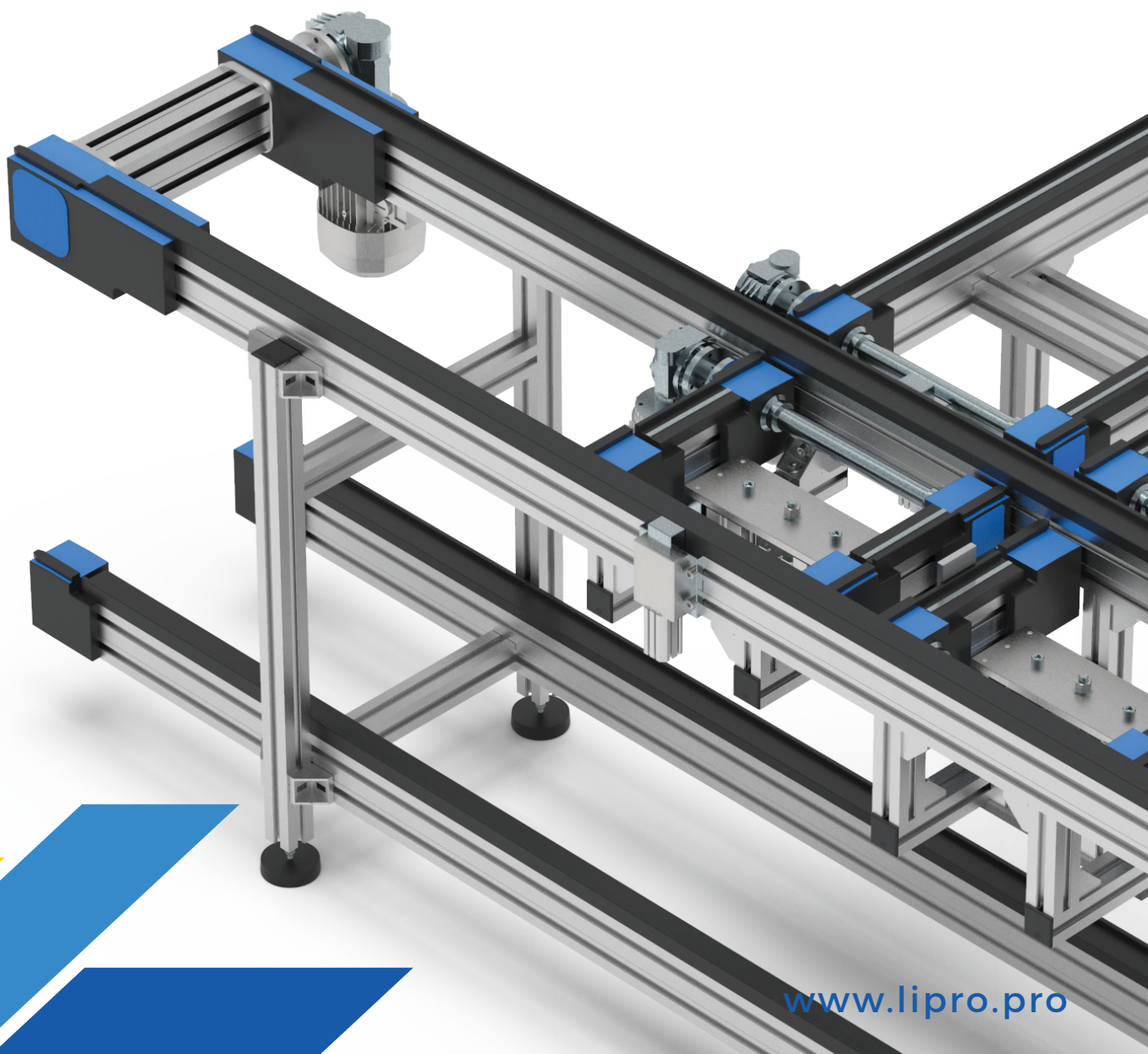




TRANSPORT SYSTEMS



www.lipro.pro



**DESIGN
ASSISTANCE**



**TURNING IDEAS
INTO PRODUCTS**

**GUARANTEE
AND SERVICE**



**FAST AND QUALITY
CUSTOMER SERVICE**

**S I N C E
1998**

TRANSPORT SYSTEMS

Transport systems in the industry are an indispensable part of work processes.

**Chain pallet systems PSC-90,
belt pallet systems PSB-60, PSB-90
and roller tracks PSR-50/60**

cover the majority of the needs for services and other transports in production processes. All three transport systems enable product accumulation, thereby reducing the storage surface and shortening the transport time. The advantages of the mentioned systems are their flexibility and their modular construction option.

In this manner we are able to freely choose and add necessary modules, from a simple track to a large and complex system.

All the existing modules may be re-used in new setups. Special attention in designing the systems was paid to the use of standard elements and their aesthetic appearance.

The catalogue presents standard solutions. Contact our technical support for special designs.



Simplifying and
improving things ...



PRESENTATION OF LIPRO

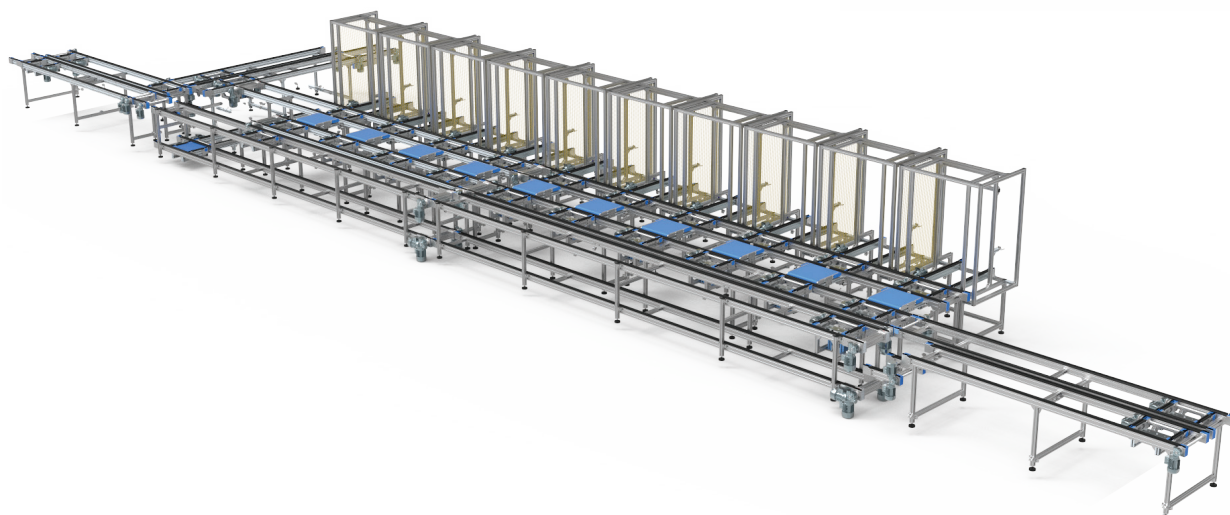
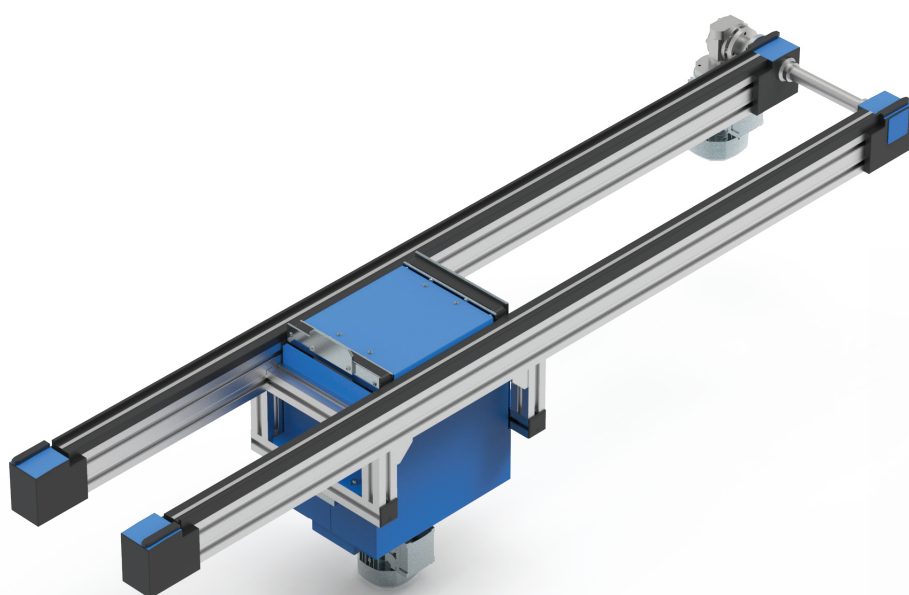
The LIPRO systemic solutions offer added value and enable high productivity, flexibility and optimisation of working processes.

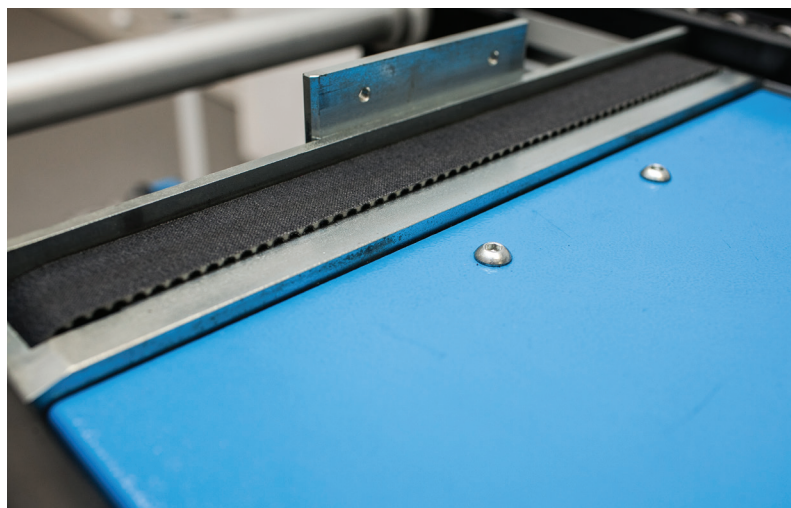
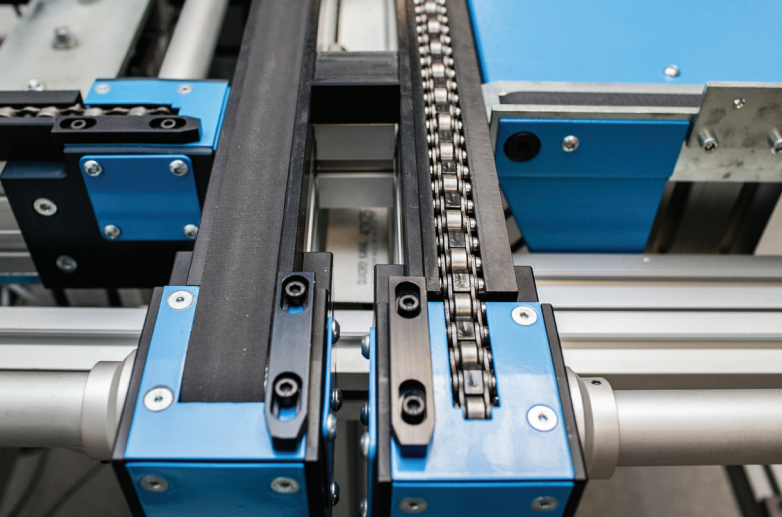


LIPRO was established in 1998 and since then it has been present on the Slovenian, European and global markets. A quality support to our esteemed business partners enabled LIPRO to develop into a recognisable and well-organised production automation company.

Gregor Pribac,
General Manager





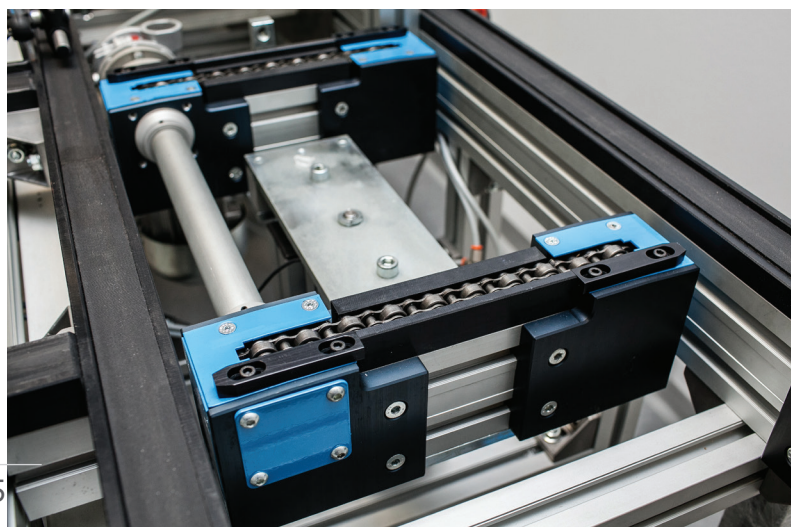
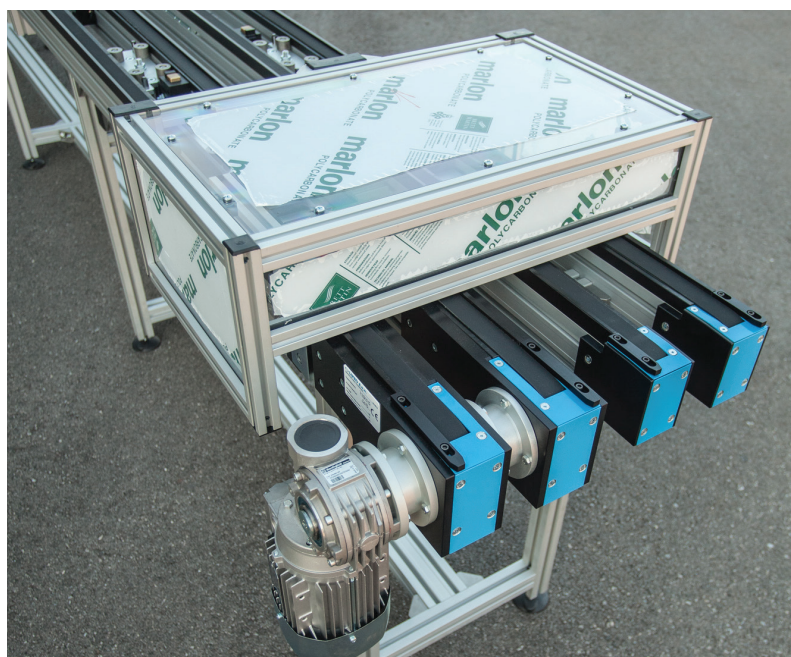


PSC-90 

PSB-60 

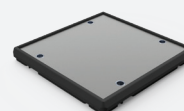
PSB-90 

PSR-50/60 



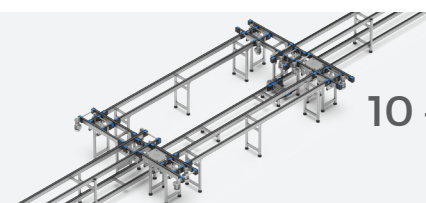
INDEX

PALLET



8 – 9

**CHAIN PALLET
PSC SYSTEM-90**



10 – 21

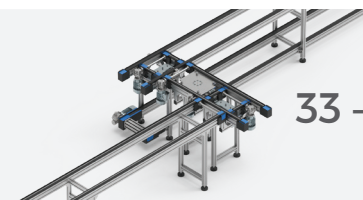
**BELT PALLET
PSB SYSTEM-60**

NEW



22 – 32

**BELT PALLET
PSB SYSTEM-90**



33 – 42

**ROLLER PALLET
PSR SYSTEM-50/60**



43 – 56

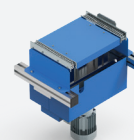
**SUPPORT FRAMES AND SPACERS
PSC-90, PSB-60, PSB-90, PSR-50/60**



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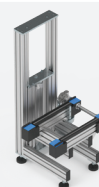
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TRANSVERSAL MODULES



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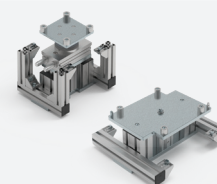
77 – 80

CURVES 90°/180°



81 – 86

POSITIONING AND ROTATING MODULES



87 – 90

CONTROLS



91 – 104

PALLET



Pallets are intended for transporting workpieces over the pallet system using a belt, chain or roller track.

Pallets have integrated sleeves that enable accurate centring at centring stations up to ± 0.1 mm.

* Contact our technical support for special designs.

Pallet



PSC-90



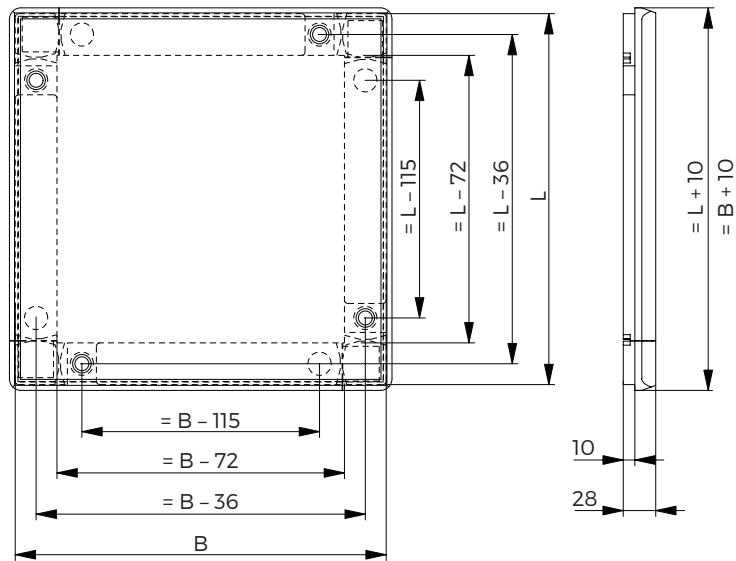
PSB-60



PSB-90



PSR-50/60



Code

EXAMPLE OF ORDERING

17PA - 160 - 160 - FE - 4,8

B

L

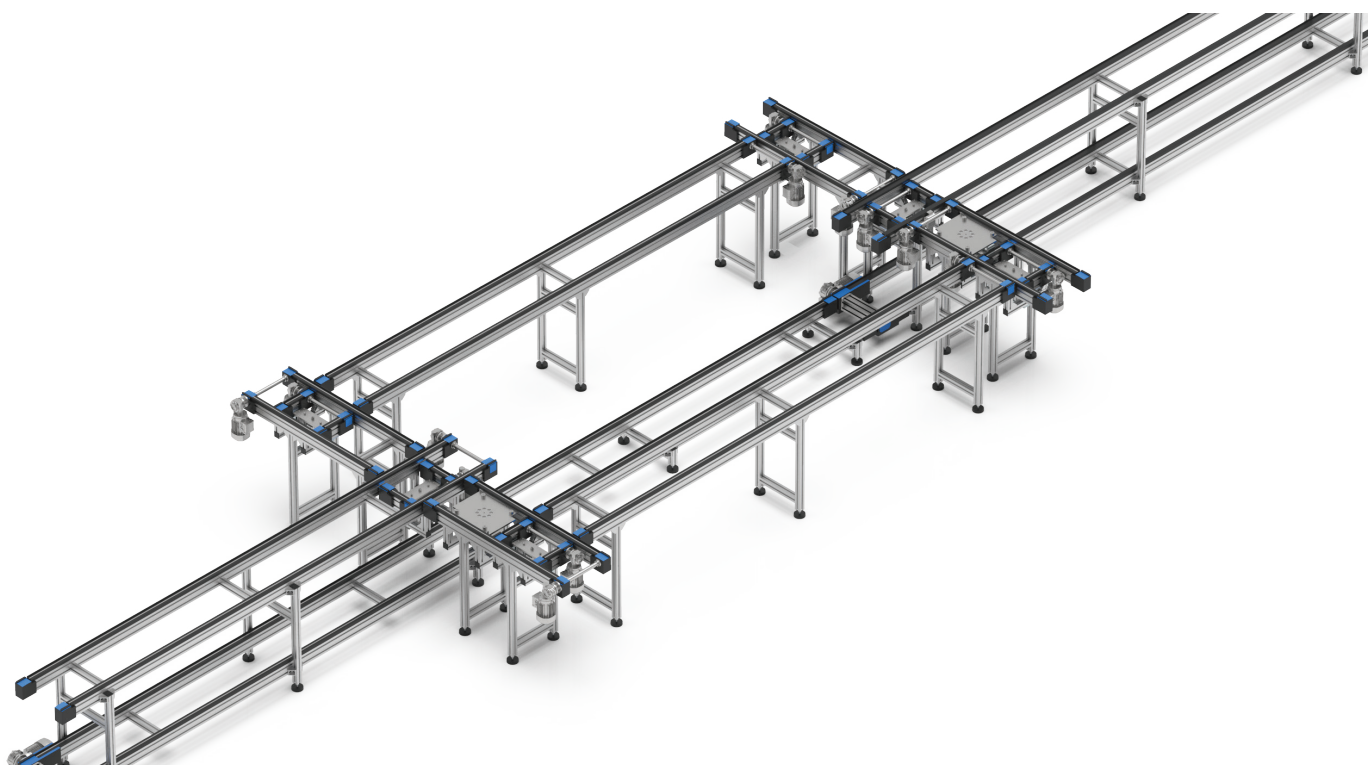
Plate

B	Pallet width	160 - 800 mm
L	Pallet length	160 - 1 040 mm
Plate	Plate material	Fe - iron, Al - aluminium
	Plate thickness	4.8 mm / 8 mm / 13 mm

B	L	Iron - Fe		Aluminium - Al		Aluminium - Al	
(mm)	(mm)	(mm)	(kg)	(mm)	(kg)	(mm)	(kg)
*160	*160	4.8	0.9				
160	240	4.8	1.4				
240	240	4.8	2.1				
160	320	4.8	1.8				
240	320	4.8	2.8				
320	320	4.8	4.3	8	2.1		
240	400	4.8	4.1	8	2.0		
320	400	4.8	5.3	8	2.7		
400	400	4.8	6.6	8	3.4	13	5.3
320	480	4.8	6.4	8	3.2	13	5.1
400	480	4.8	7.8	8	4.0	13	6.4
480	480	4.8	9.3	8	4.9	13	7.7
400	640	4.8	10.4	8	5.4	13	8.6
480	640	4.8	12.3	8	6.5	13	10.3
640	640	4.8	16.3	8	8.7	13	13.8
400	800					13	10.8
480	800					13	12.9
640	800					13	17.3
800	800					13	21.7
640	1 040					13	22.5
800	1 040					13	28.2
B =	L =						

CHAIN PALLET SYSTEM

PSC-90



The **PSC-90** pallet system is suitable for transporting heavier and larger loads. Thanks to the accumulation chain with free-rotating rollers it is possible to achieve accumulation and move loads up to 1,500 kg or 1 kg/cm using a single drive module.

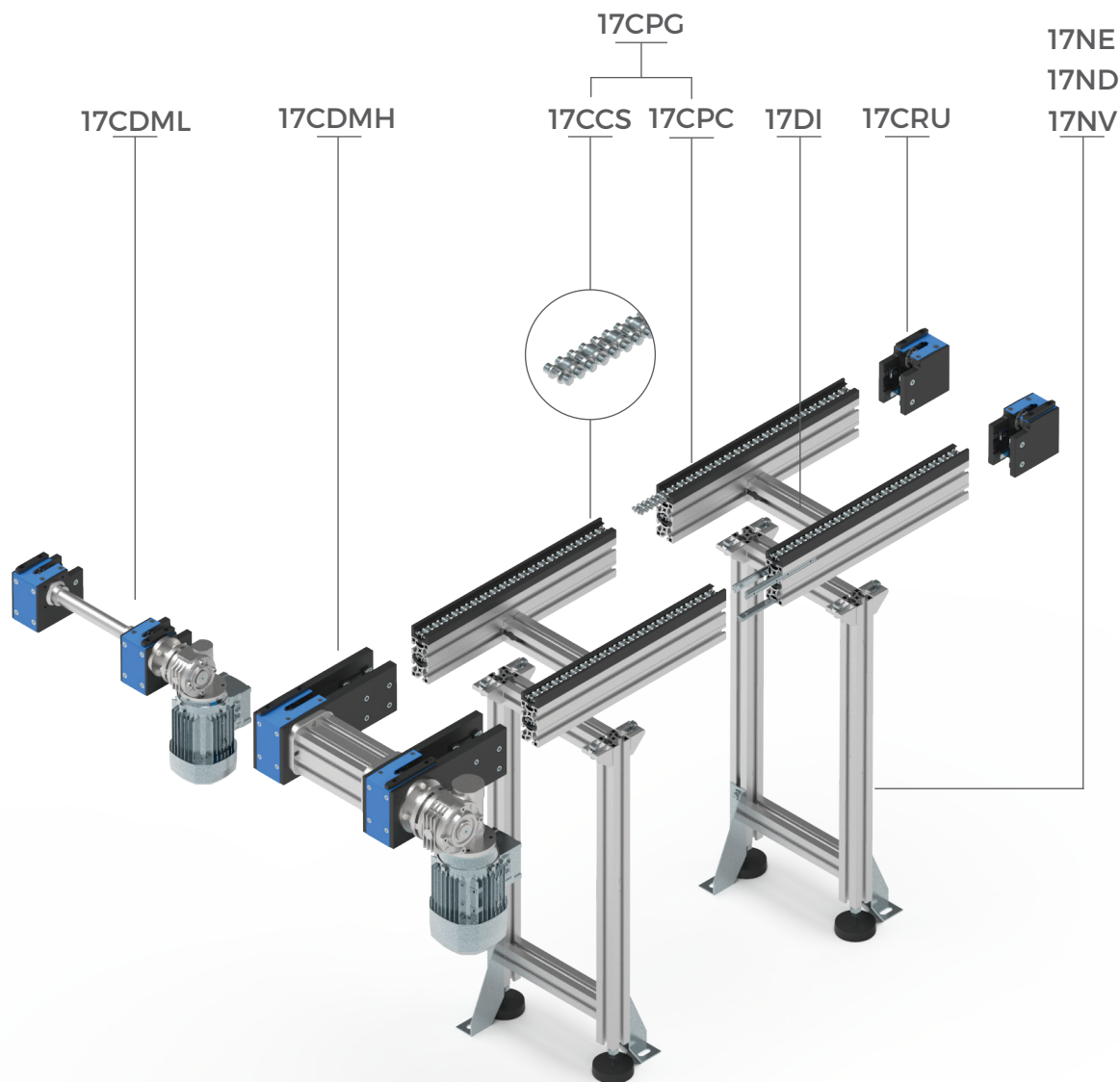
A new combination of profiles and chains is very robust and virtually does not require additional maintenance.

* Contact our technical support for special designs.

Chain pallet system



PSC-90



Drive module - heavy
17CDMH

p. **12-13**



p. **16-17**

Return module
17CRU

Drive module - light
17CDML

p. **14-15**

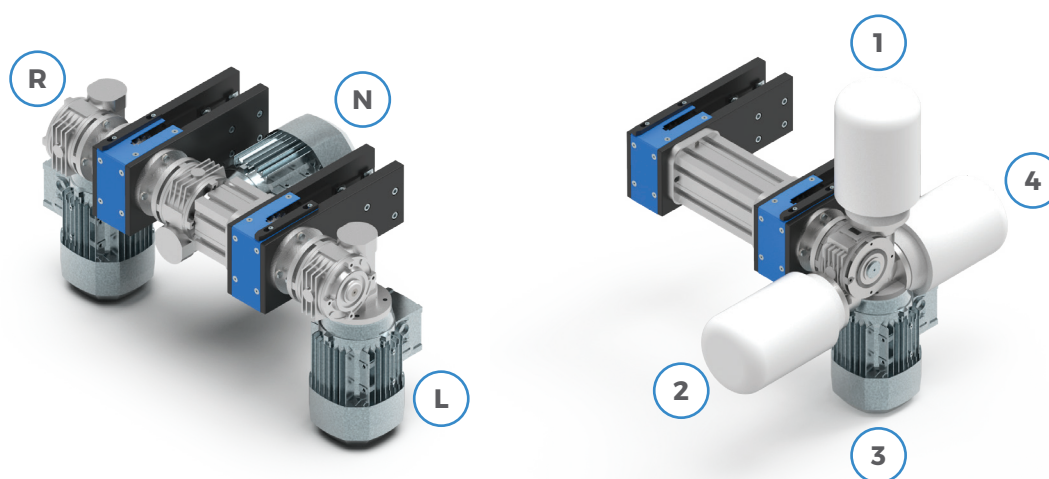


p. **18-19**

Chain track
17CPG

DRIVE MODULE – HEAVY

17CDMH



The heavy drive module is intended for driving the chain pallet system in relation to the transport track and return module.

