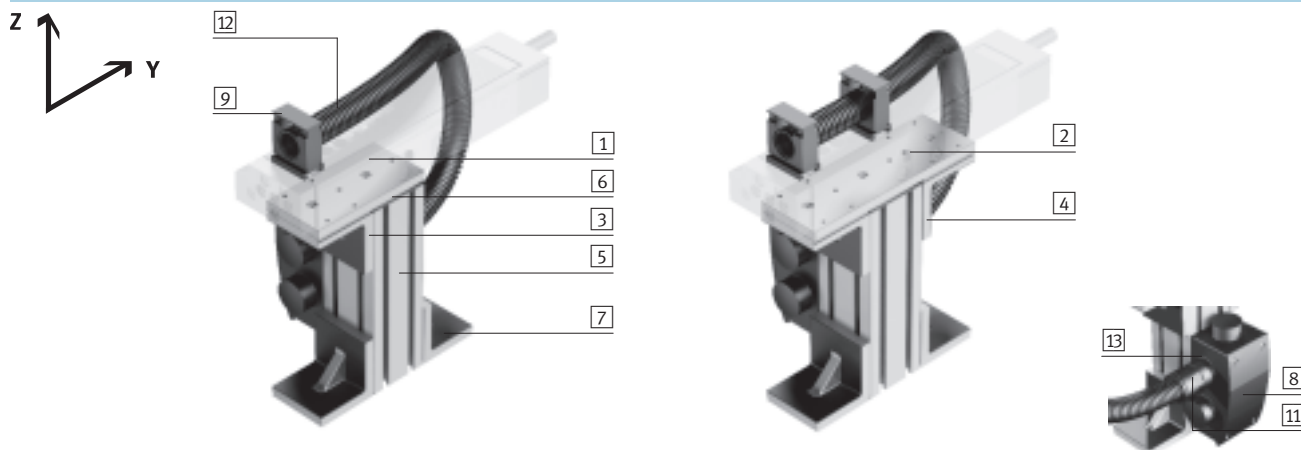
Technical data on the basic, connection and installation components can be found on the specified pages. Further accessories for the selected drives, for example proximity sensors, centring sleeves, etc. are documented with the drives.

Pick & place

Y modules

FESTO

Mini slides DGSL



Bill of materials												
Type		HMBSY-DGSL-1		HMBSY-DGSL-2		HMBSY-DGSL-3		HMBSY-DGSL-4		HMBSY-DGSL-5		➔ Page
For drives		DGSL-16		DGSL-20				DGSL-25				
Stroke [mm]		30 ... 150		30 ... 100		125 ... 200		30 ... 100		125 ... 200		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	
[1]	1	539 968		539 969		–		539 969		–		5 / 3.3-94
		HMVY-1		HMVY-2				HMVY-2				
[2]	1	–		–		539 970		–		539 970		
				HMVY-3						HMVY-3		
[3]	1	175 967		175 967		–		175 967		–		5 / 3.3-108
		HMBV-ND		HMBV-ND				HMBV-ND				
[4]	2	–		–		175 967		–		175 967		
						HMBV-ND				HMBV-ND		
[5]	1 ¹⁾	175 958		175 958		175 958		175 958		175 958		5 / 3.3-105
		HMBS-80/80		HMBS-80/80		HMBS-80/80		HMBS-80/80		HMBS-80/80		
[6]	1	175 965		175 965		175 965		175 965		175 965		5 / 3.3-105
		HMBSA-80/80		HMBSA-80/80		HMBSA-80/80		HMBSA-80/80		HMBSA-80/80		
[7]	2	175 951		175 951		175 951		175 951		175 951		5 / 3.3-107
		HMBF-DB		HMBF-DB		HMBF-DB		HMBF-DB		HMBF-DB		
[8]	1	175 126		175 126		175 126		175 126		175 126		5 / 3.3-125
		HMZV		HMZV		HMZV		HMZV		HMZV		
[9]	1	192 289		192 290		192 290		192 290		192 290		5 / 3.3-131
		MKRS-16,5-B		MKRS-23-B		MKRS-23-B		MKRS-23-B		MKRS-23-B		
		548 803		548 804		548 804		548 804		548 804		
		ZBV-M5-7		ZBV-M5-9		ZBV-M5-9		ZBV-M5-9		ZBV-M5-9		
[11]	1	177 571		177 572		177 572		177 572		177 572		5 / 3.3-126
		MKRV-16,5-PG-16		MKRV-23-PG-21		MKRV-23-PG-21		MKRV-23-PG-21		MKRV-23-PG-21		
[12]	1 ²⁾	177 566		177 567		177 567		177 567		177 567		5 / 3.3-124
		MKR-16,5-PG-16		MKR-23-PG-21		MKR-23-PG-21		MKR-23-PG-21		MKR-23-PG-21		
[13]	1	193 949		177 595		177 595		177 595		177 595		5 / 3.3-129
		MKA-PG-29-PG-16-KU		MKA-PG-29-PG-21		MKA-PG-29-PG-21		MKA-PG-29-PG-21		MKA-PG-29-PG-21		

1) Height max. 500 mm

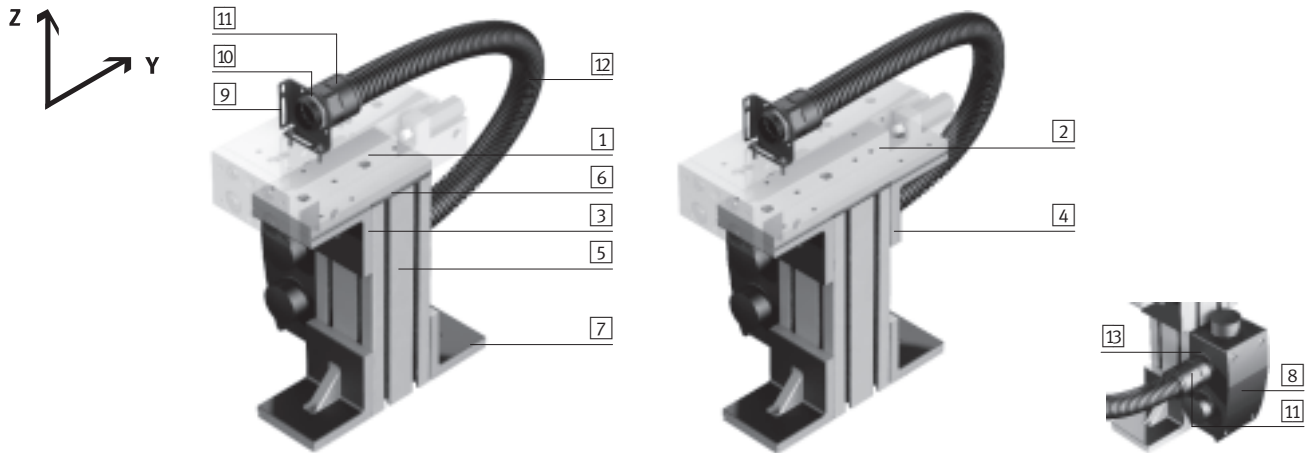
2) Length depends on the stroke of the drive

Pick & place

Y modules

FESTO

Mini slides SLT



Bill of materials												
Type		HMBSY-SLT-1		HMBSY-SLT-2		HMBSY-SLT-3		HMBSY-SLT-4		HMBSY-SLT-5		
For drives		SLT-16		SLT-20				SLT-25				
Stroke [mm]		30 ... 150		30 ... 100		125 ... 200		30 ... 100		125 ... 200		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	
1	1	539 968		539 969		–		539 969		–		5 / 3.3-94
2	1	–		–		539 970		–		539 970		
3	1	175 967		175 967		–		175 967		–		
4	2	–		–		175 967		–		175 967		
5	1 ¹⁾	175 958		175 958		175 958		175 958		175 958		5 / 3.3-105
6	1	175 965		175 965		175 965		175 965		175 965		5 / 3.3-105
7	2	175 951		175 951		175 951		175 951		175 951		5 / 3.3-107
8	1	175 126		175 126		175 126		175 126		175 126		5 / 3.3-125
9	1	193 124		193 124		193 124		193 124		193 124		5 / 3.3-132
10	1	177 599		177 599		177 599		177 599		177 599		5 / 3.3-131
11	2	177 572		177 572		177 572		177 572		177 572		5 / 3.3-126
12	1 ²⁾	177 567		177 567		177 567		177 567		177 567		5 / 3.3-124
13	1	177 595		177 595		177 595		177 595		177 595		5 / 3.3-129

1) Height max. 500 mm

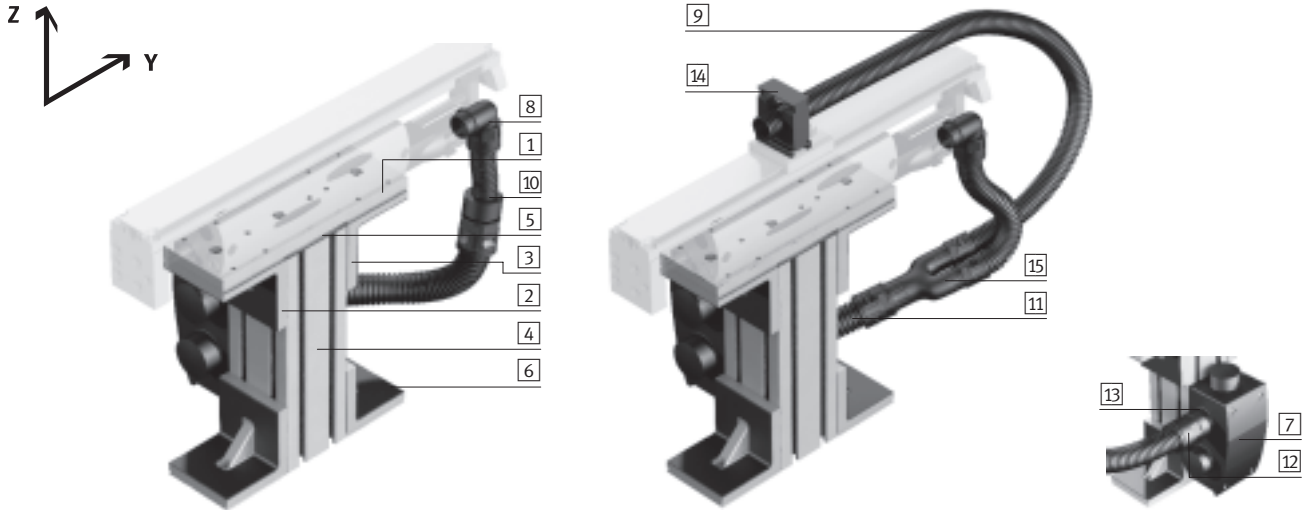
2) Length depends on the stroke of the drive

Pick & place

Y modules

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Linear modules HMPL



Bill of materials										
Type		HMBSY-HMPL-1		HMBSY-HMPL-2		HMBSY-HMPL-3		HMBSY-HMPL-4		
For drives		HMPL-16				HMPL-20				
		without intermediate position		with intermediate position		without intermediate position		with intermediate position		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	➔ Page
1	1	539 968		539 968		539 970		539 970		5 / 3.3-94
		HMVY-1		HMVY-1		HMVY-3		HMVY-3		
2	1	175 967		175 967		–		–		5 / 3.3-108
		HMBV-ND		HMBV-ND						
3	2	–		–		175 967		175 967		
						HMBV-ND		HMBV-ND		
4	1 ¹⁾	175 958		175 958		175 958		175 958		5 / 3.3-105
		HMBS-80/80		HMBS-80/80		HMBS-80/80		HMBS-80/80		
5	1	175 965		175 965		175 965		175 965		5 / 3.3-105
		HMBSA-80/80		HMBSA-80/80		HMBSA-80/80		HMBSA-80/80		
6	2	175 951		175 951		175 951		175 951		5 / 3.3-107
		HMBF-DB		HMBF-DB		HMBF-DB		HMBF-DB		
7	1	175 126		175 126		175 126		175 126		5 / 3.3-125
		HMZV		HMZV		HMZV		HMZV		
8	1	177 576		177 576		177 576		177 576		5 / 3.3-126
		MKRL-16,5-PG-16		MKRL-16,5-PG-16		MKRL-16,5-PG-16		MKRL-16,5-PG-16		
9	1 ²⁾	177 566		177 566		177 566		177 566		5 / 3.3-124
		MKR-16,5-PG-16		MKR-16,5-PG-16		MKR-16,5-PG-16		MKR-16,5-PG-16		
10	1	194 321		–		194 321		–		5 / 3.3-128
		MKRT-23-16,5				MKRT-23-16,5				
11	1 ²⁾	177 567		177 567		177 567		177 567		5 / 3.3-124
		MKR-23-PG-21		MKR-23-PG-21		MKR-23-PG-21		MKR-23-PG-21		
12	1	177 572		177 572		177 572		177 572		5 / 3.3-126
		MKRV-23-PG-21		MKRV-23-PG-21		MKRV-23-PG-21		MKRV-23-PG-21		
13	1	177 595		177 595		177 595		177 595		5 / 3.3-129
		MKA-PG-29-PG-21		MKA-PG-29-PG-21		MKA-PG-29-PG-21		MKA-PG-29-PG-21		
14	1 ³⁾	–		192 289		–		192 289		5 / 3.3-131
				MKRS-16,5-B				MKRS-16,5-B		
15	1	–		193 946		–		193 946		5 / 3.3-128
				MKY-PG-21-2PG-16				MKY-PG-21-2PG-16		

1) Height max. 500 mm

2) Length depends on the stroke of the drive, 2 conduits are required with an intermediate position.

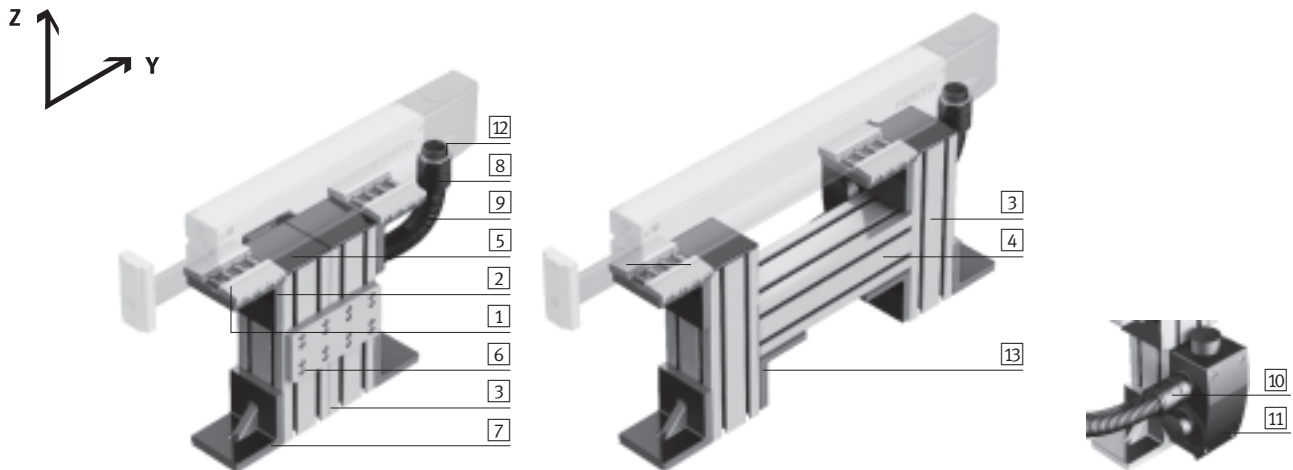
3) In order to be able to mount the retaining clip MKRS, a clamping component (1x code J) must be selected as an accessory in the order for the linear module HMPL.

Pick & place

Y modules

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Linear modules HMP, HME



Bill of materials										
Type		HMBSY-HMP-1		HMBSY-HMP-2		HMBSY-HMP-3		HMBSY-HMP-4		
For drives		HMP-/HME-16				HMP-20				
Stroke [mm]		150 ... 250		320		100 ... 250		320 ... 400		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	
1	2	175 975 HMBK-WS		175 975 HMBK-WS		175 975 HMBK-WS		175 975 HMBK-WS		5 / 3.3-93
2	2	175 967 HMBV-ND		175 967 HMBV-ND		175 967 HMBV-ND		175 967 HMBV-ND		5 / 3.3-108
3	2 ¹⁾	175 958 HMBS-80/80		175 958 HMBS-80/80		175 958 HMBS-80/80		175 958 HMBS-80/80		5 / 3.3-105
4	1 ²⁾	–		175 958 HMBS-80/80		–		175 958 HMBS-80/80		
5	2	175 965 HMBSA-80/80		175 965 HMBSA-80/80		175 965 HMBSA-80/80		175 965 HMBSA-80/80		5 / 3.3-105
6	1	175 972 HMBSV		–		175 972 HMBSV		–		5 / 3.3-106
7	2	175 951 HMBF-DB		175 951 HMBF-DB		175 951 HMBF-DB		175 951 HMBF-DB		5 / 3.3-107
8	2 ⁴⁾	177 572 MKRV-23-PG-21		177 572 MKRV-23-PG-21		177 573 MKRV-29-PG-29		177 573 MKRV-29-PG-29		5 / 3.3-126
9	1 ³⁾⁴⁾	177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		177 568 MKR-29-PG-29		177 568 MKR-29-PG-29		5 / 3.3-124
10	1 ⁴⁾	177 595 MKA-PG-29-PG-21		177 595 MKA-PG-29-PG-21		–		–		5 / 3.3-129
11	1 ⁴⁾	175 126 HMZV		175 126 HMZV		175 126 HMZV		175 126 HMZV		5 / 3.3-125
12	1 ⁴⁾	177 599 MKM-PG-21		177 599 MKM-PG-21		177 600 MKM-PG-29		177 600 MKM-PG-29		5 / 3.3-131
13	2	–		178 228 HMBSW		–		178 228 HMBSW		5 / 3.3-106

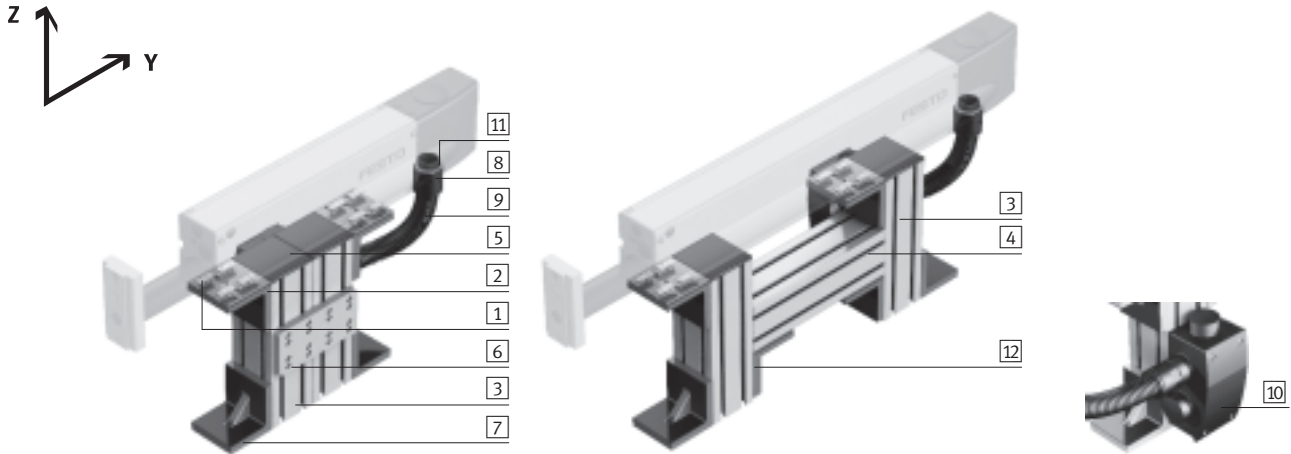
- 1) Height max. 500 mm
2) Length 250 mm
3) Length depends on the stroke of the drive
4) It is not suitable for use with linear module HME

