



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

Multi-axis modular system

Key features



The concept






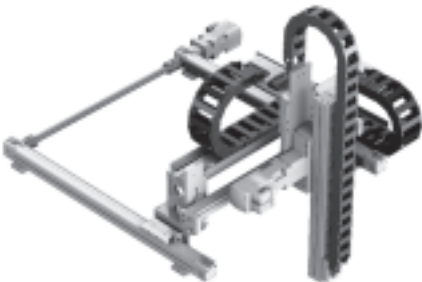
The multi-axis modular system for handling and assembly technology includes basic, connection and installation components for assembling multi-axis systems. These standardised axis combinations are the product of over ten years experience in the designing

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

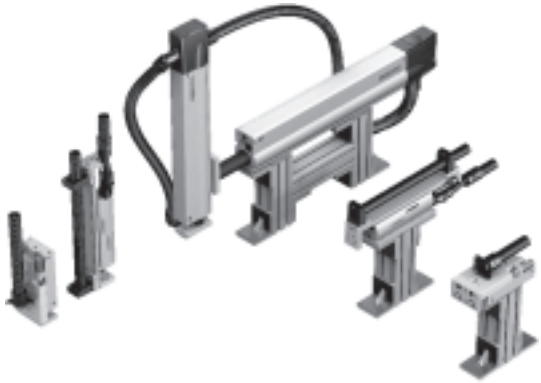
Pick & place	Linear gantries	3-Dimensional gantries
Pneumatic		Pneumatic/electrical
 <p>→ 5 / 3.3-40</p>	 <p>→ 5 / 3.3-58</p>	 <p>→ 5 / 3.3-72</p>
Pneumatic with end position controller SPC11 (Soft Stop)		
	 <p>→ 5 / 3.3-58</p>	
Electrical with spindle or toothed belt axis		
	 <p>→ 5 / 3.3-58</p>	 <p>→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

Multi-axis modular system

Key features

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Pick & place



Linear gantries



3-Dimensional gantries



System components
Multi-axis modular system

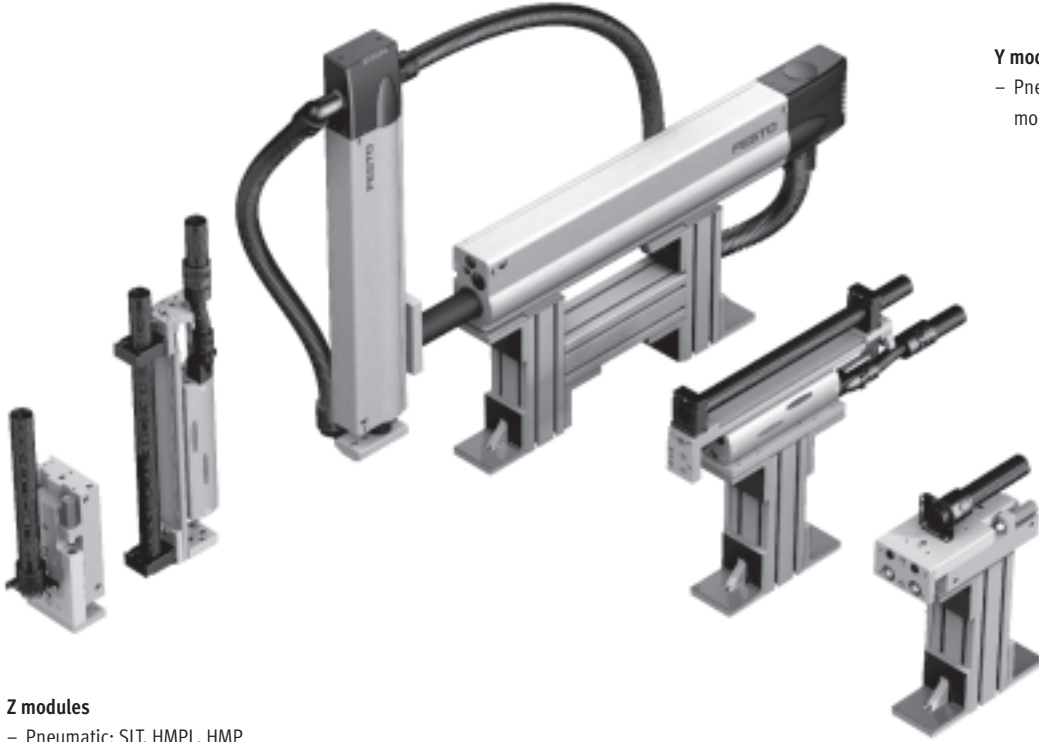
3.3

Pick & place

Key features



Y and Z modules



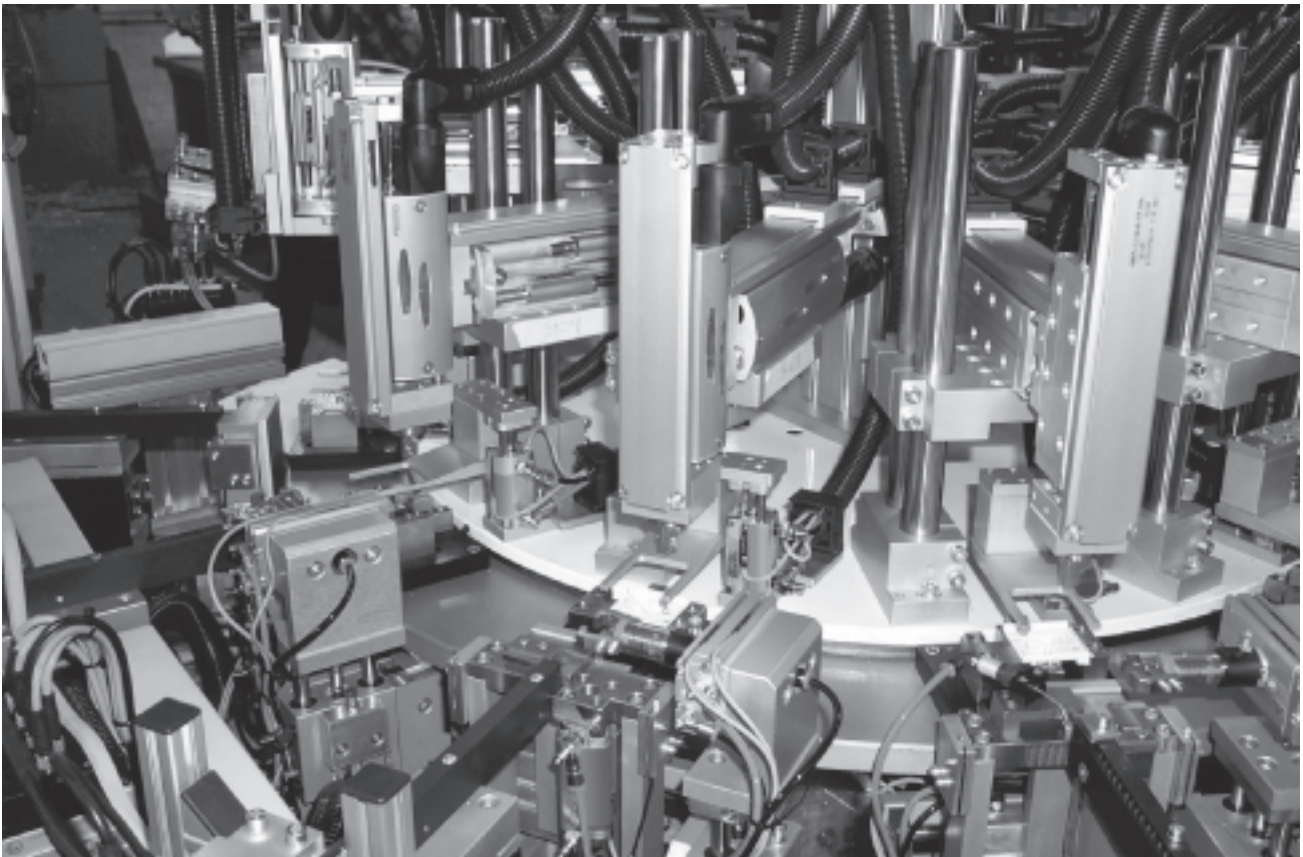
Y modules

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

Z modules

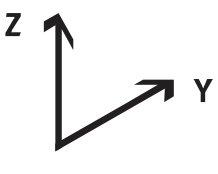





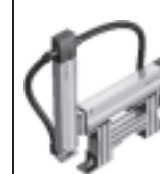
- Pneumatic: SLT, HMPL, HMP

Application



Pick & place

Product range overview

Selection aid						
Function	DGSL/DGSL	SLT/SLT	HMPL/HMPL	HM.../DGSL, SLT	HMP.../HMPL	HM.../HMP
						
Y-axis	DGSL	SLT	HMPL	HMP, HME	HMP, HME	HMP, HME
Drive function	Pneumatic					
Options	Shock absorber, adjustable/non-adjustable cushioning	Shock absorber, adjustable/non-adjustable cushioning	Intermediate position, clamping cartridge	Intermediate position		
Z-axis	DGSL	SLT	HMPL	DGSL, SLT	HMPL	HMP
Drive function	Pneumatic					
Options	Shock absorber, adjustable/non-adjustable cushioning	Shock absorber, adjustable/non-adjustable cushioning	Intermediate position, clamping cartridge	Shock absorber, adjustable/non-adjustable 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

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	-
HMPL-16	-	-	→ 5 / 3.3-55	-
HMPL-20	-	-	-	-
HMP-16	-	-	-	-
HMP-20	-	-	-	-
HMP-25	-	-	-	-

Pick & place

Selection aid for basic, connection and installation components

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

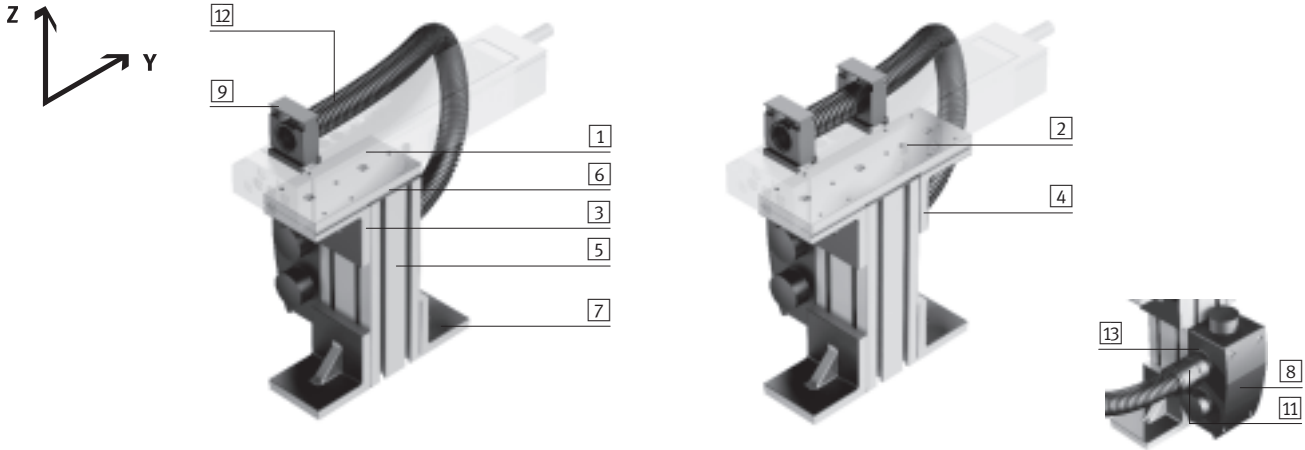
Technical data on the basic, connection and installation components can be found on the specified pages. Further accessories for the selected drives, for example proximity sensors, centring sleeves, etc. are documented with the drives.

Pick & place

Y modules

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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		125 ... 200		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.	
[1]	1	539 968 HMVY-1		539 969 HMVY-2		–		539 969 HMVY-2		–	5 / 3.3-94
[2]	1	–		–		539 970 HMVY-3		–		539 970 HMVY-3	
[3]	1	175 967 HMBV-ND		175 967 HMBV-ND		–		175 967 HMBV-ND		–	5 / 3.3-108
[4]	2	–		–		175 967 HMBV-ND		–		175 967 HMBV-ND	
[5]	1 ¹⁾	175 958 HMBS-80/80		175 958 HMBS-80/80		175 958 HMBS-80/80		175 958 HMBS-80/80		175 958 HMBS-80/80	5 / 3.3-105
[6]	1	175 965 HMBSA-80/80		175 965 HMBSA-80/80		175 965 HMBSA-80/80		175 965 HMBSA-80/80		175 965 HMBSA-80/80	5 / 3.3-105
[7]	2	175 951 HMBF-DB		175 951 HMBF-DB		175 951 HMBF-DB		175 951 HMBF-DB		175 951 HMBF-DB	5 / 3.3-107
[8]	1	175 126 HMZV		175 126 HMZV		175 126 HMZV		175 126 HMZV		175 126 HMZV	5 / 3.3-125
[9]	1	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		192 290 MKRS-23-B 548 804 ZBV-M5-9		192 290 MKRS-23-B 548 804 ZBV-M5-9	5 / 3.3-131
[11]	1	177 571 MKRV-16,5-PG-16		177 572 MKRV-23-PG-21		177 572 MKRV-23-PG-21		177 572 MKRV-23-PG-21		177 572 MKRV-23-PG-21	5 / 3.3-126
[12]	1 ²⁾	177 566 MKR-16,5-PG-16		177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		177 567 MKR-23-PG-21		177 567 MKR-23-PG-21	5 / 3.3-124
[13]	1	193 949 MKA-PG-29-PG-16-KU		177 595 MKA-PG-29-PG-21		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