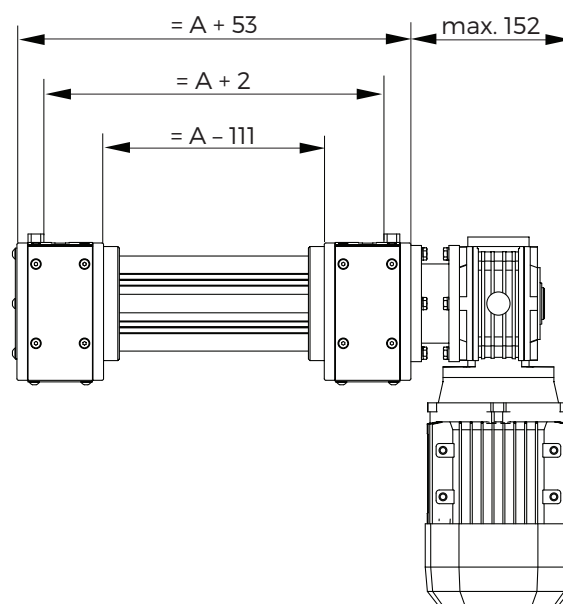
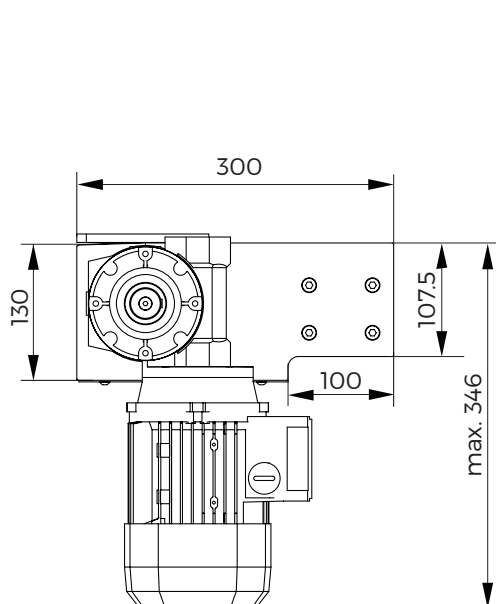
Its purpose is to drive the track up to its maximum load with accumulation $FG = 1,500$ kg.

The electric motor may be positioned on the right (R), left (L) or inside (I).

Drive module - heavy



PSC-90 



Code

EXAMPLE OF ORDERING

17CDMH - 320 - L - 3 - 4,2

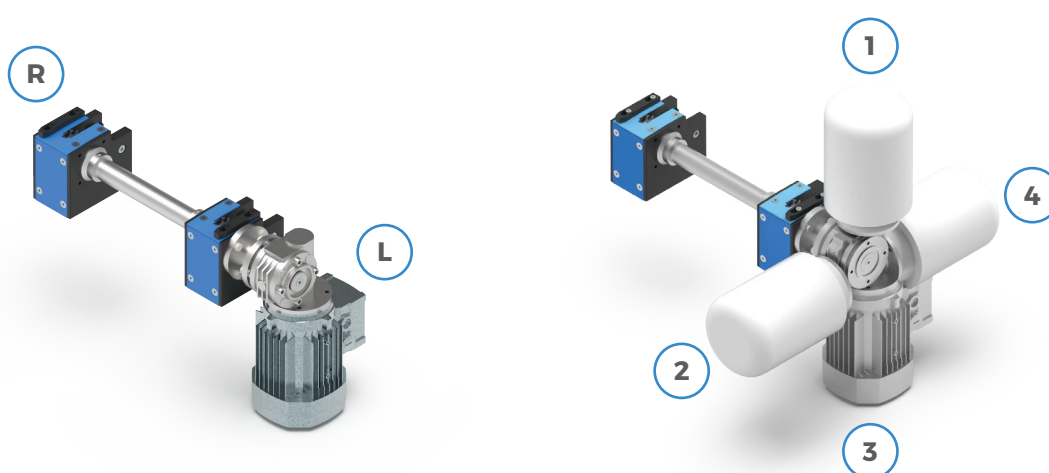
A B C D

A	Pallet width	240 - 1 200 mm
B	Drive position	L = left, R = right, *I = internal (A > 320 mm)
C	Motor reducer position	1 - 2 - 3 - 4
D	Speed	4.2 - 31.1 m/min
	Track length	min. 500 mm - max. 12 000 mm
	Track load capacity	max. 15 000 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF49 P i = 100; i = 80; i = 70	0,18	4,2 - 5,2 - <u>6</u>
BN71B4	BN 14 VF49 P i = 60; i = 45; i = 36; i = 28; i = 24; i = 18; i = 14	0,37	<u>7,3</u> - <u>9,7</u> - <u>12,1</u> - 15,6 - 18,2 - 24,2 - 31,1

DRIVE MODULE – LIGHT

17CDML



The light drive module is intended for driving the chain pallet system in relation to the transport track and return module.

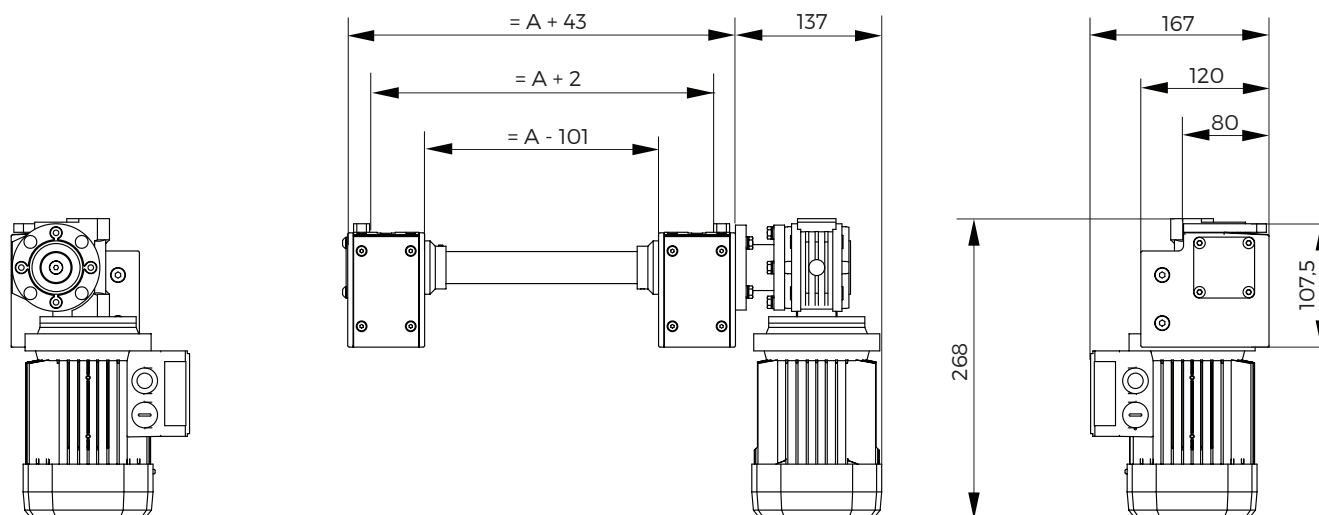
Its purpose is to drive the track up to its maximum load with accumulation $FG = 350$ kg.

The electric motor may be positioned on the right (R) or left (L).

Drive module - light



PSC-90 



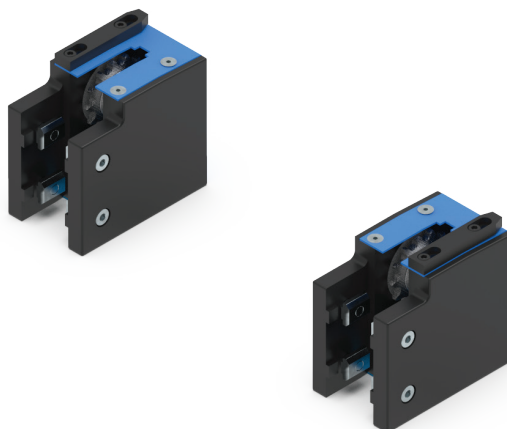
Code

EXAMPLE OF ORDERING

17CDML - 320 - L - 3 - 3,7			
A		B	C
D			
A	Pallet width	160 - 1,200 mm	
B	Drive position	L = left, R = right	
C	Motor reducer position	1 - 2 - 3 - 4	
D	Speed	3.7 - 22 m/min	
Track length		min. 250 mm - max. 5 000 mm	
Track load capacity		max. 3 500 N	
Motor	Reducer	kW	(m/min)
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; i = 20; i = 15; i = 10	0,18	3,7 - 5,5 - 7,3 - 11 - 14,7 - 22

RETURN MODULE

17CRU

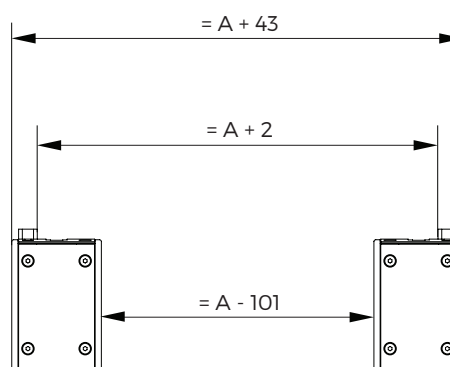
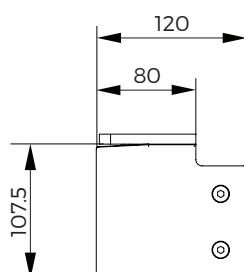


The function of the return module is to return the chain to the 17CDMH or 17CDML drive module.

Return module



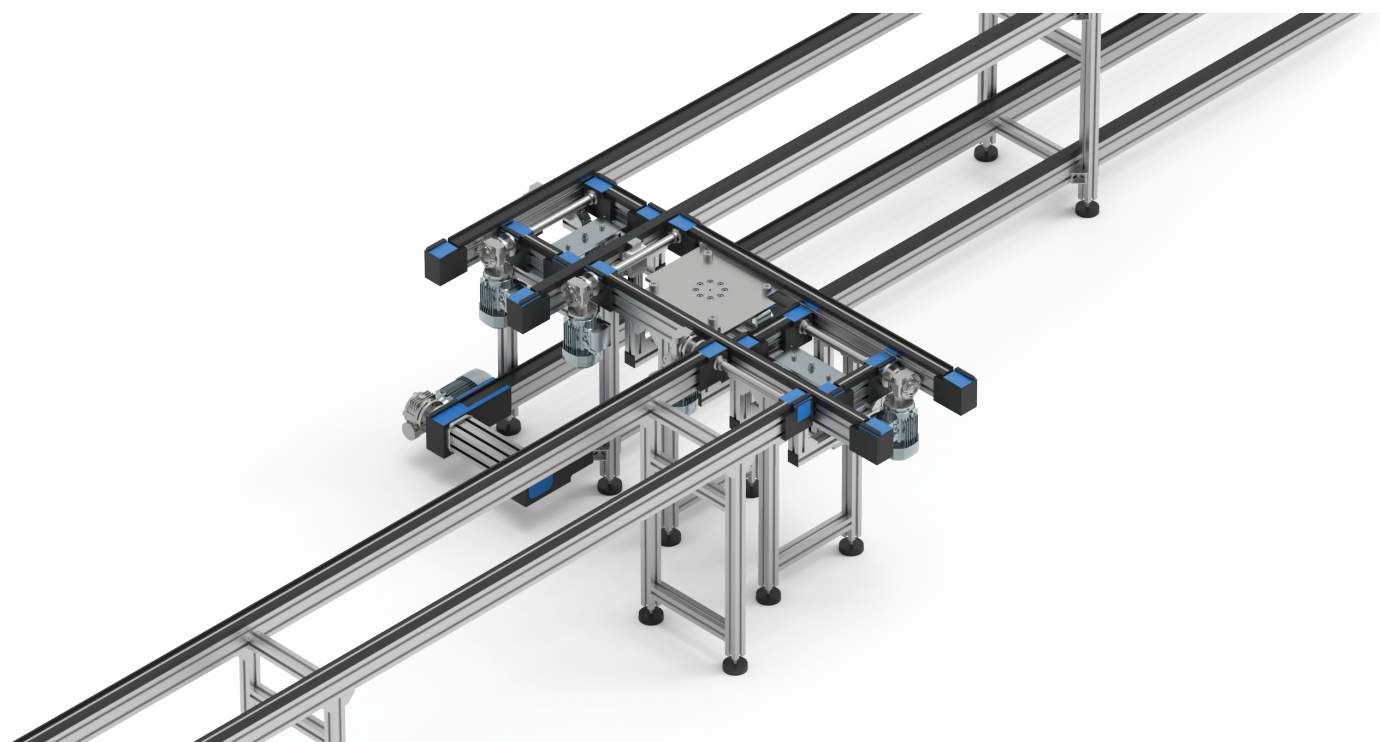
PSC-90 



Code

EXAMPLE OF ORDERING

17CRU



CHAIN TRACK

17CPG



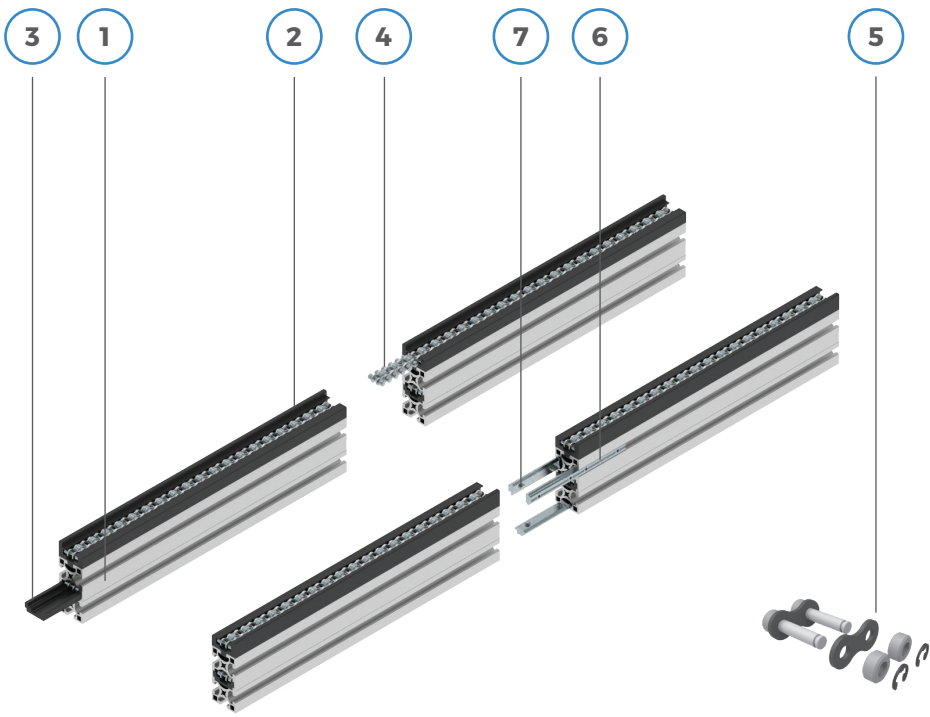
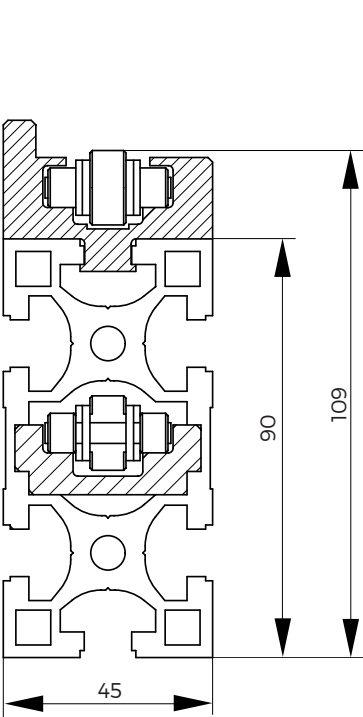
The **17CDMH** or **17CDML** drive module and **17CRU** return module assembly forms the transport track.

The track consists of an anodised aluminium profile, upper PE-guide profile and internal PE-guide profile.

Chain track



PSC-90



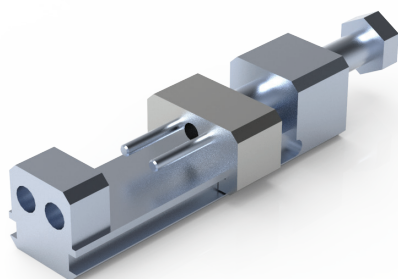
Code

EXAMPLE OF ORDERING

17CPG 10 000				
			NAME	UNIT
17CPG	1	10012	Al. profile 45 x 90 H	m
	2	16100	Guide profile - upper	m
	3	16101	Guide profile - lower	m
	4	16A055	Chain 1/2"	m
	5	16A056	Chain coupling	pcs
	6	11095	Linear coupling	pcs
	7	11034	Threaded pin M8 x 14	pcs
Track length		min. 300 mm - max. 12 000 mm		

CHAIN TOOL

17PCM000

PSC-90 

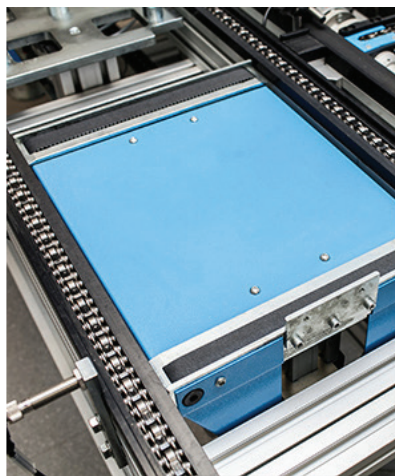
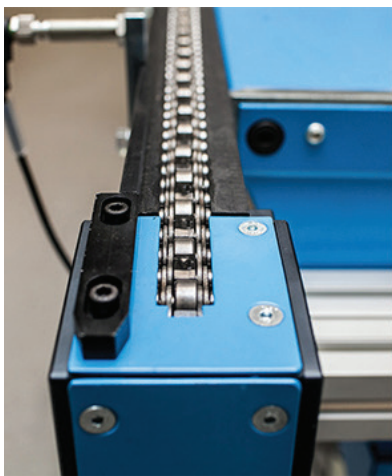
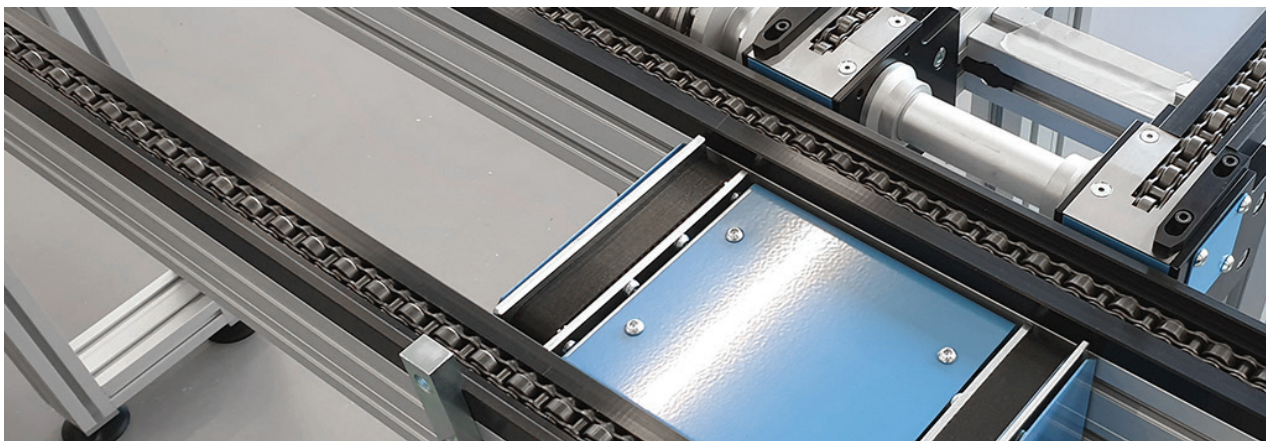
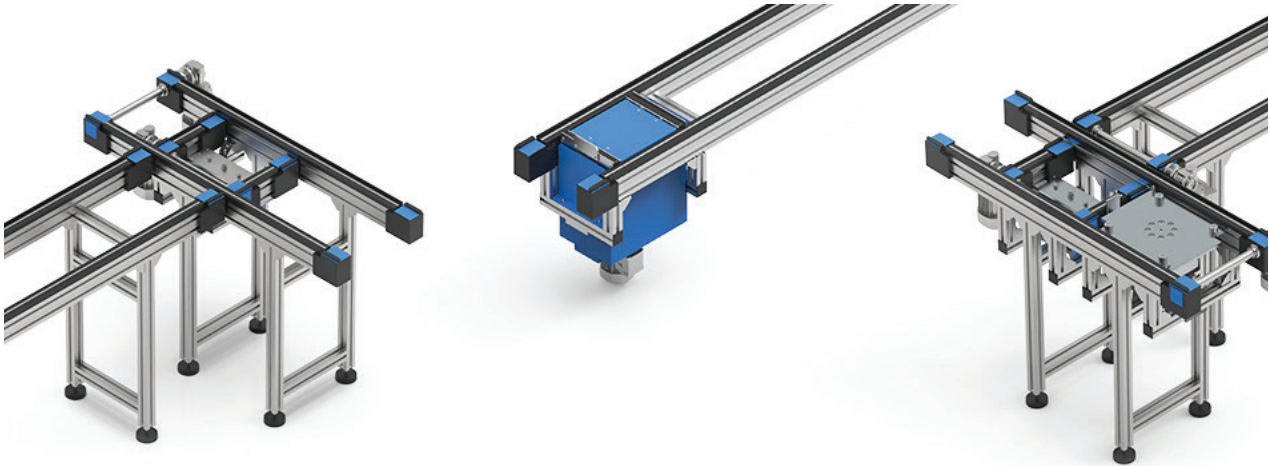
Code

EXAMPLE OF ORDERING

17PCM000

The chain tool is used to disassemble the chain links.

The chain is positioned into the tool on one side of the fitting and on the other side two needles, which split the riveted chain link, are tightened with a wrench.



BELT PALLET SYSTEM

PSB-60

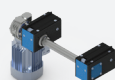
NEW



The **PSB-60** pallet system is frequently used in dry and clean environments where higher ISO "clean room" are required. **PSB-60** is suitable for smaller and lighter loads and carries a total of up to 60 kg.

Drive module – Direct
17BTDMD

p. **23–25**

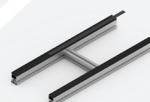


p. **29–30**

Return module
17BTRU

Drive module – Central
17BTDMC

p. **26–28**

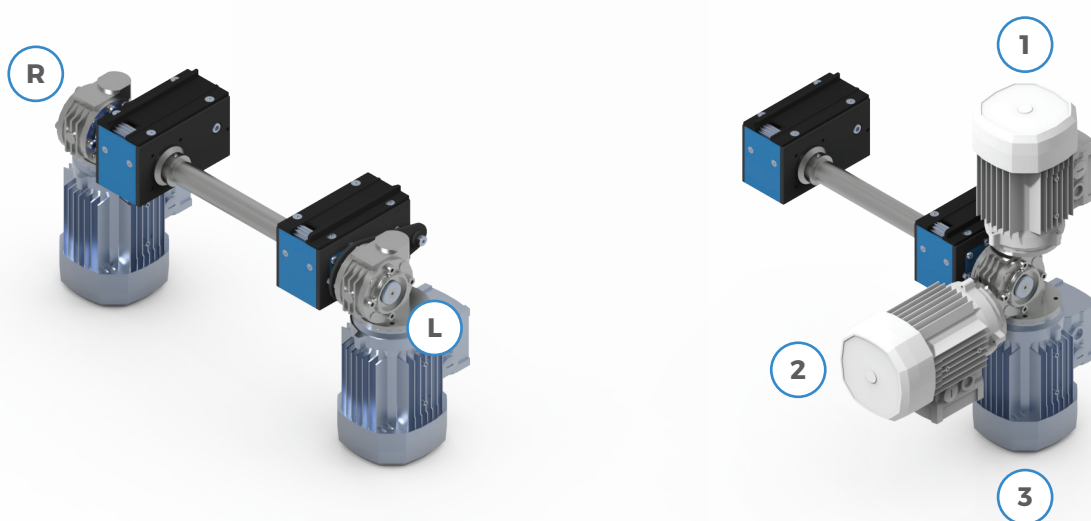


p. **31–32**

Belt track
17BTPG

DRIVE MODULE – DIRECT

17BTDMD



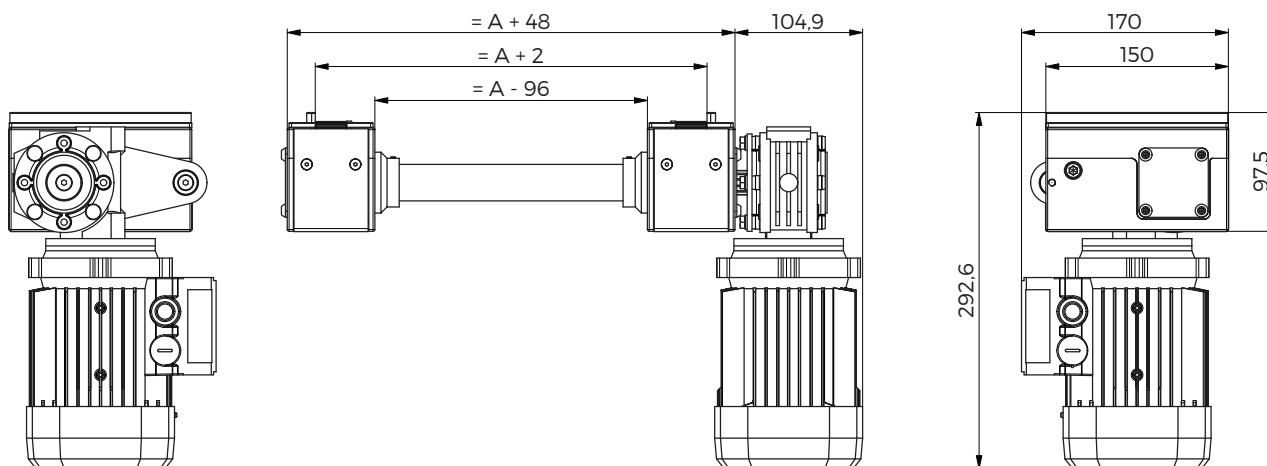
The direct drive module is intended for driving the belt pallet system in relation to the transport track and return module.

Its purpose is to drive the track up to its maximum load with accumulation $FG = 60$ kg. The electric motor may be positioned on the right (R) or left (L).