Pick & place

Y modules

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Linear modules HMP, HME



Bill of materials

Type		HMBSY-HMP-5	HMBSY-HMP-6	HMBSY-HMP-7	HMBSY-HMP-8	
For drives		HMP-/HME-25		HMP-32		
Stroke [mm]		100 ... 200	250 ... 400	100 ... 200	250 ... 400	
Item	Quantity	Part No.	Type	Part No.	Type	→ Page
[1]	2	175 970	HMBK-ND	175 970	HMBK-ND	5 / 3.3-92
[2]	2	175 967	HMBV-ND	175 967	HMBV-ND	5 / 3.3-108
[3]	2 ¹⁾	175 958	HMBS-80/80	175 958	HMBS-80/80	5 / 3.3-105
[4]	1 ²⁾	–	175 958 HMBS-80/80	–	175 958 HMBS-80/80	
[5]	2	175 965	HMBSA-80/80	175 965	HMBSA-80/80	5 / 3.3-105
[6]	1	175 972	HMBSV	175 972	HMBSV	5 / 3.3-106
[7]	2	175 951	HMBF-DB	175 951	HMBF-DB	5 / 3.3-107
[8]	2 ⁴⁾	177 573	MKRV-29-PG-29	177 573	MKRV-29-PG-29	5 / 3.3-126
[9]	1 ³⁾⁴⁾	177 568	MKR-29-PG-29	177 568	MKR-29-PG-29	5 / 3.3-124
[10]	1 ⁴⁾	175 126	HMZV	175 126	HMZV	5 / 3.3-125
[11]	1 ⁴⁾	177 600	MKM-PG-29	177 600	MKM-PG-29	5 / 3.3-131
[12]	2	–	178 228 HMBSW	–	178 228 HMBSW	5 / 3.3-106

1) Height max. 500 mm

2) Length 350 mm

3) Length depends on the stroke of the drive

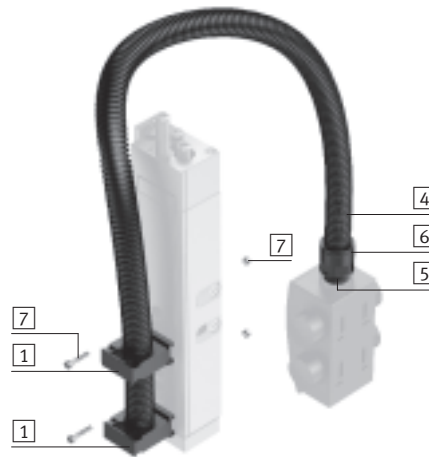
4) It is not suitable for use with linear module HME

Pick & place

Z modules

FESTO

Mini slides DGSL

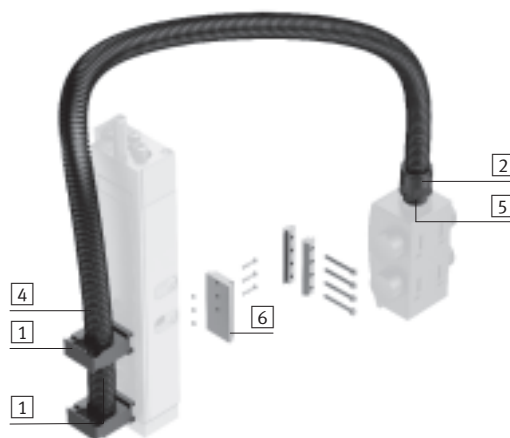


Bill of materials								
Type		HMBSZ-DGSL-1		HMBSZ-DGSL-2		HMBSZ-DGSL-3	➔ Page	
For drives		DGSL-10		DGSL-16		DGSL-20		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.		Type
[1]	2	192 289		192 289		192 290		5 / 3.3-132
		MKRS-16,5-B		MKRS-16,5-B		MKRS-23-B		
		M4x12 DIN 912		548 803		548 804		
				ZBV-M5-7		ZBV-M5-9		
[4]	1 ¹⁾	177 566		177 566		177 567		5 / 3.3-124
		MKR-16,5-PG-16		MKR-16,5-PG-16		MKR-23-PG-21		
[5]	1	193 949		193 949		177 595		5 / 3.3-129
		MKA-PG-29-PG-16-KU		MKA-PG-29-PG-16-KU		MKA-PG-29-PG-21		
[6]	1	177 571		177 571		177 572		5 / 3.3-126
		MKRV-16,5-PG-16		MKRV-16,5-PG-16		MKRV-23-PG-21		
[7]	1	548 803		548 804		150 927		–
		ZBV-M5-7		ZBV-M5-9		ZBH-9 ²⁾		

1) Length depends on the stroke of the drive

2) Centring sleeves are included in the scope of delivery of the mini slide DGSL.

Z modules



Bill of materials								
Type		HMBSZ-DGSL-4		HMBSZ-DGSL-5		HMBSZ-DGSL-6		
For drives		DGSL-16		DGSL-20		DGSL-25		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	
1	2	192 289 MKRS-16,5-B 548 803 ZBV-M5-7		192 290 MKRS-23-B 548 804 ZBV-M5-9		192 290 MKRS-23-B 548 804 ZBV-M5-9		5 / 3.3-131
2	1	177 571 MKRV-16,5-PG-16		177 572 MKRV-23-PG-21		177 572 MKRV-23-PG-21		5 / 3.3-126
4	1 ¹⁾	177 566 MKR-16,5-PG-16		177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		5 / 3.3-124
5	1	193 949 MKA-PG-29-PG-16-KU		177 595 MKA-PG-29-PG-21		177 595 MKA-PG-29-PG-21		5 / 3.3-129
6	1	548 779 HMSV-49		548 779 HMSV-49		548 779 HMSV-49		5 / 3.2-10

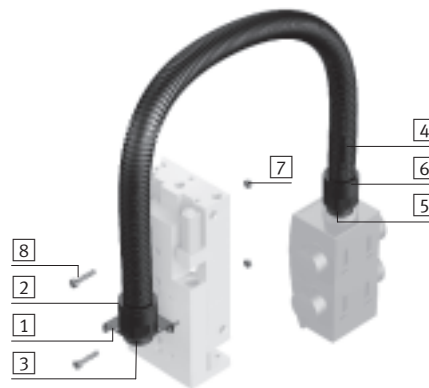
- 1) Length depends on the stroke of the drive

Pick & place

Z modules

FESTO

Mini slides SLT



Bill of materials								
Type		HMBSZ-SLT-1		HMBSZ-SLT-2		HMBSZ-SLT-3	→ Page	
For drives		SLT-10		SLT-16		SLT-20		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.		Type
[1]	1	192 289		193 124		193 124		5 / 3.3-132
		MKRS-16,5-B		HMZAS-PG-21		HMZAS-PG-21		
[2]	1	–		177 572		177 572		5 / 3.3-126
				MKRV-23-PG-21		MKRV-23-PG-21		
[3]	1	–		177 599		177 599		5 / 3.3-131
				MKM-PG-21		MKM-PG-21		
[4]	1 ¹⁾	177 566		177 567		177 567		5 / 3.3-124
		MKR-16,5-PG-16		MKR-23-PG-21		MKR-23-PG-21		
[5]	1	193 949		177 595		177 595		5 / 3.3-129
		MKA-PG-29-PG-16-KU		MKA-PG-29-PG-21		MKA-PG-29-PG-21		
[6]	1	177 571		177 572		177 572		5 / 3.3-126
		MKRV-16,5-PG-16		MKRV-23-PG-21		MKRV-23-PG-21		
[7]	– ²⁾	186 717		150 927		189 653		–
		ZBH-7		ZBH-9		ZBH-12		
[8]	2	M4x25 DIN 912		M5x30 DIN 912		M6x40 DIN 912		–

1) Length depends on the stroke of the drive

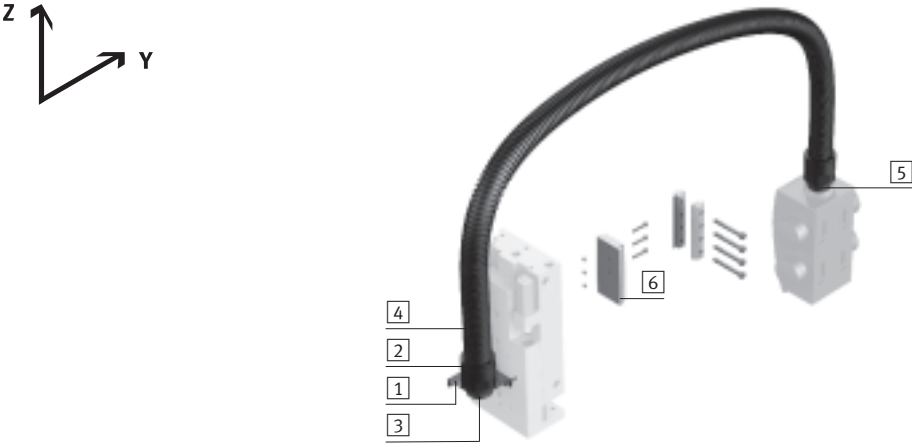
2) Centring sleeves are included in the scope of delivery of the mini slide SLT.

Pick & place

Z modules



Mini slides SLT



Bill of materials								
Type		HMBSZ-SLT-4		HMBSZ-SLT-5		HMBSZ-SLT-6	→ Page	
For drives		SLT-16		SLT-20		SLT-25		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.		Type
[1]	1	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	5 / 3.3-132
[2]	2	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	5 / 3.3-126
[3]	1	177 599	MKM-PG-21	177 599	MKM-PG-21	177 599	MKM-PG-21	5 / 3.3-131
[4]	1 ¹⁾	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	5 / 3.3-124
[5]	1	177 595	MKA-PG-29-PG-21	177 595	MKA-PG-29-PG-21	177 595	MKA-PG-29-PG-21	5 / 3.3-129
[6]	1	178 331	HMSV-36	178 332	HMSV-37	178 332	HMSV-37	5 / 3.2-11

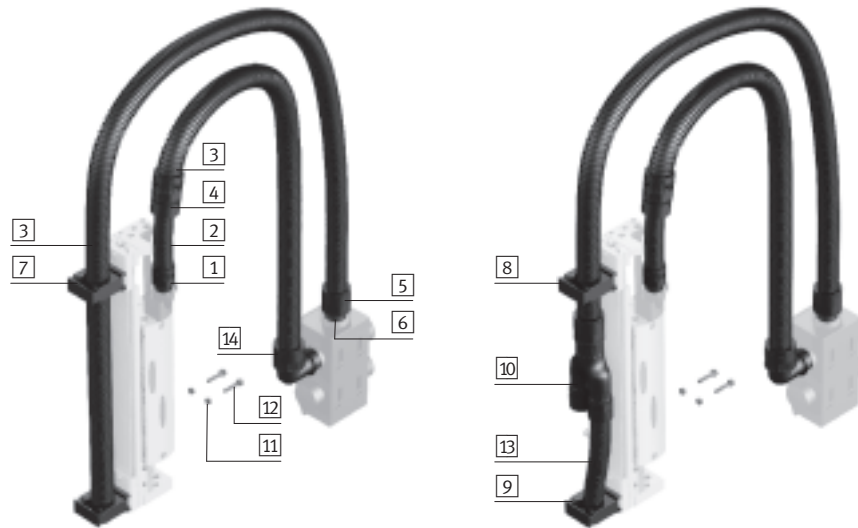
1) Length depends on the stroke of the drive

Pick & place

Z modules

FESTO

Linear modules HMPL



Bill of materials										
Type		HMBSZ-HMPL-1		HMBSZ-HMPL-2		HMBSZ-HMPL-3		HMBSZ-HMPL-4		
For drives		HMPL-12		HMPL-12		HMPL-16		HMPL-16		
		HMPL-16		HMPL-16		HMPL-20		HMPL-20		
		HMPL-20		HMPL-20						
		without intermediate position		with intermediate position		without intermediate position		with intermediate position		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	→ Page
[1]	1	177 571		177 571		177 571		177 571		5 / 3.3-126
		MKRV-16,5-PG-16		MKRV-16,5-PG-16		MKRV-16,5-PG-16		MKRV-16,5-PG-16		
[2]	1 ¹⁾	177 566		177 566		177 566		177 566		5 / 3.3-124
		MKR-16,5-PG-16		MKR-16,5-PG-16		MKR-16,5-PG-16		MKR-16,5-PG-16		
[3]	2 ¹⁾	177 567		177 567		177 567		177 567		
		MKR-23-PG-21		MKR-23-PG-21		MKR-23-PG-21		MKR-23-PG-21		
[4]	1	194 321		194 321		194 321		194 321		5 / 3.3-128
		MKRT-23-16,5		MKRT-23-16,5		MKRT-23-16,5		MKRT-23-16,5		
[5]	1	177 572		177 572		177 572		177 572		5 / 3.3-126
		MKRV-23-PG-21		MKRV-23-PG-21		MKRV-23-PG-21		MKRV-23-PG-21		
[6]	2	177 595		177 595		177 595		177 595		5 / 3.3-129
		MKA-PG-29-PG-21		MKA-PG-29-PG-21		MKA-PG-29-PG-21		MKA-PG-29-PG-21		
[7]	2 ²⁾	192 290		–		192 290		–		5 / 3.3-131
		MKRS-23-B				MKRS-23-B				
[8]	1 ²⁾	–		192 290		–		192 290		
				MKRS-23-B				MKRS-23-B		
[9]	1 ²⁾	–		192 289		–		192 289		
				MKRS-16,5-B				MKRS-16,5-B		
[10]	1	–		193 946		–		193 946		5 / 3.3-128
				MKY-PG-21-2PG-16				MKY-PG-21-2PG-16		
[11]	1 ³⁾	150 927		150 927		150 927		150 927		–
		ZBH-9		ZBH-9		ZBH-9		ZBH-9		
[12]	2	M5x16 DIN 912		M5x16 DIN 912		M5x22 DIN 912		M5x22 DIN 912		–
[13]	1 ¹⁾	–		177 566		–		177 566		5 / 3.3-124
				MKR-16,5-PG-16				MKR-16,5-PG-16		
[14]	1	177 577		177 577		177 577		177 577		5 / 3.3-127
		MKRL-23-PG-21		MKRL-23-PG-21		MKRL-23-PG-21		MKRL-23-PG-21		

1) Length depends on the stroke of the drive

2) In order to be able to mount the retaining clip MKRS, a clamping component (2x code J) must be selected as an accessory in the order for the linear module HMPL.

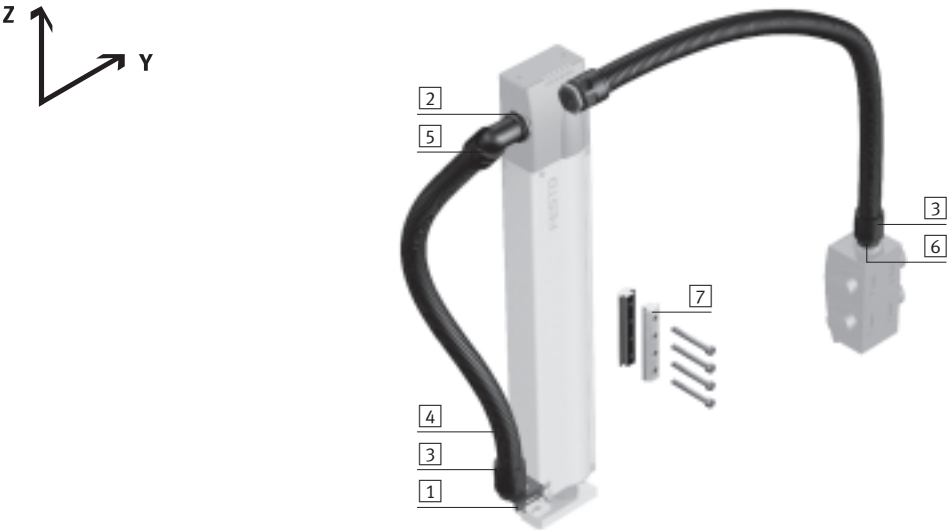
3) 10 per packaging unit

Pick & place

Z modules

FESTO

Linear modules HMP



Bill of materials							
Type		HMBSZ-HMP-1		HMBSZ-HMP-2		HMBSZ-HMP-3	
For drives		HMP-16		HMP-20		HMP-25	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
[1]	1	193 124	HMZAS-PG-21	177 603	HMZAS-PG-29	177 603	HMZAS-PG-29
[2]	3	177 599	MKM-PG-21	177 600	MKM-PG-29	177 600	MKM-PG-29
[3]	3	177 572	MKRV-23-PG-21	177 573	MKRV-29-PG-29	177 573	MKRV-29-PG-29
[4]	2 ¹⁾	177 567	MKR-23-PG-21	177 568	MKR-29-PG-29	177 568	MKR-29-PG-29
[5]	1	177 577	MKRL-23-PG-21	177 578	MKRL-29-PG-29	177 578	MKRL-29-PG-29
[6]	1	177 595	MKA-PG-29-PG-21	–		–	
[7]	1	177 647	HMSV-1	177 649	HMSV-3	177 653	HMSV-7

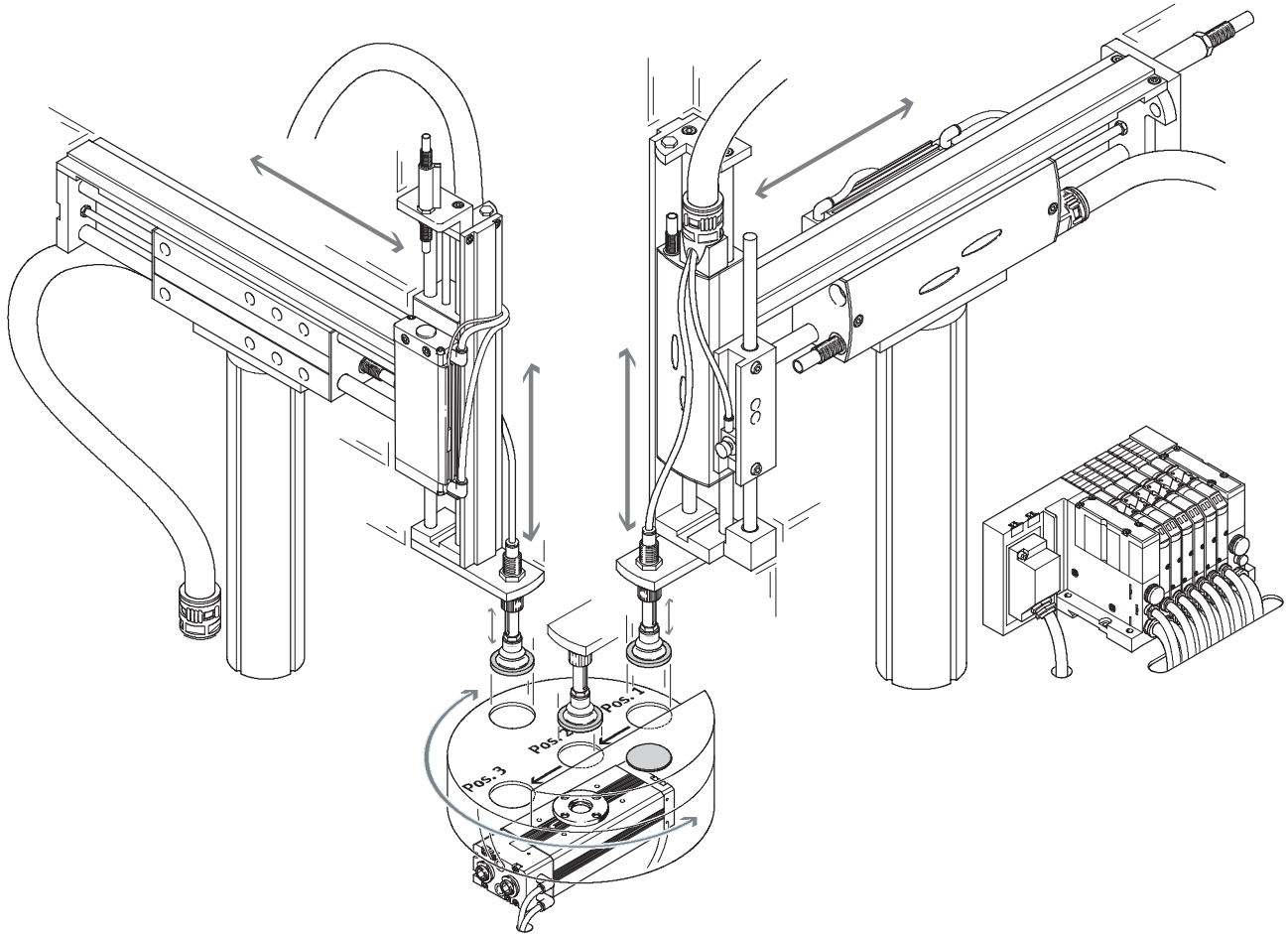
1) Length depends on the stroke of the drive