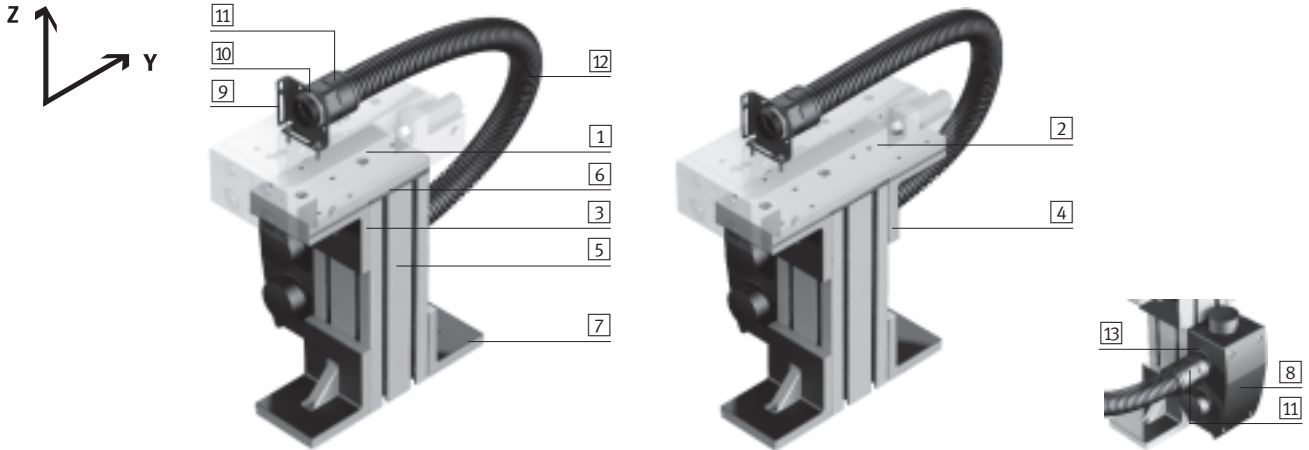
1) Height max. 500 mm

2) Length depends on the stroke of the drive

Pick & place

Y modules

Mini slides SLT



Bill of materials												
Type	HMBSY-SLT-1		HMBSY-SLT-2		HMBSY-SLT-3		HMBSY-SLT-4		HMBSY-SLT-5		→ Page	
For drives	SLT-16		SLT-20		SLT-25		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	HMVY-1	539 969	HMVY-2	–	–	539 969	HMVY-2	–	–	5 / 3.3-94
2	1	–	–	–	–	539 970	HMVY-3	–	–	539 970	HMVY-3	
3	1	175 967	HMBV-ND	175 967	HMBV-ND	–	–	175 967	HMBV-ND	–	–	5 / 3.3-108
4	2	–	–	–	–	175 967	HMBV-ND	–	–	175 967	HMBV-ND	
5	1 ¹⁾	175 958	HMBS-80/80	175 958	HMBS-80/80	175 958	HMBS-80/80	175 958	HMBS-80/80	175 958	HMBS-80/80	5 / 3.3-105
6	1	175 965	HMBSA-80/80	175 965	HMBSA-80/80	175 965	HMBSA-80/80	175 965	HMBSA-80/80	175 965	HMBSA-80/80	5 / 3.3-105
7	2	175 951	HMBF-DB	175 951	HMBF-DB	175 951	HMBF-DB	175 951	HMBF-DB	175 951	HMBF-DB	5 / 3.3-107
8	1	175 126	HMZV	175 126	HMZV	175 126	HMZV	175 126	HMZV	175 126	HMZV	5 / 3.3-125
9	1	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	5 / 3.3-132
10	1	177 599	MKM-PG-21	177 599	MKM-PG-21	177 599	MKM-PG-21	177 599	MKM-PG-21	177 599	MKM-PG-21	5 / 3.3-131
11	2	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	5 / 3.3-126
12	1 ²⁾	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	5 / 3.3-124
13	1	177 595	MKA-PG-29-PG-21	177 595	MKA-PG-29-PG-21	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

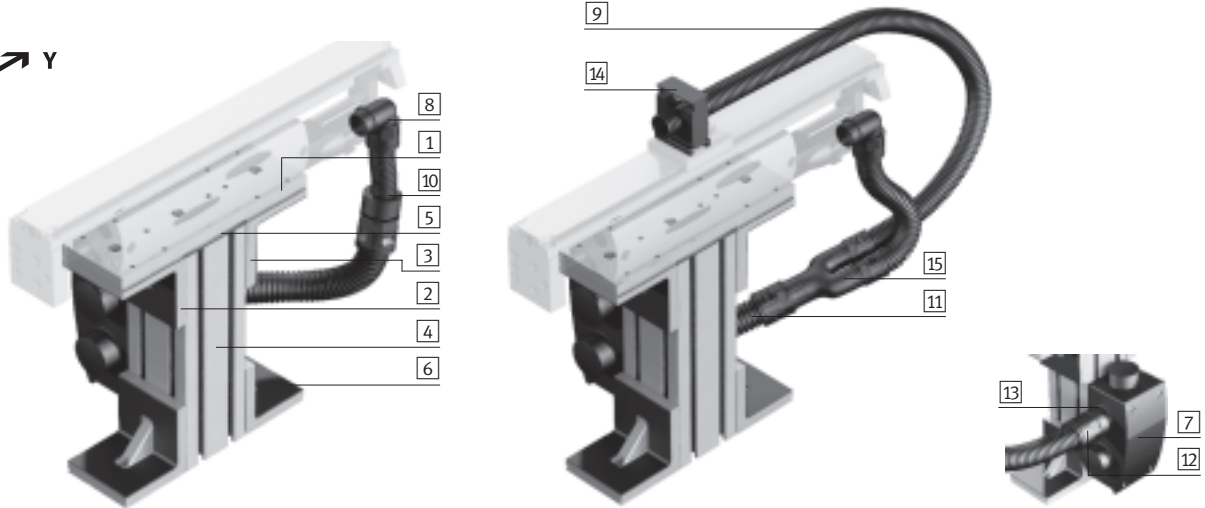
1) Height max. 500 mm
 2) Length depends on the stroke of the drive

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	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	539 968 HMVY-1	539 968 HMVY-1	539 970 HMVY-3	539 970 HMVY-3	5 / 3.3-94
2	1	175 967 HMBV-ND	175 967 HMBV-ND	-	-	5 / 3.3-108
3	2	-	-	175 967 HMBV-ND	175 967 HMBV-ND	
4	1 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
5	1	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	2	175 951 HMBF-DB	175 951 HMBF-DB	175 951 HMBF-DB	175 951 HMBF-DB	5 / 3.3-107
7	1	175 126 HMZV	175 126 HMZV	175 126 HMZV	175 126 HMZV	5 / 3.3-125
8	1	177 576 MKRL-16,5-PG-16	177 576 MKRL-16,5-PG-16	177 576 MKRL-16,5-PG-16	177 576 MKRL-16,5-PG-16	5 / 3.3-126
9	1 ²⁾	177 566 MKR-16,5-PG-16	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
10	1	194 321 MKRT-23-16,5	-	194 321 MKRT-23-16,5	-	5 / 3.3-128
11	1 ²⁾	177 567 MKR-23-PG-21	177 567 MKR-23-PG-21	177 567 MKR-23-PG-21	177 567 MKR-23-PG-21	5 / 3.3-124
12	1	177 572 MKRV-23-PG-21	177 572 MKRV-23-PG-21	177 572 MKRV-23-PG-21	177 572 MKRV-23-PG-21	5 / 3.3-126
13	1	177 595 MKA-PG-29-PG-21	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
14	1 ³⁾	-	192 289 MKRS-16,5-B	-	192 289 MKRS-16,5-B	5 / 3.3-131
15	1	-	193 946 MKY-PG-21-2PG-16	-	193 946 MKY-PG-21-2PG-16	5 / 3.3-128

1) Height max. 500 mm

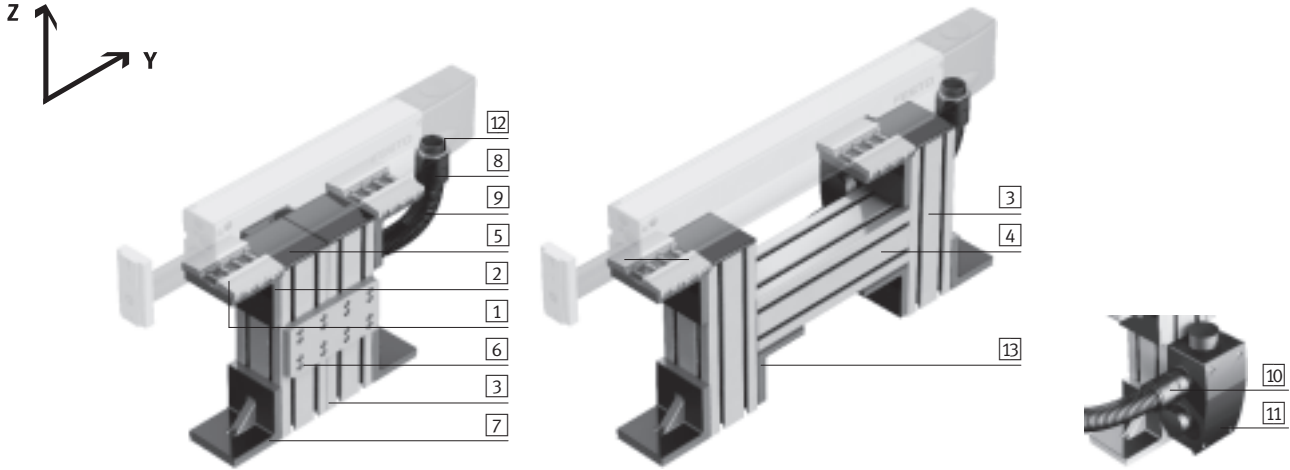
2) Length depends on the stroke of the drive, 2 conduits are required with an intermediate position.

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

Linear modules HMP, HME



Bill of materials								
Type	HMBSY-HMP-1		HMBSY-HMP-2		HMBSY-HMP-3		HMBSY-HMP-4	→ Page
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	
1	2	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	5 / 3.3-108
3	2 ¹⁾	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	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	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	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	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	5 / 3.3-125
12	1 ⁴⁾	177 599	MKM-PG-21	177 599	MKM-PG-21	177 600	MKM-PG-29	5 / 3.3-131
13	2	-		178 228	HMBSW	-	178 228 HMBSW	5 / 3.3-106

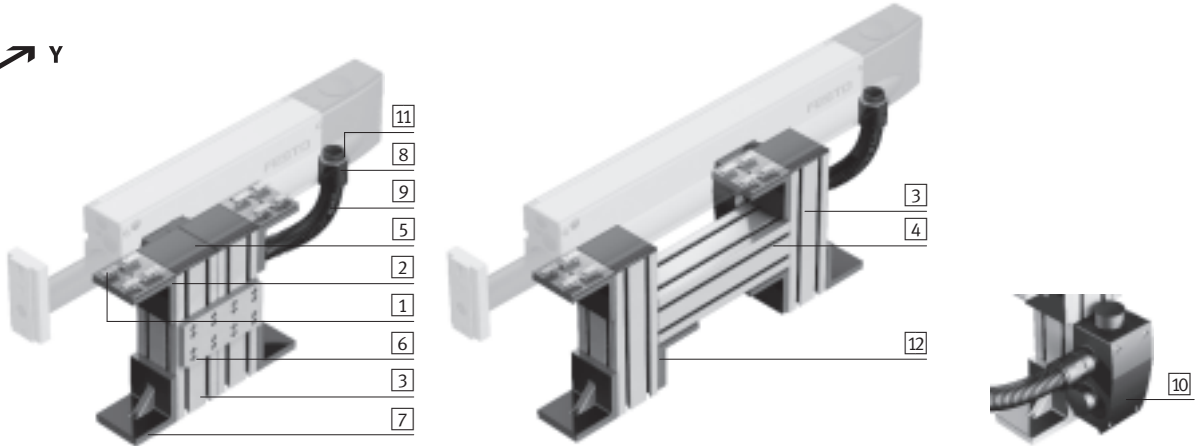
- 1) Height max. 500 mm
- 2) Length 250 mm
- 3) Length depends on the stroke of the drive
- 4) It is not suitable for use with linear module HME

Pick & place

Y modules



Linear modules HMP, HME



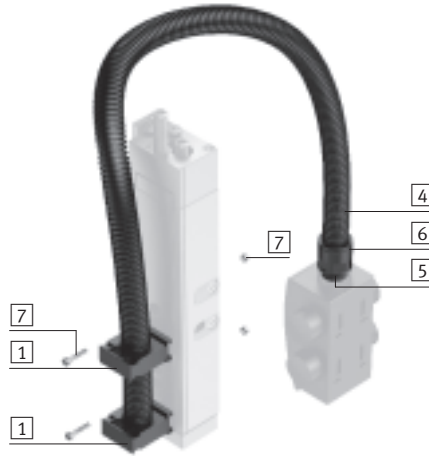
Bill of materials										
Type		HMBSY-HMP-5		HMBSY-HMP-6		HMBSY-HMP-7		HMBSY-HMP-8		
For drives		HMP-/HME-25				HMP-32				
Stroke [mm]		100 ... 200		250 ... 400		100 ... 200		250 ... 400		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	Part No.	Type	→ Page
[1]	2	175 970	HMBK-ND	175 970	HMBK-ND	175 970	HMBK-ND	175 970	HMBK-ND	5 / 3.3-92
[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⁾	177 573	MKRV-29-PG-29	177 573	MKRV-29-PG-29	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	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	175 126	HMZV	175 126	HMZV	5 / 3.3-125
[11]	1 ⁴⁾	177 600	MKM-PG-29	177 600	MKM-PG-29	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

Mini slides DGSL



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

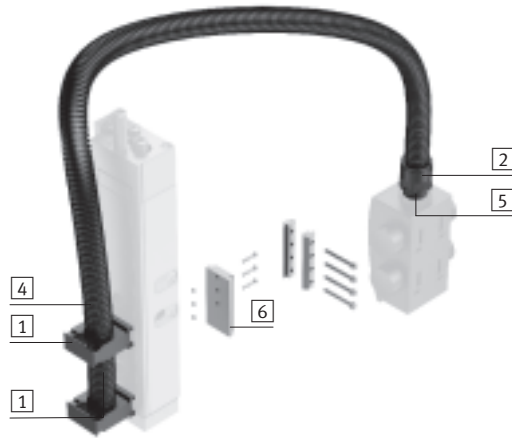
1) Length depends on the stroke of the drive

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

Pick & place

Z modules

Mini slides DGSL



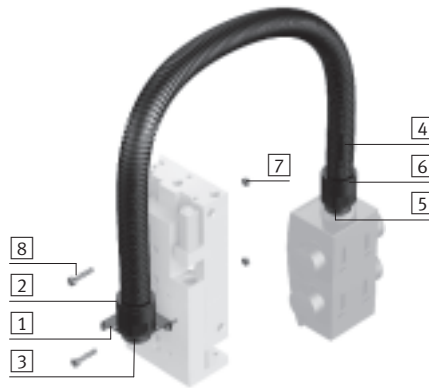
Bill of materials								
Type		HMBSZ-DGSL-4		HMBSZ-DGSL-5		HMBSZ-DGSL-6		
For drives		DGSL-16		DGSL-20		DGSL-25		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	→ Page
[1]	2	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B	5 / 3.3-131
		548 803	ZBV-M5-7	548 804	ZBV-M5-9	548 804	ZBV-M5-9	
[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