Drive module - direct



PSB-60 



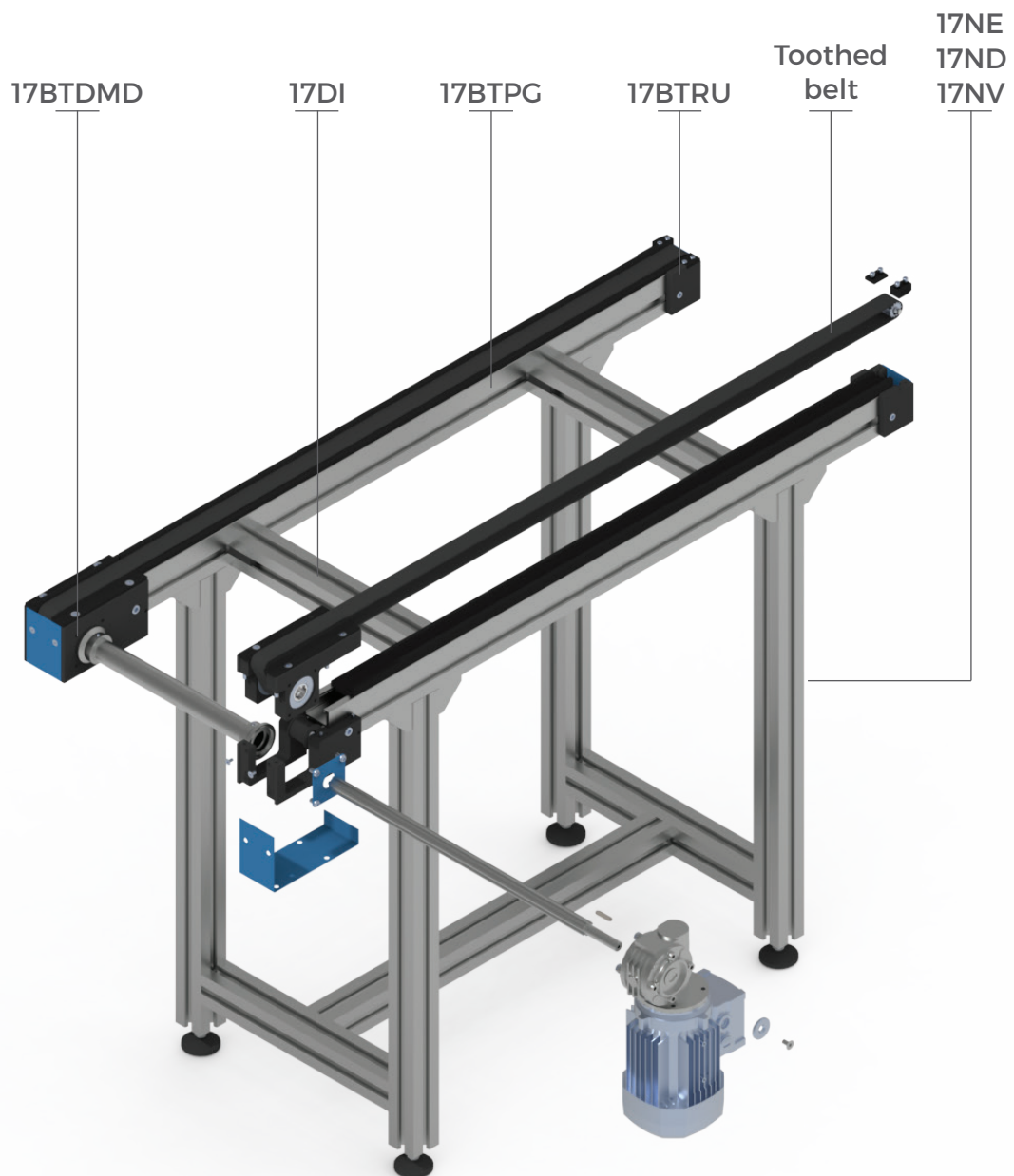
Code

EXAMPLE OF ORDERING

17BTDM D - 320 - L - 3 - 2,9			
A B C D			
A	Pallet width	160 - 480 mm	
B	Drive position	L = left, R = right	
C	Motor reducer position	1 - 2 - 3	
D	Speed	2,9 - 25 m/min	
	Track length	min. 290 mm - max. 6 000 mm	
	Track load capacity	max. 600 N	

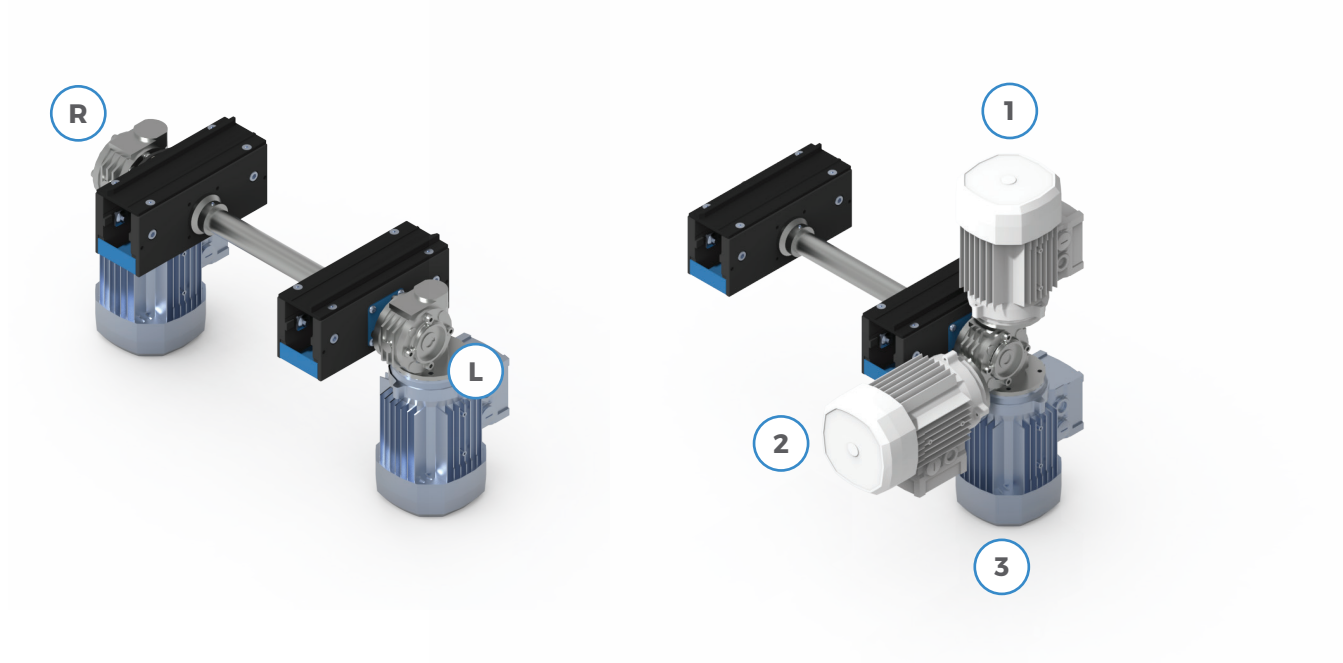
Motor	Reducer	kW	(m/min)
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10; i = 7	0,18	2,9 - 4,4 - 5,8 - 8,7 - 11,7 - 17,5 - 25

PSB-60 Belt pallet system - Direct



DRIVE MODULE – CENTRAL

17BTDMC



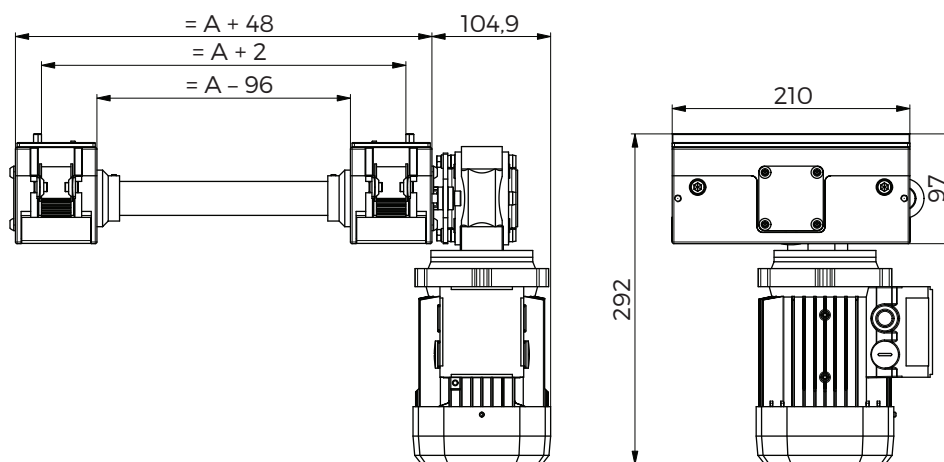
The central drive module is intended for driving the belt pallet system in relation to the transport track and return module.

Its purpose is to drive the track up to its maximum load with accumulation $FG = 60$ kg. The electric motor may be positioned on the right (R) or left (L).

Drive module - central



PSB-60 

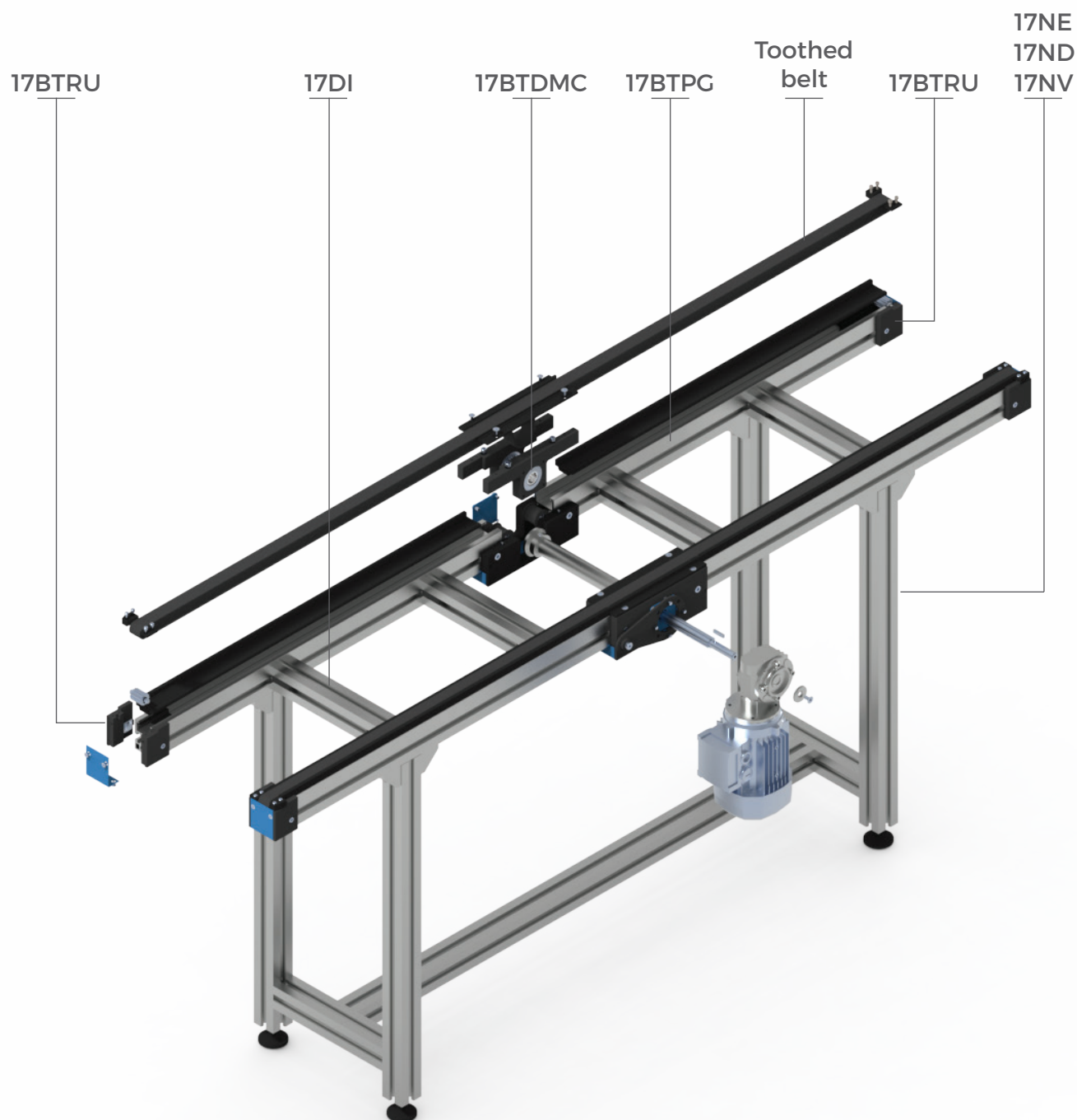


Code

EXAMPLE OF ORDERING

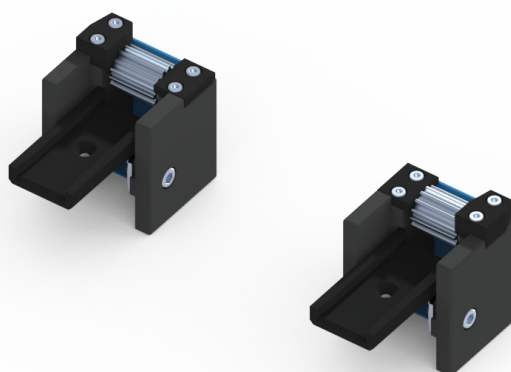
17BTDMC				-	320	-	L	-	3	-	2,9
				A			B			C	D
A	Pallet width						160 – 480 mm				
B	Drive position						L = left, R = right				
C	Motor reducer position						1 – 2 – 3				
D	Speed						2,9 – 25 m/min				
	Track length						min. 490 mm – max. 6 000 mm				
	Track load capacity						max. 600 N				
Motor	Reducer						kW	(m/min)			
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10; i = 7						0,18	2,9 – 4,4 – 5,8 – 8,7 – 11,7 – 17,5 – 25			

PSB-60 Belt pallet system - Central



RETURN MODULE

17BTRU

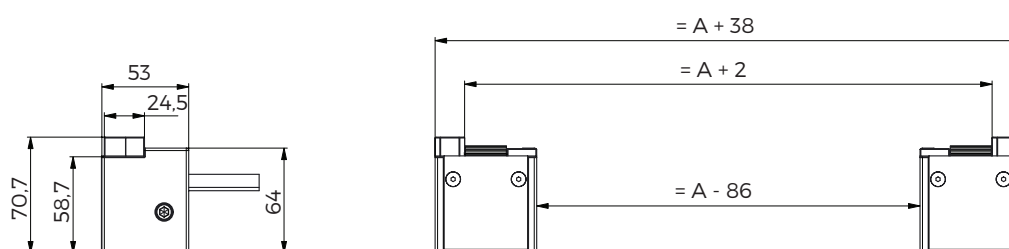


The function of the return module is to return the belt to the 17BTDMD or 17BTDMC drive module.

Return module



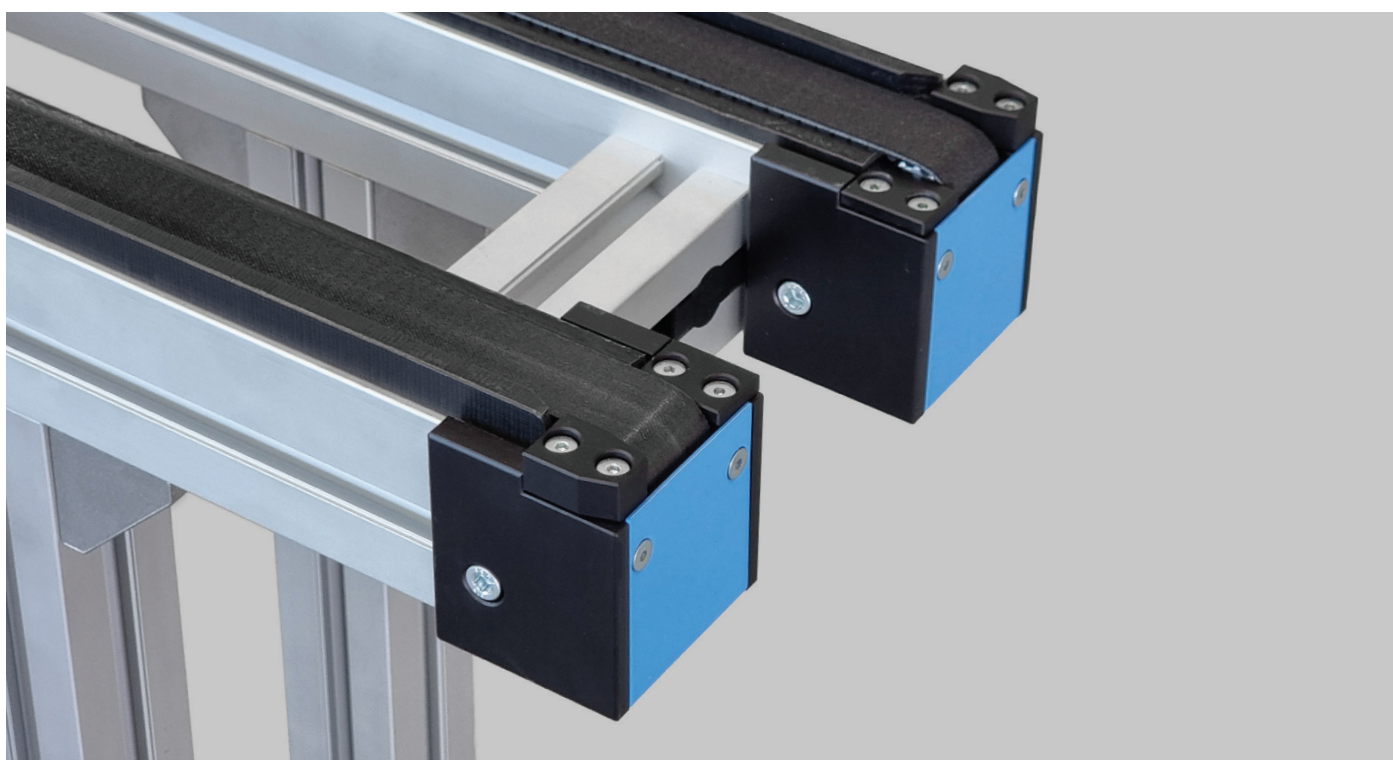
PSB-60



Code

EXAMPLE OF ORDERING

17BTRU



TOOTHED BELT TRACK

17BTPG

NEW

The 17BTDMD or 17BTDMC drive module and 17BTRU return module assembly forms the transport track.

The track consists of an anodised aluminium profile, upper PE-guide profile.

Toothed Belt Track



PSB-60 



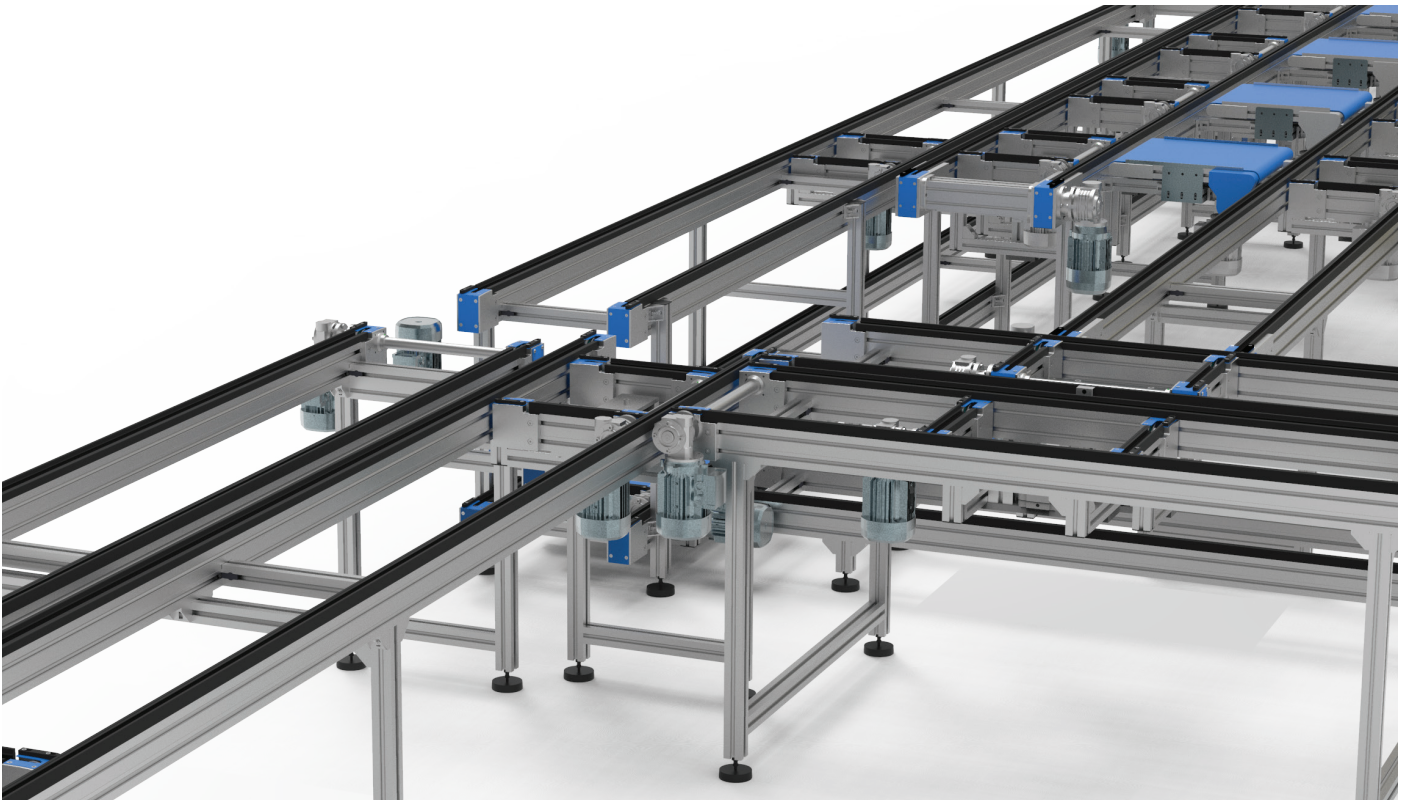
Code

EXAMPLE OF ORDERING

17BTPG 6 000				
			NAME	UNIT
17BTPG	1	10030	Al. profile 45 x 60 L	m
	2	16410	Belt guide with edge	m
	3	/	Toothed belt	m
	4	16411	Belt guide without edge	m
Track length		min. 1,000 mm – max. 6 000 mm		

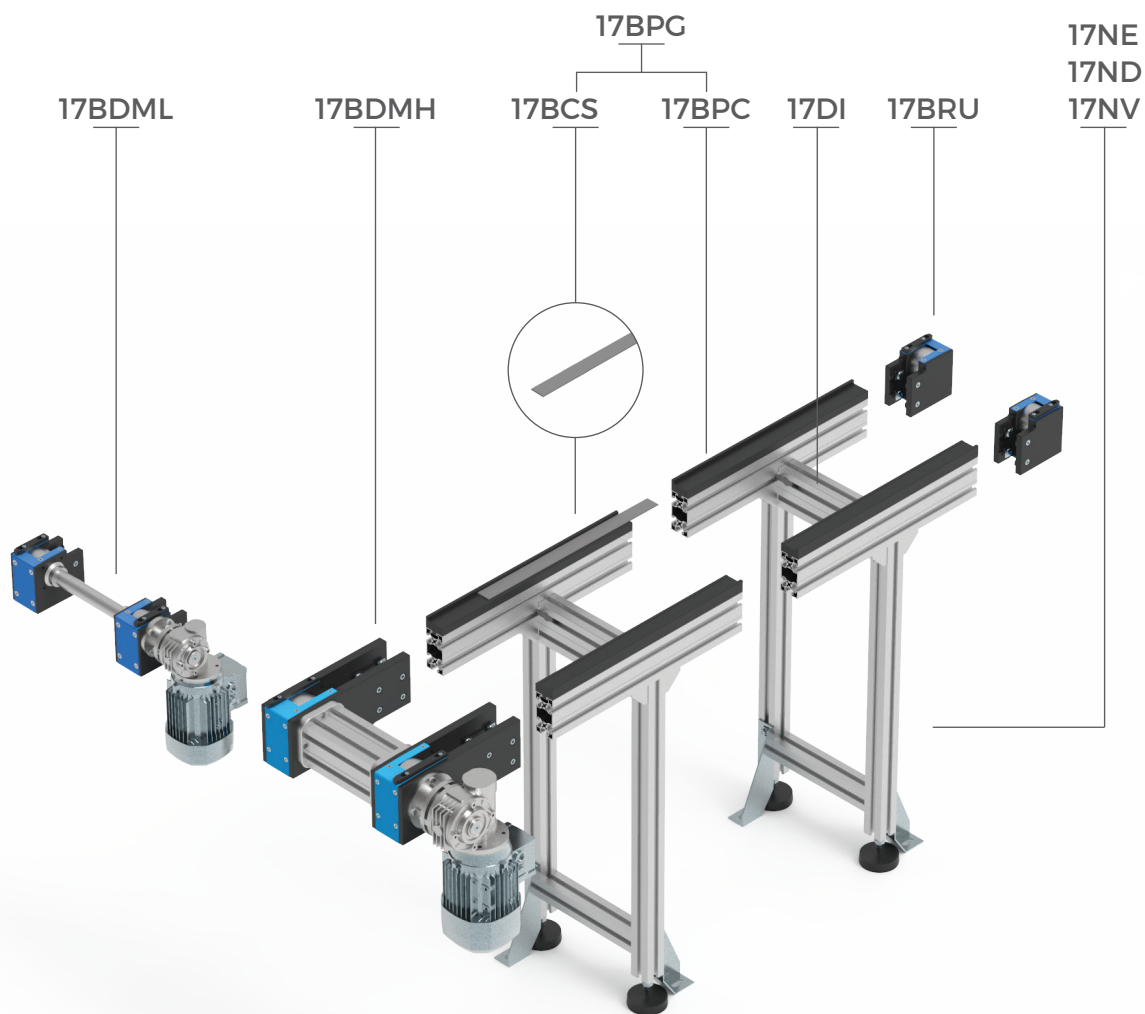
BELT PALLET SYSTEM

PSB-90



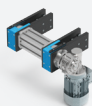
The **PSB-90** pallet system is frequently used in dry and clean environments where higher ISO “clean room” are required. **PSB-90** is suitable for smaller and lighter loads and carries a total of up to 350 kg or 1 kg/cm using a single drive module.

Belt pallet system



Drive module – heavy
17BDMH

p. **34-35**



p. **39-40**

Return module
17BRU

Drive module – light
17BDML

p. **37-38**

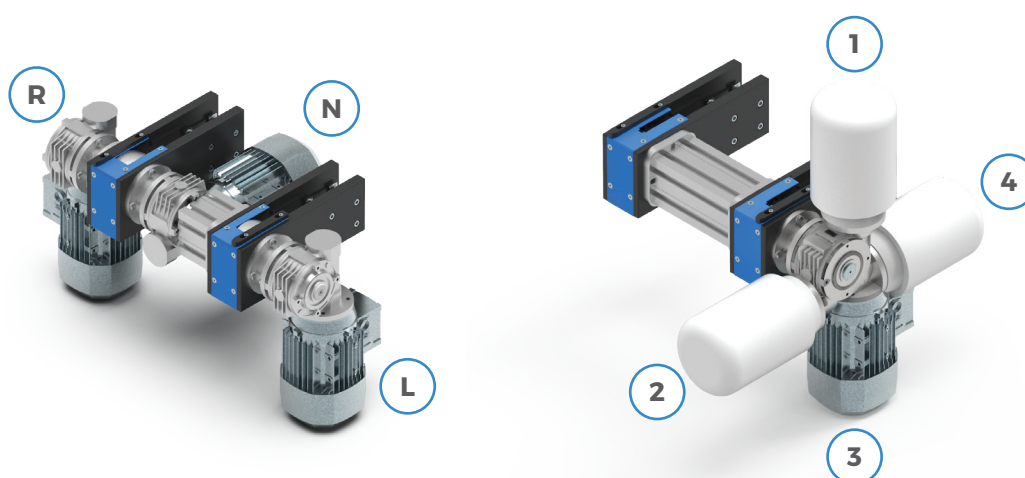


p. **41-42**

Belt track
17BPG

DRIVE MODULE – HEAVY

17BDMH



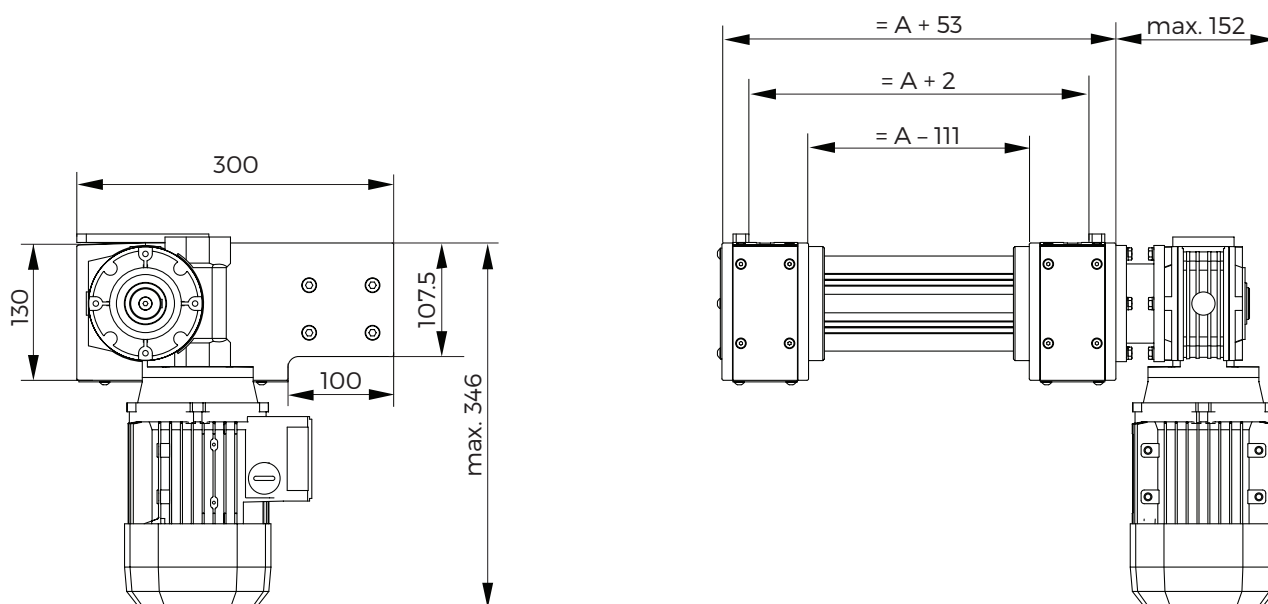
The heavy drive module is intended for driving the belt pallet system in relation to the transport track and return module.