Pick & place

System example

FESTO

Combination with handling modules HMPL



System components
Multi-axis modular system

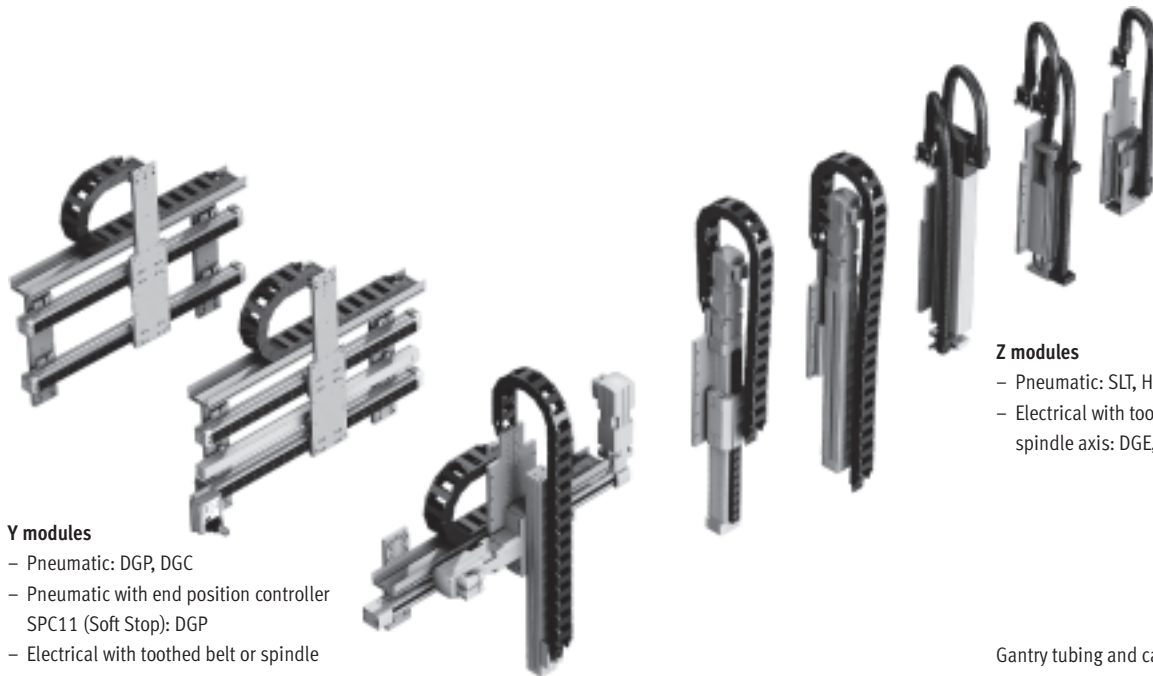
3.3

Linear gantries

Key features

FESTO

Y and Z modules



Y modules

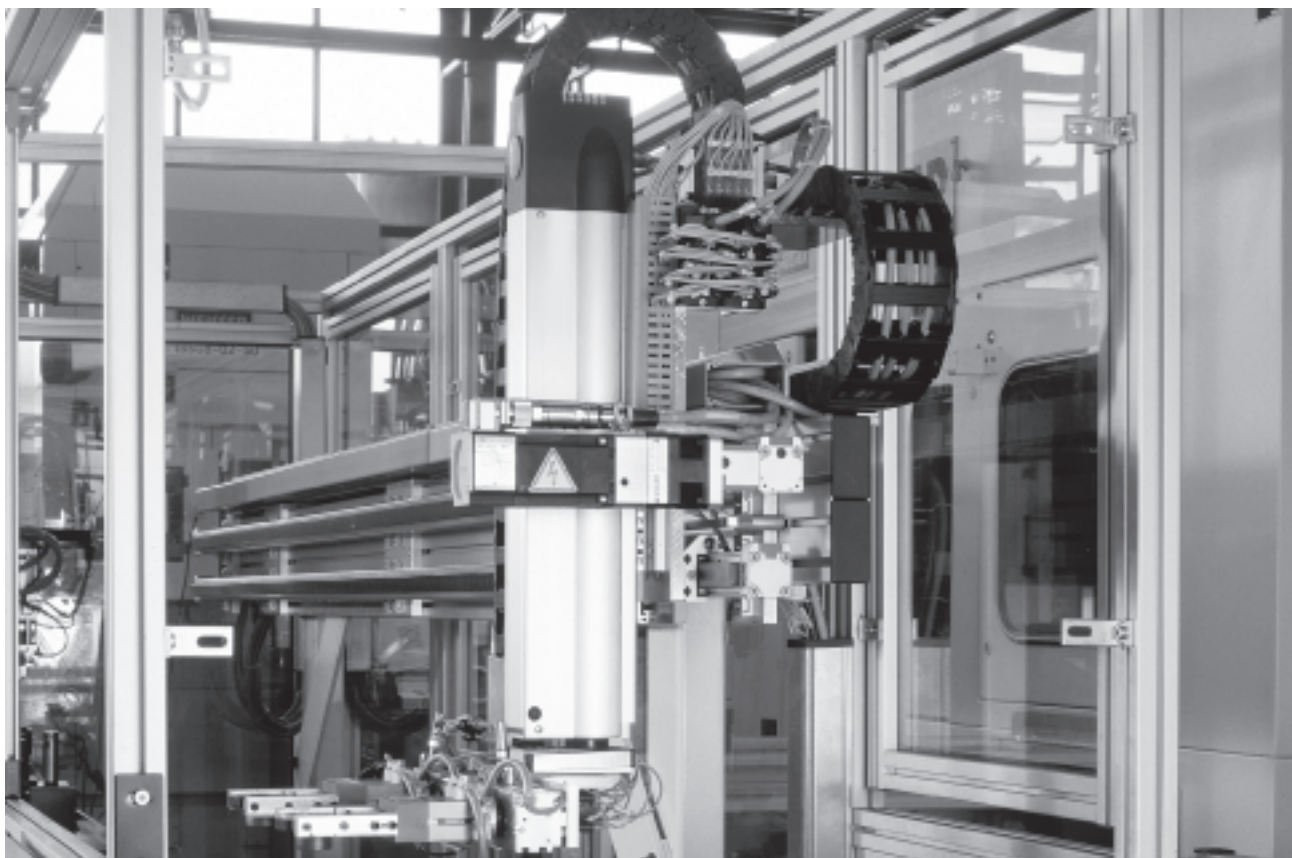
- Pneumatic: DGP, DGC
- Pneumatic with end position controller SPC11 (Soft Stop): DGP
- Electrical with toothed belt or spindle axis: DGE
- Single-axis systems (mono) or drives with guide axis (duo)

Z modules

- Pneumatic: SLT, HMPL, HMP
- Electrical with toothed belt or spindle axis: DGE, DGEA

Gantry tubing and cables are routed via protective trunking. Festo uses a base profile for this purpose specially designed for handling technology.

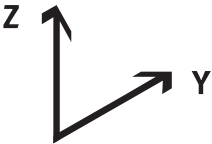
Application



Linear gantries

Product range overview

FESTO

Selection aid						
System type		Mono 25	Mono 40	Duo 25		Duo 40
						
Y-axis		DG...-25	DG...-40	DG...-25		DG...-40
Drive function		Pneumatic, pneumatic with end position controller SPC11 (Soft Stop) or electrical				
Options		Spindle or toothed belt axis				
Z-axis		DGSL-16 SLT-16 HMPL-16	DGSL-20 SLT-20 HMPL-20 HMP-16	DGSL-25 SLT-25 HMP-20	HMP-25	
Drive function		Pneumatic				
Options		Intermediate position with HMPL	Intermediate position with HMPL, HMP		Intermediate position with HMP	
Z-axis		DGEA-18	DGEA-18 DGE-25-SP-KF	DGEA-25 DGE-40-SP-KF	DGEA-25 DGE-40-SP-KF	
Drive function		Electrical				
Options		–	Spindle or toothed belt axis		Spindle or toothed belt axis	
Working load [kg]						
	1	■	■		■	■
	2	■	■		■	■
	3	–	■		■	■
	4	–	■		■	■
	6	–	–		■	■
	10	–	–		–	■
→ Page		5 / 3.3-60				

Linear gantries

Selection aid for basic, connection and installation components

FESTO

Y-axis				
System type	Mono 25	Mono 40	Duo 25	Duo 40
				
Pneumatic drives	Type			
DGPL-25	HMBSY-LP-M25-1 ➔ 5 / 3.3-62	–	HMBSY-LP-D25-1 ➔ 5 / 3.3-64	–
DGC-25	HMBSY-LP-M25-2 ➔ 5 / 3.3-62	–	HMBSY-LP-D25-2 ➔ 5 / 3.3-64	–
DGPL-25 with SPC11	HMBSY-LP-M25-3 ➔ 5 / 3.3-62	–	HMBSY-LP-D25-3 ➔ 5 / 3.3-64	–
DGPL-40	–	HMBSY-LP-M40-1 ➔ 5 / 3.3-63	–	HMBSY-LP-D40-1 ➔ 5 / 3.3-65
DGC-40	–	HMBSY-LP-M40-2 ➔ 5 / 3.3-63	–	HMBSY-LP-D40-2 ➔ 5 / 3.3-65
DGPL-40 with SPC11	–	HMBSY-LP-M40-3 ➔ 5 / 3.3-63	–	HMBSY-LP-D40-3 ➔ 5 / 3.3-65
Electrical drives	Type			
DGE-25 -SP-KF	HMBSY-LP-M25-1 ➔ 5 / 3.3-62	–	HMBSY-LP-D25-1 ➔ 5 / 3.3-64	–
-ZR-KF				
-ZR-RF	HMBSY-LP-M25-4 ➔ 5 / 3.3-62	–	HMBSY-LP-D25-4 ➔ 5 / 3.3-64	–
DGE-40 -SP-KF	–	HMBSY-LP-M40-1 ➔ 5 / 3.3-63	–	HMBSY-LP-D40-1 ➔ 5 / 3.3-65
-ZR-KF				
-ZR-RF				

Selection example:

Project engineering produced the following drive combination:

Y-axis: Duo 25 system with
DGE-25-ZR-RF
Z-axis: SLT-20

Step 1

Define the drive type in the selection aids for the Y- or Z-axis. The associated bill of materials can be found on the specified page.

Y-axis: HMBSY-LP-D25-4
➔ 5 / 3.3-64
Z-axis: HMBSZ-SLT-7
➔ 5 / 3.3-67

Step 2

The necessary basic, connection and installation components can be found in the bill of materials on the specified page.

Y-axis: HMBSY-LP-D25-4
Z-axis: HMBSZ-SLT-7

Step 3

Technical data on the basic, connection and installation components can be found on the specified pages. Further accessories for the selected drives, for example proximity sensors, centring sleeves, etc. are documented with the drives.

Linear gantries

Selection aid for basic, connection and installation components

FESTO

Z-axis				
System type	Mono 25	Mono 40	Duo 25	Duo 40
				
Pneumatic drives	Type			
DGSL-16	HMBSZ-DGSL-7 ➔ 5 / 3.3-66	–	–	–
DGSL-20	–	HMBSZ-DGSL-8 ➔ 5 / 3.3-66	–	–
DGSL-25	–	HMBSZ-DGSL-8 ➔ 5 / 3.3-66	HMBSZ-DGSL-8 ➔ 5 / 3.3-66	–
SLT-16	HMBSZ-SLT-7 ➔ 5 / 3.3-67	–	–	–
SLT-20	–	HMBSZ-SLT-7 ➔ 5 / 3.3-67	HMBSZ-SLT-7 ➔ 5 / 3.3-67	–
SLT-25	–	–	HMBSZ-SLT-7 ➔ 5 / 3.3-67	–
HMPL-16	HMBSZ-HMPL-5 HMBSZ-HMPL-6 ➔ 5 / 3.3-68	–	–	–
HMPL-20	–	HMBSZ-HMPL-5 HMBSZ-HMPL-6 ➔ 5 / 3.3-68	HMBSZ-HMPL-5 HMBSZ-HMPL-6 ➔ 5 / 3.3-68	–
HMP-16	–	HMBSZ-HMP-4 ➔ 5 / 3.3-69	HMBSZ-HMP-4 ➔ 5 / 3.3-69	–
HMP-20	–	–	HMBSZ-HMP-5 ➔ 5 / 3.3-69	–
HMP-25	–	–	–	HMBSZ-HMP-6 ➔ 5 / 3.3-69
Electrical drives	Type			
DGEA-18	HMBSZ-DGEA-1 ➔ 5 / 3.3-70	HMBSZ-DGEA-1 ➔ 5 / 3.3-70	HMBSZ-DGEA-1 ➔ 5 / 3.3-70	–
DGEA-25	–	–	HMBSZ-DGEA-2 ➔ 5 / 3.3-70	HMBSZ-DGEA-3 ➔ 5 / 3.3-70
DGE-25-SP	–	HMBSZ-DGE-1 ➔ 5 / 3.3-71	HMBSZ-DGE-1 ➔ 5 / 3.3-71	–
DGE-40-SP	–	–	HMBSZ-DGE-2 ➔ 5 / 3.3-71	HMBSZ-DGE-3 ➔ 5 / 3.3-71

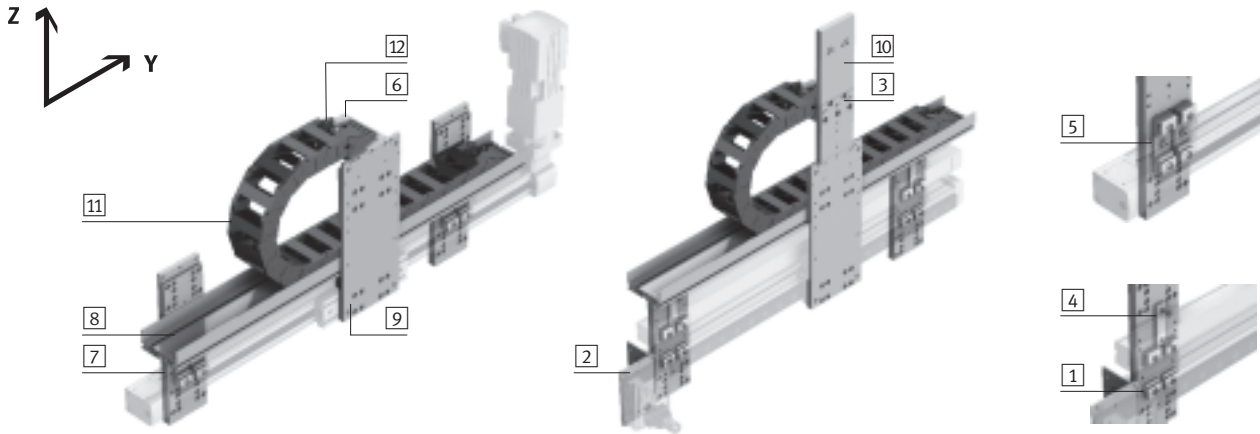
Linear gantries

Y modules

FESTO

Mono system

Toothed belt axes DGE, linear drives DGC, DGPL



Bill of materials										
Type		HMBSY-LP-M25-1		HMBSY-LP-M25-2		HMBSY-LP-M25-3		HMBSY-LP-M25-4		
For drives		DGPL-25 DGE-25-SP-KF DGE-25-ZR-KF		DGC-25		DGPL-25 with SPC11		DGE-25-ZR-RF		
System type		Mono 25								
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	→ Page
1	2 ¹⁾	150 736		–		150 736		150 736		Volume 1
		MUP-18/25				MUP-18/25		MUP-18/25		
	1 ¹⁾	–		531 753		–		–		Volume 1
				MUC-25						
2	1	–		–		539 367		–		5 / 3.3-103
						HMVW-SPC				
3	1	–		–		539 364		–		5 / 3.3-140
						HMIM-LP				
4	1 ¹⁾	–		–		539 973		–		5 / 3.3-102
						HMVO-POT				
5	2 ¹⁾	–		–		–		539 362		5 / 3.3-102
								HMVO-RF25		
6	1	539 366		539 366		539 366		539 366		5 / 3.3-140
		HMIO-AP1		HMIO-AP1		HMIO-AP1		HMIO-AP1		
7	2 ²⁾	539 972		539 972		539 972		539 972		5 / 3.3-98
		HMVM-LP-DL25/40		HMVM-LP-DL25/40		HMVM-LP-DL25/40		HMVM-LP-DL25/40		
8	1 ³⁾	539 378		539 378		539 378		539 378		5 / 3.3-139
		HMIA-E05		HMIA-E05		HMIA-E05		HMIA-E05		
9	1	539 368		539 368		539 368		539 368		5 / 3.3-100
		HMVS-DL25		HMVS-DL25		HMVS-DL25		HMVS-DL25		
10	1	–		–		539 365		–		5 / 3.3-138
						HMIZB-E03				
11	1	IGUS E2 medium 240.05.100 and 211 or KABELSCHLEPP MC 0320.60-01-100 and TS O/n _T 2								–
12	1	IGUS E2 medium 2050.12.PZB or KABELSCHLEPP MC FA/MA								–

1) Per basic kit HMVM-LP-DL25/40

2) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVM-LP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