Mini slides SLT



Bill of materials								
Type		HMBSZ-SLT-1		HMBSZ-SLT-2		HMBSZ-SLT-3		
For drives		SLT-10		SLT-16		SLT-20		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	
							→ Page	
1	1	192 289	MKRS-16,5-B	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	5 / 3.3-132
2	1	-		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	5 / 3.3-131
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	177 571	MKRV-16,5-PG-16	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	5 / 3.3-126
7	- ²⁾	186 717	ZBH-7	150 927	ZBH-9	189 653	ZBH-12	-
8	2	M4x25 DIN 912		M5x30 DIN 912		M6x40 DIN 912		-

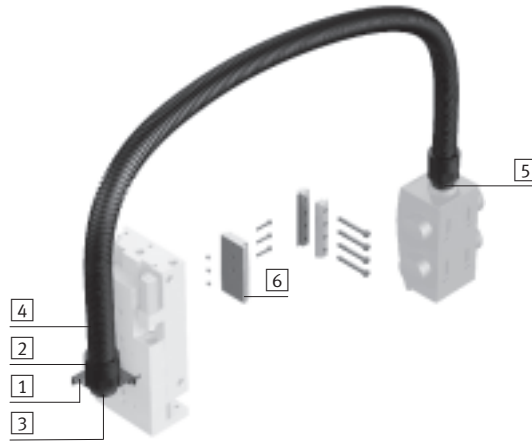
1) Length depends on the stroke of the drive

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

Pick & place

Z modules

Mini slides SLT



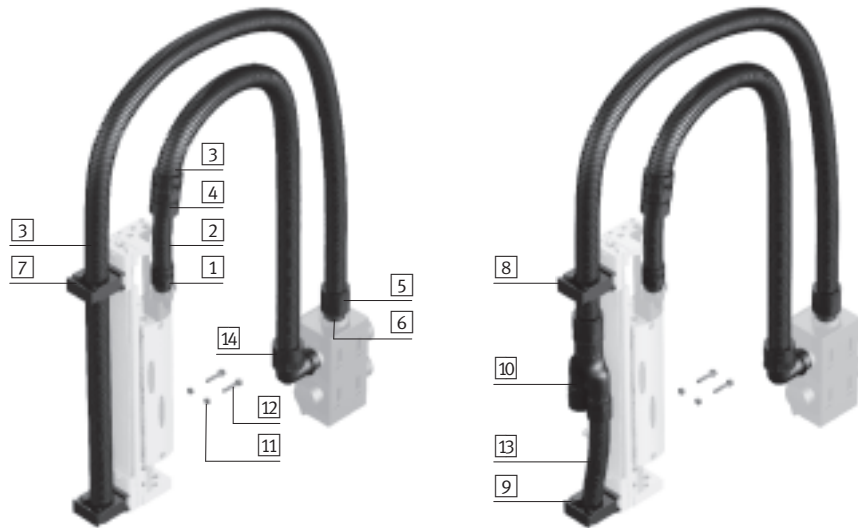
Bill of materials								
Type		HMBSZ-SLT-4		HMBSZ-SLT-5		HMBSZ-SLT-6		→ Page
For drives		SLT-16		SLT-20		SLT-25		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	
[1]	1	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	193 124	HMZAS-PG-21	5 / 3.3-132
[2]	2	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	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

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		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	MKRV-16,5-PG-16	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
2	1 ¹⁾	177 566	MKR-16,5-PG-16	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
3	2 ¹⁾	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	177 567	MKR-23-PG-21	
4	1	194 321	MKRT-23-16,5	194 321	MKRT-23-16,5	194 321	MKRT-23-16,5	194 321	MKRT-23-16,5	5 / 3.3-128
5	1	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	177 572	MKRV-23-PG-21	5 / 3.3-126
6	2	177 595	MKA-PG-29-PG-21	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
7	2 ²⁾	192 290	MKRS-23-B	-		192 290	MKRS-23-B	-		5 / 3.3-131
8	1 ²⁾	-		192 290	MKRS-23-B	-		192 290	MKRS-23-B	
9	1 ²⁾	-		192 289	MKRS-16,5-B	-		192 289	MKRS-16,5-B	
10	1	-		193 946	MKY-PG-21-2PG-16	-		193 946	MKY-PG-21-2PG-16	5 / 3.3-128
11	1 ³⁾	150 927	ZBH-9	150 927	ZBH-9	150 927	ZBH-9	150 927	ZBH-9	-
12	2	M5x16 DIN 912		M5x16 DIN 912		M5x22 DIN 912		M5x22 DIN 912		-
13	1 ¹⁾	-		177 566	MKR-16,5-PG-16	-		177 566	MKR-16,5-PG-16	5 / 3.3-124
14	1	177 577	MKRL-23-PG-21	177 577	MKRL-23-PG-21	177 577	MKRL-23-PG-21	177 577	MKRL-23-PG-21	5 / 3.3-127

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 I) must be selected as an accessory in the order for the linear module HMPL.

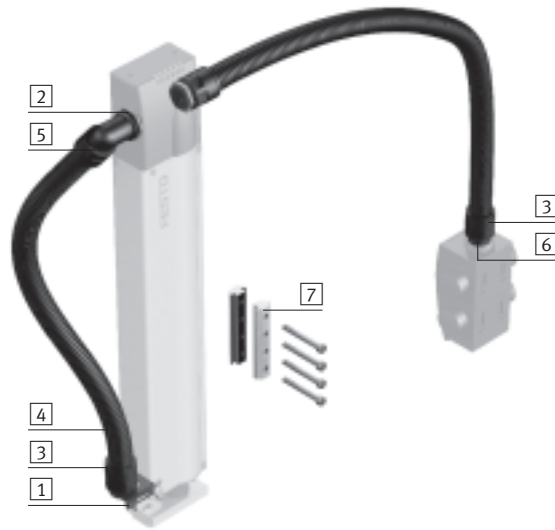
3) 10 per packaging unit

Pick & place

Z modules



Linear modules HMP



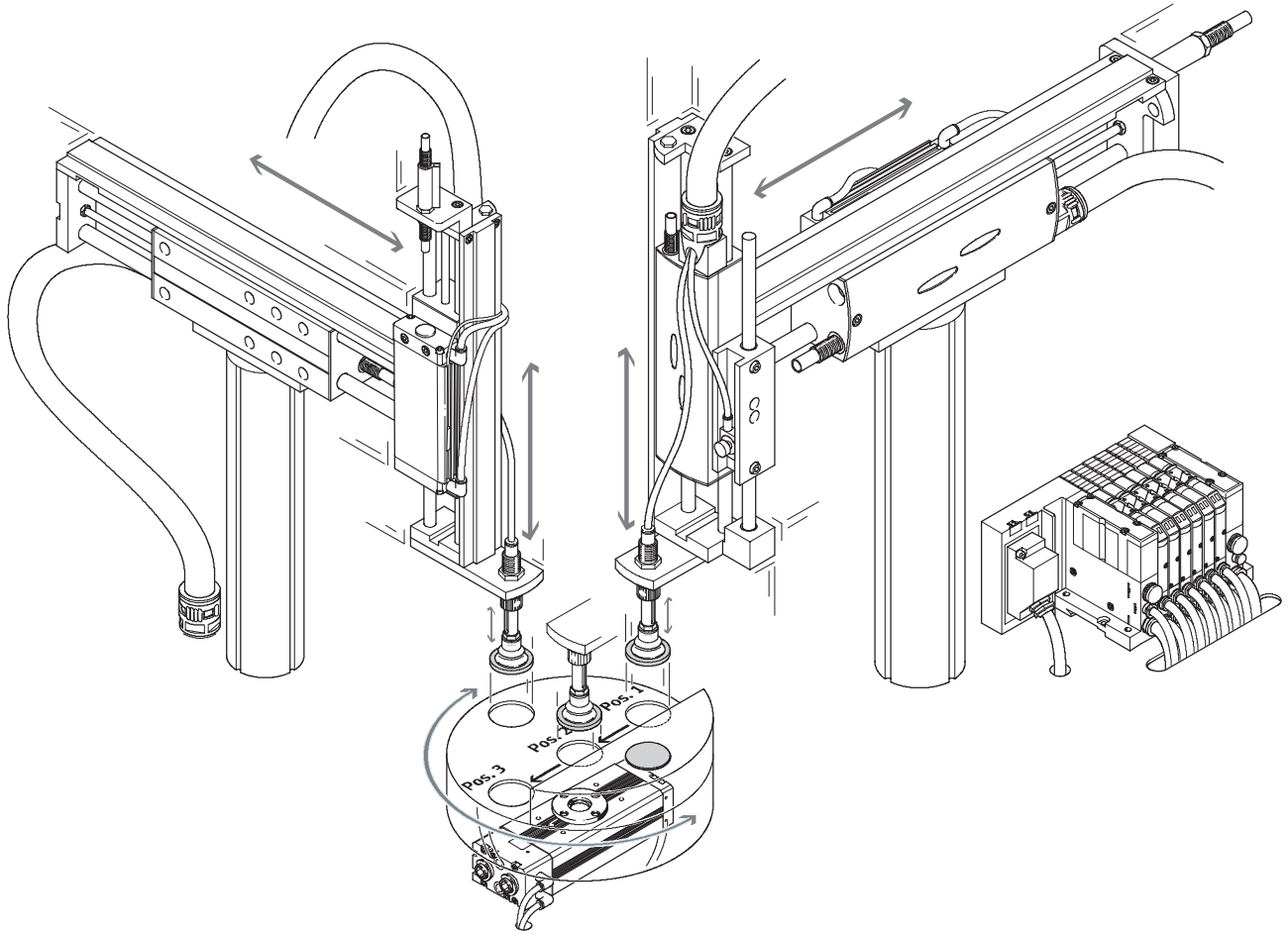
Bill of materials								
Type		HMBSZ-HMP-1		HMBSZ-HMP-2		HMBSZ-HMP-3		→ Page
For drives		HMP-16		HMP-20		HMP-25		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type	
[1]	1	193 124 HMZAS-PG-21		177 603 HMZAS-PG-29		177 603 HMZAS-PG-29		5 / 3.3-132
[2]	3	177 599 MKM-PG-21		177 600 MKM-PG-29		177 600 MKM-PG-29		5 / 3.3-131
[3]	3	177 572 MKRV-23-PG-21		177 573 MKRV-29-PG-29		177 573 MKRV-29-PG-29		5 / 3.3-126
[4]	2 ¹⁾	177 567 MKR-23-PG-21		177 568 MKR-29-PG-29		177 568 MKR-29-PG-29		5 / 3.3-124
[5]	1	177 577 MKRL-23-PG-21		177 578 MKRL-29-PG-29		177 578 MKRL-29-PG-29		5 / 3.3-127
[6]	1	177 595 MKA-PG-29-PG-21		-		-		5 / 3.3-129
[7]	1	177 647 HMSV-1		177 649 HMSV-3		177 653 HMSV-7		5 / 3.3-115