Its purpose is to drive the track up to its maximum load with accumulation $FG = 350$ kg. The electric motor may be positioned on the right (R), left (L) or inside (I).

Drive module - heavy



PSB-90 



Code

EXAMPLE OF ORDERING

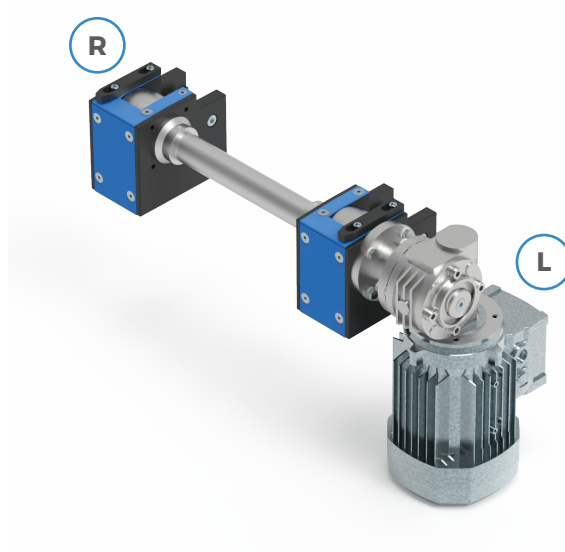
17BDMH	-	320	-	L	-	3	-	4,7
		A		B		C		D

A	Pallet width	240 - 1 200 mm
B	Drive position	L = left, R = right, *I = internal (A > 320 mm)
C	Motor reducer position	1 - 2 - 3 - 4
D	Speed	4,7 - 35,2 m/min
	Track length	min. 650 mm - max. 8 000 mm
	Track load capacity	max. 3 500 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF49 P i = 100; i = 80; i = 70	0,18	4,7 - 5,9 - <u>6,8</u>
BN71B4	BN 14 VF49 P i = 60; i = 45; i = 36; i = 28; i = 24; i = 18; i = 14	0,37	<u>8,2</u> - <u>10,9</u> - <u>13,7</u> - 17,6 - 20,6 - 27,4 - 35,2

DRIVE MODULE – LIGHT

17BDML



The light drive module is intended for driving the belt pallet system in relation to the transport track and return module.

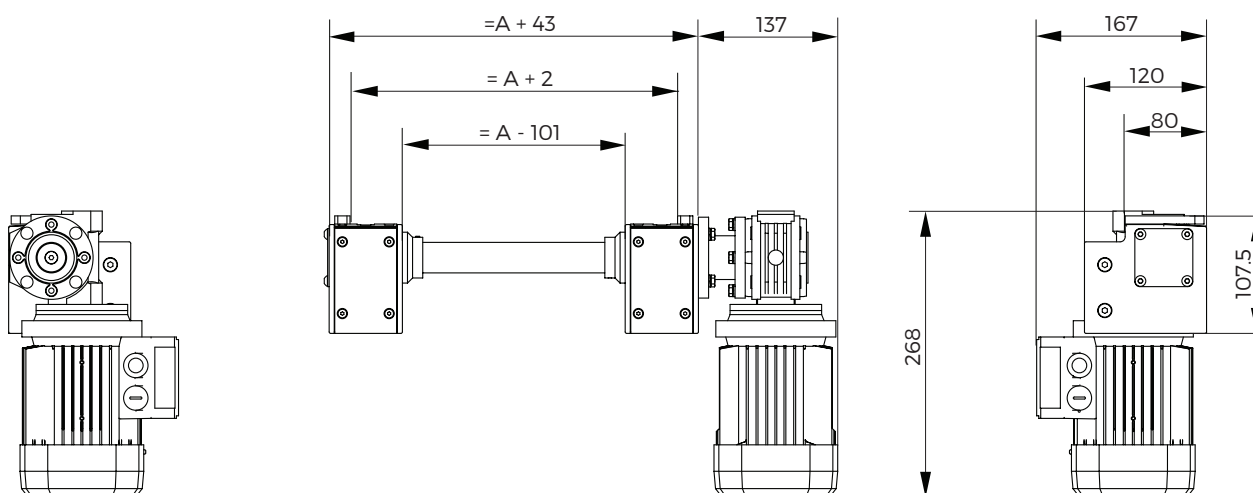
Its purpose is to drive the track up to its maximum load with accumulation FG = 60 kg.

The electric motor may be positioned on the right (R) or left (L).

Drive module - light



PSB-90 



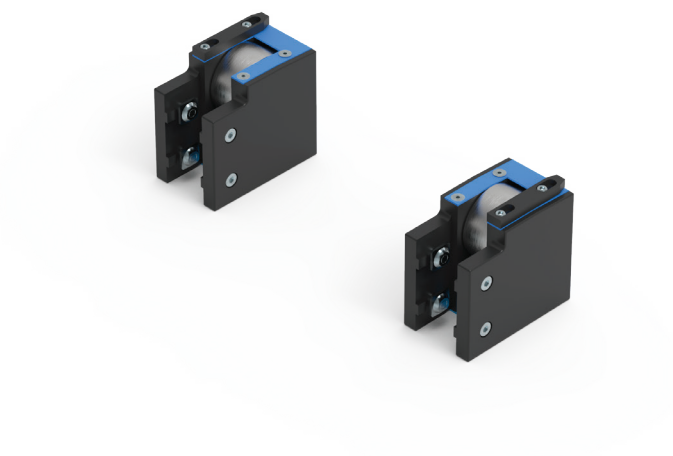
Code

EXAMPLE OF ORDERING

17BDML - 320 - L - 3 - 4,6			
A		B	C
D			
A	Pallet width	160 - 1 200 mm	
B	Drive position	L = left, R = right	
C	Motor reducer position	1 - 2 - 3 - 4	
D	Speed	4.6 - 27,4 m/min	
Track length		min. 450 mm - max. 3 000 mm	
Track load capacity		max. 600 N	
Motor	Reducer	kW	(m/min)
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	4,6 - 6,9 - 9,1 - 13,7 - 18,3 - 27,4

RETURN MODULE

17BRU

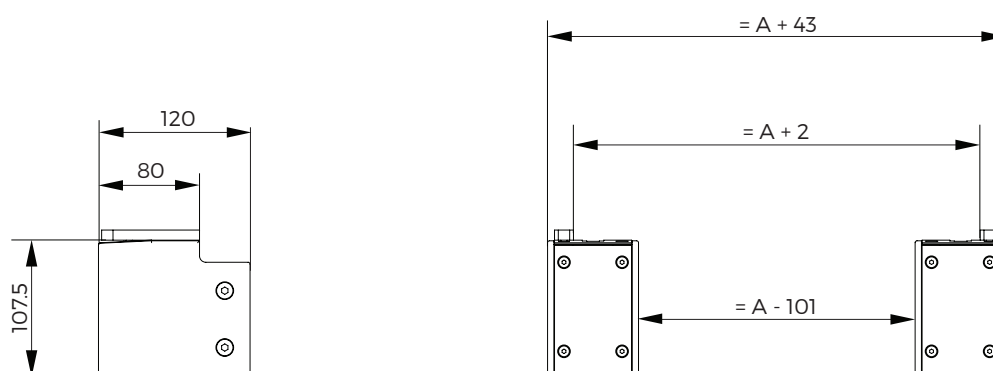


The function of the return module is to return the belt to the **17BDMH** or **17BDML** drive module.

Return module



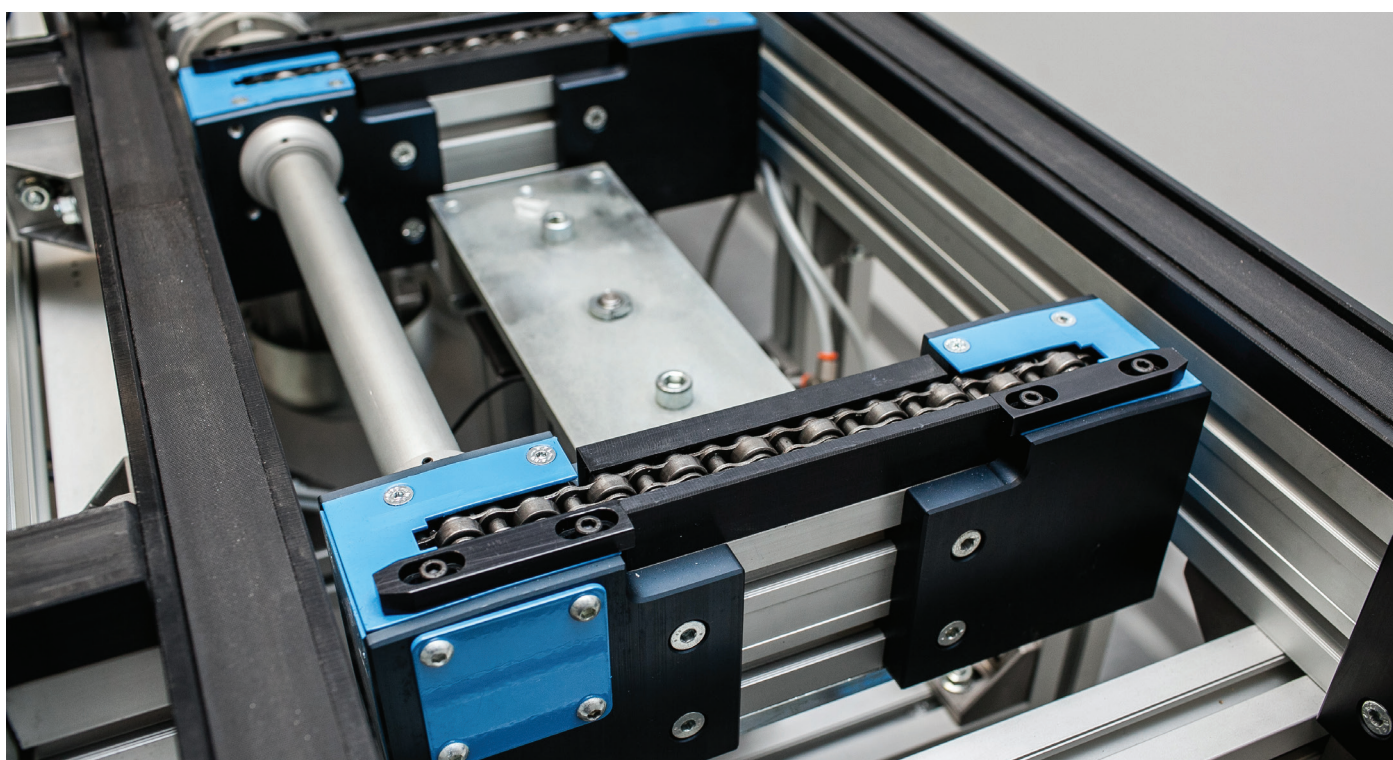
PSB-90 



Code

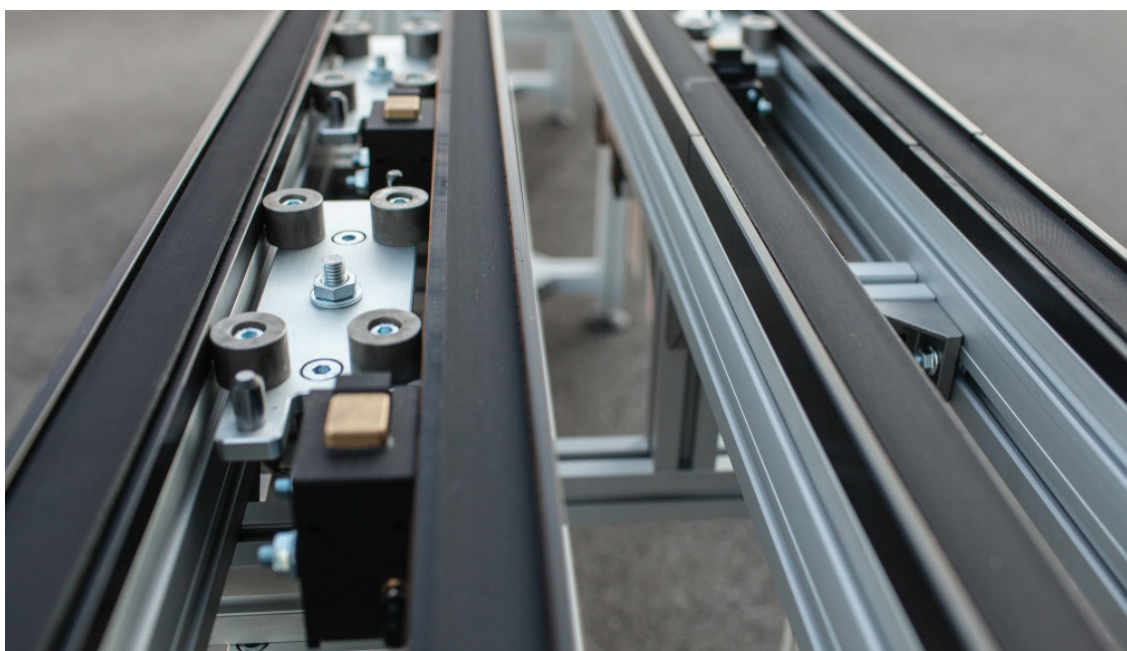
EXAMPLE OF ORDERING

17BRU



BELT TRACK

17BPG



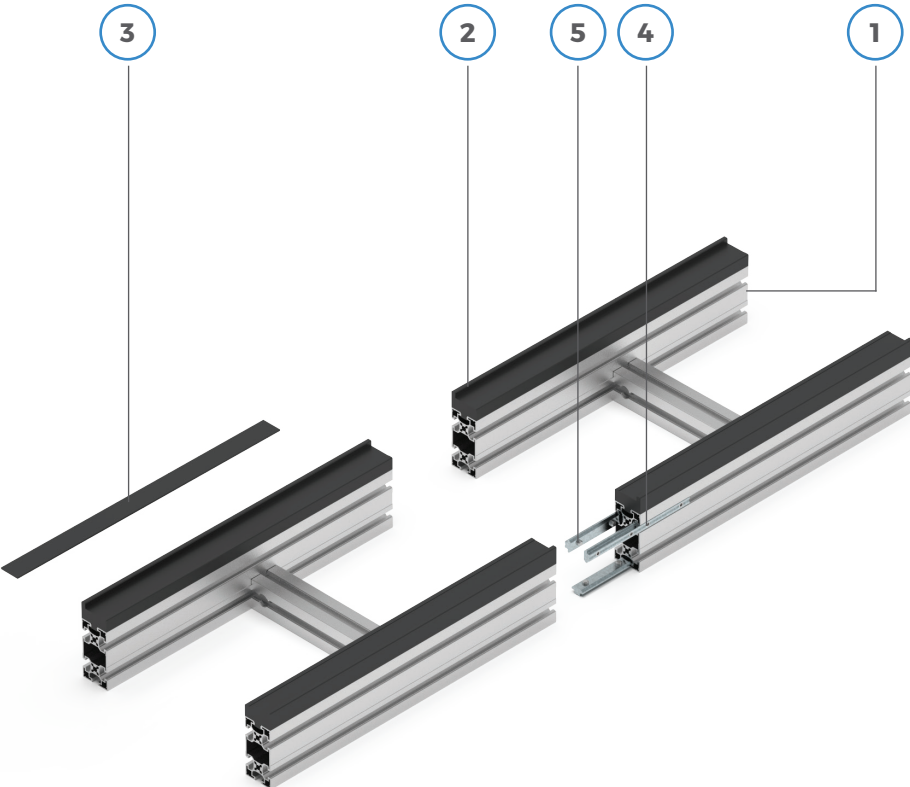
The 17BDMH or 17BDML drive module and 17BRU return module assembly forms the transport track.

The track consists of an anodised aluminium profile, upper PE-guide profile.

Belt track



PSB-90 



Code

EXAMPLE OF ORDERING

17BPG 8 000				
			NAME	UNIT
17BPG	1	10011	Al. profile 45 x 90 L	m
	2	16102	Guide profile - upper	m
	3	16A058	Belt T= 1.7 mm at 17BDML	m
	4	11095	Linear coupling	pcs
	5	11034	Threaded pin M8 x 14	pcs
Track length		min. 1,000 mm - max. 8 000 mm		

ROLLER PALLET SYSTEM

PSR-50/60



Roller tracks of various designs are used to transport bulk and palletised material and packaging of different materials and dimensions in the industry:

- Driven roller track – heavy drive **17RDMH**,
- Driven roller track – light drive **17RDML**,
- Driven roller track with electric roller **17RDMM**,
- Non-driven roller track **17RTR**.

Roller with a 50 or 60 mm diameter are used in all the above roller tracks. The permitted load of the roller tracks is up to 500 kg/m.

*For special designs of the roller tracks, such as arches, etc., contact our technical support.

Roller pallet system



Driven roller track –
heavy drive **17RDMH**

p. **45-48**



p. **53-54**

Driven roller track with
electric roller **17RDMM**

Driven roller track –
light drive **17RDML**

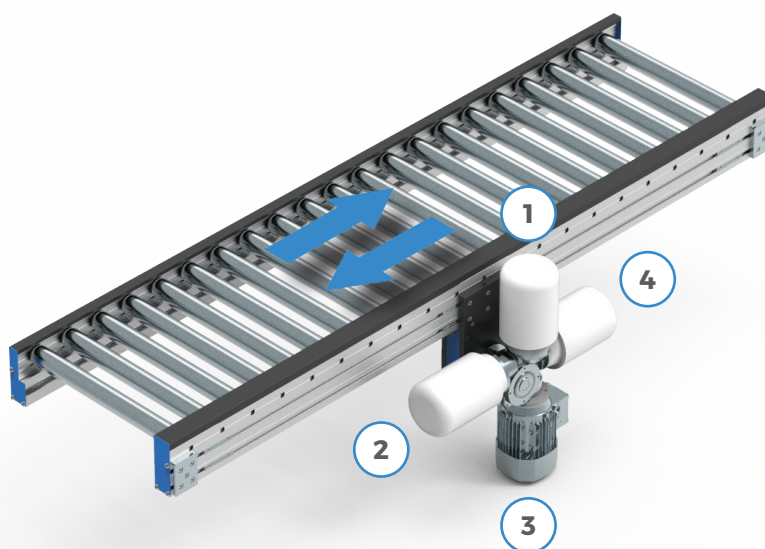
p. **49-52**



p. **55-56**

Non-driven roller track
17RTR

DRIVEN ROLLER TRACK – HEAVY DRIVE **17RDMH**



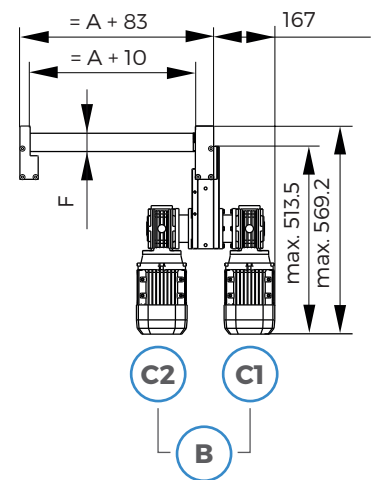
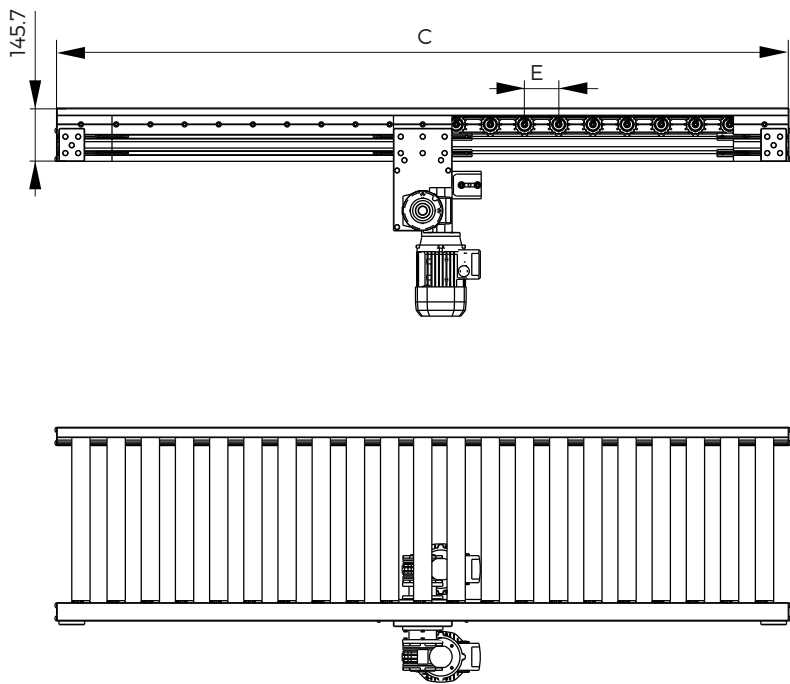
The driven roller track with heavy drive enables longer roller tracks and higher loads. As opposed to the light drive it may operate in both directions.

*See the attached table for the track structure.

Driven roller track – heavy drive



PSR-50/60 ○○○○



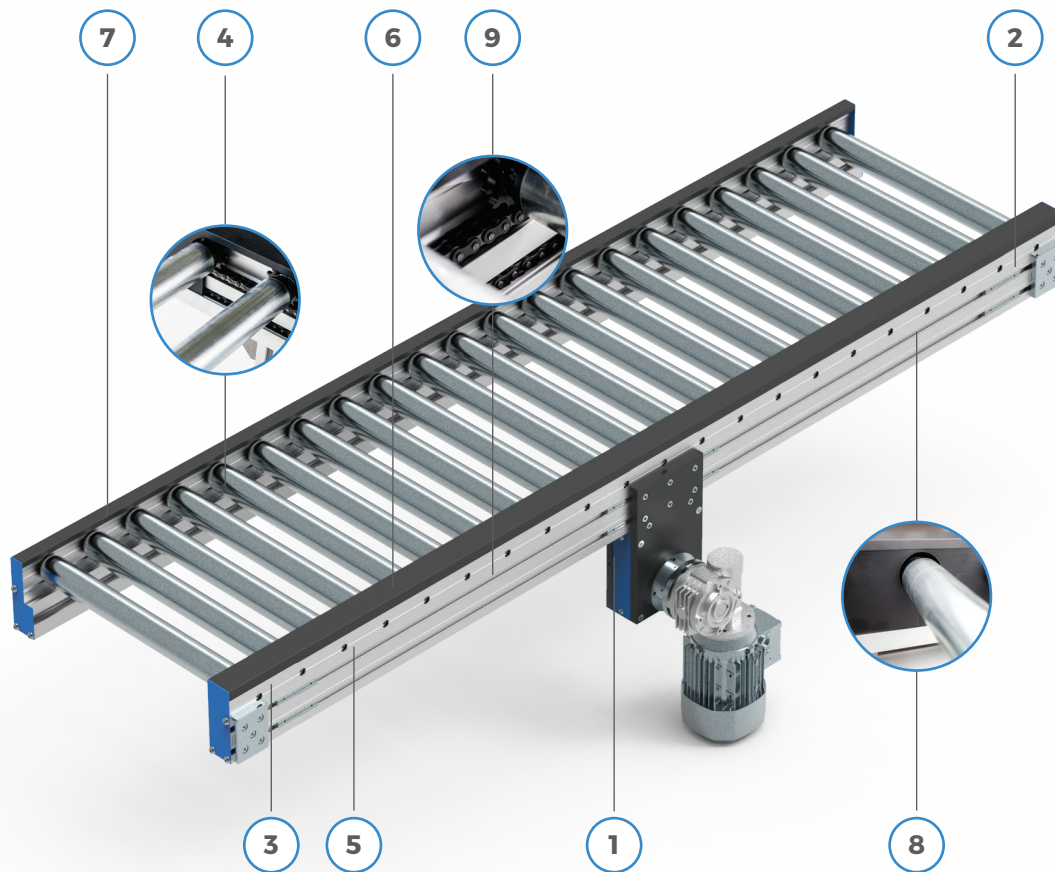
Code

EXAMPLE OF ORDERING

17RDMH – 400 – C1 – 2 000 – 3 – 120 – 50 – 3,8 – F								
	A	B	C	D	E	F	G	H
A	Usable width				min. 100 mm – max. 1 500 mm			
B	Drive position				C1 = external, C2 = internal			
C	Track length				min. 460 mm – max. 12 000 mm			
D	Motor reducer position				C1 = 1 – 2 – 3 – 4; C2 = 2 – 3 – 4			
E	Step between rollers				Ø50 min. 55 mm / Ø60 min. 65 mm			
F	Roller diameter				Ø50 / Ø60			
G	Speed				3,8 – 39,5 m/min			
H	Roller type				Fx = fixed, Ac = accumulation, Pvc = PVC-coating, Zn = zinc-plated			
	Track load capacity				max. 20 000 N			

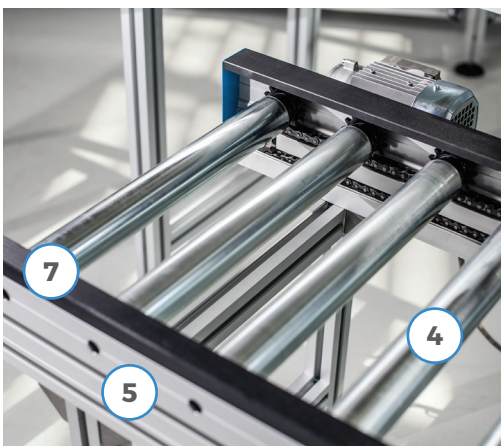
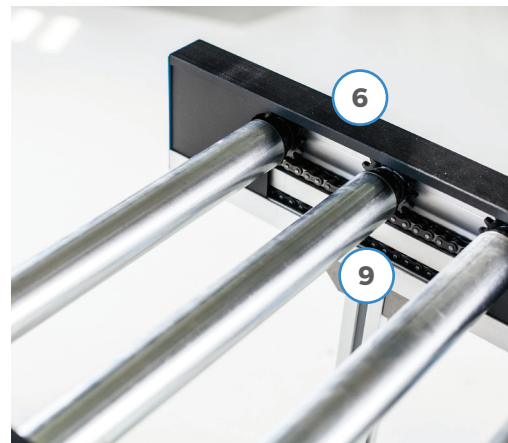
Roller	Motor	Reducer	kW	(m/min)
Ø50	BN71B4	BN 14 VF49 P i = 60; i = 45; i = 36 i = 28; i = 24; i = 18; i = 14; i = 10; i = 7	0,37	3,8 - 5,1 - 6,4 - 8,2 - 9,6 - 12,8 - 16,5 - 23 - 32,9
Ø60				4,6 - 6,1 - 7,7 - 9,9 - 11,5 - 15,4 - 19,7 - 27,6 - 39,5

Driven roller track – heavy drive

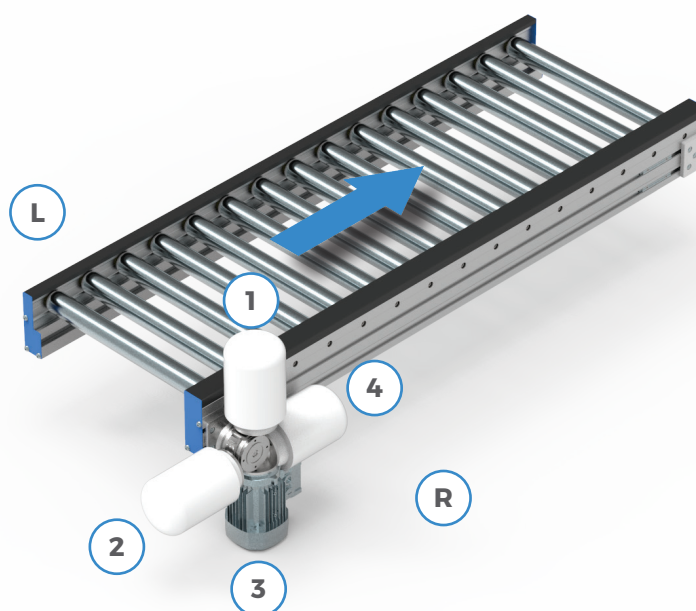


1	Drive module – heavy
2	Return L
3	Return R
4	Sprocket roller $\varnothing 50/\varnothing 60$
5	Roller track profile
6	Guide profile – wide
7	Guide profile – narrow
8	Chain guard
9	Chain

Driven roller track – heavy drive



DRIVEN ROLLER TRACK – LIGHT DRIVE **17RDML**



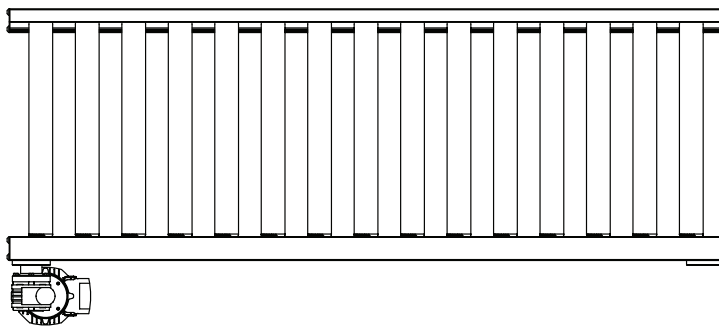
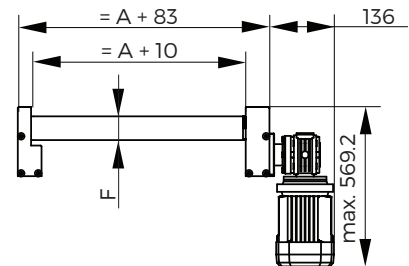
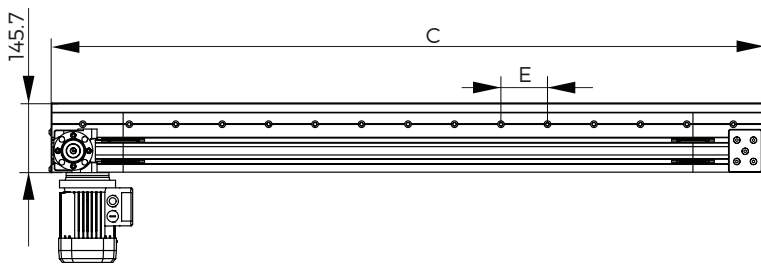
The driven roller track with light drive enables shorter roller tracks and smaller loads.