3) Length depends on the stroke of the drive

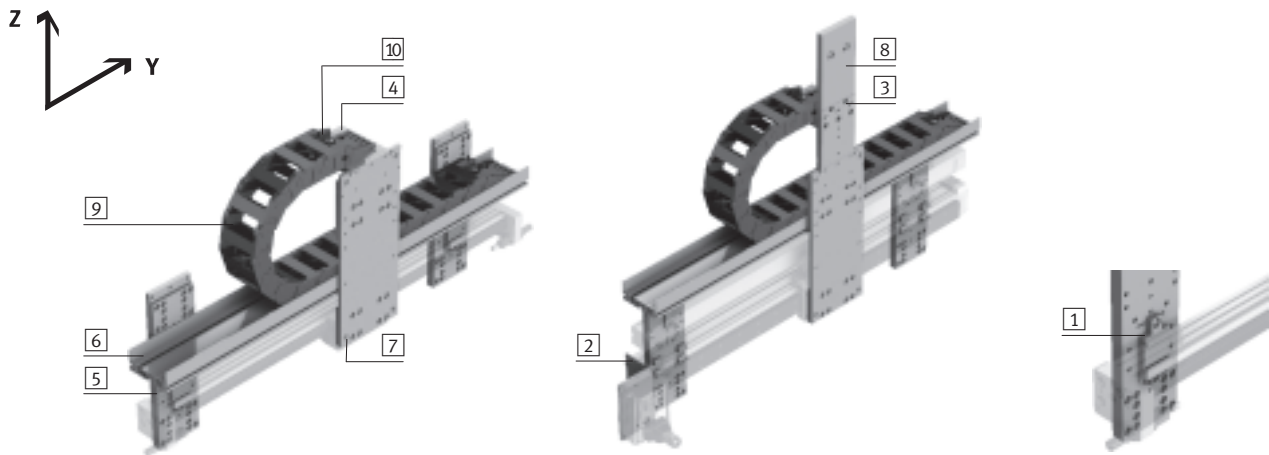
Linear gantries

Y modules

FESTO

Mono system

Toothed belt axes DGE, linear drives DGC, DGPL



Bill of materials								
Type		HMBSY-LP-M40-1		HMBSY-LP-M40-2		HMBSY-LP-M40-3		
For drives		DGPL-40 DGE-40-SP-KF DGE-40-ZR-KF DGE-40-ZR-RF		DGC-40		DGPL-40 with SPC11		
System type		Mono 40						
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	→ Page
1	1 ¹⁾	–		531 755 MUC-40		–		Volume 1
2	1	–		–		539 367 HMVW-SPC		5 / 3.3-103
3	1	–		–		539 364 HMIM-LP		5 / 3.3-140
4	1	539 366 HMIO-AP-1		540 121 HMIO-AP-2		539 366 HMIO-AP-1		5 / 3.3-140
5	2 ²⁾	539 972 HMVM-LP-DL25/40		539 972 HMVM-LP-DL25/40		539 972 HMVM-LP-DL25/40		5 / 3.3-98
6	1 ³⁾	539 378 HMIA-E05		539 378 HMIA-E05		539 378 HMIA-E05		5 / 3.3-139
7	1	539 369 HMVS-DL40		539 369 HMVS-DL40		539 369 HMVS-DL40		5 / 3.3-100
8	1	–		–		539 365 HMIZB-E03		5 / 3.3-138
9	1	IGUS E2 medium 240.05.100 and 211 or KABELSCHLEPP MC 0320.60-01-100 and TS O/ηT2						–
10	1	IGUS E2 medium 2050.12.PZB or KABELSCHLEPP MC FA/MA						–

1) Per basic kit HMVM-LP-DL25/40

2) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVM-LP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

3) Length depends on the stroke of the drive

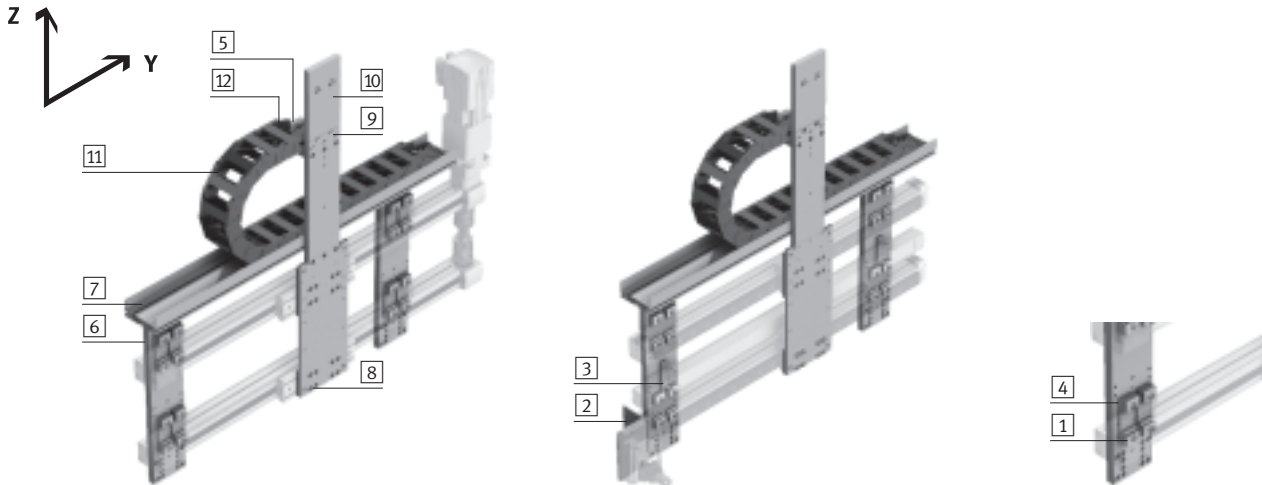
Linear gantries

Y modules

FESTO

Duo system

Toothed belt axes DGE, linear drives DGC, DGPL



Bill of materials

Type		HMBSY-LP-D25-1	HMBSY-LP-D25-2	HMBSY-LP-D25-3	HMBSY-LP-D25-4	→ Page
For drives		DGPL-25 DGE-25-SP-KF DGE-25-ZR-KF	DGC-25	DGPL-25 with SPC11	DGE-25-ZR-RF	
System type		Duo 25				
Item	Quantity	Part No. Type	Part No. Type	Part No. Type	Part No. Type	
[1]	4 ¹⁾	150 736 MUP-18/25	–	150 736 MUP-18/25	150 736 MUP-18/25	Volume 1
	2 ¹⁾	–	531 753 MUC-25	–	–	Volume 1
[2]	1	–	–	539 367 HMOVW-SPC	–	5 / 3.3-103
[3]	1 ¹⁾	–	–	539 973 HMVO-POT	–	5 / 3.3-102
[4]	4 ¹⁾	–	–	–	539 362 HMVO-RF25	5 / 3.3-102
[5]	1	539 366 HMIO-AP-1	539 366 HMIO-AP-1	539 366 HMIO-AP-1	539 366 HMIO-AP-1	5 / 3.3-140
[6]	2 ²⁾	539 971 HMVD-LP-DL25/40	539 971 HMVD-LP-DL25/40	539 971 HMVD-LP-DL25/40	539 971 HMVD-LP-DL25/40	5 / 3.3-98
[7]	1 ³⁾	539 378 HMIA-E05	539 378 HMIA-E05	539 378 HMIA-E05	539 378 HMIA-E05	5 / 3.3-139
[8]	1	539 368 HMVS-DL25	539 368 HMVS-DL25	539 368 HMVS-DL25	539 368 HMVS-DL25	5 / 3.3-100
[9]	1	539 363 HMID-LP	539 363 HMID-LP	539 363 HMID-LP	539 363 HMID-LP	5 / 3.3-140
[10]	1	539 365 HMIZB-E03	539 365 HMIZB-E03	539 365 HMIZB-E03	539 365 HMIZB-E03	5 / 3.3-138
[11]	1	IGUS E2 medium 240.05.100 and 211 or KABELSCHLEPP MC 0320.60-01-100 and TS 0/n _T 2				–
[12]	1	IGUS E2 medium 2050.12.PZB or KABELSCHLEPP MC FA/MA				–

1) Per basic kit HMVD-LP-DL25/40

2) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVD-LP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

3) Length depends on the stroke of the drive

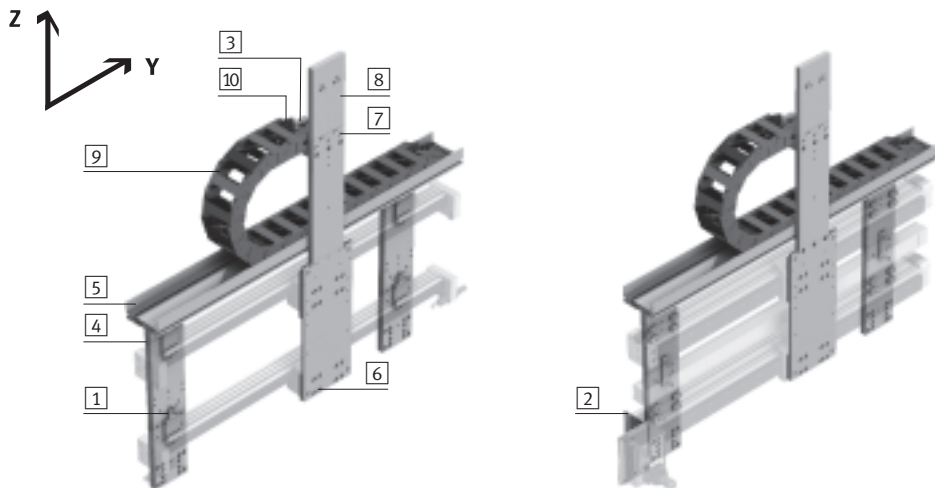
Linear gantries

Y modules

FESTO

Duo system

Toothed belt axes DGE, linear drives DGC, DGPL



Bill of materials								
Type		HMBSY-LP-D40-1		HMBSY-LP-D40-2		HMBSY-LP-D40-3		
For drives		DGPL-40 DGE-40-SP-KF DGE-40-ZR-KF DGE-40-ZR-RF		DGC-40		DGPL-40 with SPC11		
System type		Duo 40						
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	➔ Page
[1]	2 ¹⁾	–		531 755 MUC-40		–		Volume 1
[2]	1	–		–		539 367 HMVW-SPC		5 / 3.3-103
[3]	1	539 366 HMIO-AP-1		540 121 HMIO-AP-2		539 366 HMIO-AP-1		5 / 3.3-140
[4]	2 ²⁾	539 971 HMVD-LP-DL25/40		539 971 HMVD-LP-DL25/40		539 971 HMVD-LP-DL25/40		5 / 3.3-98
[5]	1 ³⁾	539 378 HMIA-E05		539 378 HMIA-E05		539 378 HMIA-E05		5 / 3.3-139
[6]	1	539 369 HMVS-DL40		539 369 HMVS-DL40		539 369 HMVS-DL40		5 / 3.3-100
[7]	1	539 363 HMID-LP		539 363 HMID-LP		539 363 HMID-LP		5 / 3.3-140
[8]	1	539 365 HMIZB-E03		539 365 HMIZB-E03		539 365 HMIZB-E03		5 / 3.3-138
[9]	1	IGUS E2 medium 240.05.100 and 211 or KABELSCHLEPP MC 0320.60-01-100 and TS O/η _T 2						–
[10]	1	IGUS E2 medium 2050.12.PZB or KABELSCHLEPP MC FA/MA						–

1) Per basic kit HMVD-LP-DL25/40

2) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVD-LP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

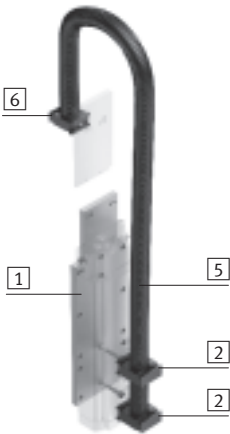
3) Length depends on the stroke of the drive

Linear gantries

Z modules

FESTO

Z modules
Mini slides DGSL



Bill of materials							
Type		HMBSZ-DGSL-7		HMBSZ-DGSL-8			
For drives		DGSL-16		DGSL-20		DGSL-25	
System type		Mono 25		Mono 40 Duo 25		Duo 25	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 373	HMVZ-2	539 373	HMVZ-2	539 373	HMVZ-2
2	1	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B
		548 803	ZBV-M5-7	548 804	ZBV-M5-9	548 804	ZBV-M5-9
5	1 ¹⁾	177 566	MKR-16,5-PG-16	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21
6	1	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B

1) Length depends on the stroke of the drive

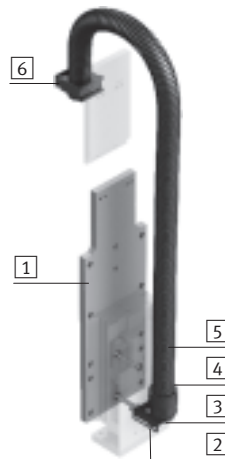
Linear gantries

Z modules

FESTO

Mono/Duo system

Mini slides SLT



Bill of materials							
Type		HMBSZ-SLT-7					
For drives		SLT-16		SLT-20		SLT-25	
System type		Mono 25		Mono 40 Duo 25		Duo 25	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 373	HMVZ-2	539 373	HMVZ-2	539 373	HMVZ-2
2	1	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21
3	1	177 599	MKM-PG-21	177 599	MKM-PG-21	177 599	MKM-PG-21
4	1	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21
5	1 ¹⁾	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21
6	1	192 290	MKRS-23-B	192 290	MKRS-23-B	192 290	MKRS-23-B

1) Length depends on the stroke of the drive

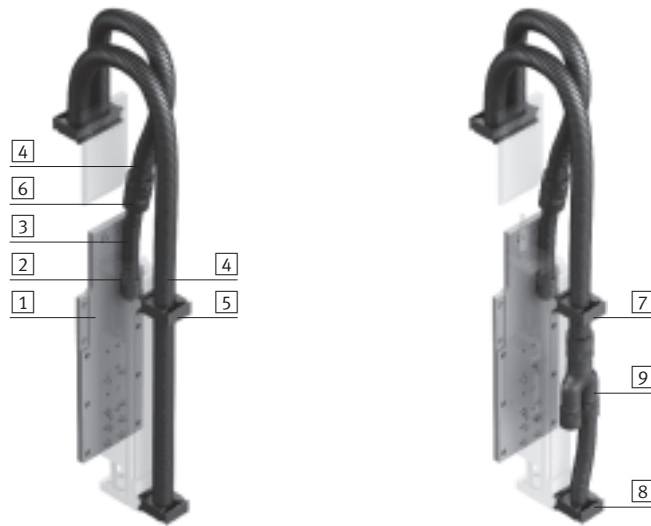
Linear gantries

Z modules

FESTO

Mono/Duo system

Linear modules HMPL



Bill of materials								
Type		HMBSZ-HMPL-5		HMBSZ-HMPL-6				
For drives		HMPL-16	HMPL-20	HMPL-16	HMPL-20			
		without intermediate position		with intermediate position				
System type		Mono 25	Mono 40 Duo 25	Mono 25	Mono 40 Duo 25			
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	➔ Page
[1]	1	539 375 HMVZ-4		539 375 HMVZ-4		539 375 HMVZ-4		5 / 3.3-101
[2]	1	177 571 MKRV-16,5-PG-16		177 571 MKRV-16,5-PG-16		177 571 MKRV-16,5-PG-16		5 / 3.3-126
[3]	1 ¹⁾	177 566 MKR-16,5-PG-16		177 566 MKR-16,5-PG-16		177 566 MKR-16,5-PG-16		5 / 3.3-124
[4]	1 ²⁾	177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		
[5]	4 ³⁾	192 290 MKRS-23-B		192 290 MKRS-23-B		–	–	
[6]	1	194 321 MKRT-23-16,5		194 321 MKRT-23-16,5		194 321 MKRT-23-16,5		5 / 3.3-128
[7]	3 ³⁾	–		–		192 290 MKRS-23-B	192 290 MKRS-23-B	5 / 3.3-131
[8]	1	–		–		192 289 MKRS-16,5-B	192 289 MKRS-16,5-B	
[9]	1	–		–		193 946 MKY-PG-21-2PG-16	193 946 MKY-PG-21-2PG-16	5 / 3.3-128

1) Length 200 mm

2) Length depends on the stroke of the drive, 2 conduits are required with an intermediate position.

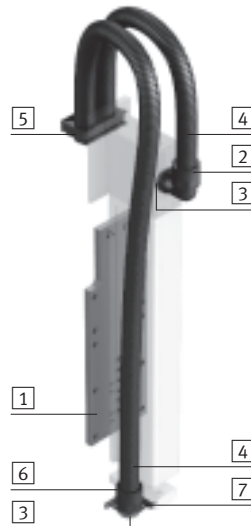
3) In order to be able to mount the retaining clip MKRS, a clamping component (2x code J) must be selected as an accessory in the order for the linear module HMPL.

Linear gantries

Z modules

FESTO

Mono/Duo system
Linear modules HMP



Bill of materials							
Type		HMBSZ-HMP-4		HMBSZ-HMP-5		HMBSZ-HMP-6	
For drives		HMP-16		HMP-20		HMP-25	
System type		Mono 40 Duo 25		Duo 25		Duo 40	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
[1]	1	539 374	HMVZ-3	539 374	HMVZ-3	539 377	HMVZ-6
[2]	1	177 577	MKRL-23-PG-21	177 578	MKRL-29-PG-29	177 578	MKRL-29-PG-29
[3]	2	177 599	MKM-PG-21	177 600	MKM-PG-29	177 600	MKM-PG-29
[4]	1 ¹⁾	177 567	MKR-23-PG-21	177 568	MKR-29-PG-29	177 568	MKR-29-PG-29
[5]	2	192 290	MKRS-23-B	192 291	MKRS-29-B	192 291	MKRS-29-B
[6]	1	177 572	MKRV-23-PG-21	177 573	MKRV-29-PG-29	177 573	MKRV-29-PG-29
[7]	1	193 124	HMZAS-PG-21	177 603	HMZAS-PG-29	177 603	HMZAS-PG-29

1) Length depends on the stroke of the drive

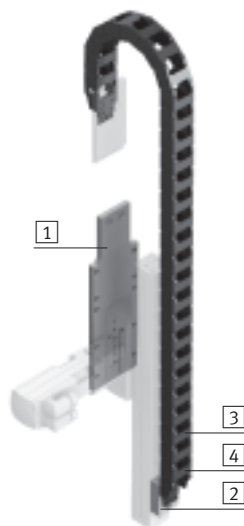
Linear gantries

Z modules

FESTO

Mono/Duo system

Cantilever axes DGEA



Bill of materials							
Type		HMBSZ-DGEA-1		HMBSZ-DGEA-2		HMBSZ-DGEA-3	
For drives		DGEA-18		DGEA-25		DGEA-25	
System type		Mono 25 Mono 40 Duo 25		Duo 25		Duo 40	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 374	HMVZ-3	539 375	HMVZ-4	539 377	HMVZ-6
2	1	539 370	HMIZF-E03-DA18	539 371	HMIZF-E03-DA25	539 371	HMIZF-E03-DA25
3	1 ¹⁾	IGUS E2 medium 240.03.075.0 and 211 or KABELSCHLEPP MC 0320.40-01-77 and TS O/n ₁ 2					–
4	1	IGUS E2 medium 2030.12.PZB or KABELSCHLEPP MC FA/MA					–

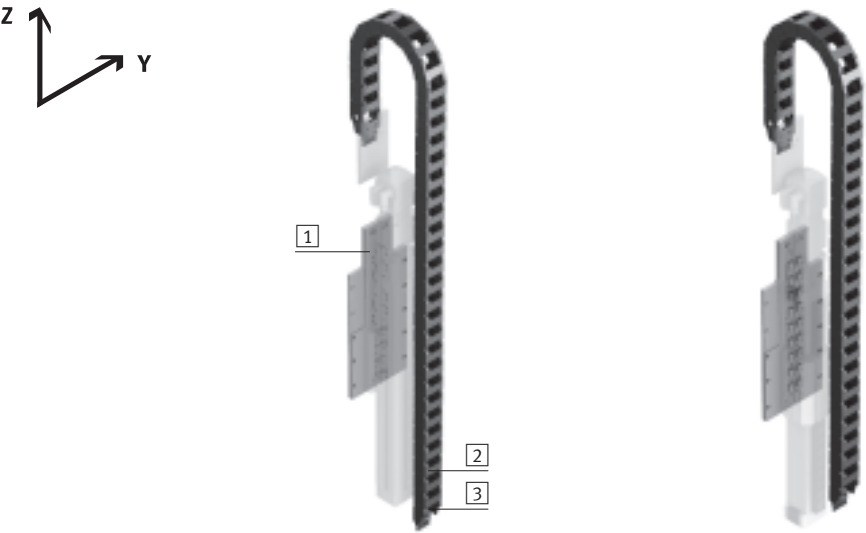
1) Length depends on the stroke of the drive