1) Length depends on the stroke of the drive

Pick & place

System example

Combination with handling modules HMPL

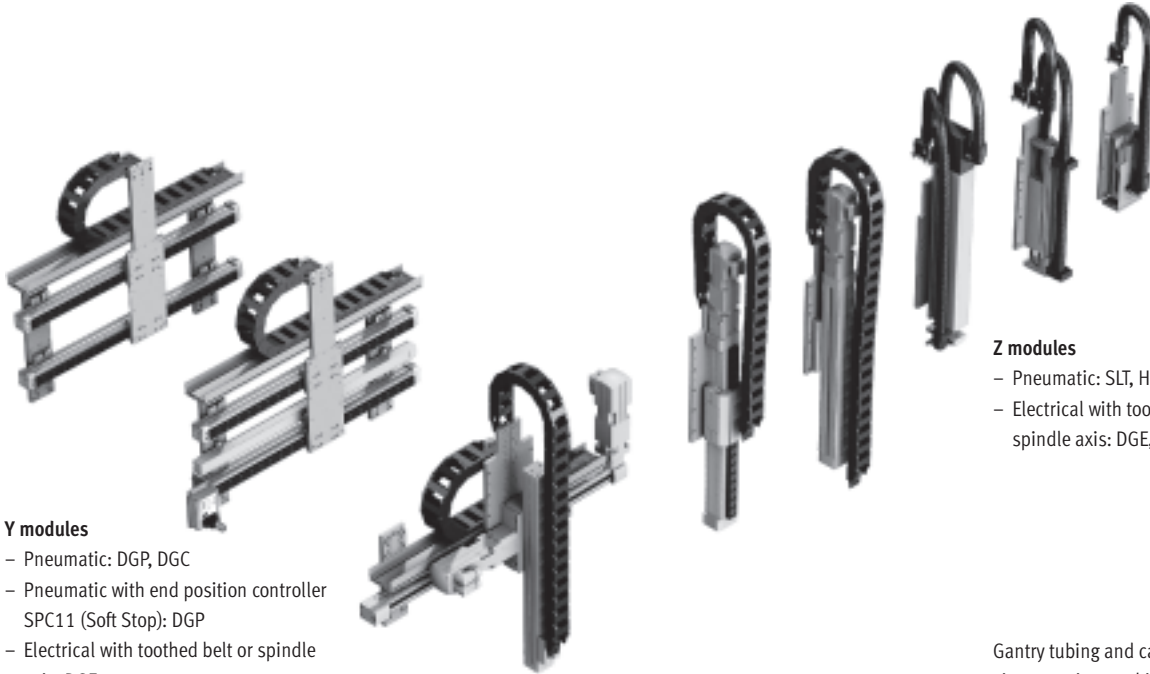


Linear gantries

Key features



Y and Z modules



Y modules

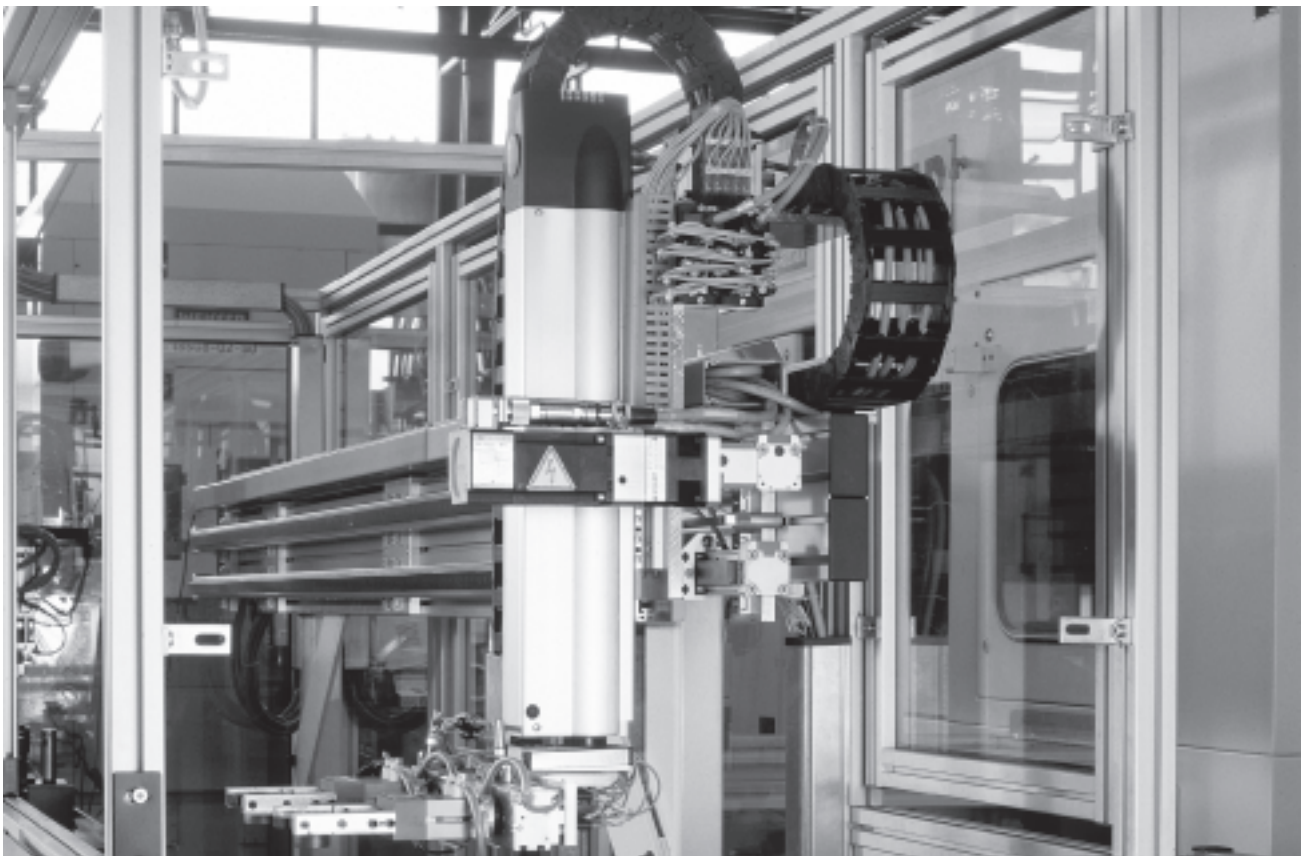
- Pneumatic: DGP, DGC
- Pneumatic with end position controller SPC11 (Soft Stop): DGP
- Electrical with toothed belt or spindle axis: DGE
- Single-axis systems (mono) or drives with guide axis (duo)

Z modules

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

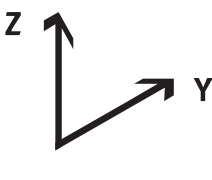


Gantry tubing and cables are routed via protective trunking. Festo uses a base profile for this purpose specially designed for handling technology.

Application



Linear gantries

Product range overview

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



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	–	HMBSY-LP-D25-1	–
-ZR-KF	→ 5 / 3.3-62		→ 5 / 3.3-64	
-ZR-RF	HMBSY-LP-M25-4	–	HMBSY-LP-D25-4	–
	→ 5 / 3.3-62		→ 5 / 3.3-64	
DGE-40 -SP-KF	–	HMBSY-LP-M40-1	–	HMBSY-LP-D40-1
-ZR-KF		→ 5 / 3.3-63		→ 5 / 3.3-65
-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

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

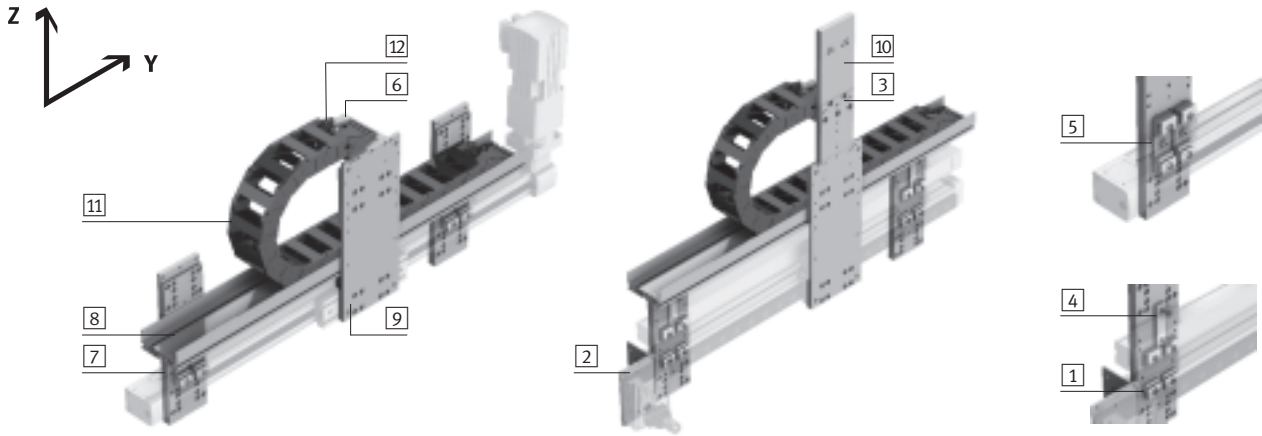
Linear gantries

Y modules



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	Page
1	2 ¹⁾	150 736		-		150 736		Volume 1
	1 ¹⁾	-		531 753		-		Volume 1
		MUP-18/25		MUC-25		MUP-18/25		
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⁾	-		-		-		5 / 3.3-102
						539 362		
						HMVO-RF25		
6	1	539 366		539 366		539 366		5 / 3.3-140
		HMIO-AP1		HMIO-AP1		HMIO-AP1		
7	2 ²⁾	539 972		539 972		539 972		5 / 3.3-98
		HMVM-LP-DL25/40		HMVM-LP-DL25/40		HMVM-LP-DL25/40		
8	1 ³⁾	539 378		539 378		539 378		5 / 3.3-139
		HMIA-E05		HMIA-E05		HMIA-E05		
9	1	539 368		539 368		539 368		5 / 3.3-100
		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.

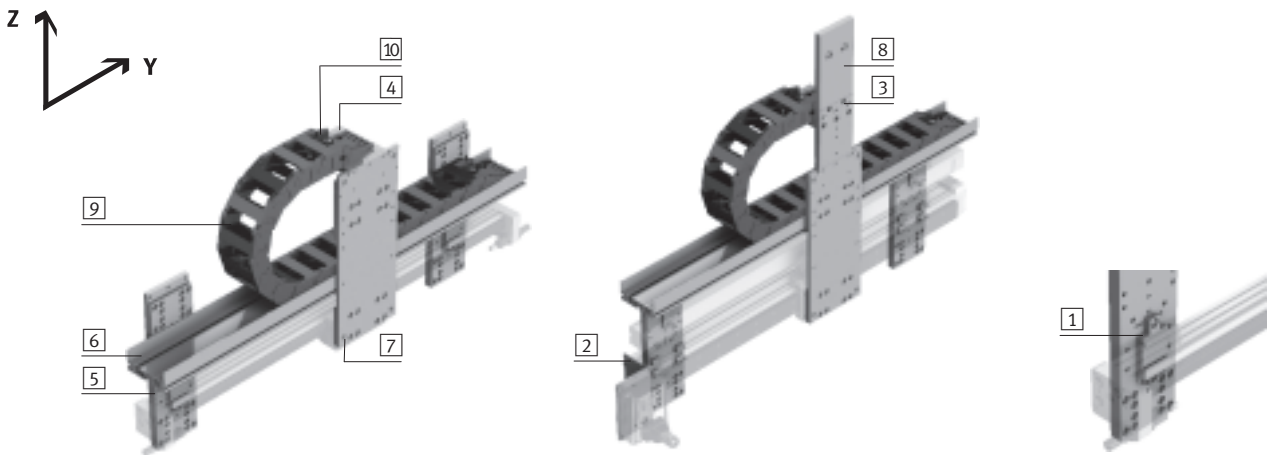
3) Length depends on the stroke of the drive

Linear gantries

Y modules

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/n _T 2						-
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

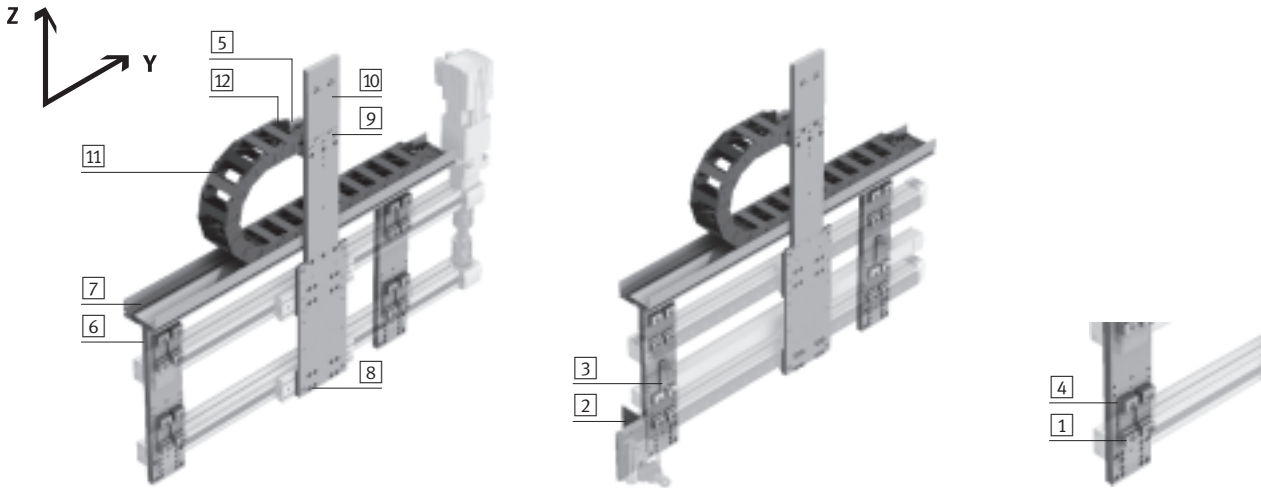
Linear gantries

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				
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	Page
1	4 ¹⁾	150 736		–		150 736	150 736	Volume 1
	2 ¹⁾	–		531 753		–	–	Volume 1
			MUP-18/25	MUC-25		MUP-18/25	MUP-18/25	
2	1	–		–		539 367	–	5 / 3.3-103
						HMVW-SPC		
3	1 ¹⁾	–		–		539 973	–	5 / 3.3-102
						HMVO-POT		
4	4 ¹⁾	–		–		–	539 362	5 / 3.3-102
							HMVO-RF25	
5	1	539 366		539 366		539 366	539 366	5 / 3.3-140
			HMIO-AP-1	HMIO-AP-1		HMIO-AP-1	HMIO-AP-1	
6	2 ²⁾	539 971		539 971		539 971	539 971	5 / 3.3-98
			HMVD-LP-DL25/40	HMVD-LP-DL25/40		HMVD-LP-DL25/40	HMVD-LP-DL25/40	
7	1 ³⁾	539 378		539 378		539 378	539 378	5 / 3.3-139
			HMIA-E05	HMIA-E05		HMIA-E05	HMIA-E05	
8	1	539 368		539 368		539 368	539 368	5 / 3.3-100
			HMVS-DL25	HMVS-DL25		HMVS-DL25	HMVS-DL25	
9	1	539 363		539 363		539 363	539 363	5 / 3.3-140
			HMID-LP	HMID-LP		HMID-LP	HMID-LP	
10	1	539 365		539 365		539 365	539 365	5 / 3.3-138
			HMI-ZB-E03	HMI-ZB-E03		HMI-ZB-E03	HMI-ZB-E03	
11	1	IGUS E2 medium 240.05.100 and 211 or KABELSCHLEPP MC 0320.60-01-100 and TS O/h _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.