*See the attached table for the track structure.

Driven roller track – light drive



PSR-50/60 ○○○○



Code

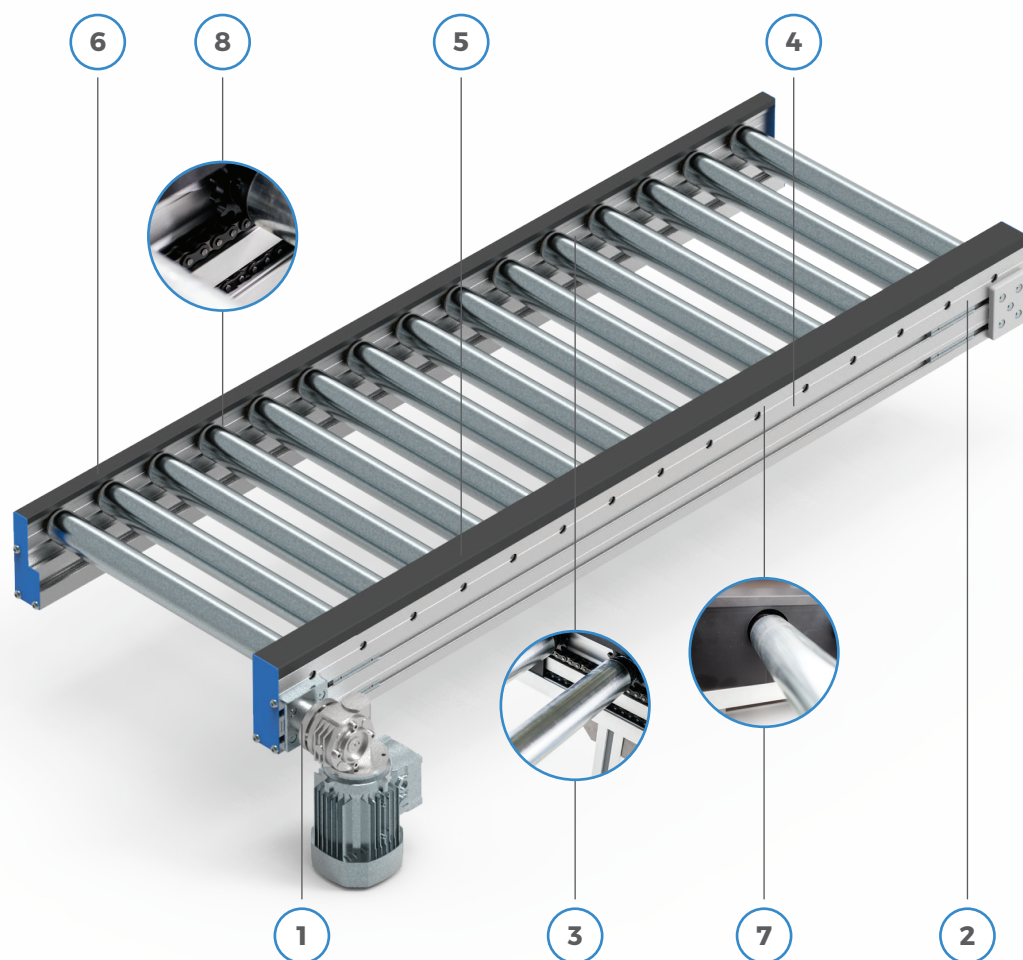
EXAMPLE OF ORDERING

17RDML	- 400	- R	- 2 000	- 3	- 120	- 50	- 3,2	- F
A	B	C	D	E	F	G	H	

A	Usable width	min. 100 mm – max. 1 500 mm
B	Drive position	L = left, R = right
C	Track length	min. 300 mm – max. 6 000 mm
D	Motor reducer position	1 – 2 – 3 – 4
E	Step between rollers	Ø50 min. 55 mm / Ø60 min. 65 mm
F	Roller diameter	Ø50 / Ø60
G	Speed	3.2 – 33 m/min
H	Roller type	Fx = fixed, Ac = accumulation, Pvc = PVC-coating, Zn = zinc-plated
	Track load capacity	max. 10 000 N

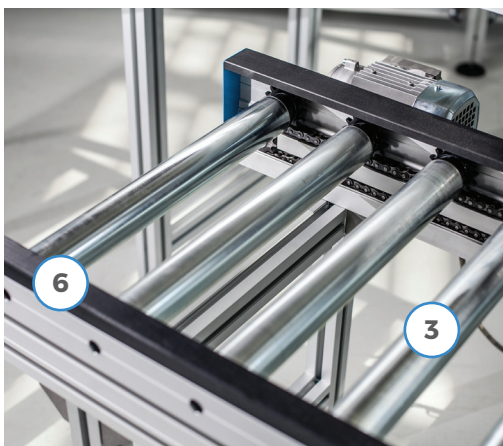
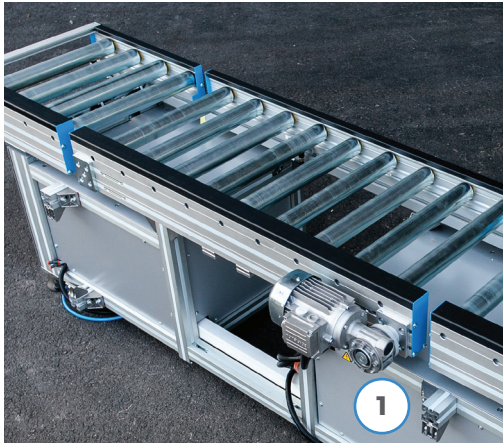
Roller	Motor	Reducer	kW	(m/min)
Ø50	BN63B4	BN 14 VF30 P i = 60; i = 40; i = 30	0.18	3,2 – 4,8 – 6,4 – 9,6 – 12,8 – 19,3 – 27,5
Ø60		i = 20; i = 15; i = 10; i = 7		3,8 – 5,8 – 7,7 – 11,6 – 15,4 – 23,1 – 33

Driven roller track - light drive

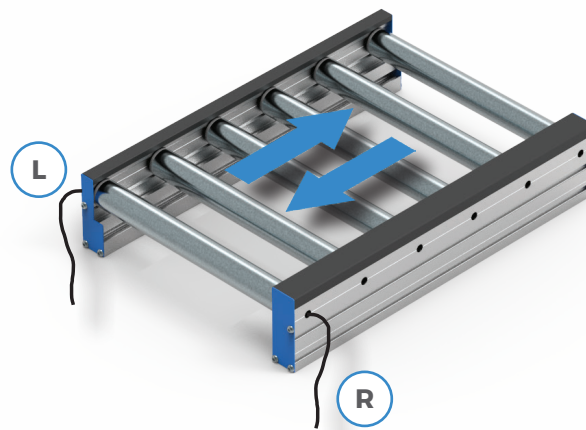


1	Drive - light
2	Return - L/R
3	Sprocket roller $\phi 50/\phi 60$
4	Roller track profile
5	Guide profile - wide
6	Guide profile - narrow
7	Chain guard
8	Chain

Driven roller track – light drive



DRIVEN ROLLER TRACK WITH ELECTRIC ROLLER **17RDMM**

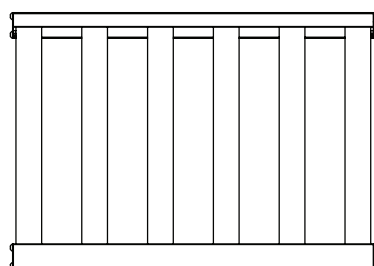
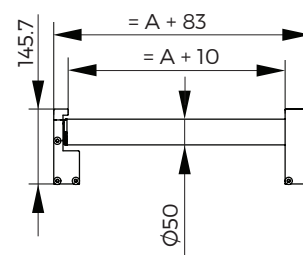
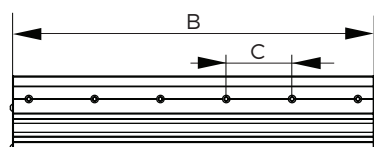


The **17RDMM** roller track contains an electric drive roller which may drive up to 10 rollers using the belt. The electric driven roller is used for shorter roller tracks and smaller loads.

Driven roller track with electric roller



PSR-50/60 ○○○○



Code

EXAMPLE OF ORDERING

17RDMM	-	400	-	1 000	-	120	-	6
		A		B		C		D

A	Load width	min. 300 mm – max. 1 200 mm
B	Track length	min. 60 mm – max. 1 000 mm
C	Step between rollers	min. 60 mm – max. 200 mm
D	Speed	6 – 54 m/min
	Track load	max. 500 N

Roller	Motor	Transmission ratio	W	(m/min) The underlined speeds are recommended	
				Min.	Max.
Ø50	24VDC	12:1	11	1,8	75
		16:1		1,2	60
		24:1		1,2	40
		36:1		0,6	27
		49:1		0,6	<u>20</u>
		64:1		0,6	<u>15</u>
		96:1		0,3	10

NON-DRIVEN ROLLER TRACK

17RTR



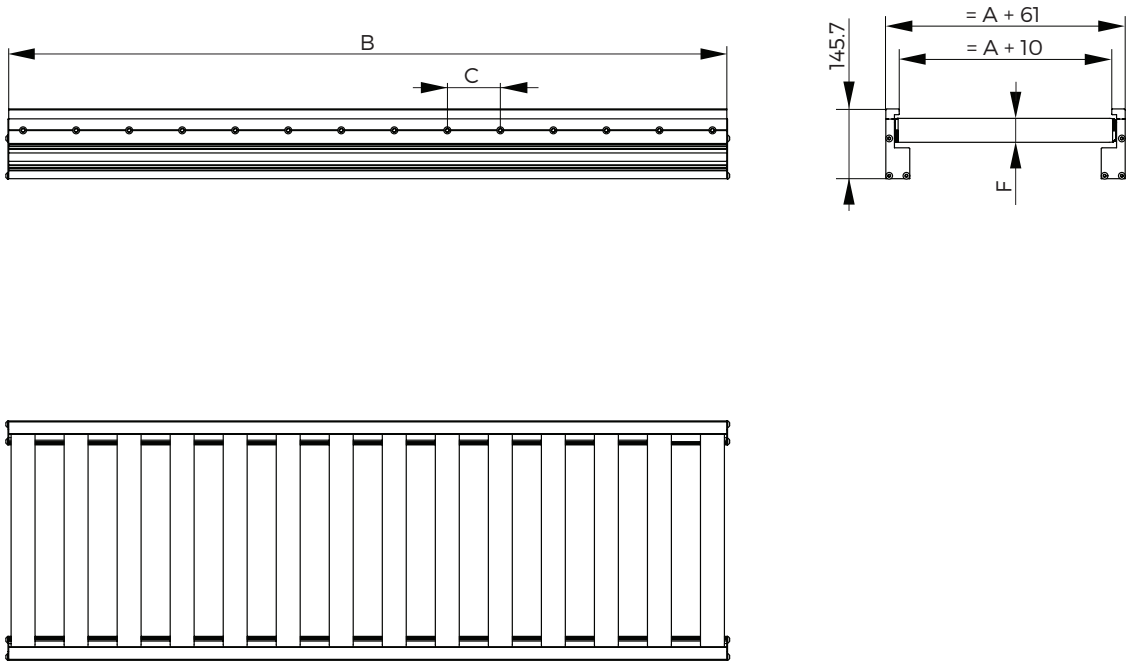
The non-driven roller track is intended for the free flow of products or packaging with a level lower surface on the basis of manual movement or gravitation.

The maximum load depends on the dimensions and design of the rollers.

Non-driven roller track



PSR-50/60 ○○○○



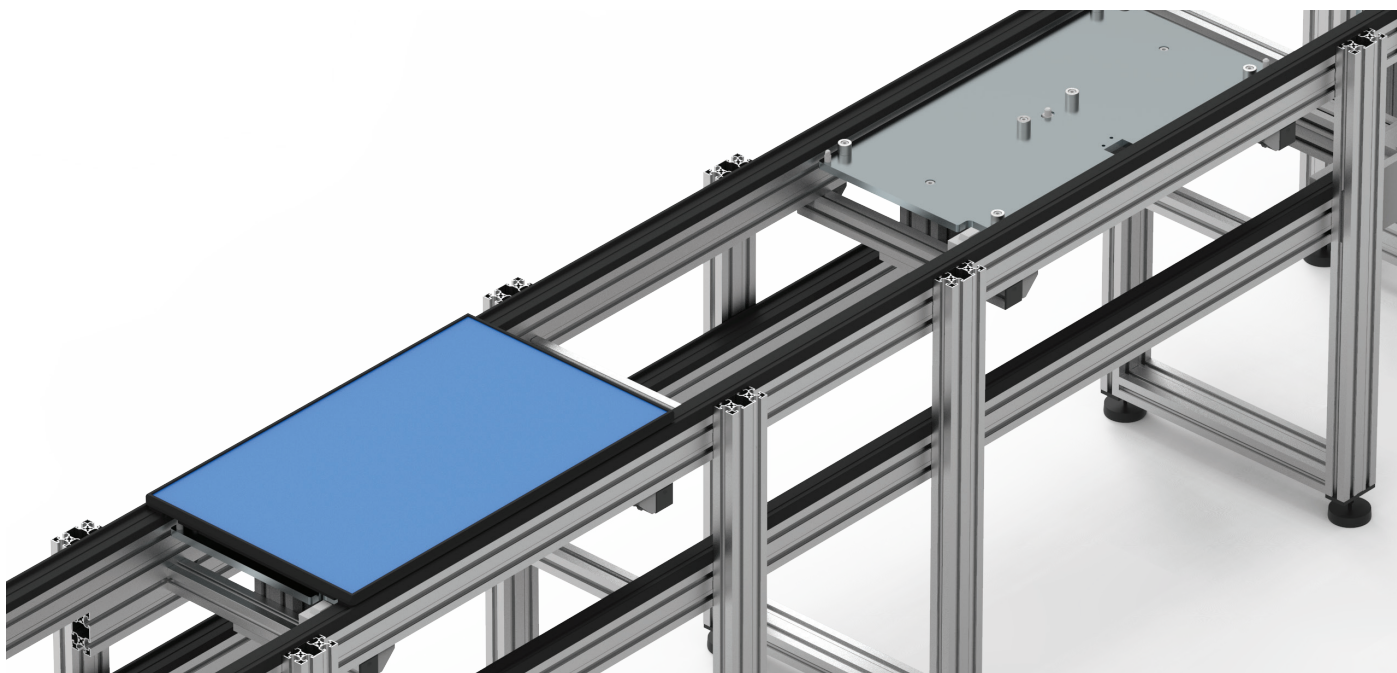
Code

EXAMPLE OF ORDERING

17RTR			-	400	-	1 000	-	120	-	50
			A	B			C	F		
A	Usable width						min. 100 mm – max. 1 500 mm			
B	Track length						min. 60 mm – max. 10 000 mm			
C	Step between rollers						Ø50 min. 55 mm / Ø60 min. 65 mm			
F	Roller diameter						Ø50 / Ø60			

SUPPORT FRAMES AND SPACERS

17NE/ND/NV, 17DI



The support frames are designed so as to support transport track at a certain height. They are divided into 3 groups:

- **17NE:** support frame – single level
- **17ND:** support frame – two levels
- **17NV:** support frame – two tracks

Support frames are installed evenly along the entire length of the transport track, usually one pair every 2,000 mm.

Spacers are used to connect transport tracks and determine the entire length of the pallet system.

* Contact our technical support for special designs.

Support frames



PSC-90



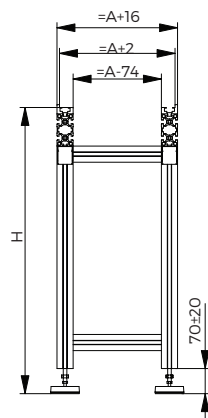
PSB-60



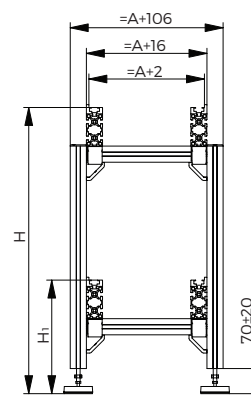
PSB-90



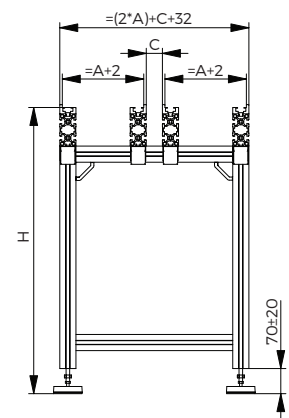
PSR-50/60



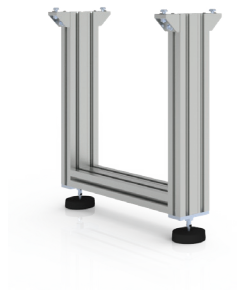
17NE



17ND



17NV



Code

EXAMPLE OF ORDERING

17NE	-	100	-	250	-	/	-	/
1		2		3		4		5

1	TYPE	17NE	17ND	17NV
2	A	100 - 1,200	100 - 1,200	100 - 480
3	H	250 - 1,200	500 - 1,200	250 - 1,200
4	H ₁		250 - 900	
5	C			45 - 155

1	Ordering CODE	NAME
6	11121	Angle piece - base
	11052	Flanged nut
	11047	Hammer-head screw

Spacers



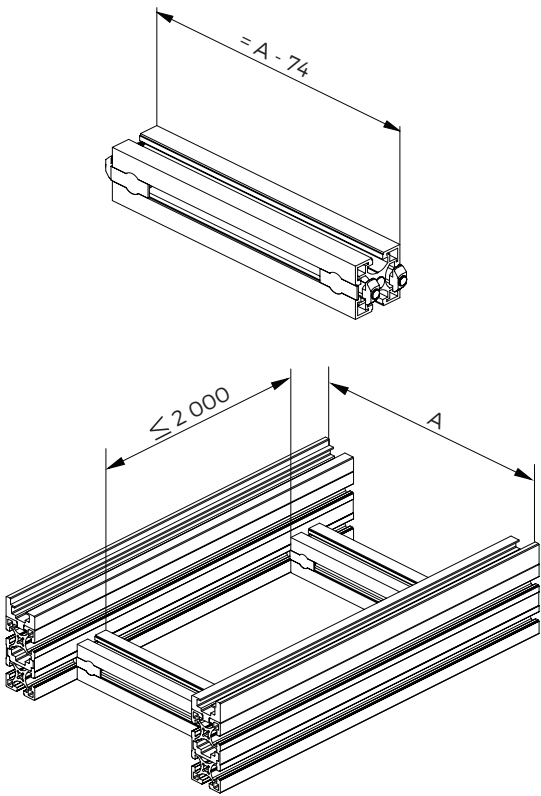
PSC-90 

PSB-60 

PSB-90 

Spacers are used to connect transport tracks and determine the entire length of the pallet system.

The number of spacers determines the load and length of the transport track.

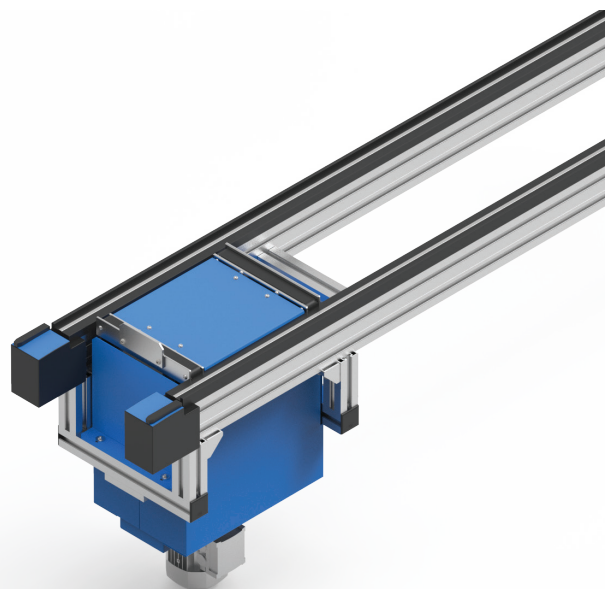
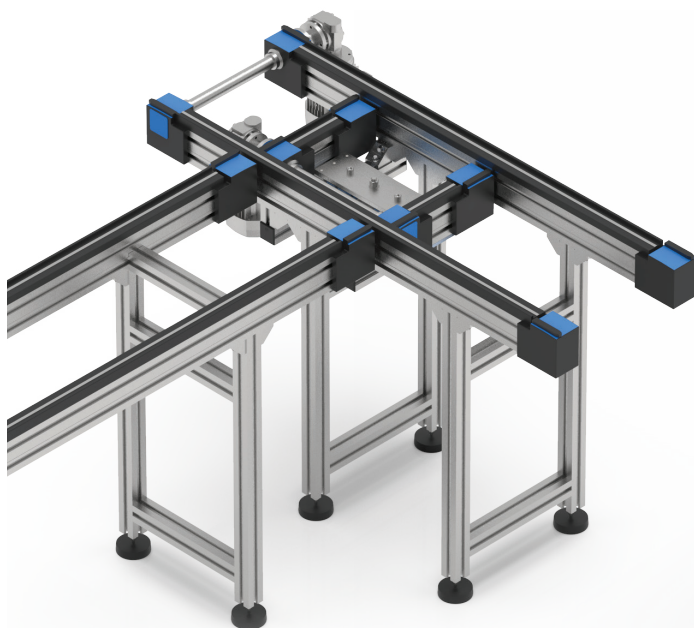


Code

EXAMPLE OF ORDERING

17DI - 240		
A		
A	Pallet width	min. 160 mm – max. 1 200 mm

TRANSVERSAL MODULES



Transversal modules are used to move the pallet by 90° horizontally from one track to the other. All transversal modules contain a pneumatic cylinder for vertical lifting and an electric motor that drives the chain or belt.

Any transversal module may be used on the **PSC90** as well as the **PSB90** module.

Contact our technical support for the *PSR-50/60 design and special designs.

Transversal module with
timing belt – 2 positions
17M2B

p. **61–62**



p. **69–70**

Transversal module with
chain – 2 positions
17M2C

Transversal module with
timing belt – 3 positions
17M3B

p. **63–64**



p. **71–72**

Transversal module with
chain – 3 positions
17M3C

Transversal module with
belt – 2 positions
17M2B

p. **65–66**



p. **73–74**

Transversal module with
chain – 2 positions
17M2C

Transversal module with
belt – 3 positions
17M3B

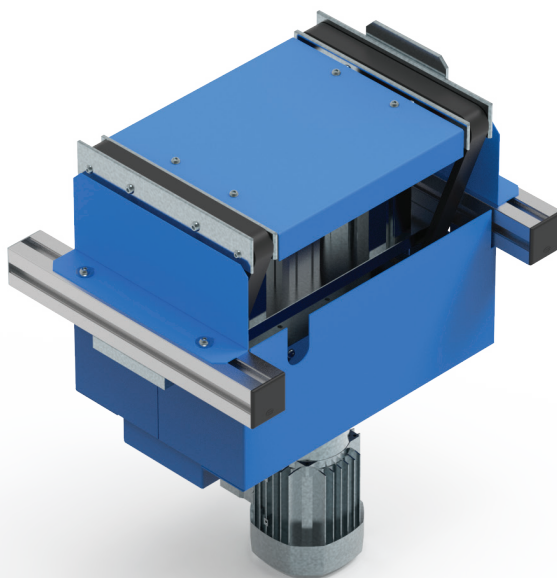
p. **67–68**



p. **75–76**

Transversal module with
chain – 3 positions
17M3C

Transversal module with timing belt (2 positions)



The belt transversal module with 2 positions is equipped with a pneumatic cylinder and electric motor that drives the timing belt.