Linear gantries

Z modules

FESTO

Mono/Duo system
Spindle axes DGE



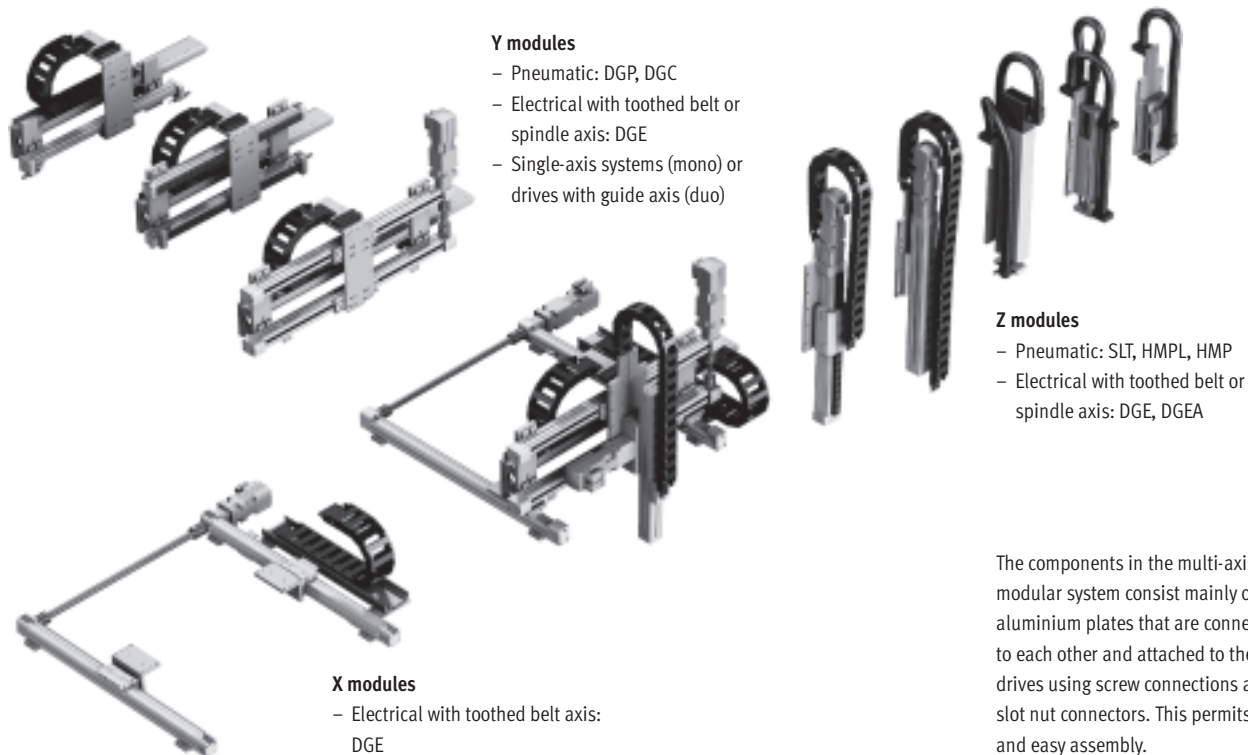
Bill of materials							
Type		HMBSZ-DGE-1		HMBSZ-DGE-2		HMBSZ-DGE-3	
For drives		DGE-25-SP		DGE-40-SP		DGE-40-SP	
System type		Mono 40 Duo 25		Duo 25		Duo 40	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 374	HMVZ-3	539 375	HMVZ-4	539 377	HMVZ-6
2	1 ¹⁾	IGUS E2 medium 240.03.075.0 and 211 or KABELSCHLEPP MC 0320.40-01-77 and TS O/nT2					–
3	1	IGUS E2 medium 2030.12.PZB or KABELSCHLEPP MC FA/MA					–

1) Length depends on the stroke of the drive

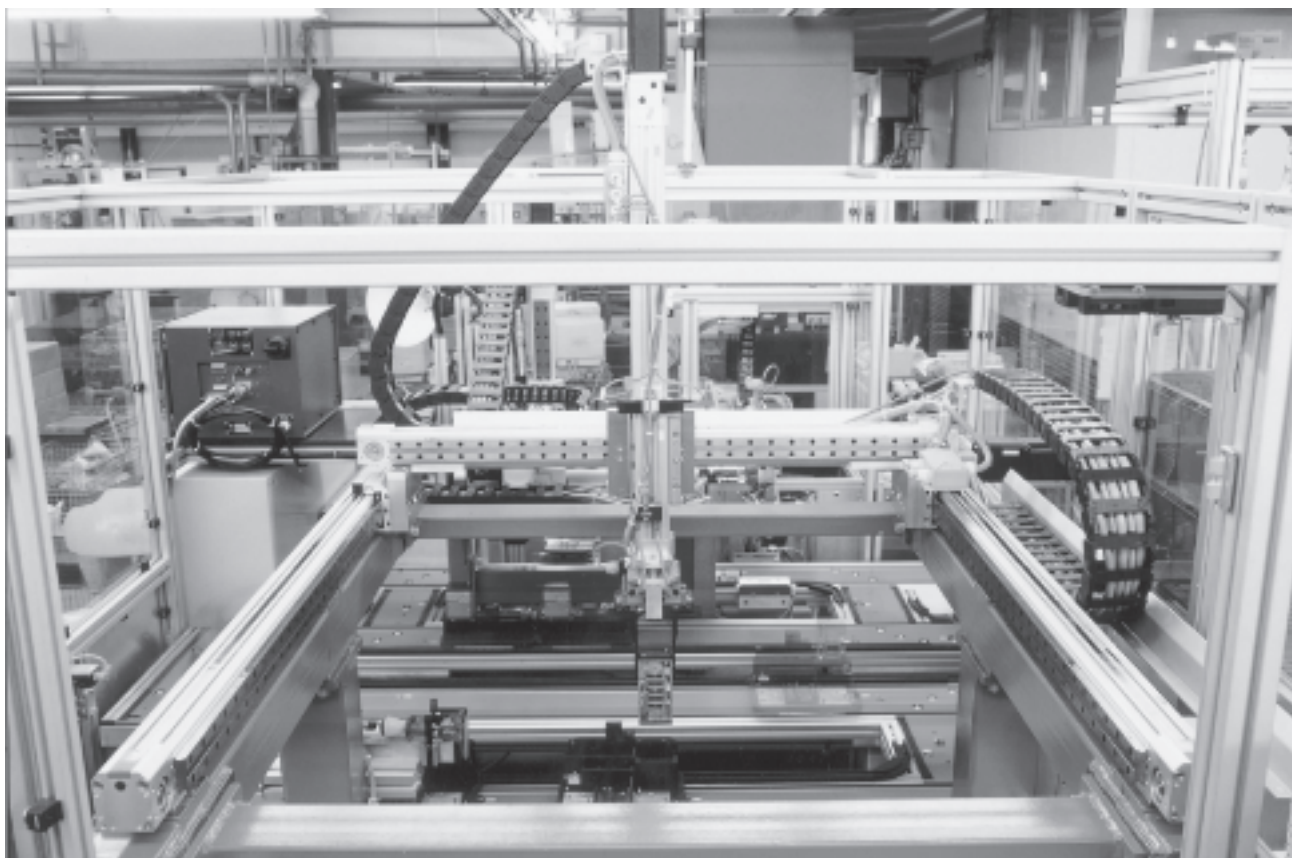
3-Dimensional gantries

Key features

X, Y and Z modules



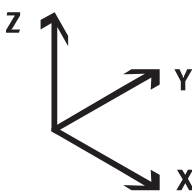
Application



3-Dimensional gantries

Product range overview

FESTO

Selection aid					
System type	Mono 25	Mono 40	Duo 25		Duo 40
					
X-axis	DGE-25-ZR	DGE-40-ZR	DGE-25-ZR	DGE-40-ZR	DGE-40-ZR
Drive function	Electrical				
Options	Ball bearing or roller guide				
Y-axis	DG...-25	DG...-40	DG...-25		DG...-40
					
Drive function	Pneumatic and electrical				
Options	Spindle or toothed belt axis				
Z-axis	DGSL-16 SLT-16 HMPL-16	DGSL-20 SLT-20 HMPL-20 HMP-16		DGSL-25 SLT-25 HMP-20	HMP-25
Drive function	Pneumatic				
Options	Intermediate position with HMPL	Intermediate position with HMPL, HMP		Intermediate position with HMP	
Z-axis	DGEA-18	DGEA-18 DGE-25-SP-KF		DGEA-25 DGE-40-SP-KF	DGEA-25 DGE-40-SP-KF
Drive function	Electrical				
Options	–	Spindle or toothed belt axis		Spindle or toothed belt axis	
Working load [kg]					
	1	■	■	■	■
	2	■	■	■	■
	3	–	■	■	■
	4	–	■	■	■
	6	–	–	■	■
	10	–	–	–	■
➔ Page	5 / 3.3-74				

3-Dimensional gantries

Selection aid for basic, connection and installation components

FESTO

X-axis					
System type		Mono 25	Mono 40	Duo 25	Duo 40
					
Electrical drives		Type			
DGE-25	-ZR-KF	HMBSX-RP/FP-25-1 ➔ 5 / 3.3-77	HMBSX-RP/FP-25-1 ➔ 5 / 3.3-77	HMBSX-RP/FP-25-1 ➔ 5 / 3.3-77	–
	-ZR-RF	HMBSX-RP/FP-25-2 ➔ 5 / 3.3-77	HMBSX-RP/FP-25-2 ➔ 5 / 3.3-77	HMBSX-RP/FP-25-2 ➔ 5 / 3.3-77	–
DGE-40	-ZR-KF	–	HMBSX-RP/FP-40-1 ➔ 5 / 3.3-77	HMBSX-RP/FP-40-1 ➔ 5 / 3.3-77	HMBSX-RP/FP-40-1 ➔ 5 / 3.3-77
	-ZR-RF	–	HMBSX-RP/FP-40-2 ➔ 5 / 3.3-77	HMBSX-RP/FP-40-2 ➔ 5 / 3.3-77	HMBSX-RP/FP-40-2 ➔ 5 / 3.3-77

Selection example:

Project engineering produced the following drive combination:

Step 1

Define the drive type in the selection aids for the X-, Y- or Z-axis. The associated bill of materials can be found on the specified page.

Step 2

The necessary basic, connection and installation components can be found in the bill of materials on the specified page.

Step 3

Technical data on the basic, connection and installation components can be found on the specified pages. Further accessories for the selected drives, for example proximity sensors, centring sleeves, etc. are documented with the drives.

X-axis: DGE-40-ZR-KF

X-axis: HMBSX-RP/FP-40-1
→ 5 / 3.3-77

X-axis: HMBSX-RP/FP-40-1

Y-axis: Mono 40 system with DGC-40

Y-axis: HMBSY-RP/FP-M40-2
→ 5 / 3.3-78

Y-axis: HMBSY-RP/FP-M40-2

Z-axis: HMPL-20 without intermediate position

Z-axis: HMBSZ-HMPL-5 or 6
→ 5 / 3.3-82

Z-axis: HMBSZ-HMPL-5

3-Dimensional gantries

Selection aid for basic, connection and installation components

FESTO

Y-axis				
System type	Mono 25	Mono 40	Duo 25	Duo 40
				
Pneumatic drives	Type			
DGPL-25	HMBSY-RP/FP-M25-1 ➔ 5 / 3.3-78	–	HMBSY-RP/FP-D25-1 ➔ 5 / 3.3-79	–
DGC-25	HMBSY-RP/FP-M25-2 ➔ 5 / 3.3-78	–	HMBSY-RP/FP-D25-2 ➔ 5 / 3.3-79	–
DGPL-40	–	HMBSY-RP/FP-M40-1 ➔ 5 / 3.3-78	–	HMBSY-RP/FP-D40-1 ➔ 5 / 3.3-79
DGC-40	–	HMBSY-RP/FP-M40-2 ➔ 5 / 3.3-78	–	HMBSY-RP/FP-D40-2 ➔ 5 / 3.3-79
Electrical drives	Type			
DGE-25 -SP-KF -ZR-KF -ZR-RF	HMBSY-RP/FP-M25-1 ➔ 5 / 3.3-78	–	HMBSY-RP/FP-D25-1 ➔ 5 / 3.3-79	–
DGE-40 -SP-KF -ZR-KF -ZR-RF	–	HMBSY-RP/FP-M40-1 ➔ 5 / 3.3-78	–	HMBSY-RP/FP-D40-1 ➔ 5 / 3.3-79

3-Dimensional gantries

Selection aid for basic, connection and installation components

FESTO



Z-axis				
System type	Mono 25	Mono 40	Duo 25	Duo 40
Pneumatic drives	Type			
DGSL-16	HMBSZ-DGSL-7 ➔ 5 / 3.3-80	–	–	–
DGSL-20	–	HMBSZ-DGSL-8 ➔ 5 / 3.3-80	–	–
DGSL-25	–	HMBSZ-DGSL-8 ➔ 5 / 3.3-80	HMBSZ-DGSL-8 ➔ 5 / 3.3-80	–
SLT-16	HMBSZ-SLT-7 ➔ 5 / 3.3-81	–	–	–
SLT-20	–	HMBSZ-SLT-7 ➔ 5 / 3.3-81	HMBSZ-SLT-7 ➔ 5 / 3.3-81	–
SLT-25	–	–	HMBSZ-SLT-7 ➔ 5 / 3.3-81	–
HMPL-16	HMBSZ-HMPL-5 HMBSZ-HMPL-6 ➔ 5 / 3.3-82	–	–	–
HMPL-20	–	HMBSZ-HMPL-5 HMBSZ-HMPL-6 ➔ 5 / 3.3-82	HMBSZ-HMPL-5 HMBSZ-HMPL-6 ➔ 5 / 3.3-82	–
HMP-16	–	HMBSZ-HMP-4 ➔ 5 / 3.3-83	HMBSZ-HMP-4 ➔ 5 / 3.3-83	–
HMP-20	–	–	HMBSZ-HMP-5 ➔ 5 / 3.3-83	–
HMP-25	–	–	–	HMBSZ-HMP-6 ➔ 5 / 3.3-83
Electrical drives	Type			
DGEA-18	HMBSZ-DGEA-1 ➔ 5 / 3.3-84	HMBSZ-DGEA-1 ➔ 5 / 3.3-84	HMBSZ-DGEA-1 ➔ 5 / 3.3-84	–
DGEA-25	–	–	HMBSZ-DGEA-2 v5 / 3.3-84	HMBSZ-DGEA-3 ➔ 5 / 3.3-84
DGE-25-SP	–	HMBSZ-DGE-1 ➔ 5 / 3.3-85	HMBSZ-DGE-1 ➔ 5 / 3.3-85	–
DGE-40-SP	–	–	HMBSZ-DGE-2 ➔ 5 / 3.3-85	HMBSZ-DGE-3 ➔ 5 / 3.3-85

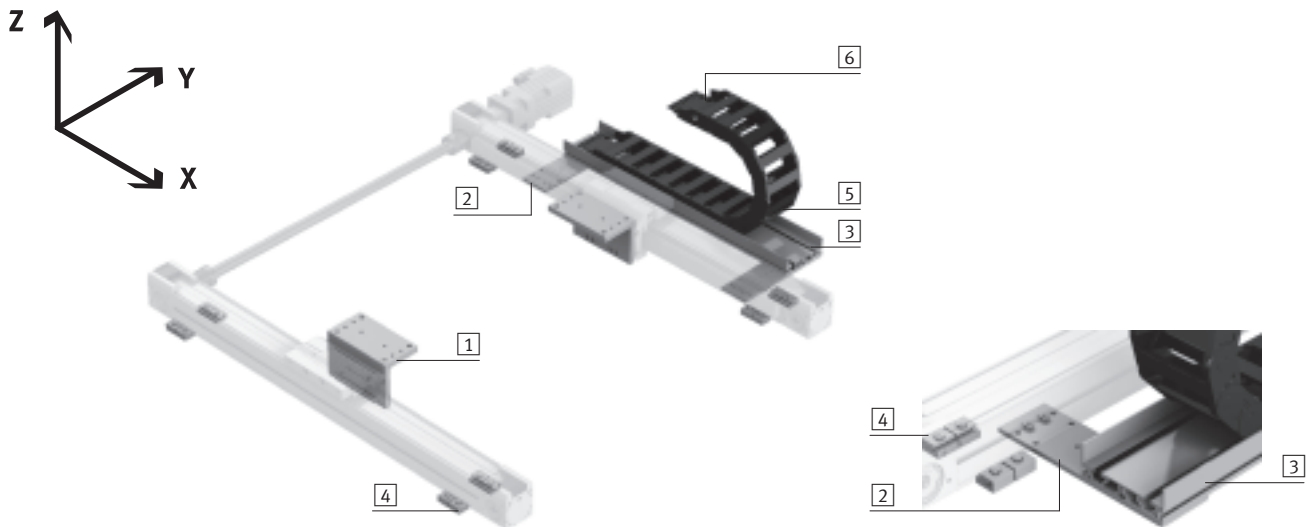
3-Dimensional gantries

X modules

FESTO

Basic system

Toothed belt axes DGE



Bill of materials										
Type		HMBSX-RP/FP-25-1		HMBSX-RP/FP-25-2		HMBSX-RP/FP-40-1		HMBSX-RP/FP-40-2		➔ Page
For drives		DGE-25-ZR-KF		DGE-25-ZR-RF		DGE-40-ZR-KF		DGE-40-ZR-RF		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	
[1]	1	539 651 HMVW-DL25		539 652 HMVS-RF25		540 325 HMVW-DL40		539 653 HMVS-RF40		5 / 3.3-95
[2]	2 ¹⁾	539 654 HMIXB-RP/FP		539 654 HMIXB-RP/FP		539 654 HMIXB-RP/FP		539 654 HMIXB-RP/FP		5 / 3.3-141
[3]	1 ²⁾	539 379 HMIA-E07		539 379 HMIA-E07		539 379 HMIA-E07		539 379 HMIA-E07		5 / 3.3-139
[4]	2 ³⁾	150 736 MUP-18/25		150 736 MUP-18/25		–		–		Volume 1
	1 ³⁾	–		–		150 738 MUP-40		150 738 MUP-40		Volume 1
[5]	1 ²⁾	IGUS E2 medium 240.07.100.0 and 211 or KABELSCHLEPP MC 0320.80-01 and TS O/η _T 2								–
[6]	1	IGUS E2 medium 2070.12.PZB or KABELSCHLEPP MC FA/MA								–

1) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, an installation kit HMIXB-RP/FP must be additionally ordered per 500 mm stroke or part thereof.