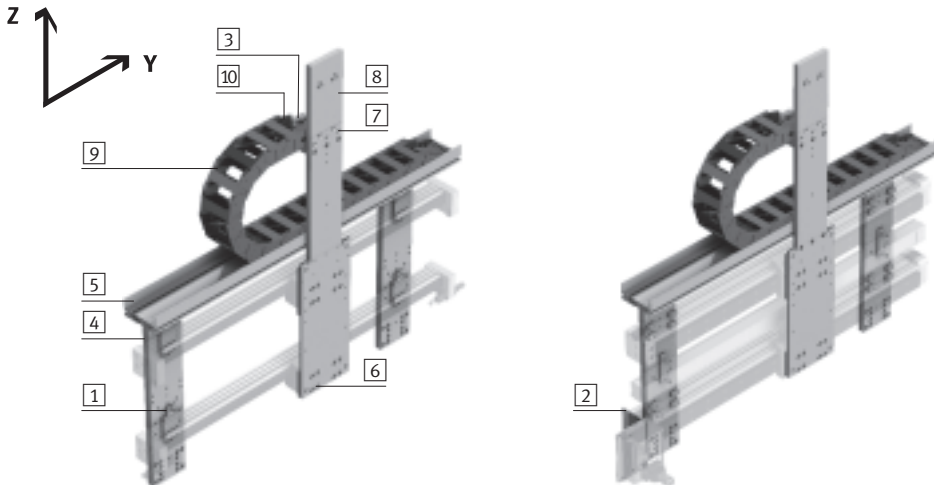
3) Length depends on the stroke of the drive

Linear gantries

Y modules

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/n _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

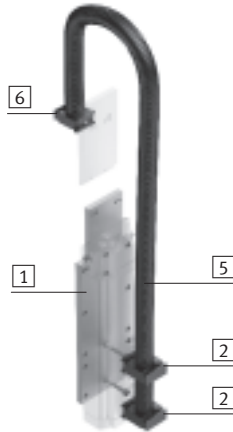
Linear gantries

Z modules



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	→ Page
[1]	1	539 373	HMVZ-2	539 373	HMVZ-2	539 373	HMVZ-2	5 / 3.3-101
[2]	1	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B	5 / 3.3-131
		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	5 / 3.3-124
[6]	1	192 289	MKRS-16,5-B	192 290	MKRS-23-B	192 290	MKRS-23-B	5 / 3.3-131

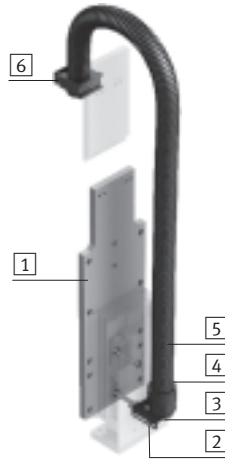
1) Length depends on the stroke of the drive

Linear gantries

Z modules

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

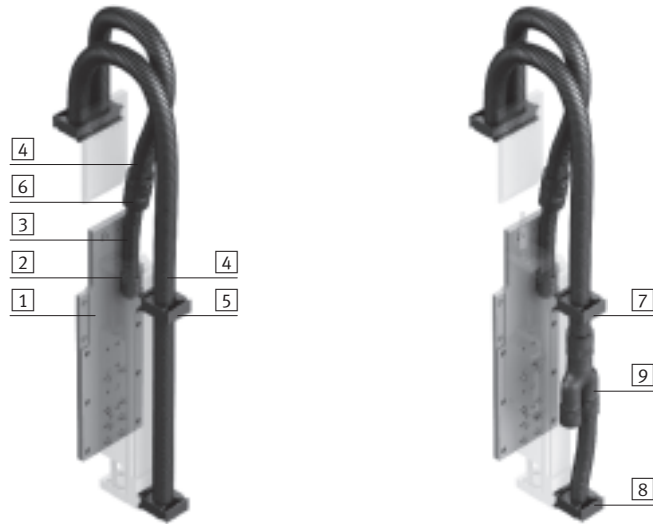
Linear gantries

Z modules



Mono/Duo system

Linear modules HMPL



Bill of materials

Type		HMBSZ-HMPL-5		HMBSZ-HMPL-6		→ Page	
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
1	1	539 375	HMVZ-4	539 375	HMVZ-4	539 375	HMVZ-4
2	1	177 571	MKRV-16,5-PG-16	177 571	MKRV-16,5-PG-16	177 571	MKRV-16,5-PG-16
3	1 ¹⁾	177 566	MKR-16,5-PG-16	177 566	MKR-16,5-PG-16	177 566	MKR-16,5-PG-16
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
7	3 ³⁾	–	–	–	–	192 290	MKRS-23-B
8	1	–	–	–	–	192 289	MKRS-16,5-B
9	1	–	–	–	–	193 946	MKY-PG-21-2PG-16

1) Length 200 mm

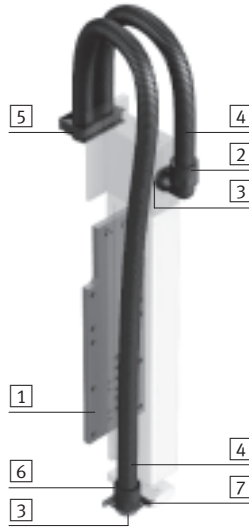
2) Length depends on the stroke of the drive, 2 conduits are required with an intermediate position.

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

Mono/Duo system
Linear modules HMP



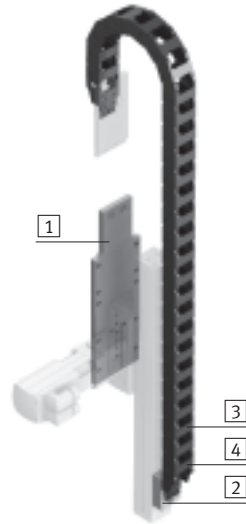
Bill of materials							
Type	HMBSZ-HMP-4		HMBSZ-HMP-5		HMBSZ-HMP-6		→ Page
For drives	HMP-16		HMP-20		HMP-25		
System type	Mono 40 Duo 25		Duo 25		Duo 40		
Item	Quantity	Part No.	Type	Part No.	Type	Part No.	Type
1	1	539 374	HMVZ-3	539 374	HMVZ-3	539 377	HMVZ-6
2	1	177 577	MKRL-23-PG-21	177 578	MKRL-29-PG-29	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

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	→ Page	
1	1	539 374 HMVZ-3		539 375 HMVZ-4		539 377 HMVZ-6		5 / 3.3-101	
2	1	539 370 HMIZF-E03-DA18		539 371 HMIZF-E03-DA25		539 371 HMIZF-E03-DA25		5 / 3.3-138	
3	1 ¹⁾	IGUS E2 medium 240.03.075.0 and 211 or KABELSCHLEPP MC 0320.40-01-77 and TS 0/n _T 2							-
4	1	IGUS E2 medium 2030.12.PZB or KABELSCHLEPP MC FA/MA							-

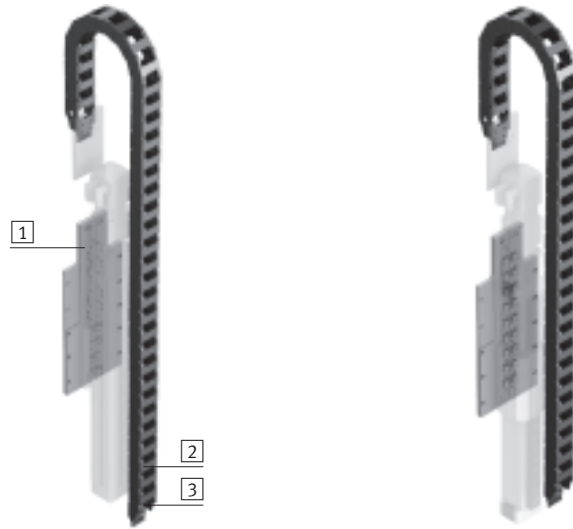
1) Length depends on the stroke of the drive

Linear gantries

Z modules

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						-
							→ Page	

1) Length depends on the stroke of the drive

3-Dimensional gantries

Key features



X, Y and Z modules



Y modules

- Pneumatic: DGP, DGC
- Electrical with toothed belt or spindle axis: DGE
- Single-axis systems (mono) or drives with guide axis (duo)



Z modules

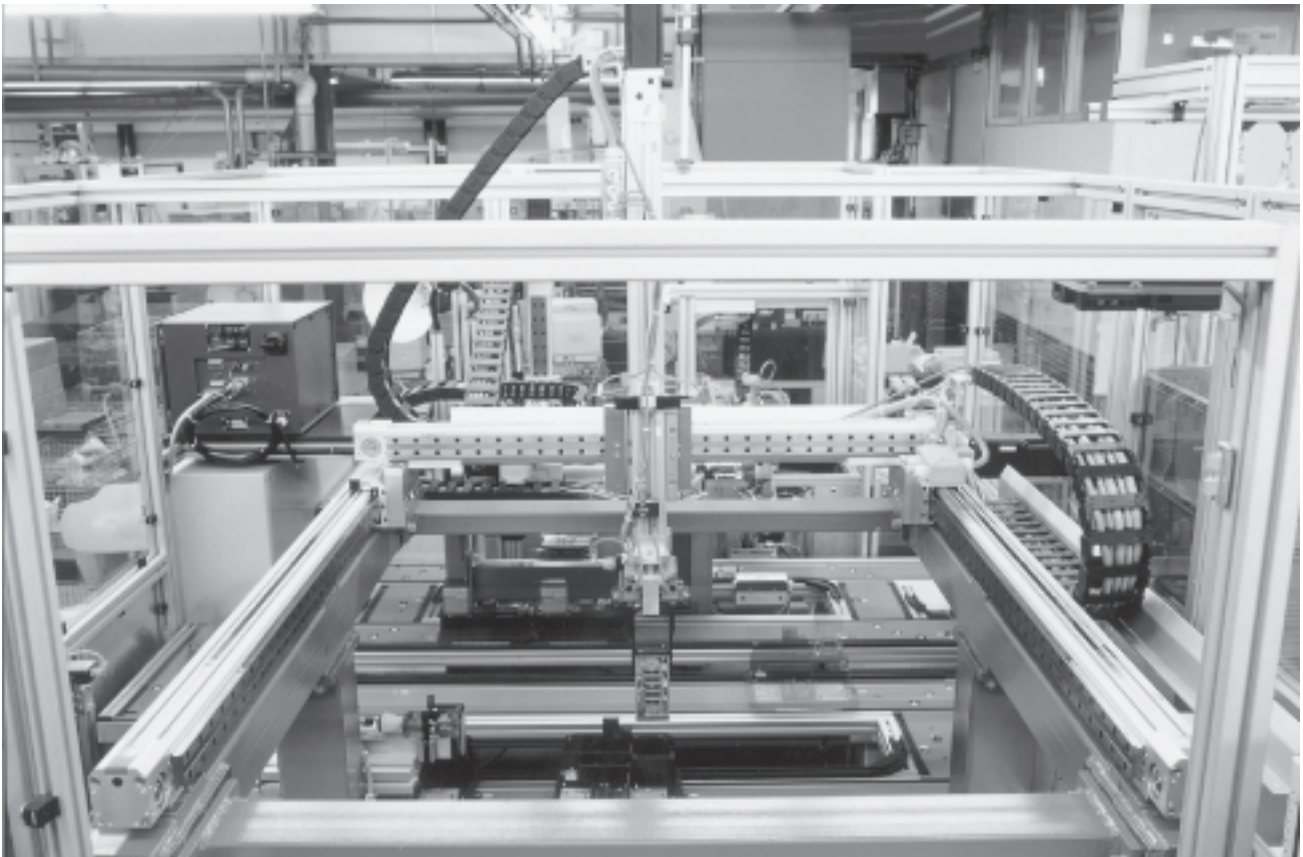
- Pneumatic: SLT, HMPL, HMP
- Electrical with toothed belt or spindle axis: DGE, DGEA

X modules

- Electrical with toothed belt axis: DGE

The components in the multi-axis modular system consist mainly of aluminium plates that are connected to each other and attached to the drives using screw connections and slot nut connectors. This permits fast and easy assembly.

Application



3-Dimensional gantries

Product range overview



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



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

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

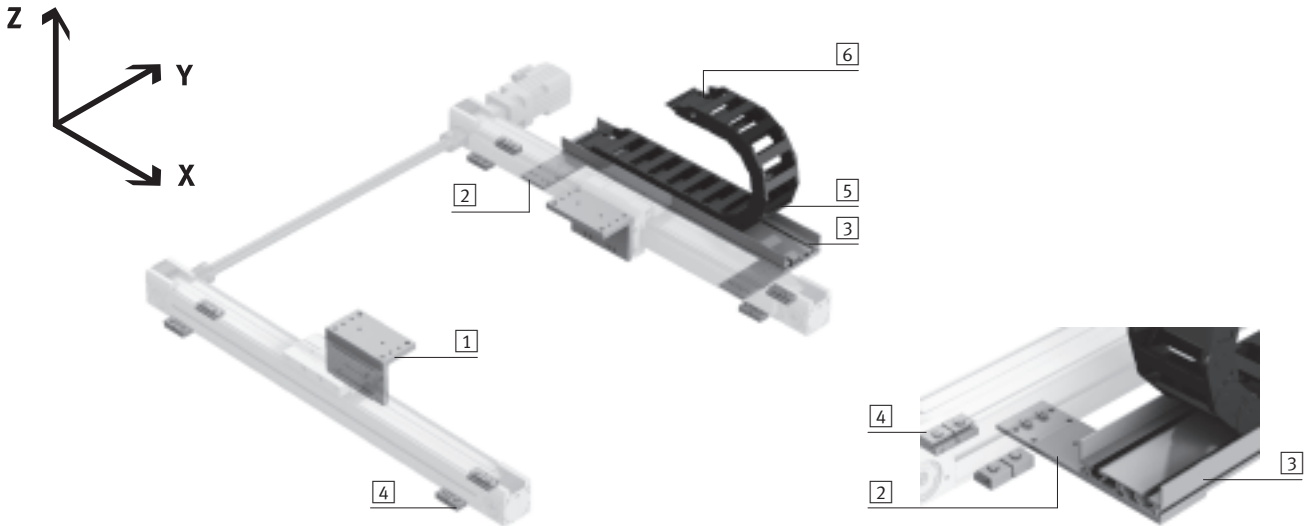
Z-axis				
System type	Mono 25	Mono 40	Duo 25	Duo 40
				
Pneumatic drives	Type			
DGSL-16	HMBSZ-DGSL-7 → 5 / 3.3-80	–	–	–
DGSL-20	–	HMBSZ-DGSL-8 → 5 / 3.3-80	–	–
DGSL-25	–	HMBSZ-DGSL-8 → 5 / 3.3-80	HMBSZ-DGSL-8 → 5 / 3.3-80	–
SLT-16	HMBSZ-SLT-7 → 5 / 3.3-81	–	–	–
SLT-20	–	HMBSZ-SLT-7 → 5 / 3.3-81	HMBSZ-SLT-7 → 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

Basic system

Toothed belt axes DGE



Bill of materials							Page			
Type	HMBSX-RP/FP-25-1		HMBSX-RP/FP-25-2		HMBSX-RP/FP-40-1			HMBSX-RP/FP-40-2		
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/n _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