This transversal module is mainly used at the end of the tracks where the direction of the pallets may continue only at a 90° angle. For this reason the transversal module functions at the lower position of the PN-cylinder as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder.
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

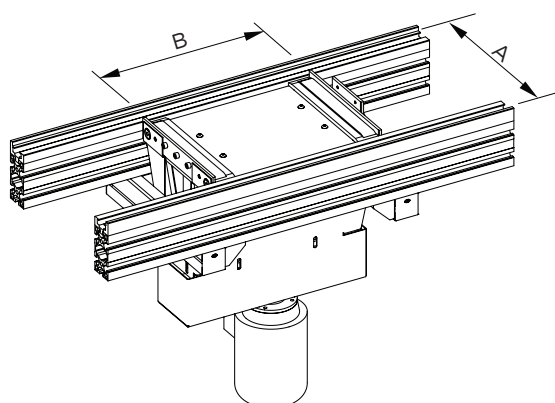
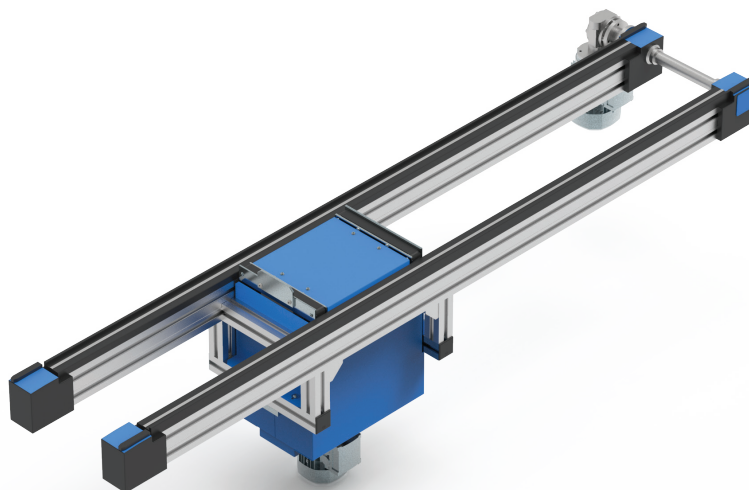
Transversal module with timing belt (2 positions)



PSC-90 

PSB-60 

PSB-90 



Code

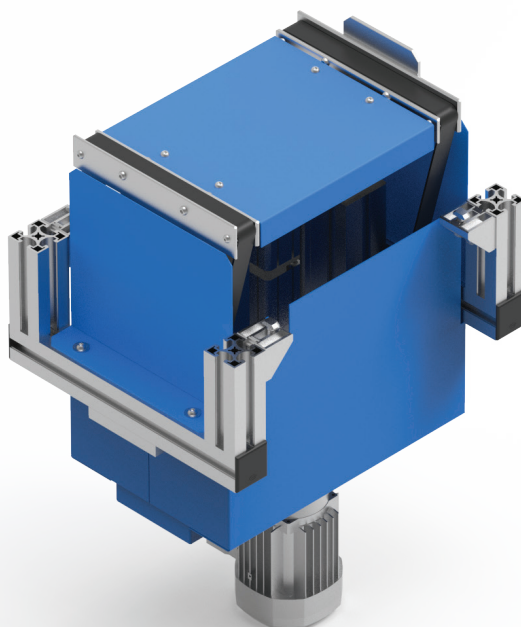
EXAMPLE OF ORDERING

17M2B	-	240	-	240	-	3,5
		A		B		C

A	Pallet width	min. 240 mm – max. 400 mm
B	Pallet length	min. 240 mm – max. 640 mm
C	Speed	3,5 – 20,8 m/min
	Track load capacity	B = 240 mm = max. 500 N B > 240 mm = max. 800 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	3,5 – <u>5,2</u> – <u>6,9</u> – <u>10,4</u> – 13,9 – 20,8

Transversal module with timing belt (3 positions)



The belt transversal module with 3 positions is equipped with two pneumatic cylinders and electric motor that drives the timing belt.

This transversal module may be used anywhere on the track, where the direction of the pallets continues at a 90° angle or straight ahead. For this reason the transversal module is completely hidden under the track at the lower position of the PN-cylinder and ensures a smooth transition of the pallets; in the middle position it functions as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

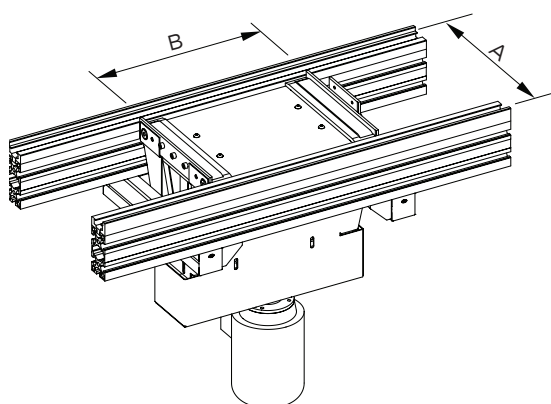
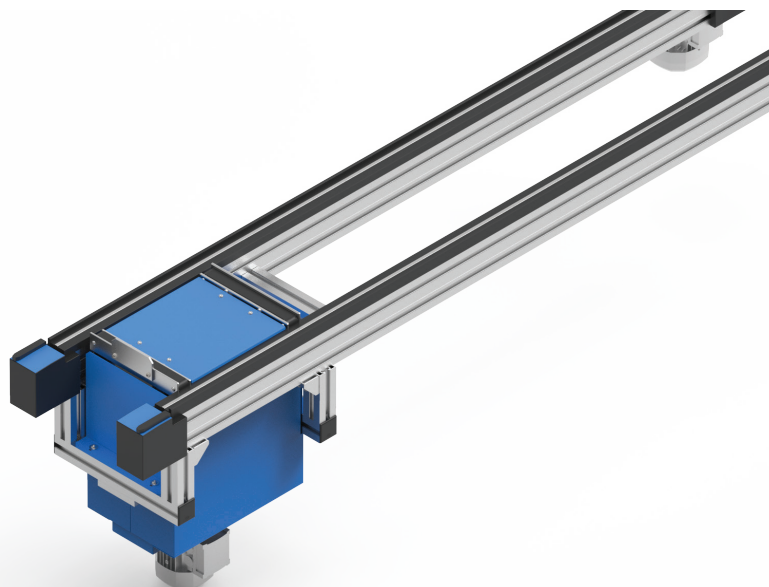
Transversal module with timing belt (3 positions)



PSC-90 

PSB-60 

PSB-90 



Code

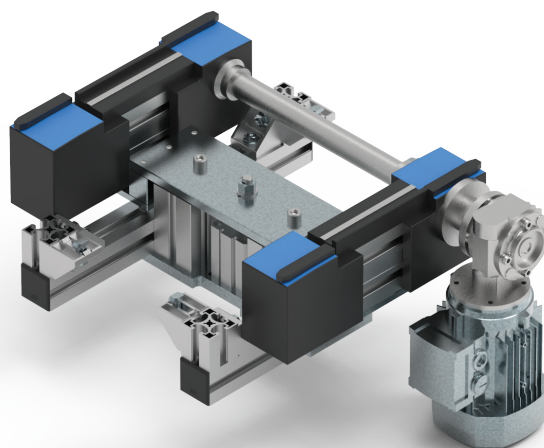
EXAMPLE OF ORDERING

17M3B	-	240	-	240	-	3,5
		A		B		C

A	Pallet width	min. 240 mm – max. 400 mm
B	Pallet length	min. 240 mm – max. 640 mm
C	Speed	3,5 – 20,8 m/min
	Track load capacity	B = 240 mm = max. 500 N B > 240 mm = max. 800 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	3,5 – <u>5,2</u> – <u>6,9</u> – <u>10,4</u> – 13,9 – 20,8

Transversal module with belt (2 positions)



The belt transversal module with 2 positions is equipped with a pneumatic cylinder and electric motor that drives the belt.

This transversal module is mainly used at the end of the tracks where the direction of the pallets may continue only at a 90° angle. For this reason the transversal module functions at the lower position of the PN-cylinder as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

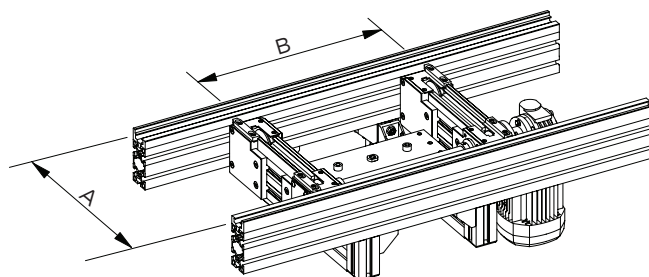
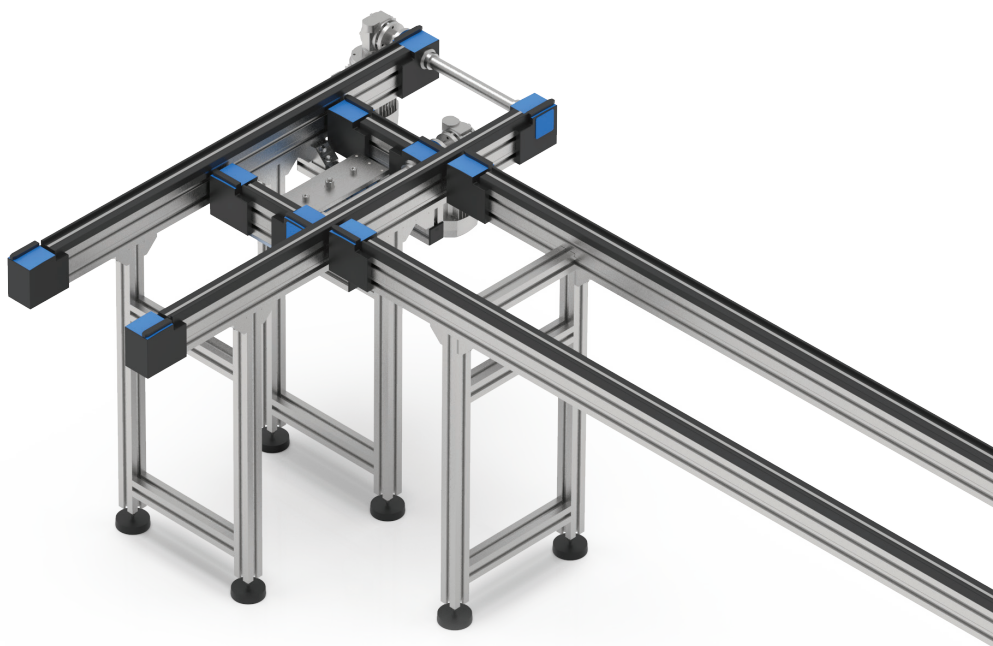
Transversal module with belt (2 positions)



PSC-90 

PSB-60 

PSB-90 



Code

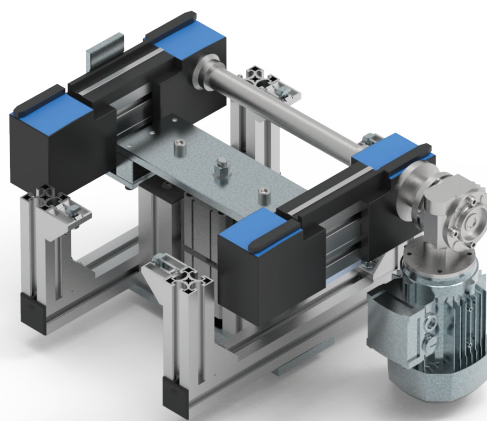
EXAMPLE OF ORDERING

17M2B	-	400	-	400	-	4.6
		A		B		C

A	Pallet width	min. 400 mm – max. 1 200 mm
B	Pallet length	min. 400 mm – max. 1 200 mm
C	Speed	4.6 – 27.4 m/min
	Track load capacity	max. 800 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	4,6 – <u>6,9</u> – <u>9,1</u> – <u>13,7</u> – 18,3 – 27,4

Transversal module with belt (3 positions)



The belt transversal module with 3 positions is equipped with two pneumatic cylinders and electric motor that drives the belt.

This transversal module may be used anywhere on the track, where the direction of the pallets continues at a 90° angle or straight ahead. For this reason the transversal module is completely hidden under the track at the lower position of the PN-cylinder and ensures a smooth transition of the pallets; in the middle position it functions as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

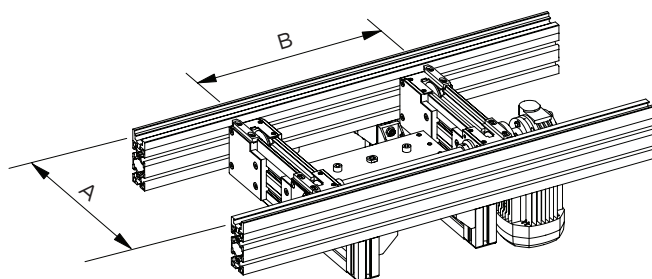
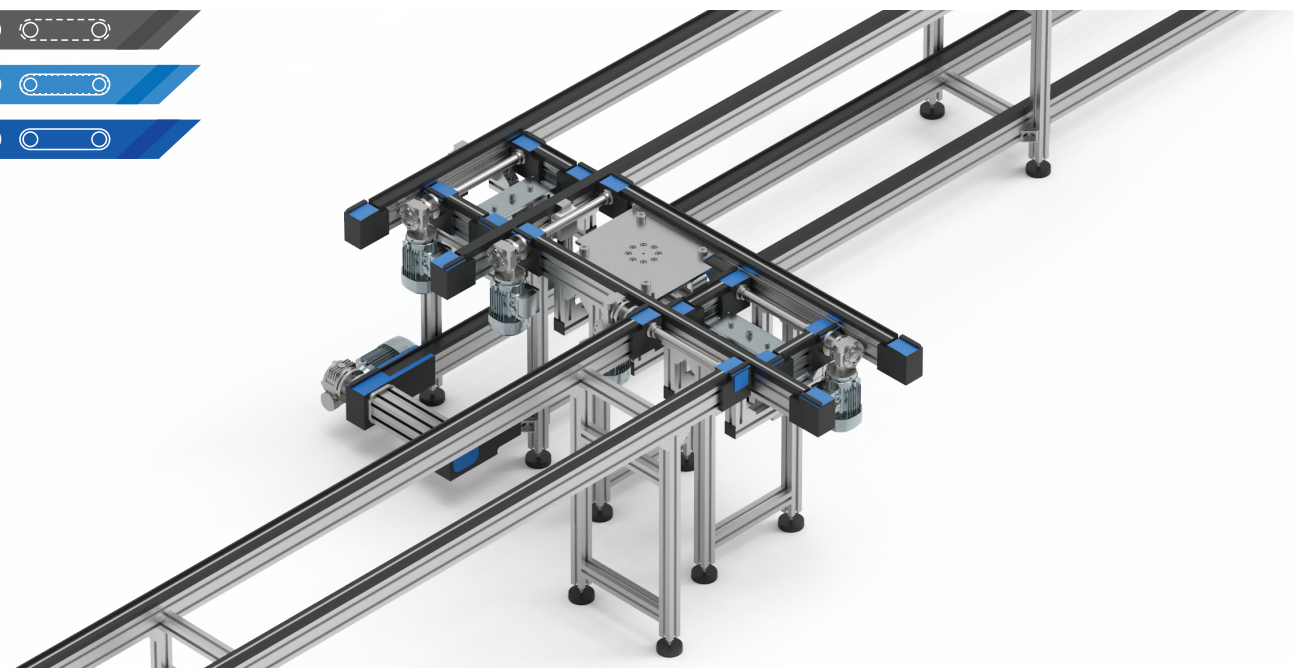
Transversal module with belt (3 positions)



PSC-90 

PSB-60 

PSB-90 



Code

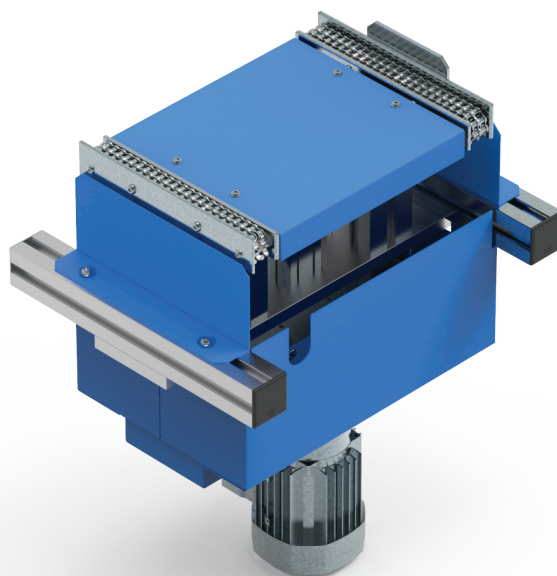
EXAMPLE OF ORDERING

17M3B	-	400	-	400	-	4.6
		A		B		C

A	Pallet width	min. 400 mm - max. 1 200 mm
B	Pallet length	min. 400 mm - max. 1 200 mm
C	Speed	4.6 - 27,4 m/min
	Track load capacity	max. 800 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	4,6 - <u>6,9</u> - <u>9,1</u> - <u>13,7</u> - 18,3 - 27,4

Transversal module with chain (2 positions)



The chain transversal module with 2 positions is equipped with a pneumatic cylinder and electric motor that drives the chain.

This transversal module is mainly used at the end of the tracks where the direction of the pallets may continue only at a 90° angle. For this reason the transversal module functions at the lower position of the PN-cylinder as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

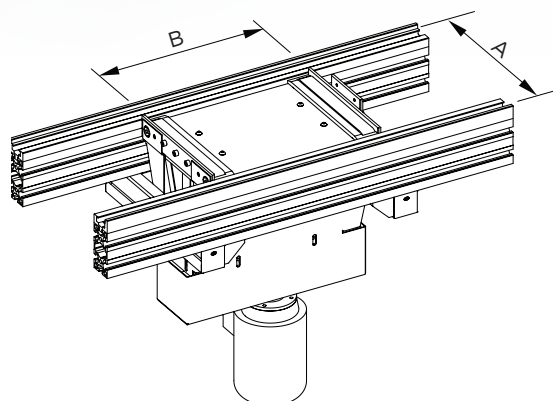
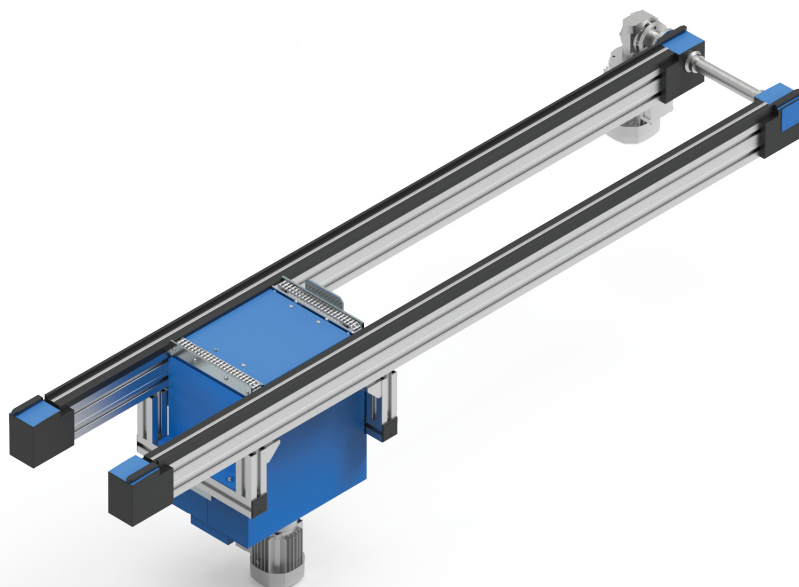
Transversal module with chain (2 positions)



PSC-90 

PSB-60 

PSB-90 



Code

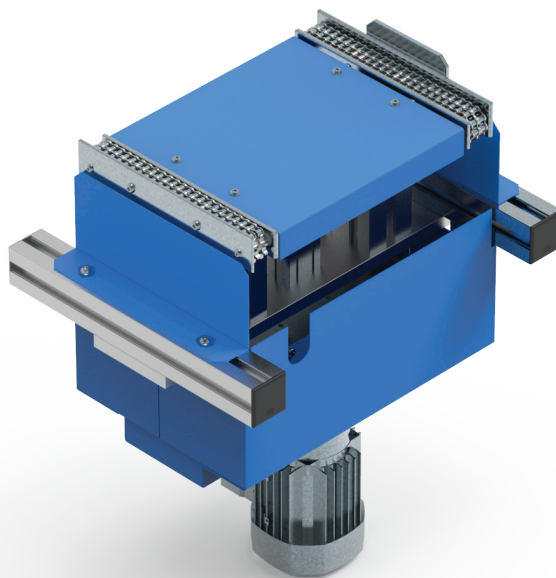
EXAMPLE OF ORDERING

	17M2C	-	240	-	240	-	2,9
			A		B		C

A	Pallet width	min. 240 mm – max. 400 mm
B	Pallet length	min. 240 mm – max. 640 mm
C	Speed	2.9 – 17,7 m/min
	Track load capacity	B = 240 mm = max. 500 N B > 240 mm = max. 800 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	2,9 – 4,4 – <u>5,9</u> – <u>8,9</u> – <u>11,8</u> – 17,7

Transversal module with chain (3 positions)



The chain transversal module with 3 positions is equipped with two pneumatic cylinders and electric motor that drives the chain.

This transversal module may be used anywhere on the track, where the direction of the pallets continues at a 90° angle or straight ahead. For this reason the transversal module is completely hidden under the track at the lower position of the PN-cylinder and ensures a smooth transition of the pallets; in the middle position it functions as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

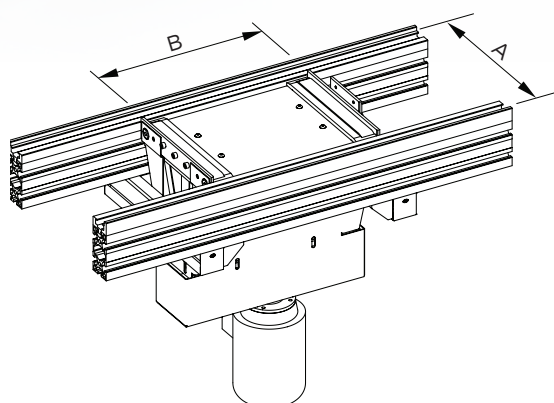
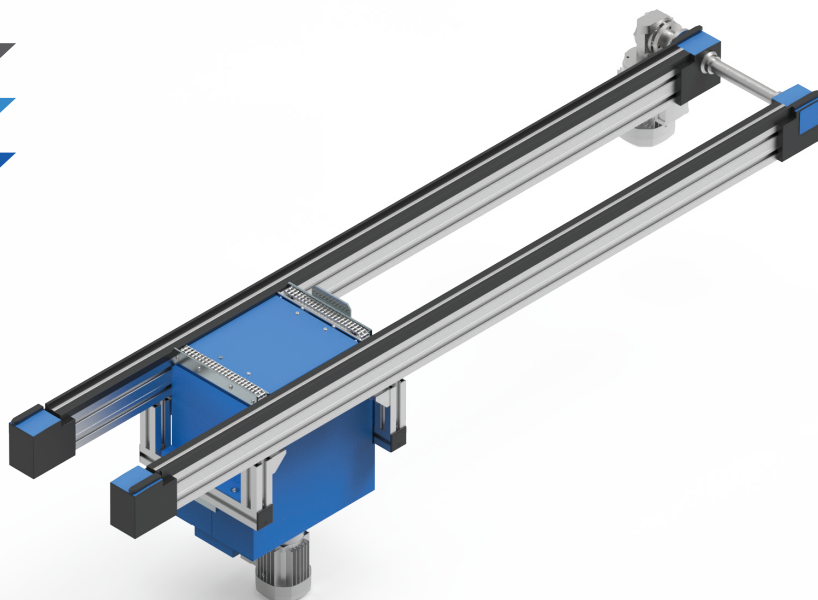
Transversal module with chain (3 positions)



PSC-90 

PSB-60 

PSB-90 



Code

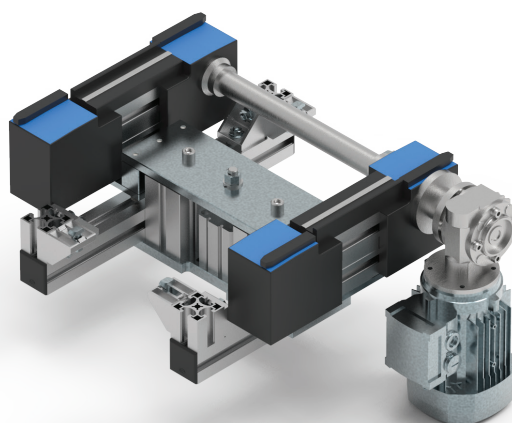
EXAMPLE OF ORDERING

17M3C	-	240	-	240	-	2,9
		A		B		C

A	Pallet width	min. 240 mm - max. 400 mm
B	Pallet length	min. 240 mm - max. 640 mm
C	Speed	2,9 - 17,7 m/min
	Track load capacity	B = 240 mm = max. 500 N B > 240 mm = max. 800 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	2,9 - 4,4 - <u>5,9</u> - <u>8,9</u> - <u>11,8</u> - 17,7

Transversal module with chain (2 positions)



The chain transversal module with 2 positions is equipped with a pneumatic cylinder and electric motor that drives the chain.

This transversal module is mainly used at the end of the tracks where the direction of the pallets may continue only at a 90° angle. For this reason the transversal module functions at the lower position of the PN-cylinder as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

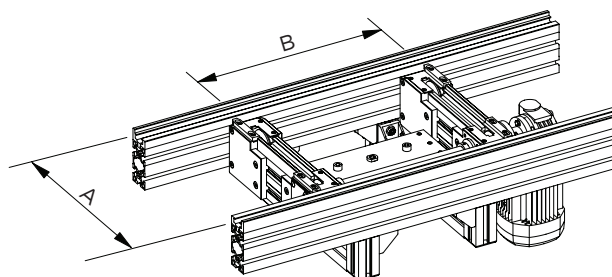
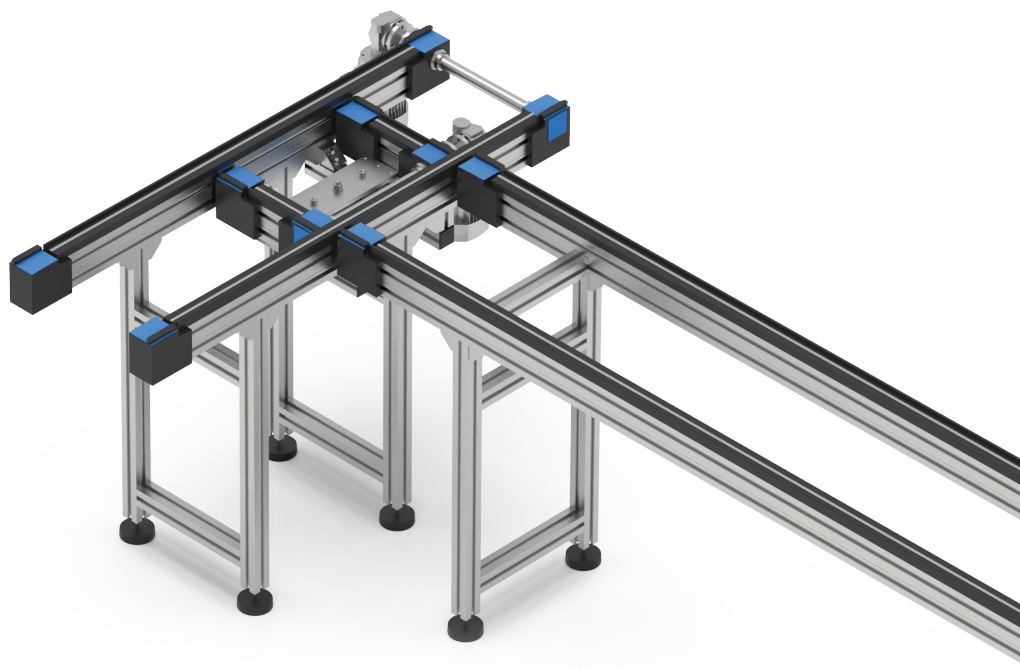
Transversal module with chain (2 positions)



PSC-90 

PSB-60 

PSB-90 



Code

EXAMPLE OF ORDERING

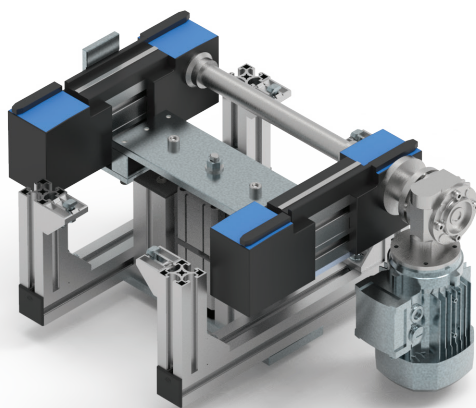
17M2C	-	400	-	400	-	2,9	-	R	-	3
		A		B		C		D		E

A	Pallet width	min. 400 mm - max. 1 200 mm
B	Pallet length	min. 400 mm - max. 1 200 mm
C	Speed	2,9 - 17,7 m/min
D	Drive position	L = left R = right
E	Motor reducer position	3 - 4

	Track load capacity	B = 400 - 480 mm = max. 1 200 N B > 480 mm = max. 1 800 N
--	---------------------	--

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	2,9 - 4,4 - <u>5,9</u> - <u>8,9</u> - <u>11,8</u> - 17,7

Transversal module with chain (3 positions)



The chain transversal module with 3 positions is equipped with two pneumatic cylinders and electric motor that drives the chain.