2) Length depends on the stroke of the drive

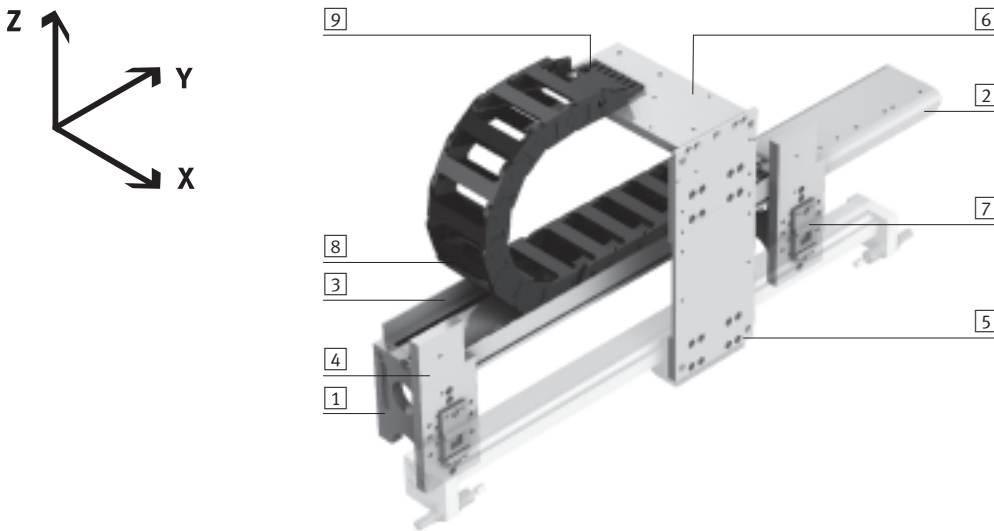
3) Every 500 mm per axis

3-Dimensional gantries

Y modules

FESTO

Mono system
Toothed belt/spindle axes DGE, linear drives DGC, DGPL



Bill of materials										
Type		HMBSY-RP/FP-M25-1		HMBSY-RP/FP-M25-2		HMBSY-RP/FP-M40-1		HMBSY-RP/FP-M40-2		
For drives		DGE-25-SP-KF DGE-25-ZR-KF DGE-25-ZR-RF DGPL-25		DGC-25		DGE-40-SP-KF DGE-40-ZR-KF DGE-40-ZR-RF DGPL-40		DGC-40		
System type		Mono 25				Mono 40				
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	➔ Page
[1]	2	539 657	HMVV-RP/FP	539 657	HMVV-RP/FP	539 657	HMVV-RP/FP	539 657	HMVV-RP/FP	5 / 3.3-97
[2]	1	539 658	HMIXF-RP/FP	539 658	HMIXF-RP/FP	539 658	HMIXF-RP/FP	539 658	HMIXF-RP/FP	5 / 3.3-97
[3]	1 ¹⁾	539 379	HMIA-E07	539 379	HMIA-E07	539 379	HMIA-E07	539 379	HMIA-E07	5 / 3.3-139
[4]	2 ³⁾	539 656	HMVM-RP/FP-DL25/40	539 656	HMVM-RP/FP-DL25/40	539 656	HMVM-RP/FP-DL25/40	539 656	HMVM-RP/FP-DL25/40	5 / 3.3-99
[5]	1	539 368	HMVS-DL25	539 368	HMVS-DL25	539 369	HMVS-DL40	539 369	HMVS-DL40	5 / 3.3-100
[6]	1	539 659	HMIYF-RF/DL25	539 659	HMIYF-RF/DL25	539 660	HMIYF-RF/DL40	539 660	HMIYF-RF/DL40	5 / 3.3-142
[7]	2 ²⁾	150 736	MUP-18/25	–		–		–		Volume 1
	1 ²⁾	–		531 753	MUC-25	–		531 755	MUC-40	Volume 1
	1 ²⁾	–		–		150 738	MUP-40	–		Volume 1
[8]	1 ¹⁾	IGUS E2 medium 240.07.100.0 and 211 or KABELSCHLEPP MC 0320.80-01 and TS O/n ₇ 2								–
[9]	1	IGUS E2 medium 2070.12.PZB or KABELSCHLEPP MC FA/MA								–

1) Length depends on the stroke of the drive

2) Per basic kit HMVM-RP/FP-DL25/40

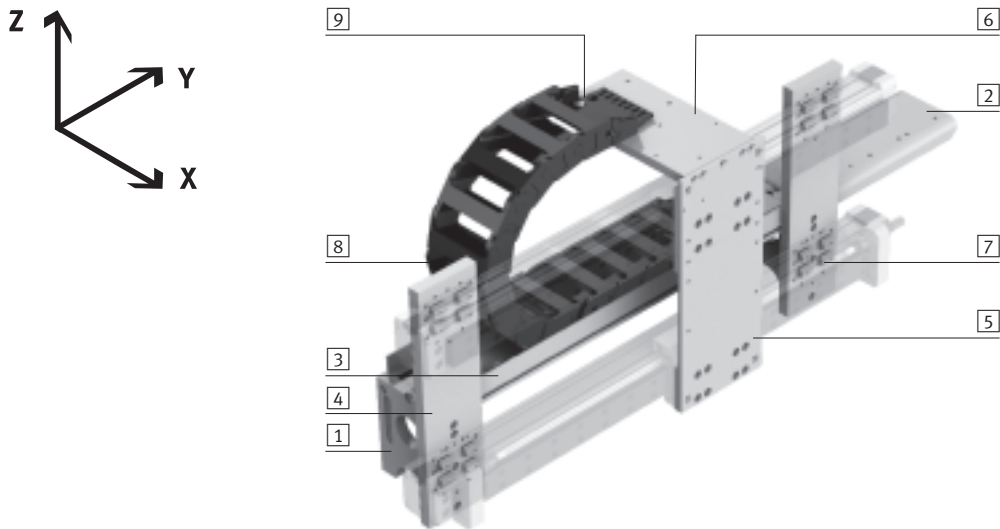
3) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVM-RP/FP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

3-Dimensional gantries

Y modules

FESTO

Duo system
Toothed belt/spindle axes DGE, linear drives DGC, DGPL



Bill of materials										
Type		HMBSY-RP/FP-D25-1		HMBSY-RP/FP-D25-2		HMBSY-RP/FP-D40-1		HMBSY-RP/FP-D40-2		
For drives		DGE-25-SP-KF DGE-25-ZR-KF DGE-25-ZR-RF DGPL-25		DGC-25		DGE-40-SP-KF DGE-40-ZR-KF DGE-40-ZR-RF DGPL-40		DGC-40		
System type		Duo 25				Duo 40				
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	
[1]	2	539 657		539 657		539 657		539 657		5 / 3.3-97
		HMVV-RP/FP		HMVV-RP/FP		HMVV-RP/FP		HMVV-RP/FP		
[2]	1	539 658		539 658		539 658		539 658		5 / 3.3-97
		HMIXF-RP/FP		HMIXF-RP/FP		HMIXF-RP/FP		HMIXF-RP/FP		
[3]	1 ¹⁾	539 379		539 379		539 379		539 379		5 / 3.3-139
		HMIA-E07		HMIA-E07		HMIA-E07		HMIA-E07		
[4]	2 ³⁾	539 655		539 655		539 655		539 655		5 / 3.3-99
		HMVD-RP/FP-DL25/40		HMVD-RP/FP-DL25/40		HMVD-RP/FP-DL25/40		HMVD-RP/FP-DL25/40		
[5]	1	539 368		539 368		539 369		539 369		5 / 3.3-100
		HMVS-DL25		HMVS-DL25		HMVS-DL40		HMVS-DL40		
[6]	1	539 659		539 659		539 660		539 660		5 / 3.3-142
		HMIYF-RF/DL25		HMIYF-RF/DL25		HMIYF-RF/DL40		HMIYF-RF/DL40		
[7]	4 ²⁾	150 736		–		–		–		Volume 1
		MUP-18/25								
	2	–		531 753		–		531 755		Volume 1
				MUC-25				MUC-40		
[8]	1 ¹⁾	IGUS E2 medium 240.07.100.0 and 211 or KABELSCHLEPP MC 0320.80-01 and TS O/η _T 2								–
[9]	1	IGUS E2 medium 2070.12.PZB or KABELSCHLEPP MC FA/MA								–

1) Length depends on the stroke of the drive

2) Per basic kit HMVD-RP/FP-DL25/40

3) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVD-RP/FP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

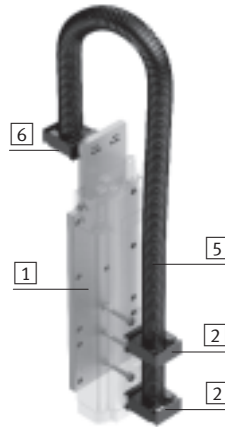
3-Dimensional gantries

Z modules

FESTO

Mono/Duo system

Mini slides DGSL



Bill of materials							
Type		HMBSZ-DGSL-7		HMBSZ-DGSL-8			
For drives		DGSL-16		DGSL-20		DGSL-25	
System type		Mono 25		Mono 40 Duo 25		Duo 25	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
[1]	1	539 373	HMVZ-2	539 373	HMVZ-2	539 373	HMVZ-2
[2]	1	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B
		548 803	ZBV-M5-7	548 804	ZBV-M5-9	548 804	ZBV-M5-9
[5]	1 ¹⁾	177 566	MKR-16,5-PG-16	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21
[6]	1	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B

1) Length depends on the stroke of the drive

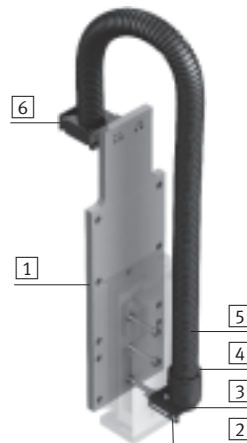
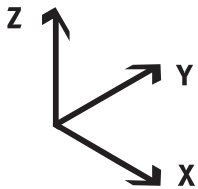
3-Dimensional gantries

Z modules

FESTO

Mono/Duo system

Mini slides SLT



Bill of materials							
Type		HMBSZ-SLT-7					
For drives		SLT-16		SLT-20		SLT-25	
System type		Mono 25		Mono 40 Duo 25		Duo 25	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 373	HMVZ-2	539 373	HMVZ-2	539 373	HMVZ-2
2	1	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21
3	1	177 599	MKM-PG-21	177 599	MKM-PG-21	177 599	MKM-PG-21
4	1	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21
5	1 ¹⁾	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21
6	1	192 290	MKRS-23-B	192 290	MKRS-23-B	192 290	MKRS-23-B

1) Length depends on the stroke of the drive

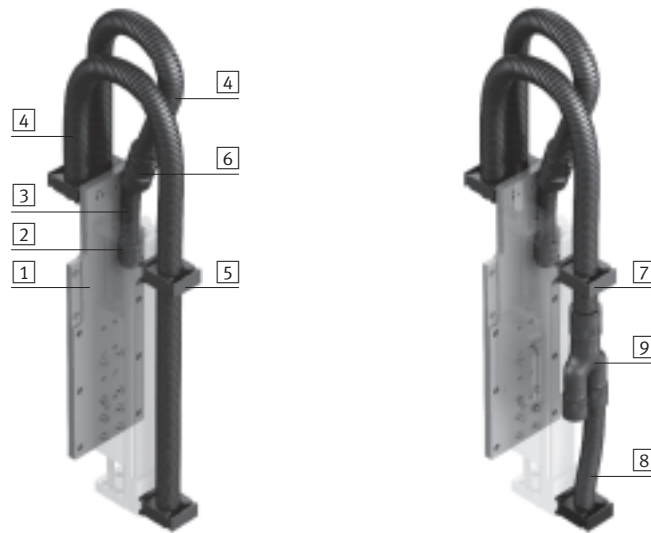
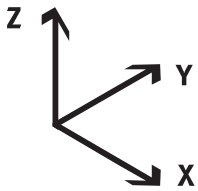
3-Dimensional gantries

Z modules

FESTO

Mono/Duo system

Linear modules HMPL



Bill of materials								
Type		HMBSZ-HMPL-5			HMBSZ-HMPL-6			
For drives		HMPL-16	HMPL-20	HMPL-16	HMPL-20			
		without intermediate position		with intermediate position				
System type		Mono 25	Mono 40 Duo 25	Mono 25	Mono 40 Duo 25			
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	➔ Page
1	1	539 375 HMVZ-4		539 375 HMVZ-4		539 375 HMVZ-4		5 / 3.3-101
2	1	177 571 MKRV-16,5-PG-16		177 571 MKRV-16,5-PG-16		177 571 MKRV-16,5-PG-16		5 / 3.3-126
3	1 ¹⁾	177 566 MKR-16,5-PG-16		177 566 MKR-16,5-PG-16		177 566 MKR-16,5-PG-16		5 / 3.3-124
4	1 ²⁾	177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		
5	4 ³⁾	192 290 MKRS-23-B		192 290 MKRS-23-B		–	–	
6	1	194 321 MKRT-23-16,5		194 321 MKRT-23-16,5		194 321 MKRT-23-16,5		5 / 3.3-128
7	3 ³⁾	–		–		192 290 MKRS-23-B	192 290 MKRS-23-B	5 / 3.3-131
8	1	–		–		192 289 MKRS-16,5-B	192 289 MKRS-16,5-B	
9	1	–		–		193 946 MKY-PG-21-2PG-16	193 946 MKY-PG-21-2PG-16	5 / 3.3-128

1) Length 200 mm

2) Length depends on the stroke of the drive, 2 conduits are required with an intermediate position.

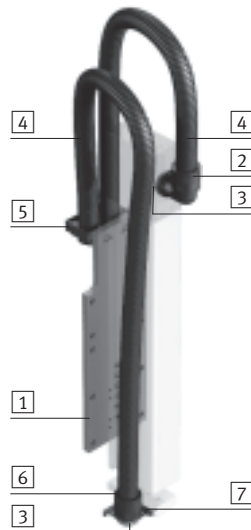
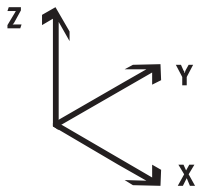
3) In order to be able to mount the retaining clip MKRS, a clamping component (2x code J) must be selected as an accessory in the order for the linear module HMPL.

3-Dimensional gantries

Z modules

FESTO

Mono/Duo system
Linear modules HMP



Bill of materials							
Type		HMBSZ-HMP-4		HMBSZ-HMP-5		HMBSZ-HMP-6	
For drives		HMP-16		HMP-20		HMP-25	
System type		Mono 40 Duo 25		Duo 25		Duo 40	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 374	HMVZ-3	539 374	HMVZ-3	539 377	HMVZ-6
2	1	177 577	MKRL-23-PG-21	177 578	MKRL-29-PG-29	177 578	MKRL-29-PG-29
3	2	177 599	MKM-PG-21	177 600	MKM-PG-29	177 600	MKM-PG-29
4	1 ¹⁾	177 567	MKR-23-PG-21	177 568	MKR-29-PG-29	177 568	MKR-29-PG-29
5	2	192 290	MKRS-23-B	192 291	MKRS-29-B	192 291	MKRS-29-B
6	1	177 572	MKRV-23-PG-21	177 573	MKRV-29-PG-29	177 573	MKRV-29-PG-29
7	1	193 124	HMZAS-PG-21	177 603	HMZAS-PG-29	177 603	HMZAS-PG-29

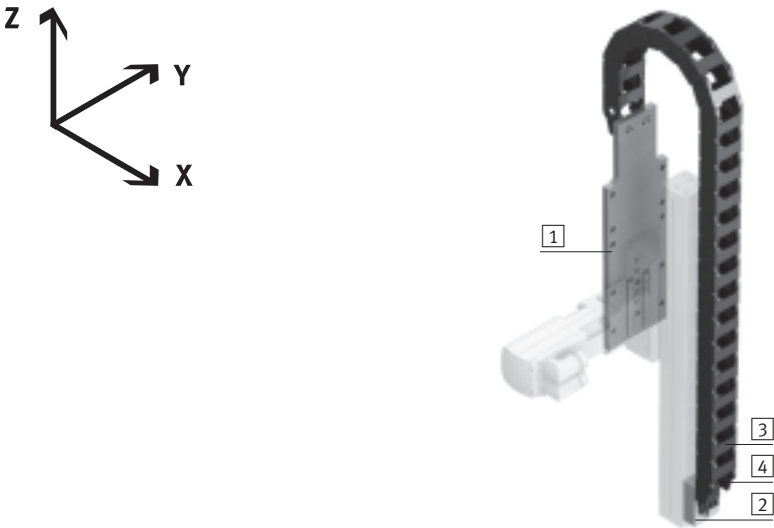
1) Length depends on the stroke of the drive

3-Dimensional gantries

Z modules

FESTO

Mono/Duo system Cantilever axes DGEA



Bill of materials							
Type		HMBSZ-DGEA-1		HMBSZ-DGEA-2		HMBSZ-DGEA-3	
For drives		DGEA-18		DGEA-25		DGEA-25	
System type		Mono 25 Mono 40 Duo 25		Duo 25		Duo 40	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 374	HMVZ-3	539 375	HMVZ-4	539 377	HMVZ-6
2	1	539 370	HMIZF-E03-DA18	539 371	HMIZF-E03-DA25	539 371	HMIZF-E03-DA25
3	1 ¹⁾	IGUS E2 medium 240.03.075.0 and 211 or KABELSCHLEPP MC 0320.40-01-77 and TS O/n ₁ 2					–
4	1	IGUS E2 medium 2030.12.PZB or KABELSCHLEPP MC FA/MA					–

1) Length depends on the stroke of the drive

3-Dimensional gantries

Z modules

FESTO

Mono/Duo system
Toothed belt axes DGE



Bill of materials							
Type		HMBSZ-DGE-1		HMBSZ-DGE-2		HMBSZ-DGE-3	
For drives		DGE-25-SP		DGE-40-SP		DGE-40-SP	
System type		Mono 40 Duo 25		Duo 25		Duo 40	
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 374	HMVZ-3	539 375	HMVZ-4	539 377	HMVZ-6
2	1 ¹⁾	IGUS E2 medium 240.03.075.0 and 211 or KABELSCHLEPP MC 0320.40-01-77 and TS O/nT2					–
3	1	IGUS E2 medium 2030.12.PZB or KABELSCHLEPP MC FA/MA					–

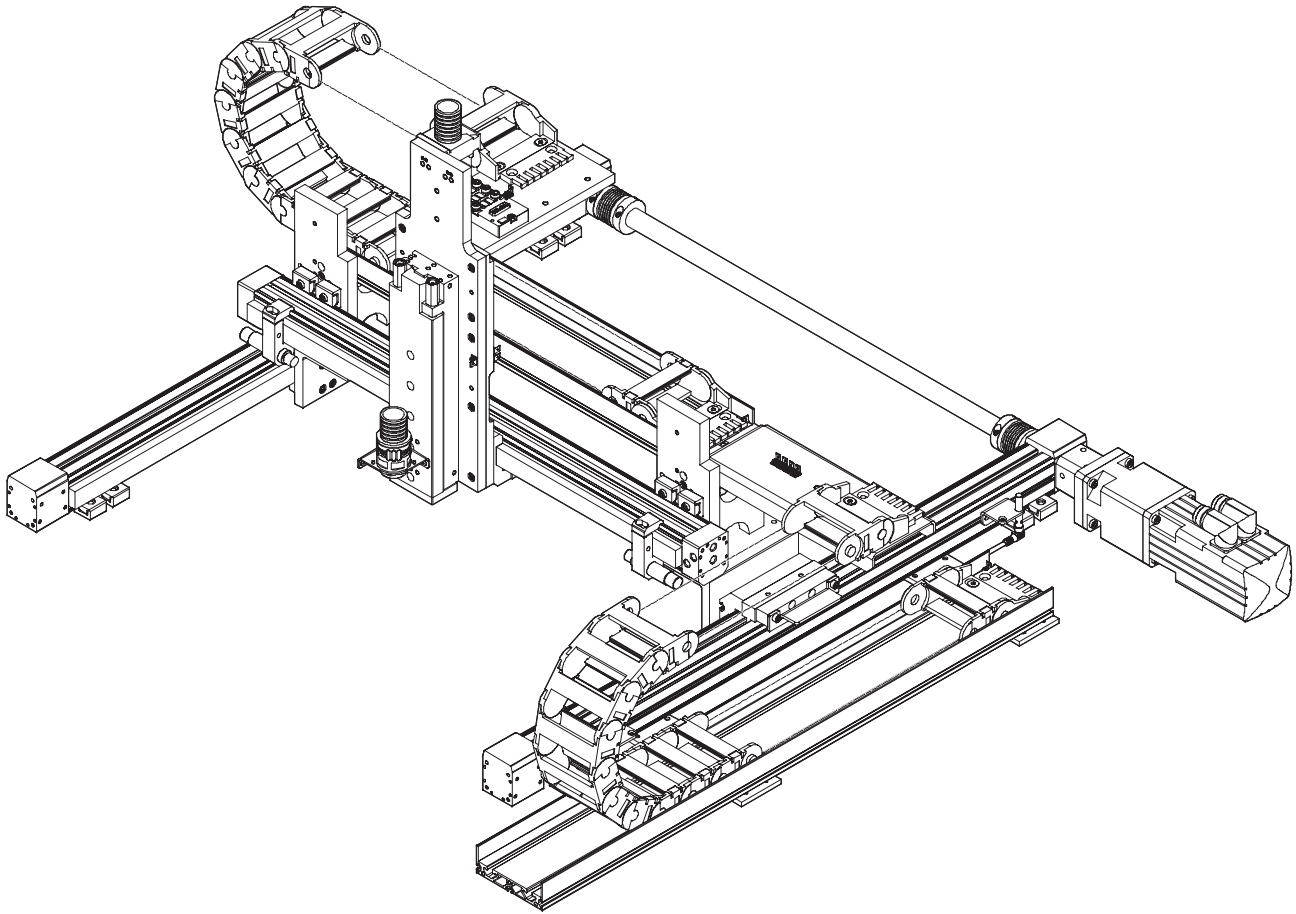
1) Length depends on the stroke of the drive