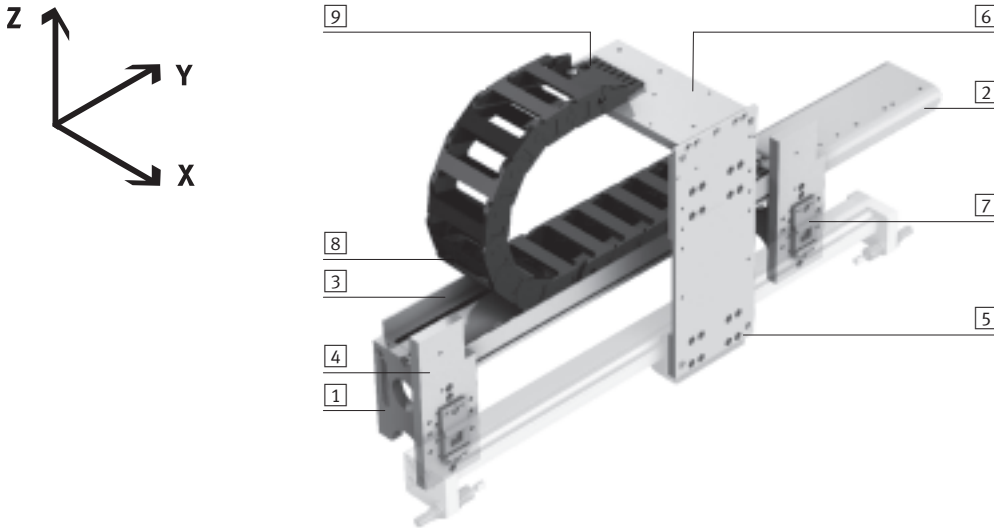
3-Dimensional gantries

Y modules



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	Page	
[1]	2	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	5 / 3.3-97	
[3]	1 ¹⁾	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	5 / 3.3-99	
[5]	1	539 368	HMVS-DL25	539 368	HMVS-DL25	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	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

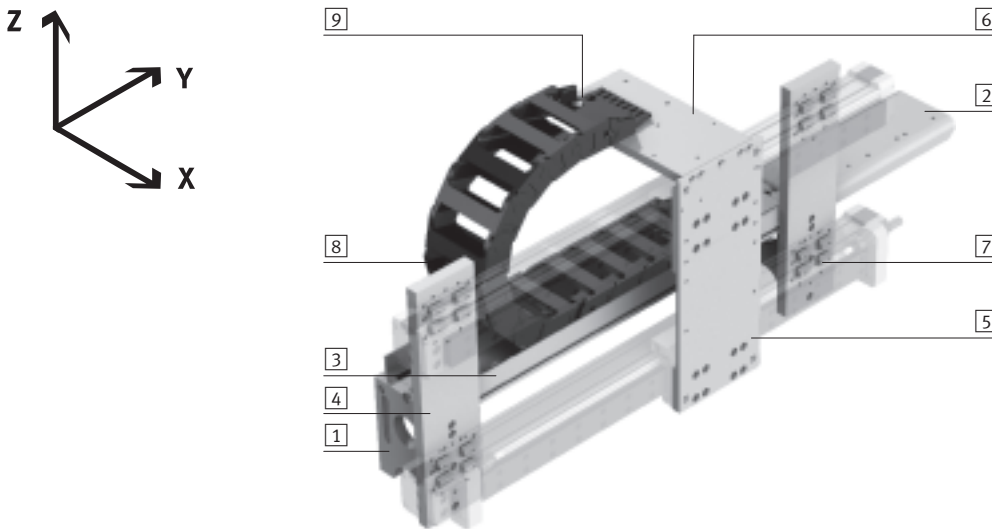
3) Quantity with stroke ≤ 500 mm. With stroke > 500 mm, a basic kit HMVM-RP/FP-DL25/40 must be additionally ordered per 500 mm stroke or part thereof.

3-Dimensional gantries

Y modules

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	Page
1	2	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	5 / 3.3-97
3	1 ¹⁾	539 379	HMIA-E07	539 379	HMIA-E07	539 379	HMIA-E07	5 / 3.3-139
4	2 ³⁾	539 655	HMVD-RP/FP-DL25/40	539 655	HMVD-RP/FP-DL25/40	539 655	HMVD-RP/FP-DL25/40	5 / 3.3-99
5	1	539 368	HMVS-DL25	539 368	HMVS-DL25	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	5 / 3.3-142
7	4 ²⁾	150 736	MUP-18/25	-	-	-	-	Volume 1
	2	-	-	531 753	MUC-25	-	531 755	MUC-40
8	1 ¹⁾	IGUS E2 medium 240.07.100.0 and 211 or KABELSCHLEPP MC 0320.80-01 and TS O/η 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.

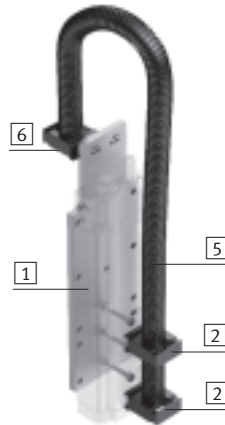
3-Dimensional gantries

Z modules



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

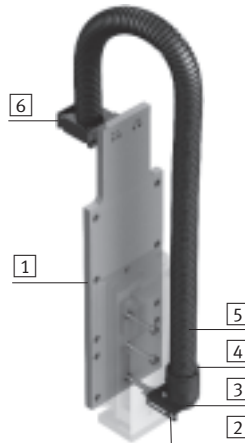
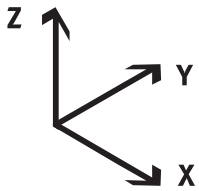
1) Length depends on the stroke of the drive

3-Dimensional gantries

Z modules

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

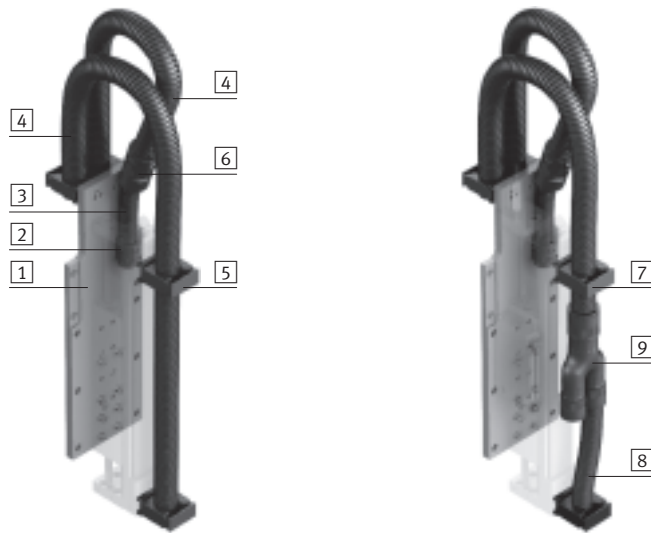
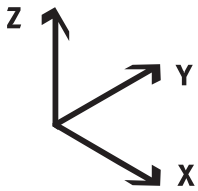
3-Dimensional gantries

Z modules



Mono/Duo system

Linear modules HMPL



Bill of materials

Type		HMBSZ-HMPL-5		HMBSZ-HMPL-6		→ Page	
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
[1]	1	539 375	HMVZ-4	539 375	HMVZ-4	539 375	HMVZ-4
[2]	1	177 571	MKRV-16,5-PG-16	177 571	MKRV-16,5-PG-16	177 571	MKRV-16,5-PG-16
[3]	1 ¹⁾	177 566	MKR-16,5-PG-16	177 566	MKR-16,5-PG-16	177 566	MKR-16,5-PG-16
[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
[7]	3 ³⁾	-	-	-	-	192 290	MKRS-23-B
[8]	1	-	-	-	-	192 289	MKRS-16,5-B
[9]	1	-	-	-	-	193 946	MKY-PG-21-2PG-16

1) Length 200 mm

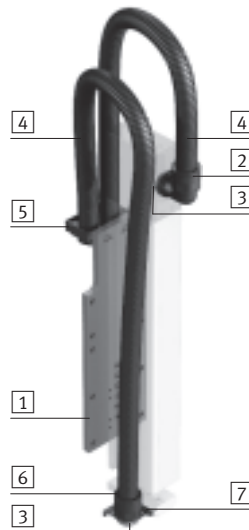
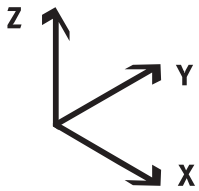
2) Length depends on the stroke of the drive, 2 conduits are required with an intermediate position.

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

Mono/Duo system
Linear modules HMP



Bill of materials								
Type	HMBSZ-HMP-4		HMBSZ-HMP-5		HMBSZ-HMP-6		→ Page	
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	5 / 3.3-101
2	1	177 577	MKRL-23-PG-21	177 578	MKRL-29-PG-29	177 578	MKRL-29-PG-29	5 / 3.3-127
3	2	177 599	MKM-PG-21	177 600	MKM-PG-29	177 600	MKM-PG-29	5 / 3.3-131
4	1 ¹⁾	177 567	MKR-23-PG-21	177 568	MKR-29-PG-29	177 568	MKR-29-PG-29	5 / 3.3-124
5	2	192 290	MKRS-23-B	192 291	MKRS-29-B	192 291	MKRS-29-B	5 / 3.3-131
6	1	177 572	MKRV-23-PG-21	177 573	MKRV-29-PG-29	177 573	MKRV-29-PG-29	5 / 3.3-126
7	1	193 124	HMZAS-PG-21	177 603	HMZAS-PG-29	177 603	HMZAS-PG-29	5 / 3.3-132

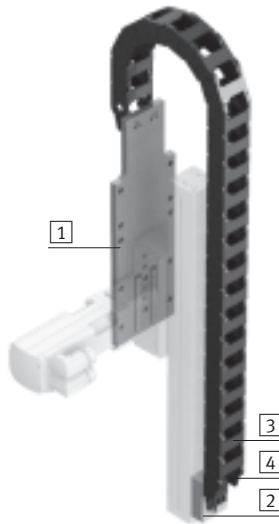
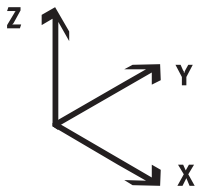
1) Length depends on the stroke of the drive

3-Dimensional gantries

Z modules

Mono/Duo system

Cantilever axes DGEA



Bill of materials

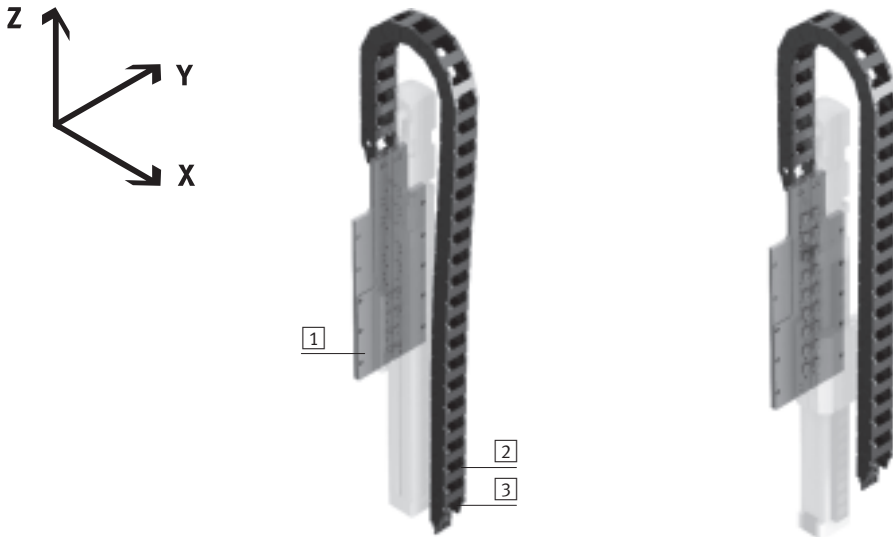
Type	HMBSZ-DGEA-1	HMBSZ-DGEA-2	HMBSZ-DGEA-3		
For drives	DGEA-18	DGEA-25	DGEA-25		
System type	Mono 25 Mono 40 Duo 25	Duo 25	Duo 40		
Item	Quantity	Part No. Type	Part No. Type	Part No. Type	→ Page
[1]	1	539 374 HMVZ-3	539 375 HMVZ-4	539 377 HMVZ-6	5 / 3.3-101
[2]	1	539 370 HMIZF-E03-DA18	539 371 HMIZF-E03-DA25	539 371 HMIZF-E03-DA25	5 / 3.3-138
[3]	1 ¹⁾	IGUS E2 medium 240.03.075.0 and 211 or KABELSCHLEPP MC 0320.40-01-77 and TS 0/n _T 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

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					-	
							→ Page	

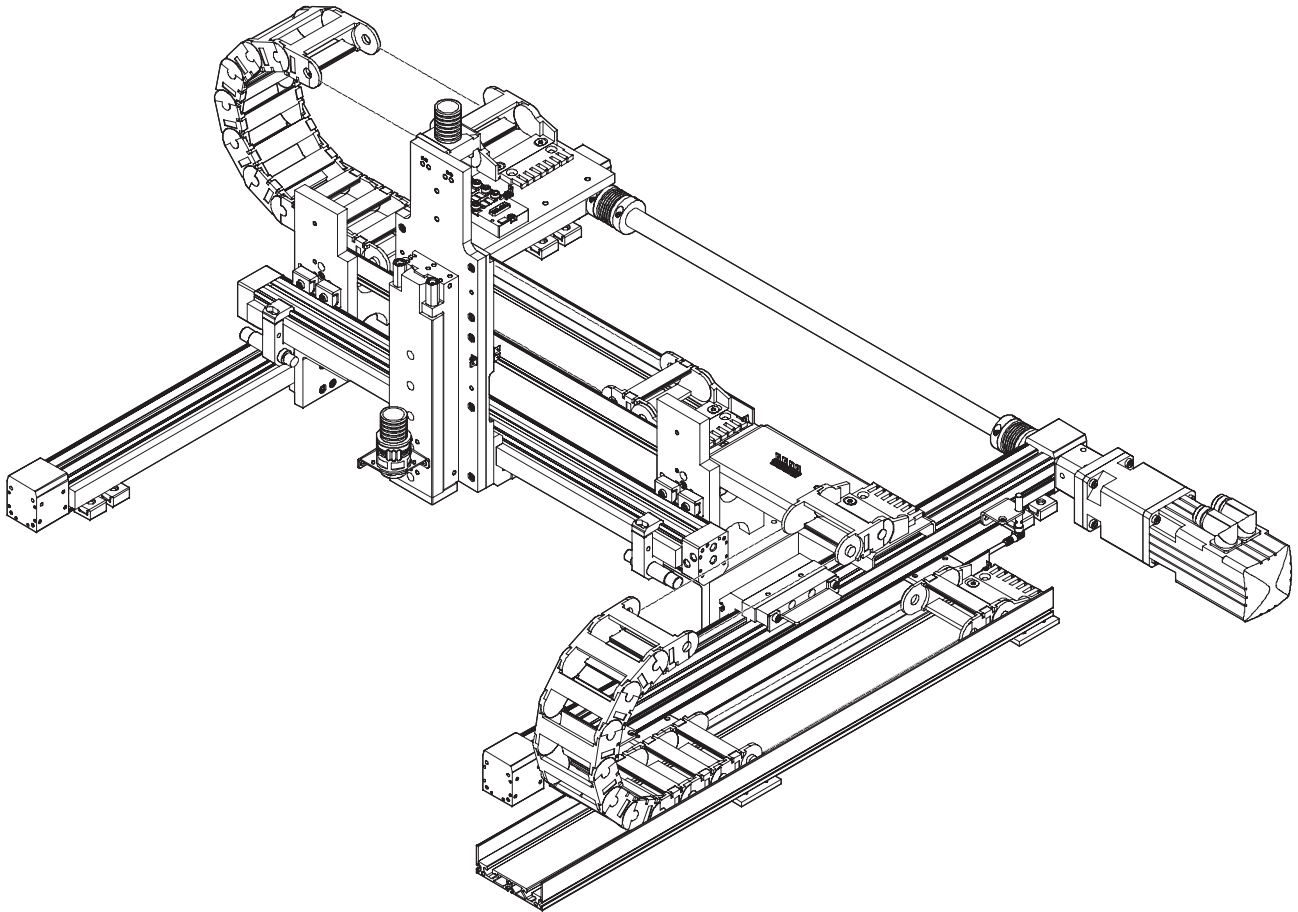
1) Length depends on the stroke of the drive