This transversal module may be used anywhere on the track, where the direction of the pallets continues at a 90° angle or straight ahead. For this reason the transversal module is completely hidden under the track at the lower position of the PN-cylinder and ensures a smooth transition of the pallets; in the middle position it functions as a stopper for the pallet, and in the upper position the module is above the track and transfers the pallet to the track next to it.

The module does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* Contact our technical support for special designs.

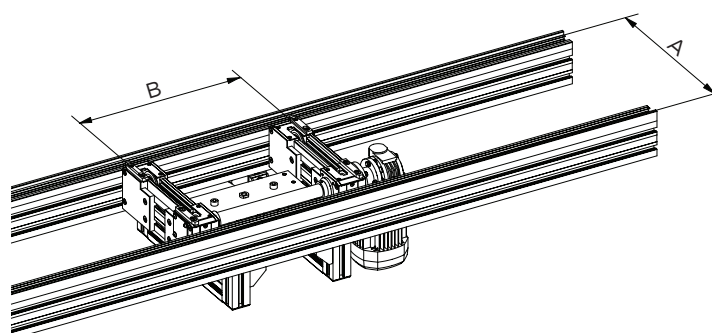
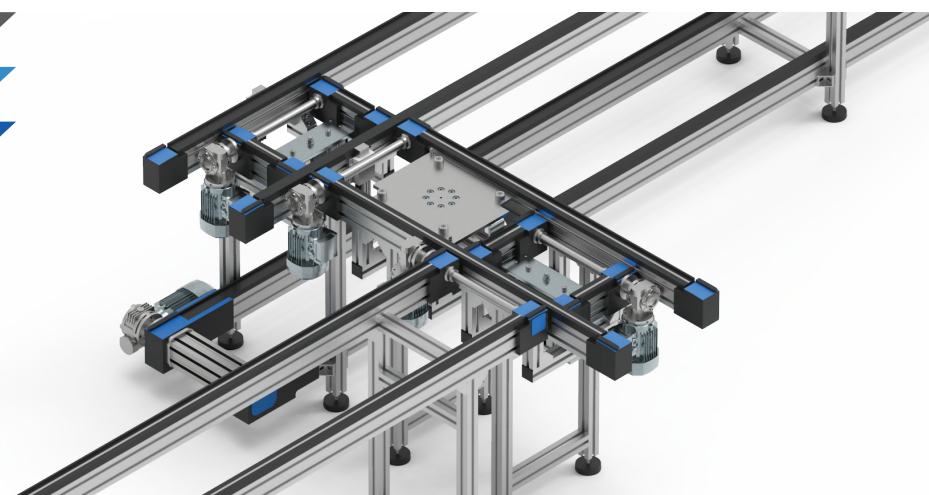
Transversal module with chain (3 positions)



PSC-90 

PSB-60 

PSB-90 



Code

EXAMPLE OF ORDERING

17M3C	-	400	-	400	-	2,9	-	R	-	3
		A		B		C		D		E

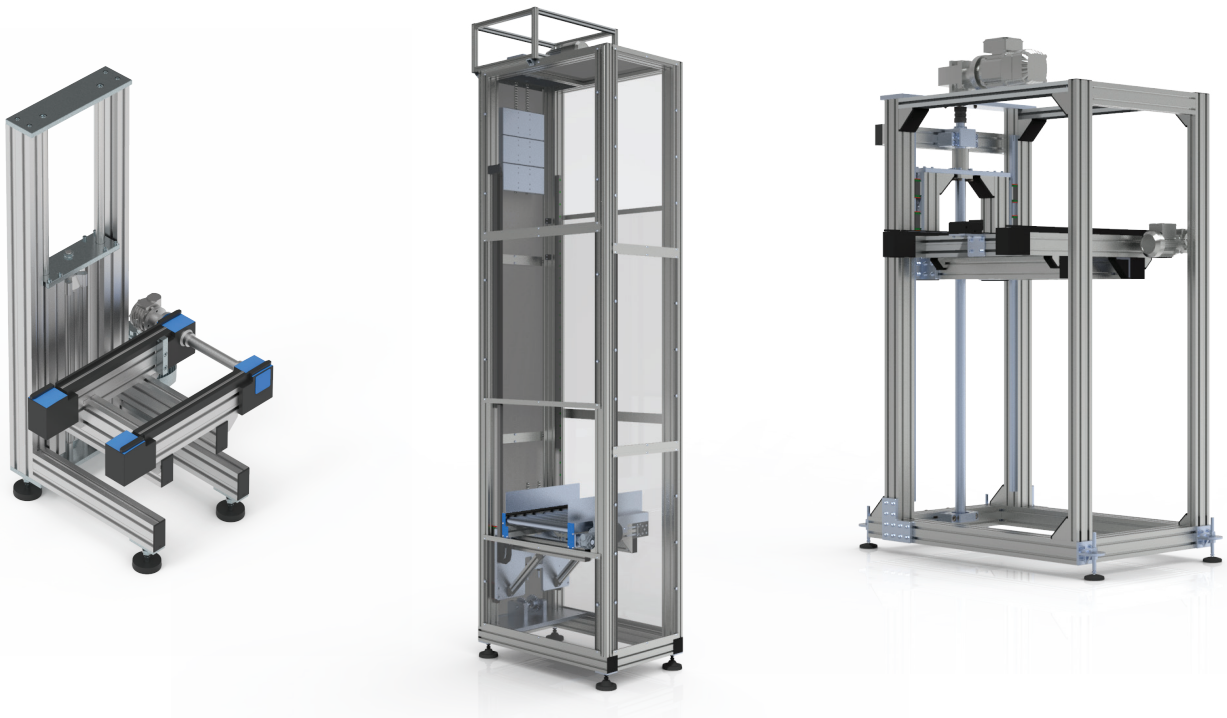
A	Pallet width	min. 400 mm - max. 1 200 mm
B	Pallet length	min. 400 mm - max. 1 200 mm
C	Speed	2,9 - 17,7 m/min
D	Drive position	L = left, R = right
E	Motor reducer position	3 - 4

	Track load capacity	B = 400 - 480 mm = max. 1 200 N B > 480 mm = max. 1 800 N
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Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10	0,18	2,9 - 4,4 - <u>5,9</u> - <u>8,9</u> - <u>11,8</u> - 17,7

LIFTS

17DP, 17DE, 17DV



Lifts are used to move the pallet vertically from one transport track to another.

There are three types of lifts:

- pneumatic lift **17DP**
- electric lift **17DE**
- lift with spindle **17DV**

Any lift may be used for **PSC-90**, **PSB-60**, **PSB-90** and also **PSR-50/60**.

* Contact our technical support for special designs.

Pneumatic lift

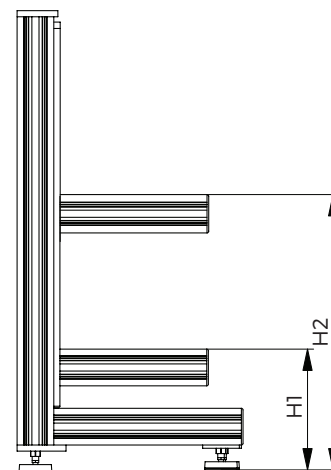
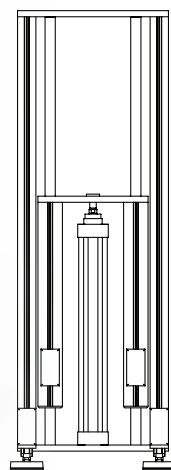
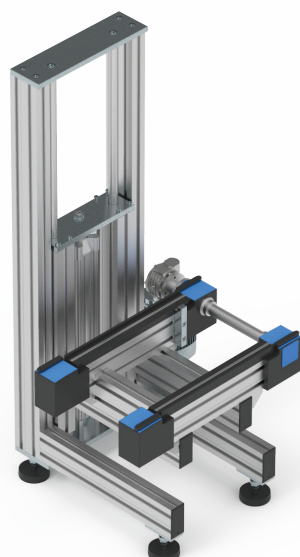


PSC-90 

PSB-60 

PSB-90 

PSR-50/60 



The **17DP** pneumatic lift is used for shorter travel and allows only two stopping position.

There are three types of pneumatic lifts:

- **S** - light pneumatic lift equipped with a PN-cylinder and round linear guides,
- **M** - medium pneumatic lift equipped with a PN-cylinder, rail linear guides and linear carts,
- **L** - heavy pneumatic lift equipped with a PN-cylinder, rail linear guides, linear carts and pneumatic brakes.

The lift does not include:

- el. switches for the pneumatic cylinder,
- flow regulators for the pneumatic cylinder.

* For more information contact our technical service.

Code

EXAMPLE OF ORDERING

17DP - 240 - 800		
H ₁		H ₂
H ₁	Height	min. 200 mm
H ₂	Height	max. 1 200 mm

Electric lift



- PSC-90
- PSB-60
- PSB-90
- PSR-50/60



The 17DE electric lift is used for longer travel and enables several stopping positions. It is equipped with a counterweight, electric motor with brake and chain lifting system.

* For more information contact our technical service.

Code			EXAMPLE OF ORDERING
17DE - / - /			
	H ₁	H ₂	
H ₁	Height	Please contact our technical support.	
H ₂	Height		
	Load capacity	Please contact our technical support.	

Lift with spindle



PSC-90 

PSB-60 

PSB-90 

PSR-50/60 



The **17DV** lift with spindle enables very accurate operation and several stopping positions. It is equipped with a spindle, el. motor with brake, rail linear guides and linear carts.

* For more information contact our technical service.

Code

EXAMPLE OF ORDERING

17DV - / - /		
	H ₁	H ₂
H ₁	Height	Please contact our technical support.
H ₂	Height	
	Load capacity	Please contact our technical support.

CURVE PSB-60

17BTK90

NEW

Curves are used in order to change the path of the pallet or load, whereby the pallet does not change the orientation (the front side is always in front).

Warning!

Accumulation on the arch may be avoided by a stopper before the curve.

* For more information contact our technical service.

90° curve



PSB-60

A	B
240	240
	320
320	240
	320
	400
400	320
	400



*For pallets smaller than 240 mm, please contact our technical service.

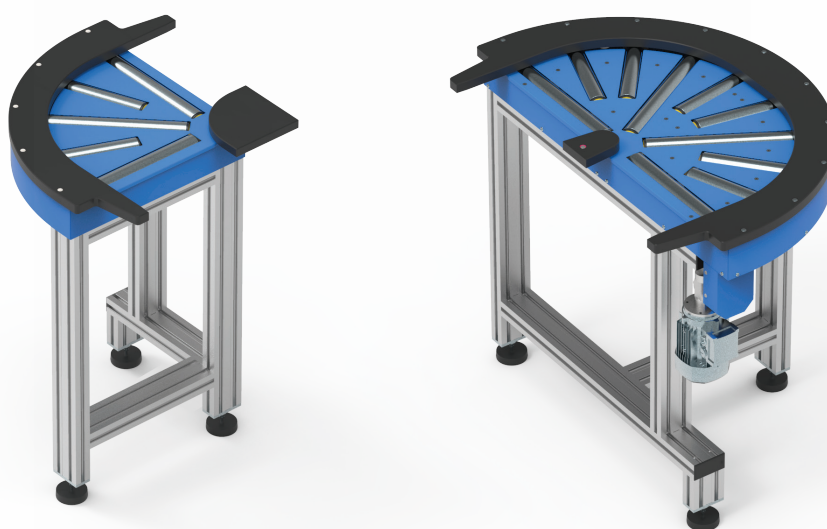
Code

EXAMPLE OF ORDERING

17BTK90 - 320 - 320 - 2,9			
	A	B	D
A	Pallet width	min. 240 mm – max. 400 mm	
B	Pallet length	min. 240 mm – max. 400 mm	
D	Speed	2,9 – 25 m/min	
	Track load capacity	max. 600 N	
Motor	Reducer	kW	(m/min)
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10; i = 7	0,18	2,9 – 4,4 – 5,8 – 8,7 – 11,7 – 17,5 – 25

ROLLER CURVES

17K90, 17K180



Roller curves are used in order to change the path of the pallet or load, whereby the pallet does not change the orientation (the front side is always in front).

Warning!

Accumulation on the arch may be avoided by a stopper before the curve.

* For more information contact our technical service.

90° roller curve

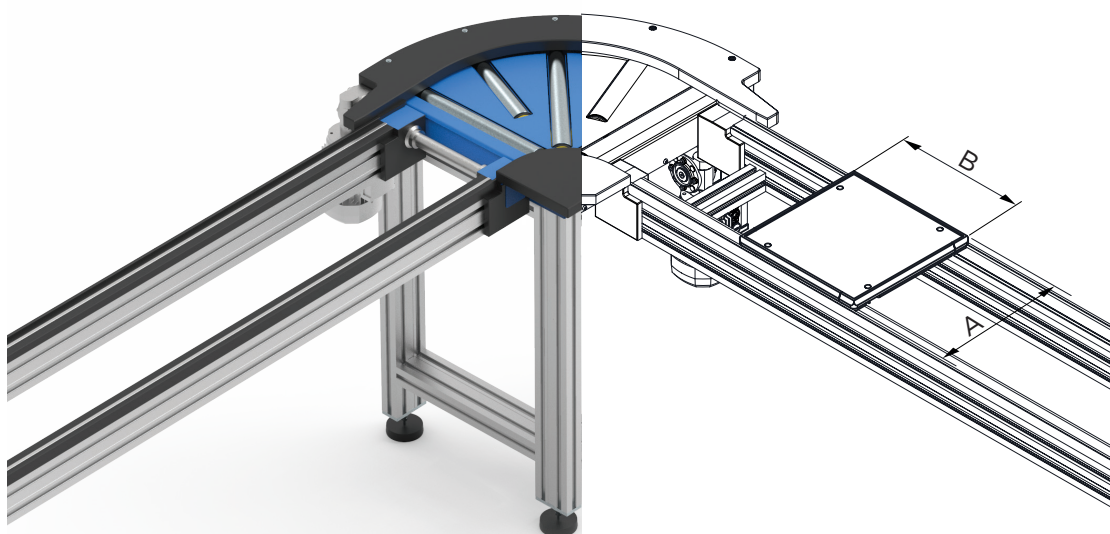


PSC-90 

PSB-90 

PSR-50/60 

A	B
160	160
	240
240	160
	240
	320
320	240
	320
	400
400	320
	400



Code

EXAMPLE OF ORDERING

17K90	-	160	-	160	-	3.2
		A		B		D

A	Pallet width	min. 160 mm – max. 800 mm
B	Pallet length	min. 160 mm – max. 800 mm
D	Speed	3,2 – 27,5 m/min

	Track load capacity	max. 500 N
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Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10; i = 7	0,18	3,2 – <u>4,8</u> – 6,4 – 9,6 – 12,8 – 19,3 – 27,5

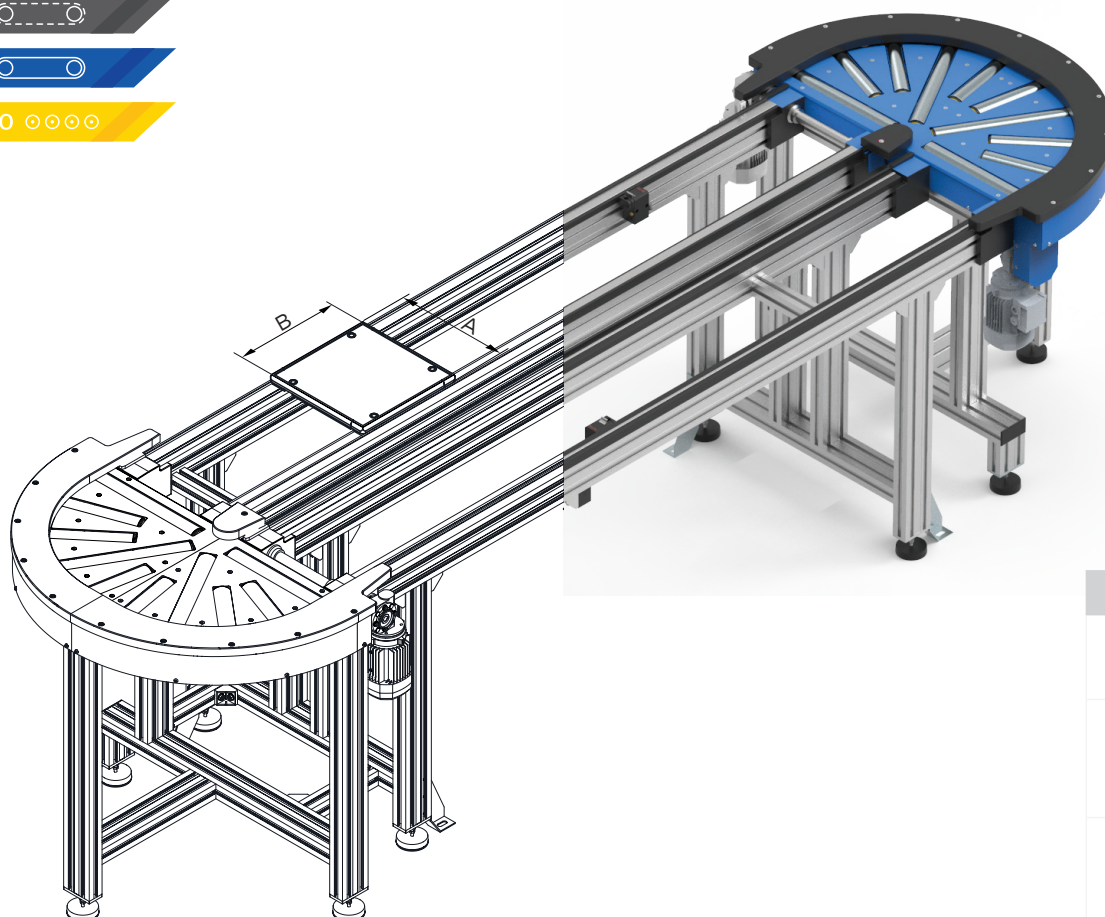
180° roller curve



PSC-90 

PSB-90 

PSR-50/60 



A	B
160	160
	240
240	160
	240
	320
320	240
	320
	400
400	320
	400

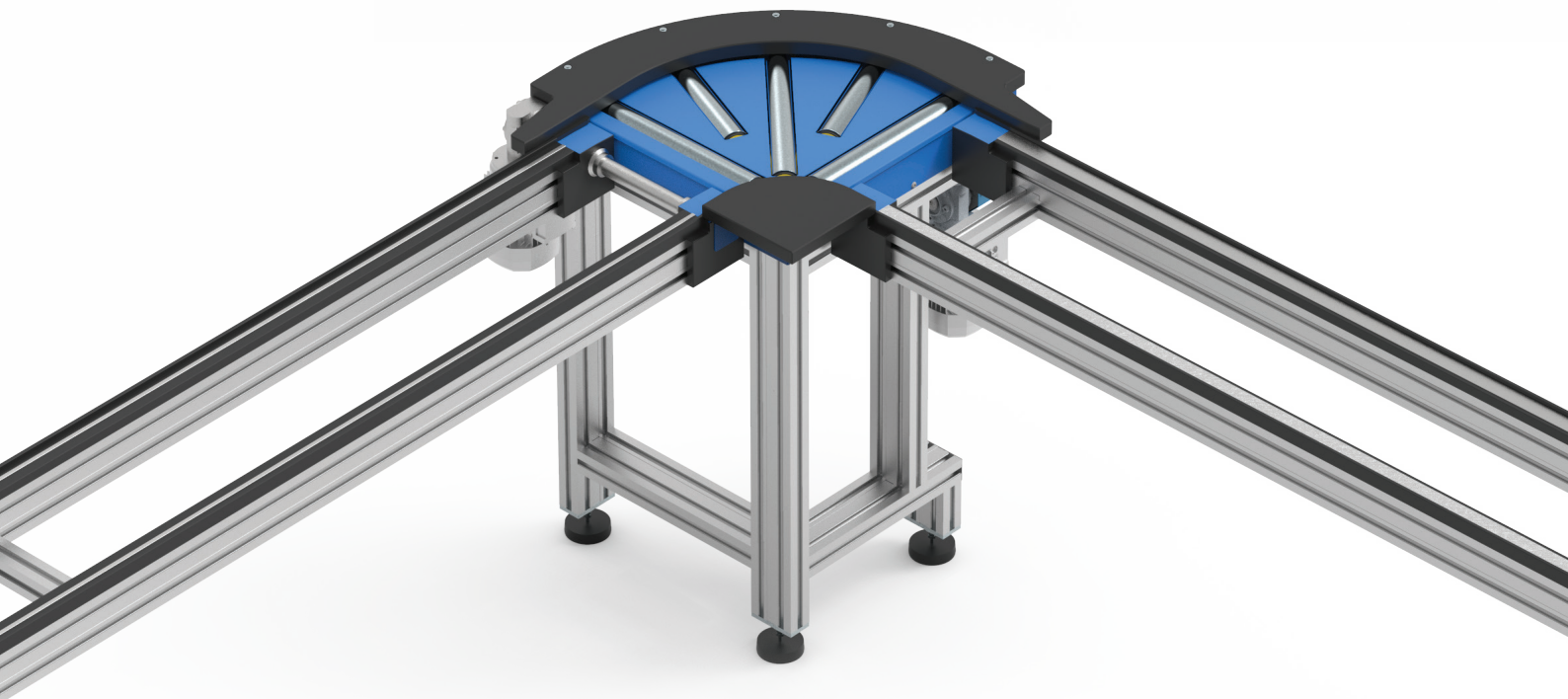
Code

EXAMPLE OF ORDERING

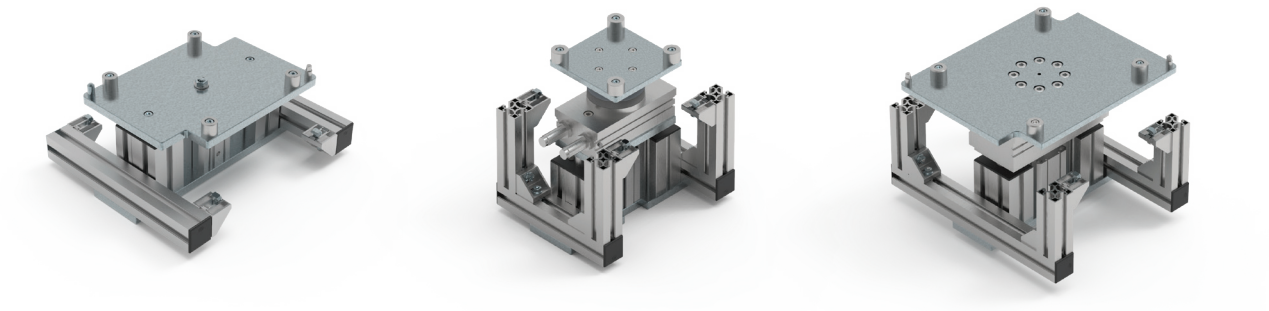
17K180	-	160	-	L	-	3,2
		A		B		D

A	Pallet width	min. 160 mm – max. 800 mm
B	Pallet length	min. 160 mm – max. 800 mm
D	Speed	3,2 – 27,5 m/min
	Track load capacity	max. 500 N

Motor	Reducer	kW	(m/min) The underlined speeds are recommended
BN63 B4	BN 14 VF30 P i = 60; i = 40; i = 30; P i = 20; i = 15; i = 10; i = 7	0,18	3,2 – <u>4,8</u> – 6,4 – 9,6 – 12,8 – 19,3 – 27,5



POSITIONING AND ROTATING MODULE **17CM, 170M, 17COM**



When there is a need for accurate centring or for changing the pallet's orientation in the working process, the positioning or rotating module is used.

* For more information and special designs contact our technical service.

Positioning module

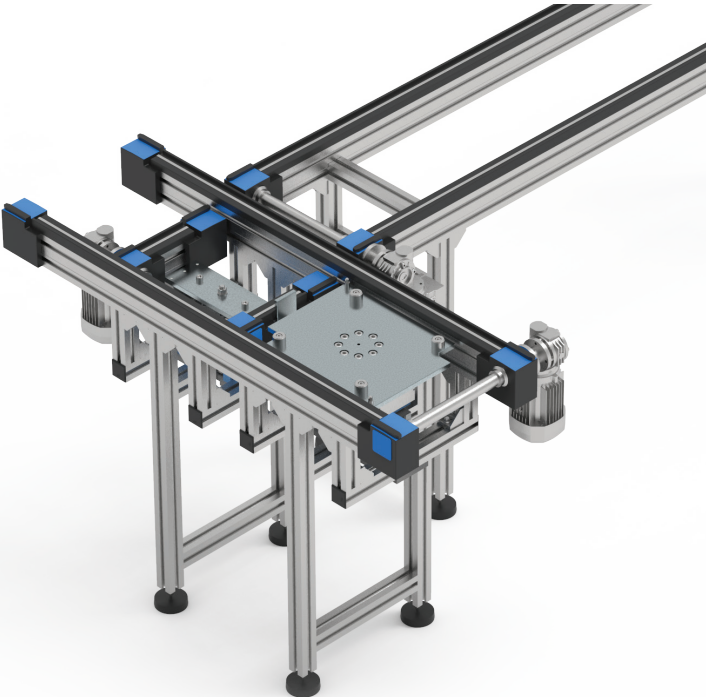
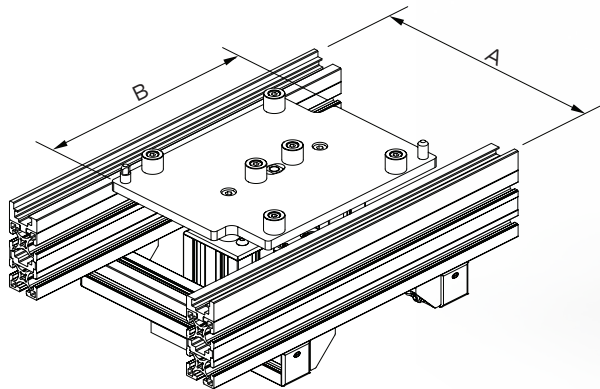


PSC-90

PSB-60

PSB-90

Positioning modules are suitable for various pallet dimensions and weights. They enable centring with high tolerance: +/- 0.1 mm.



Code

EXAMPLE OF ORDERING

17CM - 160 - 160 - 30		
A B H		
A	Pallet width	min. 160 mm - max. 800 mm
B	Pallet length	min. 160 mm - max. 800 mm
H	Standard travel	30 mm
	Load capacity	B = 160 - 240 mm = max. 800 N B = 240 - 400 mm = max. 1 200 N B > 400 mm = max. 1 800 N

Rotating module

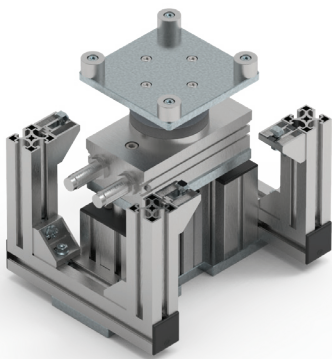


PSC-90 

PSB-60 

PSB-90 

The rotating module is required whenever it is necessary to change the pallet's orientation from 0° to 180°.