3-Dimensional gantries

System example

FESTO

Combination with toothed-belt axis DGE-RF/linear drive DGC/mini-slide SLT



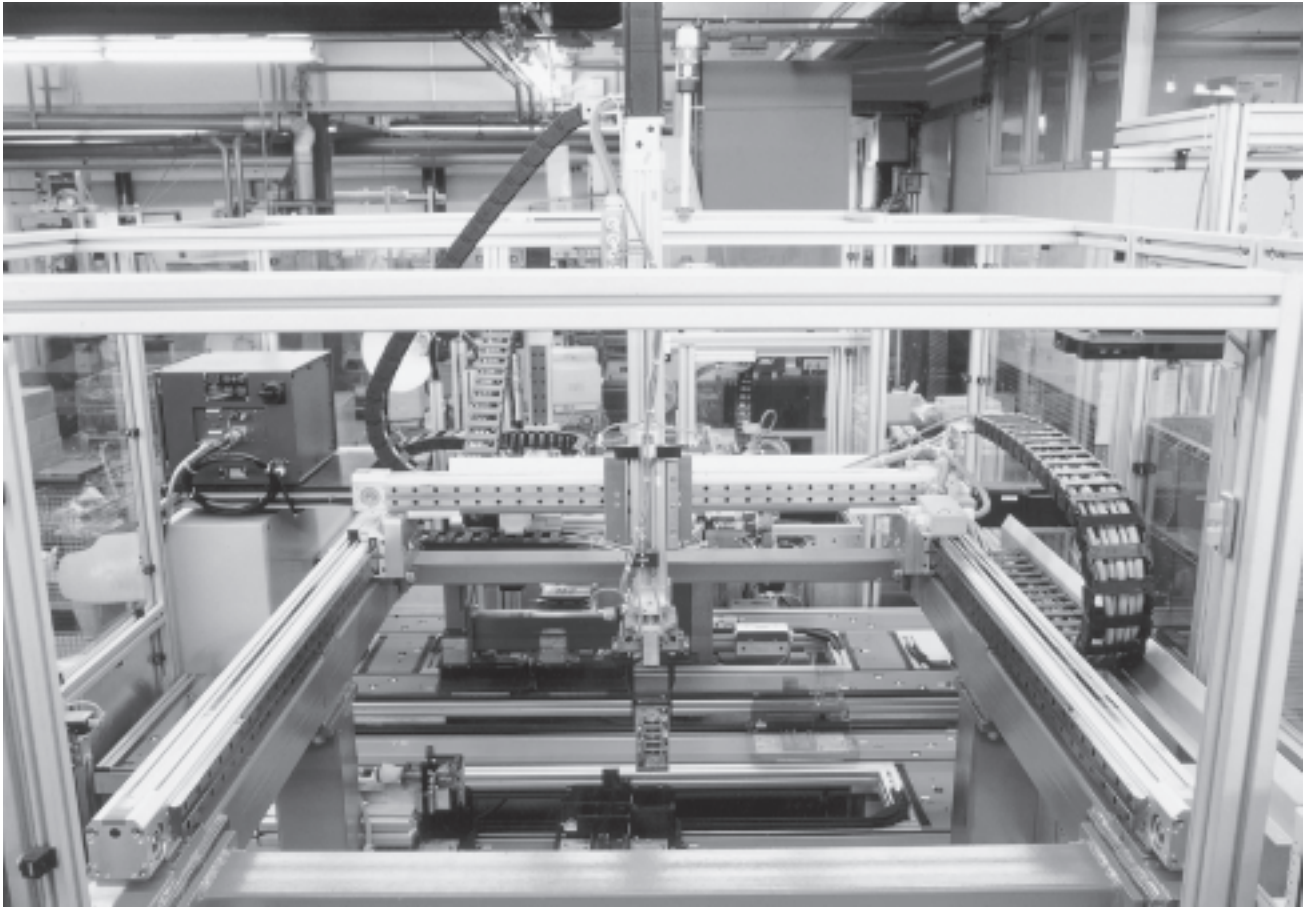


- Modular
- Functional
- Versatile

Connectors

Key features

FESTO



Connecting kits

Basic kit

Kit that serves as the basis for the individual modules in a multi-axis system and as the interface to the surrounding machines.

Adapter kit

Kit for connecting drives. Direct mounting or mounting via slot nuts.

Connecting kit

For connecting drives and basic components.

Reinforcing kit

Primarily used to reinforce an existing connection. Also used to mount the base profile for power cables.

Mounting kit

For mounting accessories such as controllers on multi-axis systems.

Connectors

Key features

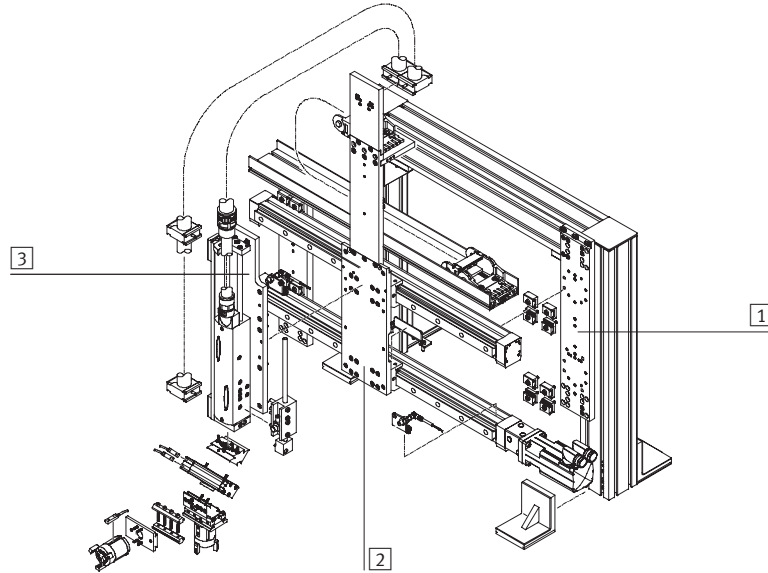
FESTO

System components
Multi-axis modular system

3.3

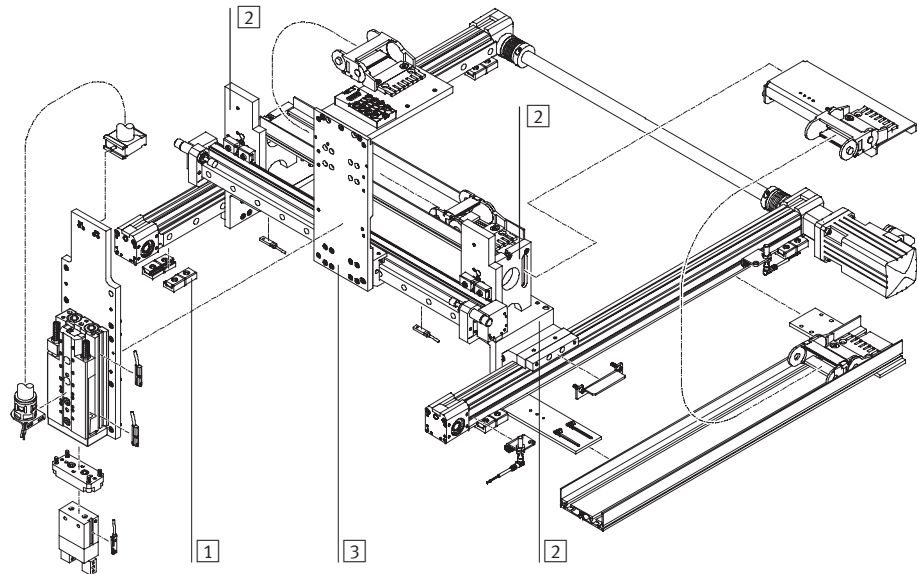
Linear gantry

- 1 Components for combining basic axes (basic kit)
- 2 Components for connecting the drives (adapter kit)
- 3 Components for mounting the drives along the Z-axis in gantry designs



3-Dimensional gantry

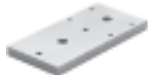
- 1 Components for combining basic axes
- 2 Components for lateral mounting of an axis (adapter kit, reinforcing kit, basic kit)
- 3 Components for mounting the drives along the Z-axis in gantry designs

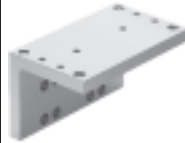


Connectors

Product range overview

FESTO

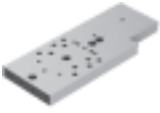
Version	Brief description	→ Page
Reinforcing kit HMBK-DB		
	- For pick & place - For direct mounting of linear modules HMP and HMPL	5 / 3.3-92
Components kit HMBK-ND		
	- For pick & place - For direct mounting of linear modules HMP	5 / 3.3-92
Connecting kit HMBK-WS		
	- For pick & place - For dovetail mounting of linear modules HMP and HMPL and mini slides SLT	5 / 3.3-93
Connecting adapter HMOV		
	- For pick & place - For connecting basic components and drives - Fastening material is included in delivery	5 / 3.3-94

Version	Brief description	→ Page
Adapter kit HMOV-DL		
	- For 3-dimensional gantries - For connecting X-axes and Y-axes - Mounting interface for reinforcing kit HMOV and basic kit HMVM - Fastening material is included in delivery	5 / 3.3-95
Adapter kit HMOV-RF		
	- For 3-dimensional gantries - For connecting X-axes and Y-axes - For toothed belt axis DGE-RF with roller guide - Mounting interface for reinforcing kit HMOV and basic kit HMVM - Fastening material is included in delivery	5 / 3.3-96
Reinforcing kit HMOV-RP/FP		
	- For 3-dimensional gantries - Mounting interface for basic kit HMVM/HMVD, installation components, etc. - Fastening material is included in delivery	5 / 3.3-97
Basic kit HMVM-LP, HMVD-LP		
	- For linear gantries - For Y-axis - For Mono and Duo systems - Mounting interface for profiles, drives and displacement encoders - Fastening material is included in delivery	5 / 3.3-98

Connectors

Product range overview

FESTO

Version	Brief description	→ Page	Version	Brief description	→ Page
Basic kit HMVM-RP/FP, HMVD-RP/FP			Connecting plate HMVO-RF		
	• For 3-dimensional gantries • For Y-axis • For Mono and Duo systems • Mounting interface for drives • Fastening material is included in delivery	5 / 3.3-99		• For linear gantries • Compensating component for toothed belt axis DGE-RF for compensating the difference in height in comparison with the axes DGE-ZR-KF and DGE-SP-KF	5 / 3.3-102
Adapter kit HMVS-DL			Connecting plate HMVO-POT		
	• For linear and 3-dimensional gantries • For Mono and Duo systems • Mounting interface for basic kit HMVZ • Fastening material and earthing kits are included in delivery	5 / 3.3-100		• For linear gantries • Compensating component for displacement encoder MLO-POT-TLF for compensating the difference in height in comparison with the linear drive DGPL with MUP	5 / 3.3-102
Basic kit HMVZ			Mounting kit HMVW-SPC		
	• For linear and 3-dimensional gantries • For Z-axis • For Mono and Duo systems • Mounting interface for drives, installation components, etc. • Fastening material and earthing kits are included in delivery	5 / 3.3-101		• For mounting the axis interface on the end cap of the drive • Fastening material is included in delivery	5 / 3.3-103

Connectors

Technical data

FESTO

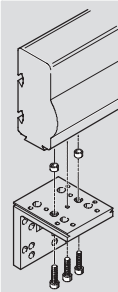
Components kit HMBK-DB



- For pick & place

- For direct mounting of linear modules HMP and HMPL

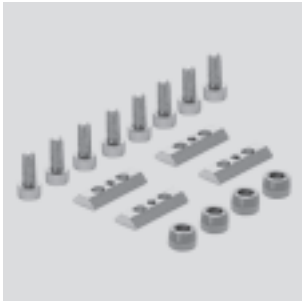
Material:
Steel
Free of copper, PTFE and silicone



Technical data and ordering codes			
CRC ¹⁾	Weight [g]	Part No.	Type
2	15	175 973	HMBK-DB

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

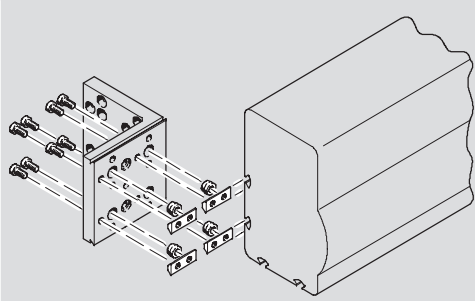
Components kit HMBK-ND



- For pick & place

- For direct mounting of linear modules HMP

Material: Steel
Tempered steel, non-alloyed
Free of copper, PTFE and silicone



Technical data and ordering codes			
CRC ¹⁾	Weight [g]	Part No.	Type
2	62	175 970	HMBK-ND

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

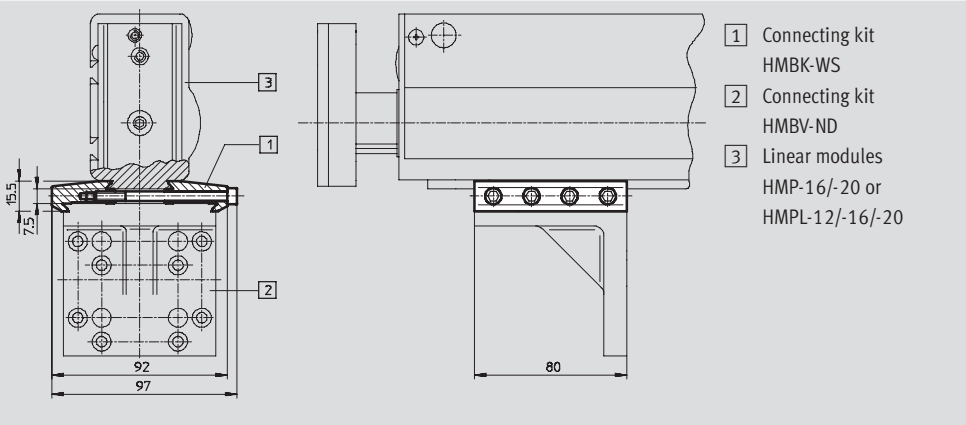
Technical data



Connecting kit HMBK-WS



- For pick & place
 - For dovetail mounting of linear modules HMP and HMPL and mini slides SLT
- Material:
Anodised aluminium
Free of copper, PTFE and silicone



Technical data and ordering codes			
CRC ¹⁾	Weight [g]	Part No.	Type
2	453	175 975	HMBK-WS

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

FESTO

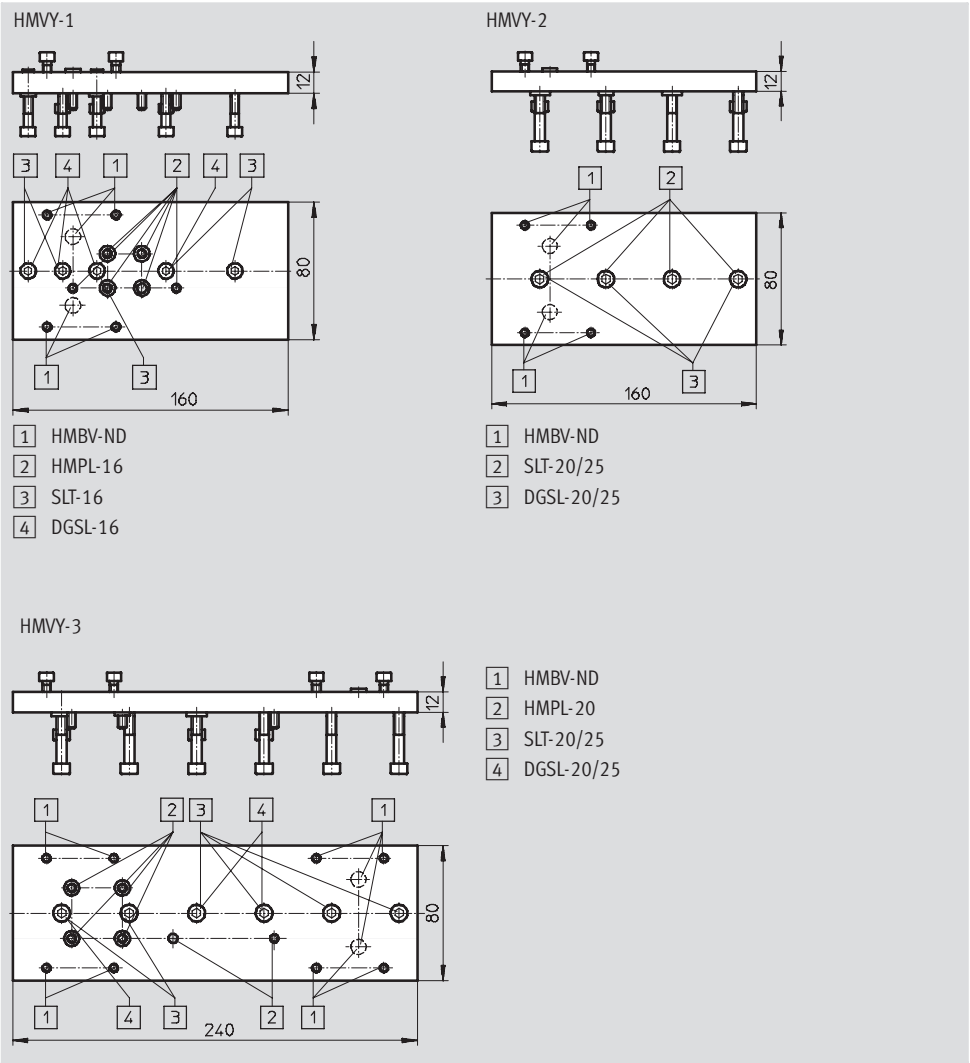
Connecting adapter HMOV



- For pick & place

- For connecting basic components and drives
- Fastening material is included in delivery

Material:
Anodised aluminium
Free of copper, PTFE and silicone



Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	410	539 968	HMOV-1
	420	539 969	HMOV-2
	620	539 970	HMOV-3

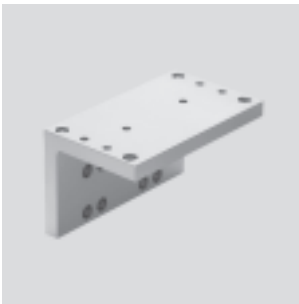
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