3-Dimensional gantries

System example



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



System components
Multi-axis modular system

3.3



- Modular
- Functional
- Versatile

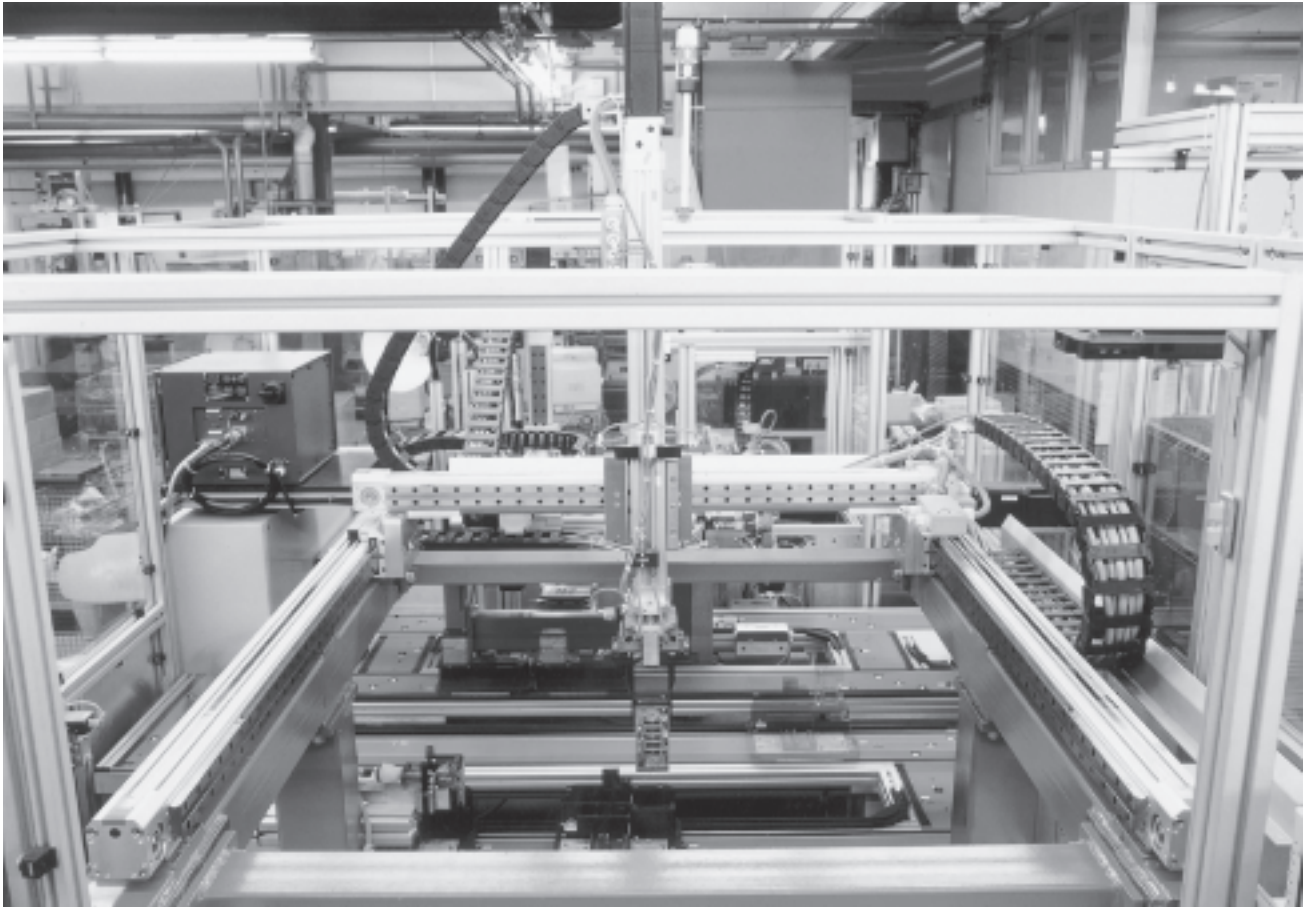
Connectors

Key features



System components
Multi-axis modular system

3.3



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

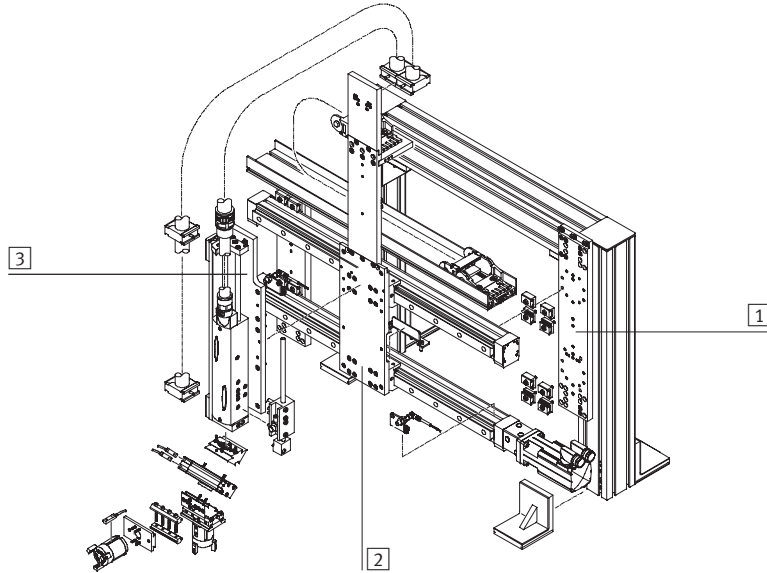
For mounting accessories such as controllers on multi-axis systems.

Connectors

Key features

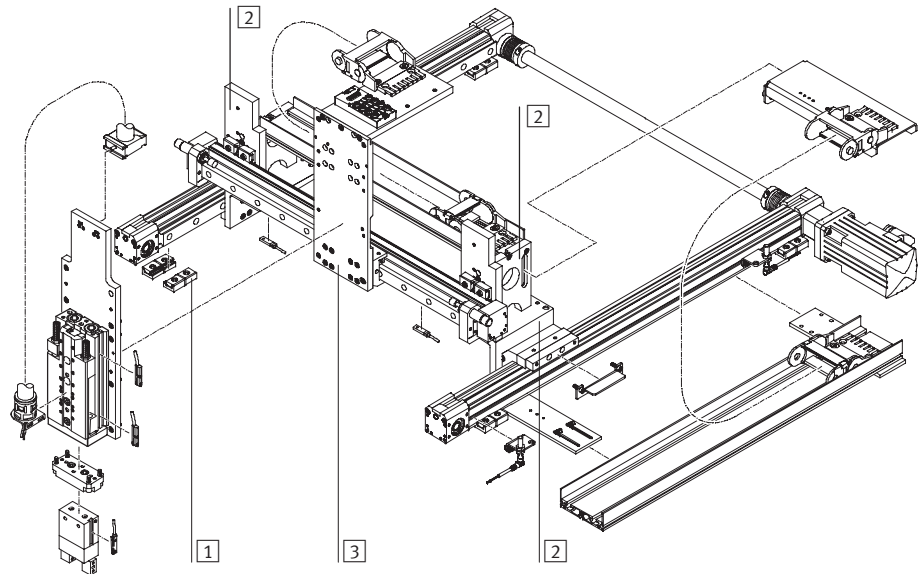
Linear gantry

- 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

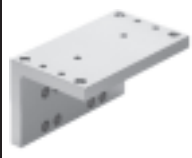





Connectors

Product range overview









Version	Brief description	→ Page
Reinforcing kit HMBK-DB		
	<ul style="list-style-type: none"> • For pick & place • For direct mounting of linear modules HMP and HMPL 	5 / 3.3-92
Components kit HMBK-ND		
	<ul style="list-style-type: none"> • For pick & place • For direct mounting of linear modules HMP 	5 / 3.3-92
Connecting kit HMBK-WS		
	<ul style="list-style-type: none"> • For pick & place • For dovetail mounting of linear modules HMP and HMPL and mini slides SLT 	5 / 3.3-93
Connecting adapter HMY		
	<ul style="list-style-type: none"> • 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 HMY-DL		
	<ul style="list-style-type: none"> • For 3-dimensional gantries • For connecting X-axes and Y-axes • Mounting interface for reinforcing kit HMYV and basic kit HMYM • Fastening material is included in delivery 	5 / 3.3-95
Adapter kit HMY-S-RF		
	<ul style="list-style-type: none"> • 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 HMYV and basic kit HMYM • Fastening material is included in delivery 	5 / 3.3-96
Reinforcing kit HMYV-RP/FP		
	<ul style="list-style-type: none"> • For 3-dimensional gantries • Mounting interface for basic kit HMYM/HMYD, installation components, etc. • Fastening material is included in delivery 	5 / 3.3-97
Basic kit HMYM-LP, HMYD-LP		
	<ul style="list-style-type: none"> • 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

Version	Brief description	→ Page	Version	Brief description	→ Page
Basic kit HMVM-RP/FP, HMVD-RP/FP			Connecting plate HMVO-RF		
	<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • 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		
	<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • 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		
	<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • 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

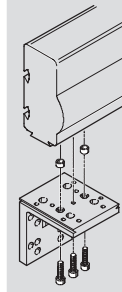


Components kit HMBK-DB

- 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

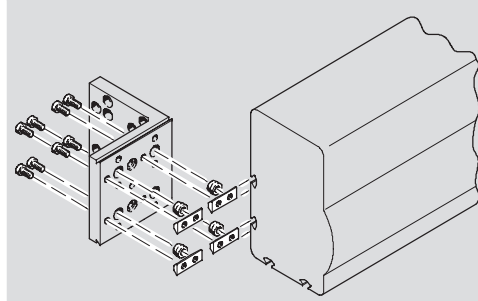
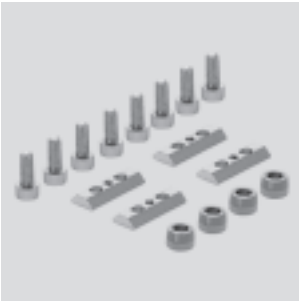
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

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



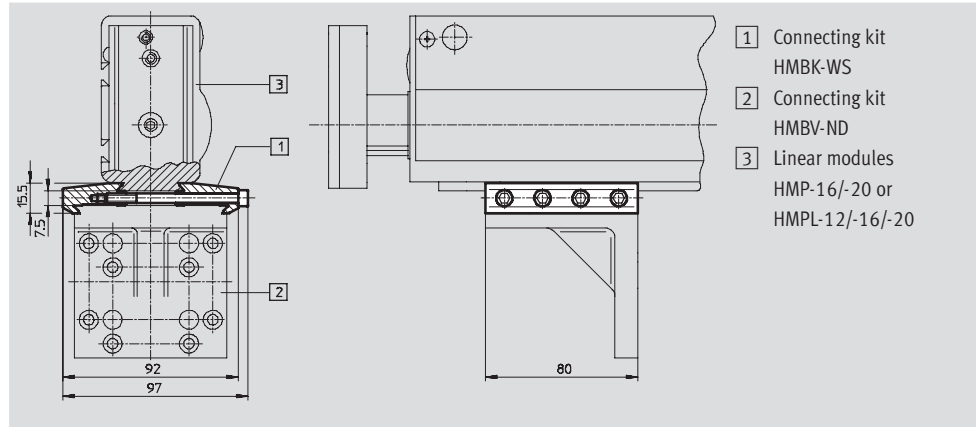
Connecting kit HMBK-WS



- 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



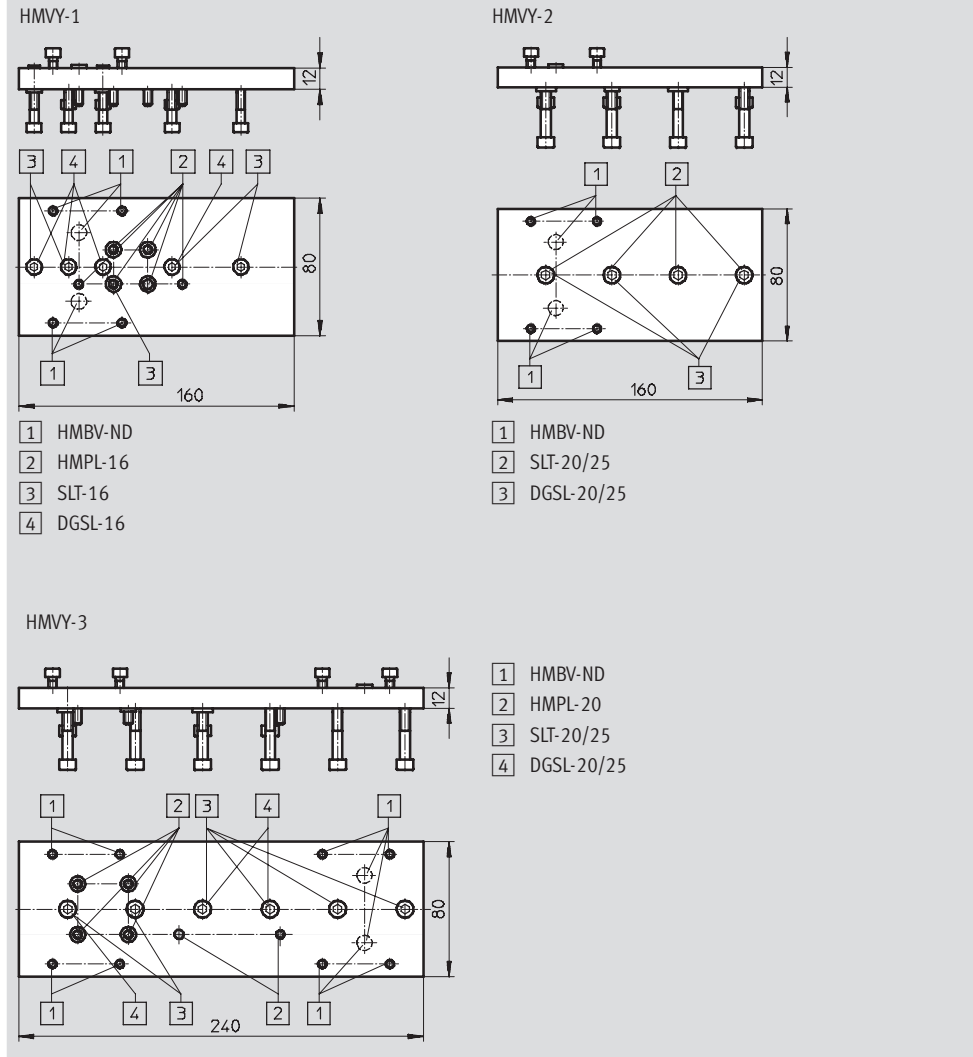
Connecting adapter HMOV



- 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



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



HMVW-DL25

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

HMVW-DL40

1 DGE-40-ZR-KF
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	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



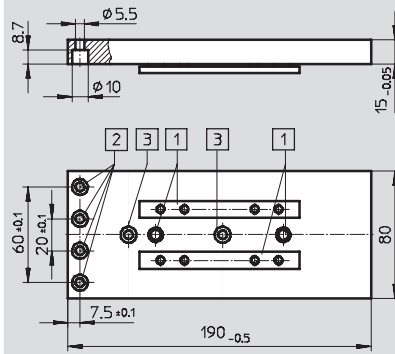
Adapter kit HMVS-RF

- 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

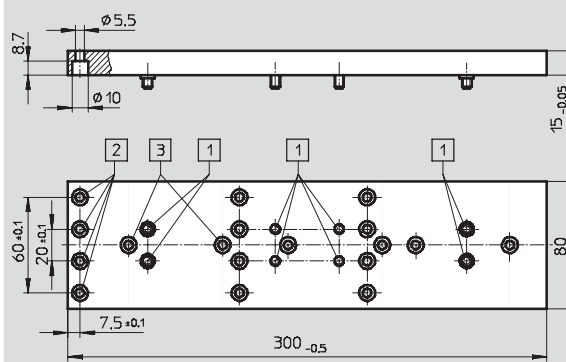


HMVS-RF-25



- 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 HMVV-RP/FP



- For 3-dimensional gantries

- Mounting interface for basic kit HMVM/HMVD, installation components, etc.
- Fastening material is included in delivery

Material:
Anodised aluminium
Free of copper, PTFE and silicone

Technical drawing showing dimensions and callouts:

- Top view: Overall width 127^{-0.5}, height 100, hole diameter 15^{+0.2}.
- Callout 1: Points to the top edge.
- Callout 2: Points to the side slots.
- Callout 3: Points to the central hole.
- Callout 4: Points to the mounting holes.

1	HMVM-RP/FP-DL25/40 HMVD-RP/FP-DL25/40
2	HMVS-RF25/40 HMVW-DL25/40
3	HMIA-E07
4	HMIXF-RP/FP

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

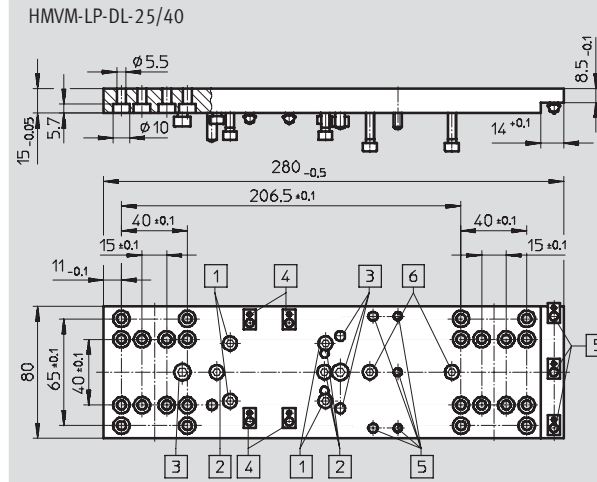
Technical data



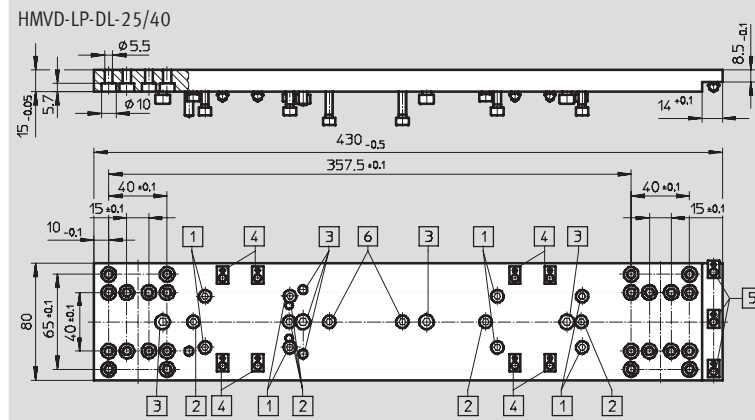
Basic kit
HMVM-LP
HMVD-LP

- 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



- 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)



- 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



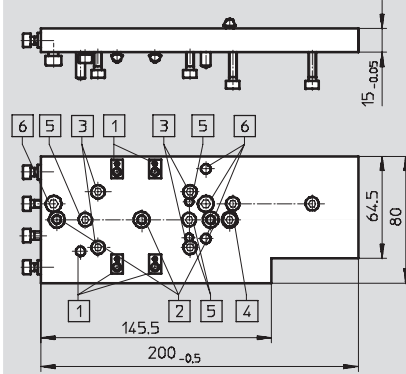
Basic kit
HMVM-RP/FP
HMVD-RP/FP



- For 3-dimensional gantries
- For Y-axis
- For Mono and Duo systems
- Mounting interface for drives
- Fastening material is included in delivery

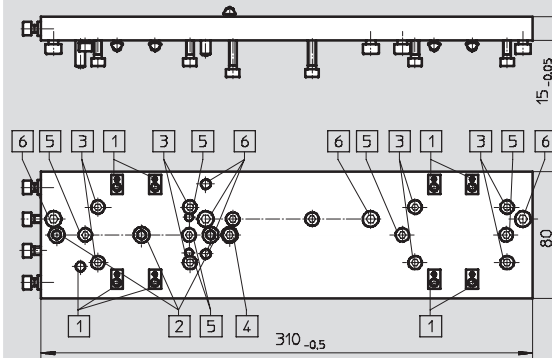
Material:
 Anodised aluminium
 Free of copper, PTFE and silicone

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

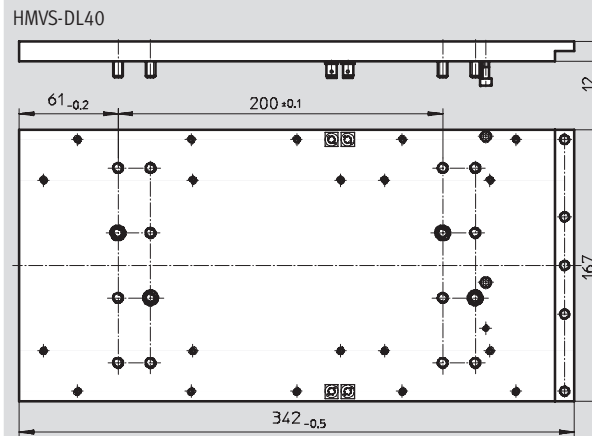
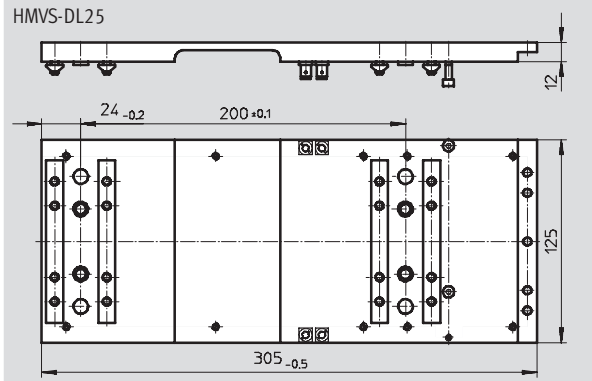
Technical data



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



System components
Multi-axis modular system

3.3

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



Basic kit HMVZ

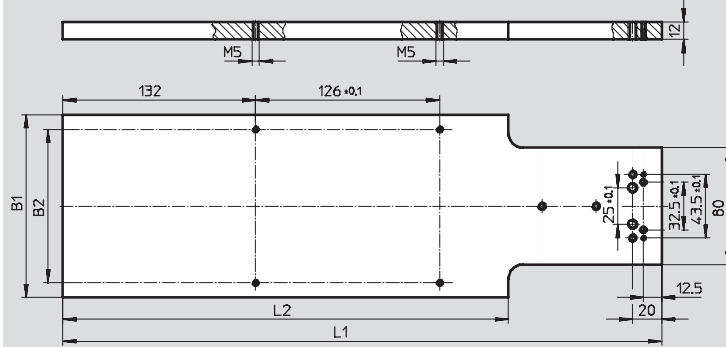


- For linear and 3-dimensional gantries
- For Z-axis

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

Material:
Anodised aluminium
Free of copper, PTFE and silicone

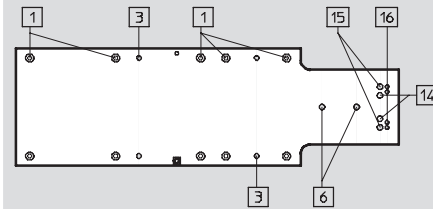
HMVZ-...



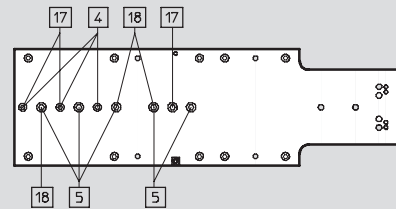
- Fastening material and earthing kits are included in delivery

- 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

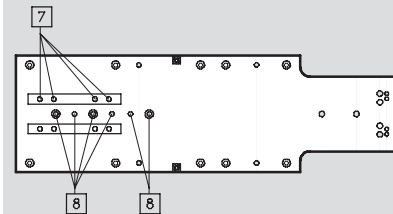
HMVZ-1



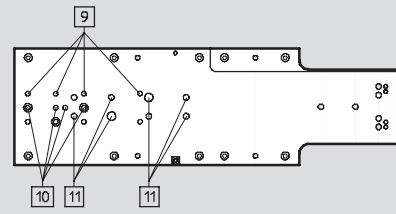
HMVZ-2



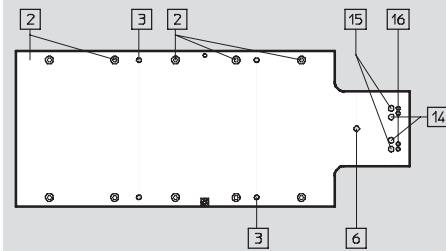
HMVZ-3



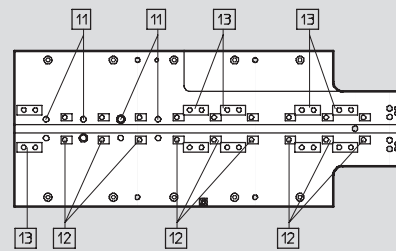
HMVZ-4



HMVZ-5



HMVZ-6



Dimensions, technical data and ordering data

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

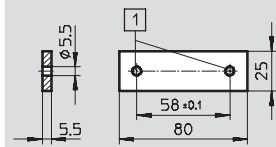
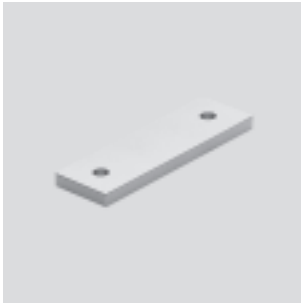
Technical data



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

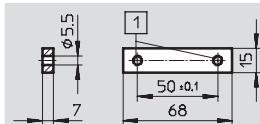
Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	30	539 362	HMVO-RF25

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

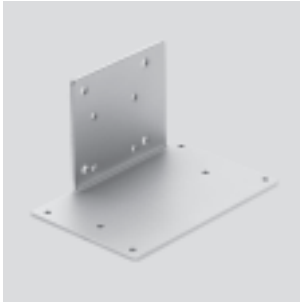
Technical data and ordering codes			
CRC ¹⁾	Weight	Part No.	Type
	[g]		
2	20	539 973	HMVO-POT

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

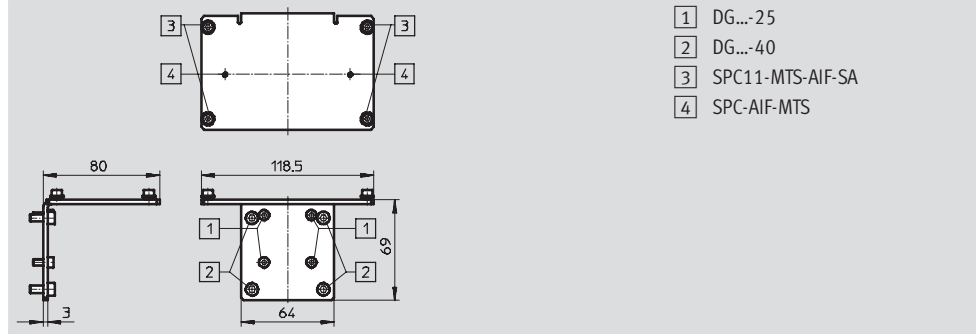
Technical data

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.