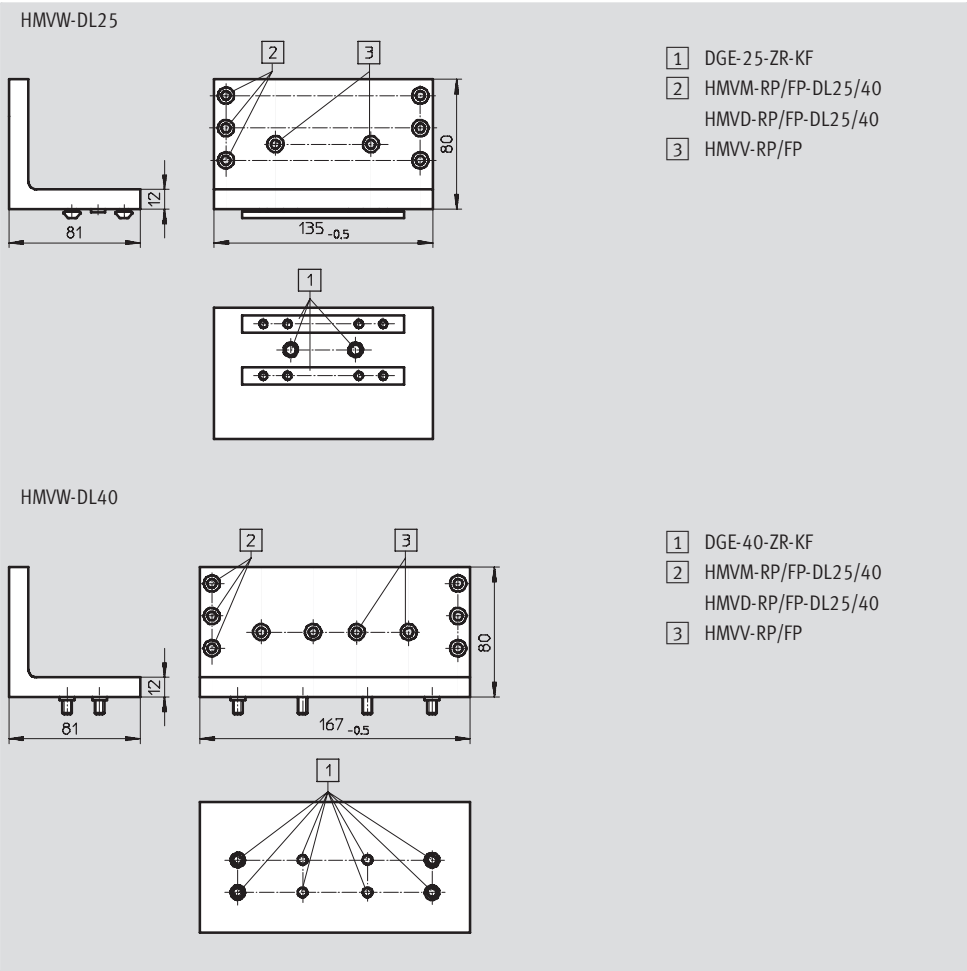
FESTO

Adapter kit HMVW-DL



- For 3-dimensional gantries
- For connecting X-axes and Y-axes
- Mounting interface for reinforcing kit HMVV and basic kit HMVM
- Fastening material is included in delivery

Material:
Anodised aluminium
Free of copper, PTFE and silicone



Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	640	539 651	HMVW-DL25
	800	540 325	HMVW-DL40

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

FESTO

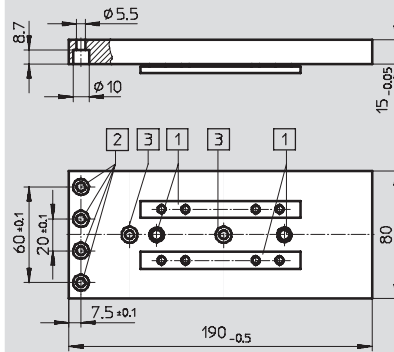
Adapter kit HMVS-RF



- For 3-dimensional gantries
- For connecting X-axes and Y-axes
- For toothed belt axis DGE-RF with roller guide
- Mounting interface for reinforcing kit HMVV and basic kit HMVM
- Fastening material is included in delivery

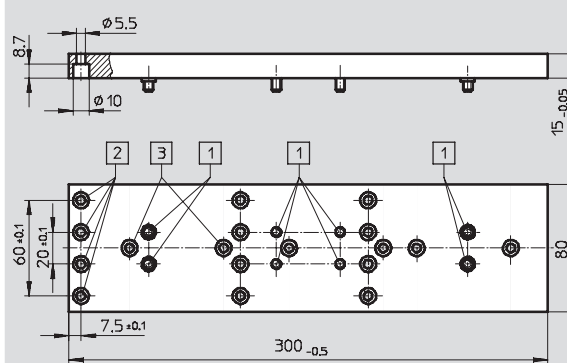
Material:
Anodised aluminium
Free of copper, PTFE and silicone

HMVS-RF-25



- 1 DGE-25-ZR-RF
- 2 HMVM-RP/FP-DL25/40
HMVD-RP/FP-DL25/40
- 3 HMVV-RP/FP

HMVS-RF-40



- 1 DGE-40-ZR-RF
- 2 HMVM-RP/FP-DL25/40
HMVD-RP/FP-DL25/40
- 3 HMVV-RP/FP

Technical data and ordering codes

CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	600	539 652	HMVS-RF25
	930	539 653	HMVS-RF40

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

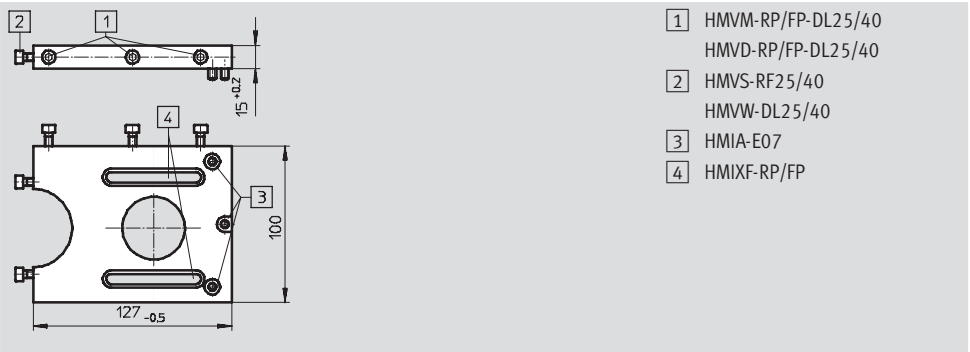
Technical data



Reinforcing kit HMMV-RP/FP



- For 3-dimensional gantries
 - Mounting interface for basic kit HMMV/HMVD, installation components, etc.
 - Fastening material is included in delivery
- Material:
Anodised aluminium
Free of copper, PTFE and silicone



Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	400	539 657	HMMV-RP/FP

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

FESTO

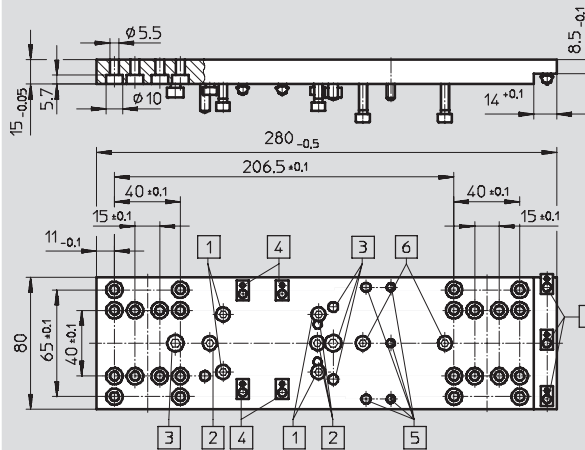
Basic kit
HMVM-LP
HMVD-LP

- For linear gantries
- For Y-axis
- For Mono and Duo systems
- Mounting interface for profiles, drives and displacement encoders
- Fastening material is included in delivery

Material:
Anodised aluminium
Free of copper, PTFE and silicone

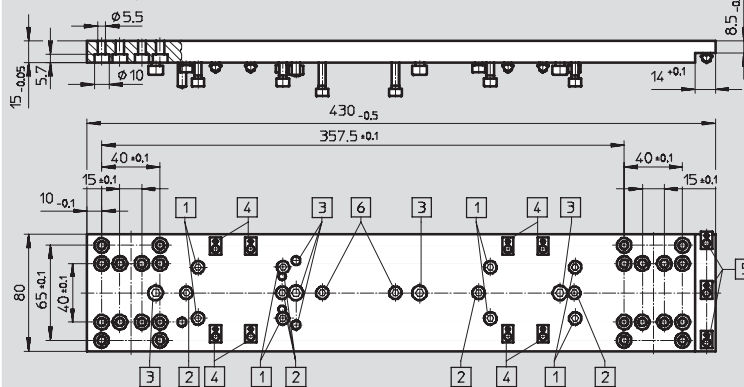


HMVM-LP-DL-25/40



- 1 MUP-18/25
(with DGE-25-...-RF, additionally HMVO-RF25)
- 2 MUC-25
- 3 MUC-40
- 4 DG...-40-...
- 5 HMIA-E05
- 6 MLO-POT-...-TLF
(with DGPL-25-...-KF, additionally HMVO-POT)

HMVD-LP-DL-25/40



- 1 MUP-18/25
(with DGE-25-...-RF, additionally HMVO-RF25)
- 2 MUC-25
- 3 MUC-40
- 4 DG...-40-...
- 5 HMIA-E05
- 6 MLO-POT-...-TLF
(with DGPL-25-...-KF, additionally HMVO-POT)

Technical data and ordering codes

For system type	CRC ¹⁾	Weight [g]	Part No.	Type
Mono	2	830	539 972	HMVM-LP-DL-25/40
Duo		1320	539 971	HMVD-LP-DL-25/40

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

FESTO

Basic kit
HMVM-RP/FP
HMVD-RP/FP

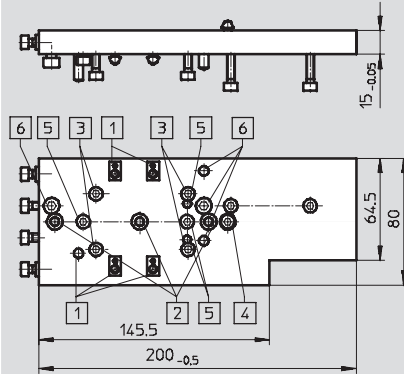


- For 3-dimensional gantries
- For Y-axis
- For Mono and Duo systems

- Mounting interface for drives
- Fastening material is included in delivery

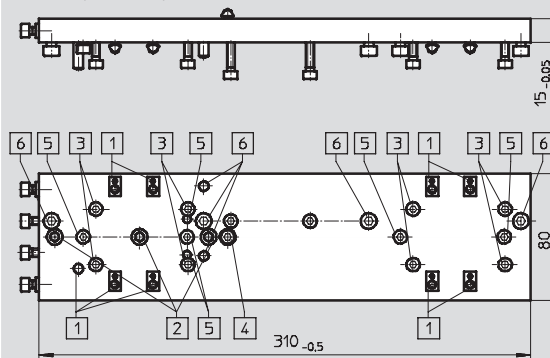
Material:
 Anodised aluminium
 Free of copper, PTFE and silicone

HMVM-RP/FP-DL-25/40



- 1 DG...-40
- 2 HMVV-RP/FP
- 3 MUP-18/25
- 4 HMIA-E07
- 5 MUC-25
- 6 MUC-40

HMVD-RP/FP-DL-25/40



- 1 DG...-40
- 2 HMVV-RP/FP
- 3 MUP-18/25
- 4 HMIA-E07
- 5 MUC-25
- 6 MUC-40

Technical data and ordering codes				
For system type	CRC ¹⁾	Weight	Part No.	Type
		[g]		
Mono	2	600	539 656	HMVM-RP/FP-DL-25/40
Duo		1000	539 655	HMVD-RP/FP-DL-25/40

1) Corrosion resistance class 2 according to Festo standard 940 070
 Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

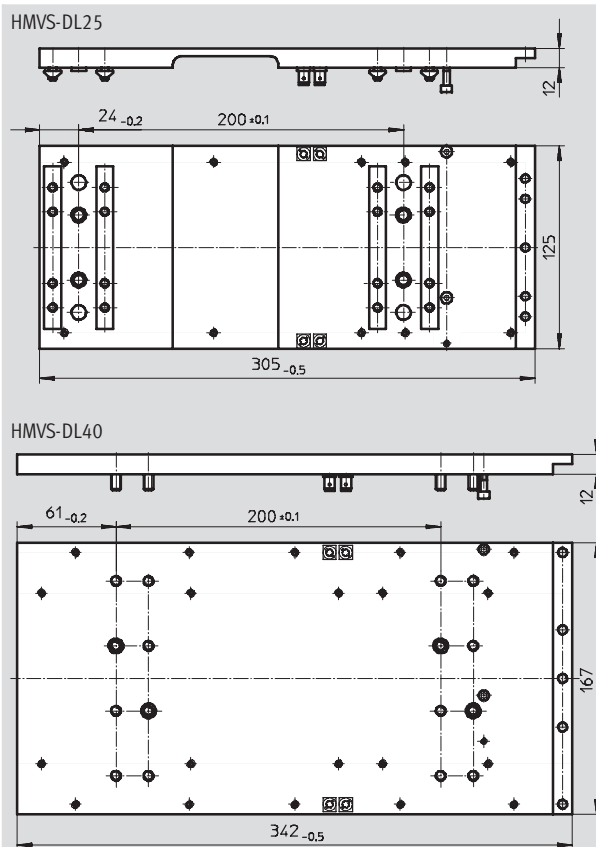
Technical data

FESTO

Adapter kit HMVS-DL

- For linear and 3-dimensional gantries
- For Mono and Duo systems
- Mounting interface for basic kit HMVZ
- Fastening material and earthing kits are included in delivery

Material:
Anodised aluminium
Free of copper, PTFE and silicone



Technical data and ordering codes

CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	1050	539 368	HMVS-DL25
	1800	539 369	HMVS-DL40

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

FESTO

Basic kit HMVZ

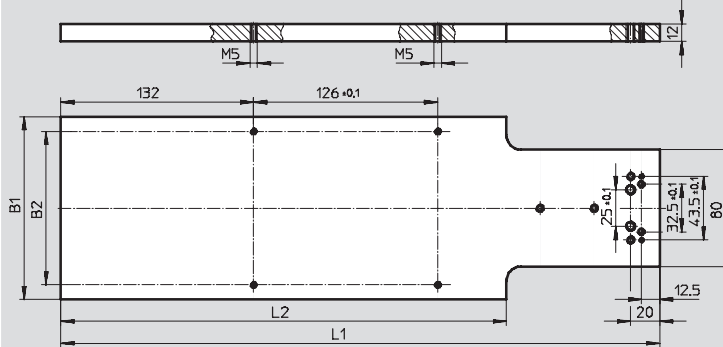


- For linear and 3-dimensional gantries
- For Z-axis

- For Mono and Duo systems
- Mounting interface for drives, installation components, etc.

Material:
Anodised aluminium
Free of copper, PTFE and silicone

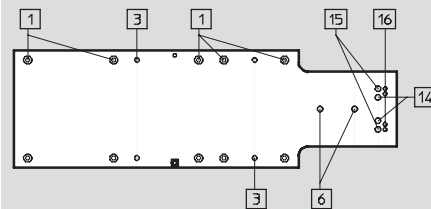
HMVZ-...



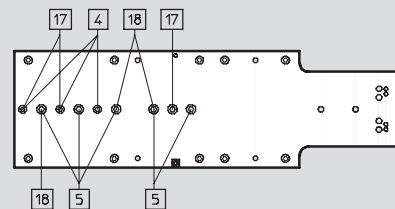
- Fastening material and earthing kits are included in delivery

- 1 HMVS-DL-25
- 2 HMVS-DL-40
- 3 Universal interface
- 4 SLT-16
- 5 SLT-20/25
- 6 HMID-LP
- 7 DGE-25/DGEA-18
- 8 HMP-16/20
- 9 HMPL-16/20
- 10 HMPL-16/20, HMPL-...-KP
- 11 DGE-40/DGEA-25
- 12 DGE-40 (profile)
- 13 HMP-25
- 14 Protective trunking
- 15 Protective trunking
- 16 MKRS-16,5/23/29-B
- 17 DGSL-16
- 18 DGSL-20/25

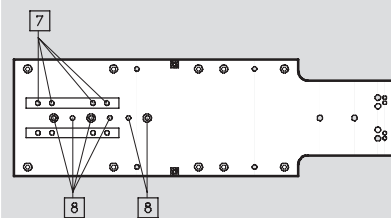
HMVZ-1



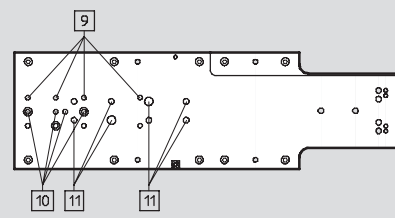
HMVZ-2



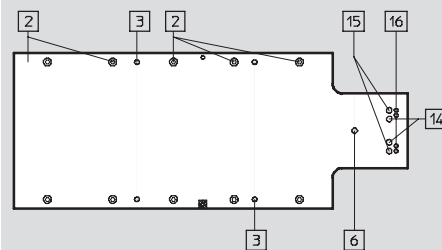
HMVZ-3



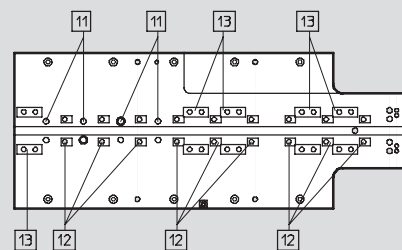
HMVZ-4



HMVZ-5



HMVZ-6



Dimensions, technical data and ordering data

B1	B2	L1	L2	CRC ¹⁾	Weight	Part No.	Type
	± 0.1	− 0.5	− 0.5		[g]		
125	105	410	305	2	1520	539 372	HMVZ-1
					1510	539 373	HMVZ-2
					1490	539 374	HMVZ-3
					1450	539 375	HMVZ-4
167	155	422	342		2080	539 376	HMVZ-5
					1900	539 377	HMVZ-6

1) Corrosion resistance class 2 according to Festo standard 940 070

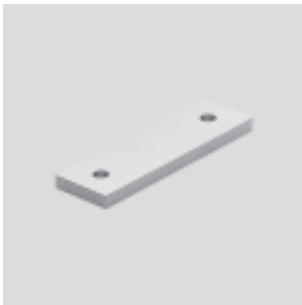
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

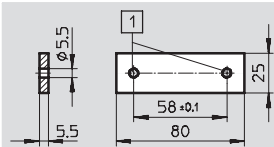
FESTO

Connecting plate HMVO-RF



- For linear gantries
- Compensating component for toothed belt axis DGE-RF for compensating the difference in height in comparison with the axes DGE-ZR-KF and DGE-SP-KF

Material:
Anodised aluminium
Free of copper, PTFE and silicone



1 HMVM-LP-DL25/40
HMVD-LP-DL25/40
MUP-18/25

Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	30	539 362	HMVO-RF25

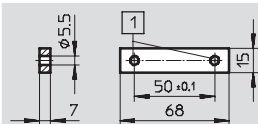
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connecting plate HMVO-POT



- For linear gantries
- Compensating component for displacement encoder MLO-POT-TLF for compensating the difference in height in comparison with the linear drive DGPL with MUP

Material:
Anodised aluminium
Free of copper, PTFE and silicone



1 HMVM-LP-DL25/40
HMVD-LP-DL25/40
MLO-POT-TLF

Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	20	539 973	HMVO-POT

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Connectors

Technical data

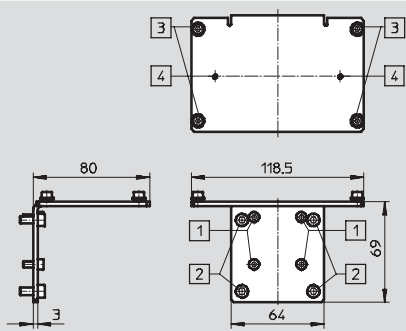


Mounting kit HMVW-SPC



- For mounting the axis interface on the end cap of the drive
- Fastening material is included in delivery

Material:
Galvanised steel
Free of copper, PTFE and silicone



- 1 DG...-25
- 2 DG...-40
- 3 SPC11-MTS-AIF-SA
- 4 SPC-AIF-MTS

Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	310	539 367	HMVW-SPC

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

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Custom Automation Components

Complete custom engineered solutions



Custom Control Cabinets

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To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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