Code

EXAMPLE OF ORDERING

170M			-	160	-	160	-	50
				A		B		H
A	Pallet width					min. 160 mm – max. 800 mm		
B	Pallet length					min. 160 mm – max. 800 mm		
H	Standard travel					50 mm		
		Load capacity				B = 160 – 240 mm = max. 800 N B = 240 – 400 mm = max. 1 200 N B > 400 mm = max. 1 800 N		

Positioning-rotating module

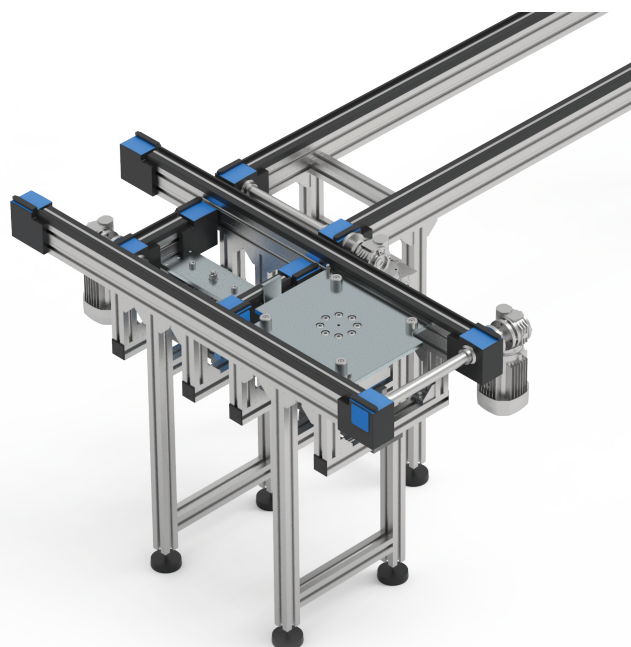
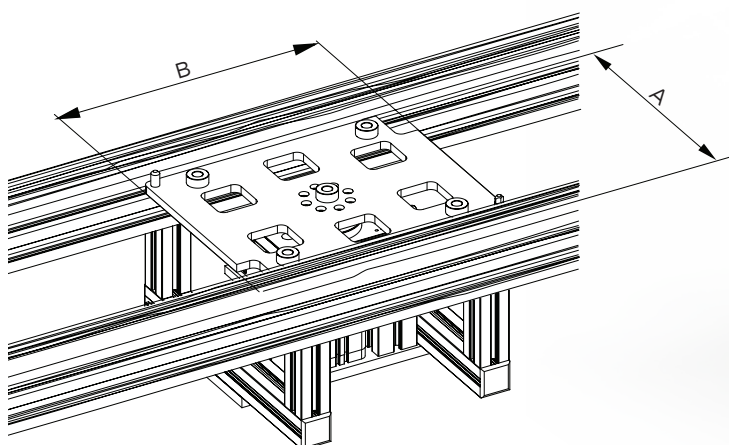


PSC-90 

PSB-60 

PSB-90 

Positioning-rotating modules are suitable for various pallet dimensions and weights. They enable centring with high tolerance: $\pm 0,1$ mm and enable changing the pallet's orientation from 0° to 180° .

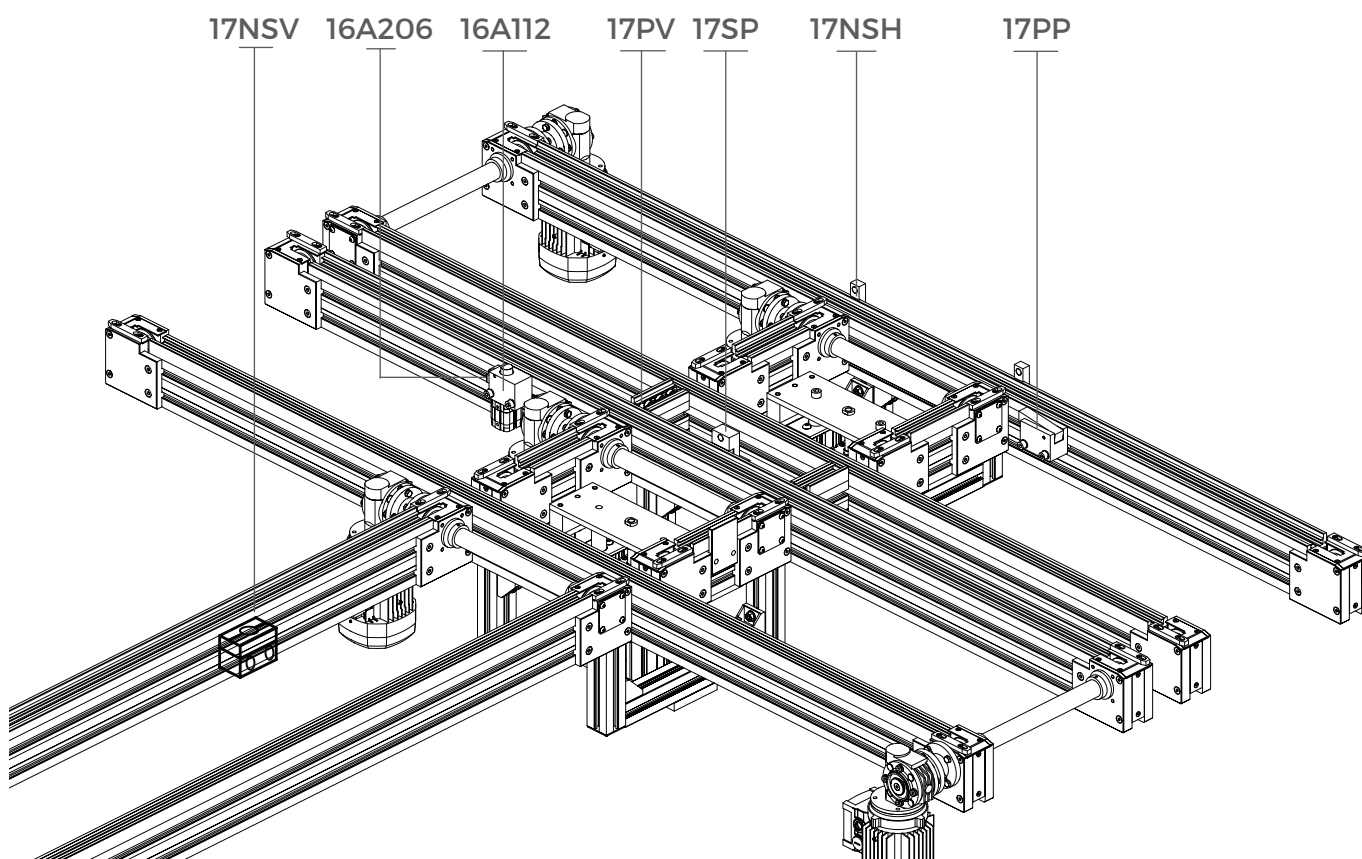


Code

EXAMPLE OF ORDERING

17COM - 160 - 160 - 50		
	A	B H
A	Pallet width	min. 160 mm - max. 800 mm
B	Pallet length	min. 160 mm - max. 800 mm
H	Standard travel	50 mm
	Load capacity	B = 160 - 240 mm = max. 800 N B = 240 - 400 mm = max. 1 200 N B > 400 mm = max. 1 800 N

CONTROLS



The controls are used to stop, separate and locate the pallet on the pallet system.

Stopper and sensor bracket
16A112, 16A206

p. **92**



p. **98**

Sensor bracket – horizontal
17NSH 000

Stopper
16A235, 16A236

p. **93-94**

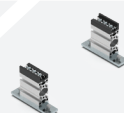


p. **99**

Sensor bracket – vertical
17NSV 000

Transversal stopper
17SP000

p. **95**



p. **100**

Transitional rollers
17PV

Anti-return stop
17PP000

p. **96**

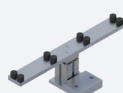


p. **101**

Electric roller

Roller stopper
17RST

p. **97**



p. **102-104**

Connecting coupling
17VE 00

ASU-400-EW-09-100 stopper and sensor bracket



PSC-90 

PSB-60 

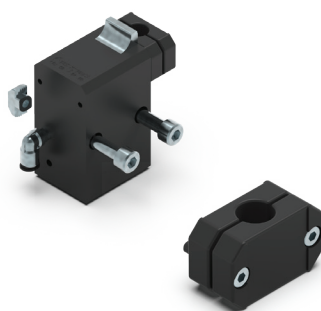
PSB-90 

The **16A112** stopper stops one or more pallets at certain locations.

*The set contains screws for attachment to the transport track.

The **16A206** sensor bracket is suitable for the M12 x 1 sensor. Material: PA.

*The set contains screws for attachment to the stopper.



Code

EXAMPLE OF ORDERING

		16A112		+	16A206					
		Stopper			Sensor bracket for the stopper					
Speed	v = m/min	6	9	12	15	18	24	30	36	
ASU - 400	weight (kg)	0 - 400	0 - 300	0 - 250	0 - 220	0 - 200	0 - 110	0 - 65	0 - 50	

ASM-400-EW-09 stopper with absorption



PSC-90 

PSB-60 

PSB-90 

The **16A235** stopper stops one or more pallets at certain locations. It uses absorption to reduce the pallet's vibrations while stopping.

*The set contains screws for attachment to the transport track.



Code

EXAMPLE OF ORDERING

16A235								
Stopper with absorption								
Speed	v = m/min	9	12	15	18	24	30	36
ASM - 400	weight (kg)	5 - 400	5 - 280	5 - 255	5 - 240	5 - 200	5 - 180	5 - 120

ASMNG-80-EW-08-100 stopper with absorption



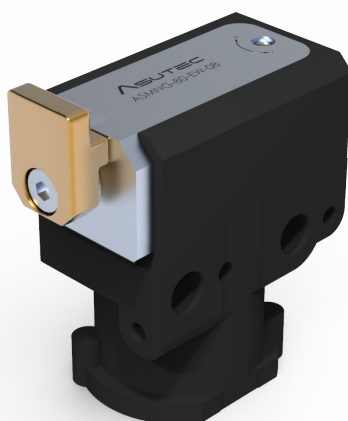
PSC-90 

PSB-60 

PSB-90 

The **16A236** stopper stops one or more pallets at certain locations. It uses absorption to reduce the pallet's vibrations while stopping.

*The set contains screws for attachment to the transport track.



Code

EXAMPLE OF ORDERING

16A236								
Stopper with absorption								
Speed	v = m/min	6	9	12	15	18	24	30
ASMNG - 80	weight (kg)	1 - 80	1 - 60	1 - 50	1 - 45	1 - 37	1 - 28	1 - 20

Transversal stopper

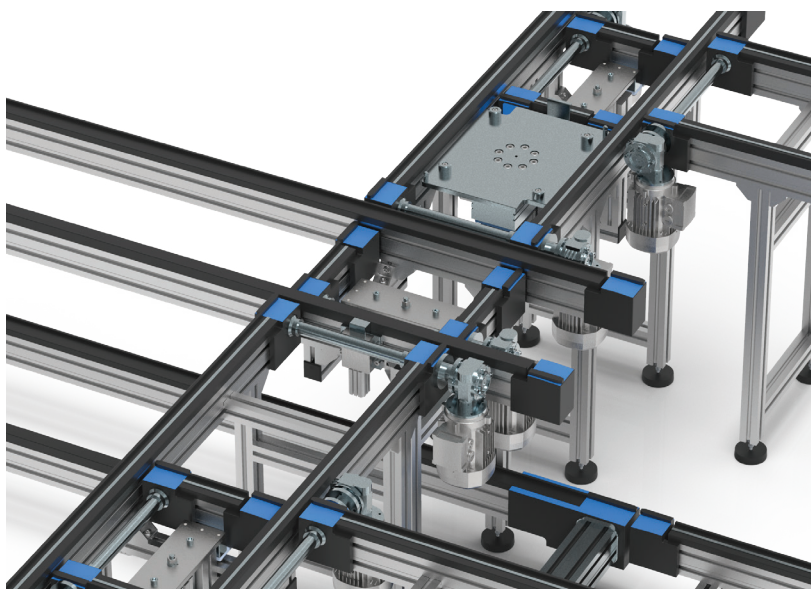
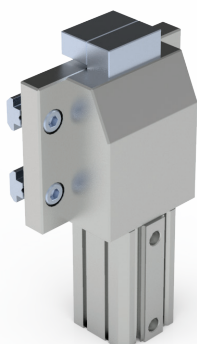


PSC-90 

PSB-60 

PSB-90 

The **17SP000** transversal stopper is used when two transversal transport track are connected to the longitudinal track.



Code

EXAMPLE OF ORDERING

17SP000

Transversal stopper

Anti-return stop

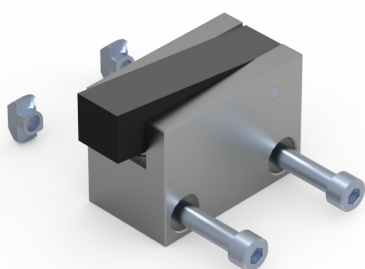


PSC-90 

PSB-60 

PSB-90 

Prevents the pallet moving to the opposite direction while stopping.



Code

EXAMPLE OF ORDERING

17PP000

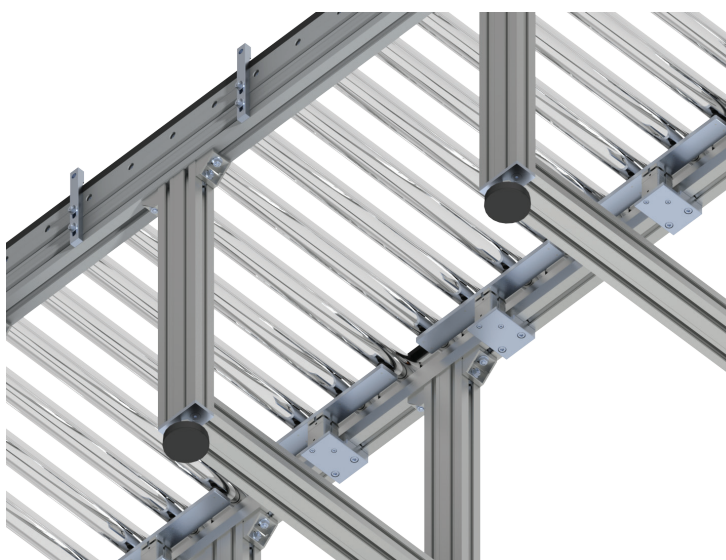
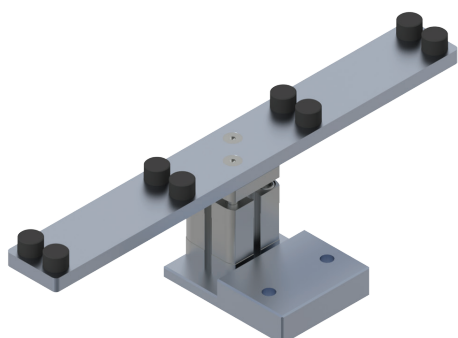
Anti-return stop

Roller stopper



PSR-50/60 ○○○○

Stops accumulation rollers on the driven roller track.



Code

EXAMPLE OF ORDERING

17RST

Roller stopper

Sensor bracket - horizontal



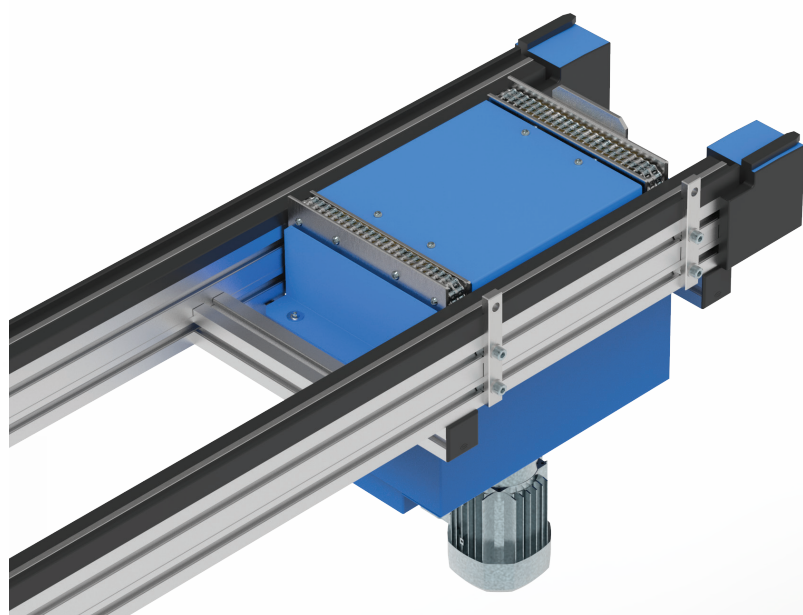
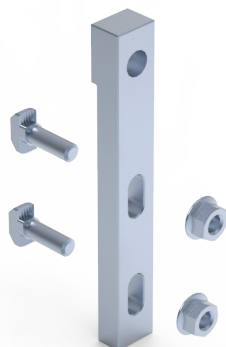
PSC-90 

PSB-60 

PSB-90 

The **17NSH000** sensor bracket is suitable for the M12 x 1 sensor. Material: zinc-plated iron. It is also intended for stopping the pallet at the end of the tracks.

*The set contains screws for attachment to the transport track.



Code

EXAMPLE OF ORDERING

17NSH 000

Sensor bracket - horizontal

Sensor bracket - vertical



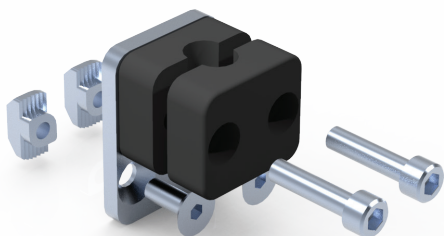
PSC-90

PSB-60

PSB-90

The **17NSV000** sensor bracket is suitable for the M12 x 1 sensor. Material: PA.

*The set contains screws for attachment to the transport track.



Code

EXAMPLE OF ORDERING

17NSV 000

Sensor bracket - vertical

Transitional rollers



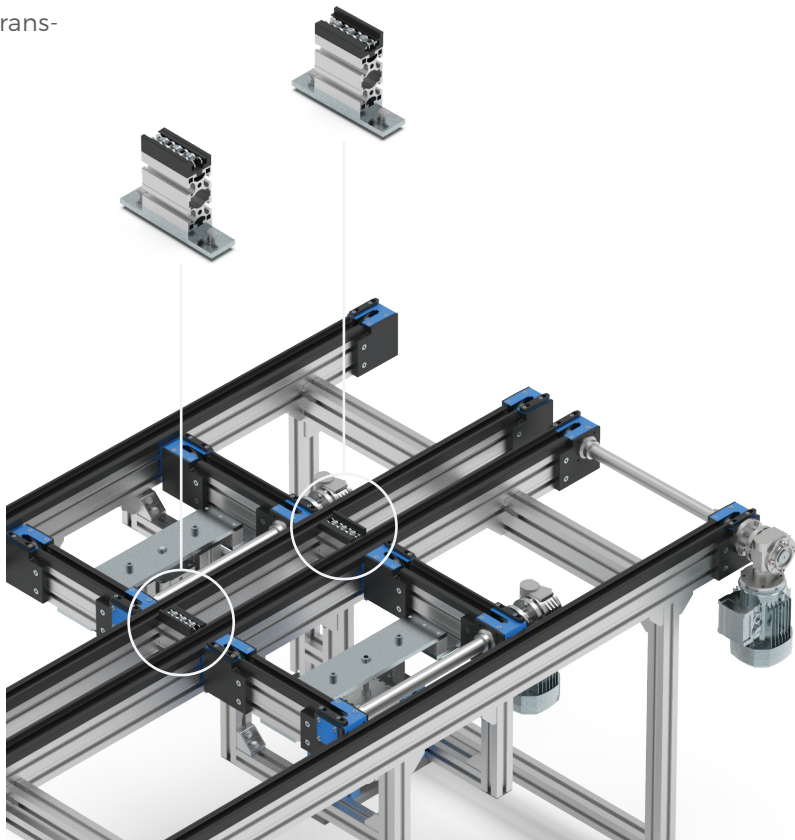
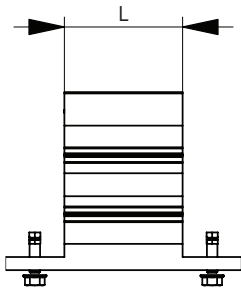
PSC-90 

PSB-60 

PSB-90 

The **17PV** transitional rollers are used between two transversal modules in order to facilitate the transfer of pallets between two parallel transport tracks.

*The set contains screws for attachment to the transport track.



Code

EXAMPLE OF ORDERING

17PV - 160		
L		
L	Length	min. 45 mm

Electric roller



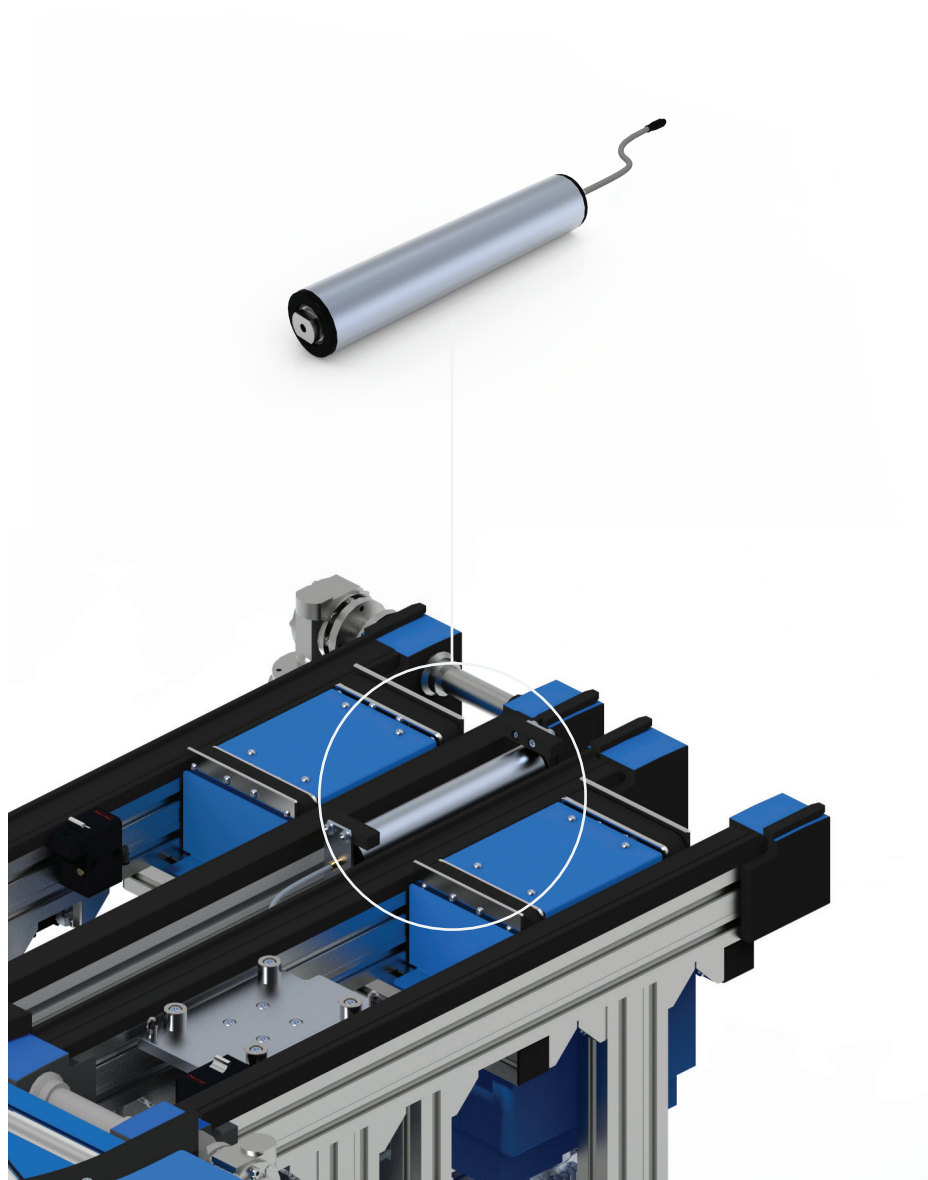
PSC-90 

PSB-60 

PSB-90 

The electric roller is used when the gap between two parallel transport tracks is too large to use transitional rollers.

* For more information contact our technical service.



Connecting coupling I



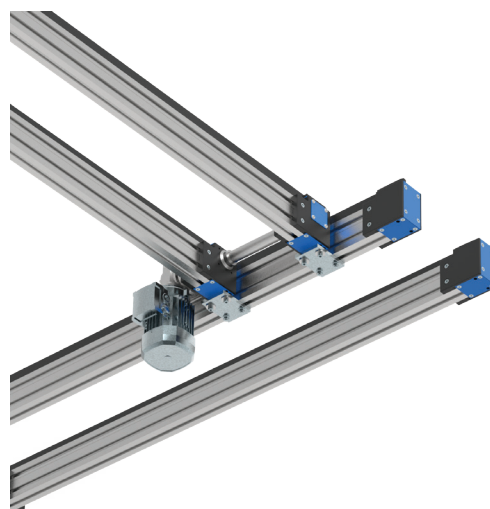
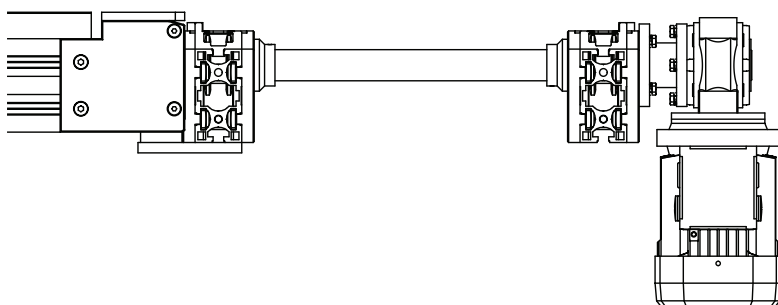
PSC-90 

PSB-90 

The connecting coupling between 17CDML/17BDML and 17CRU/17BRU.

The kit consists of:

- 2x connecting plate
- connecting elements



Code

EXAMPLE OF ORDERING

17VE 001

Connecting coupling I

Connecting coupling II



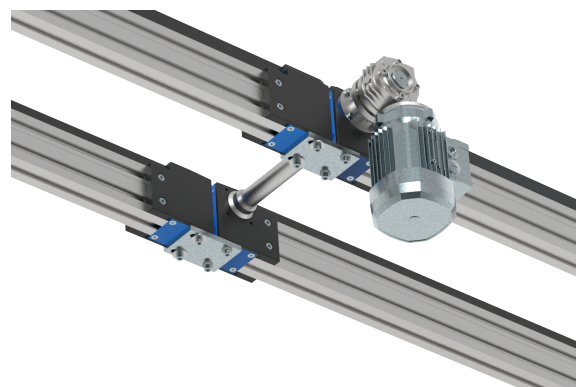
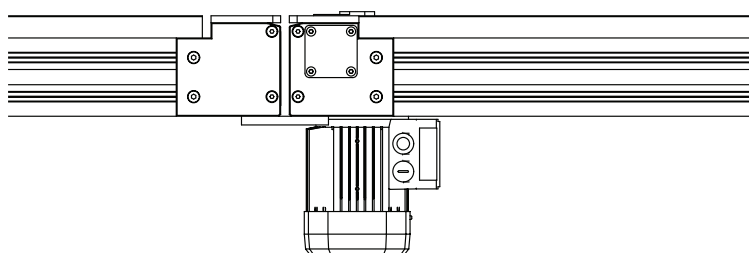
PSC-90 

PSB-90 

The connecting coupling between 17CDML/17BDML and 17CRU/17BRU.

The kit consists of:

- 2x connecting plate
- connecting elements



Code

EXAMPLE OF ORDERING

17VE 002

Connecting coupling II

Connecting coupling III



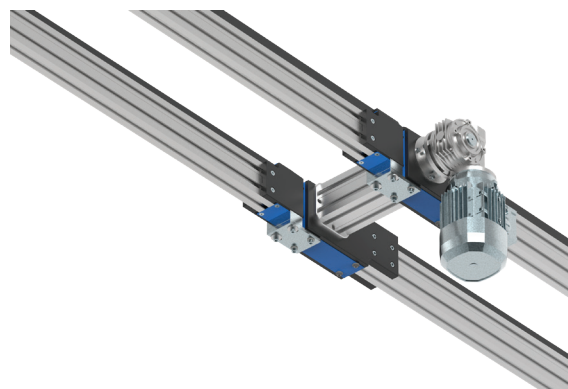
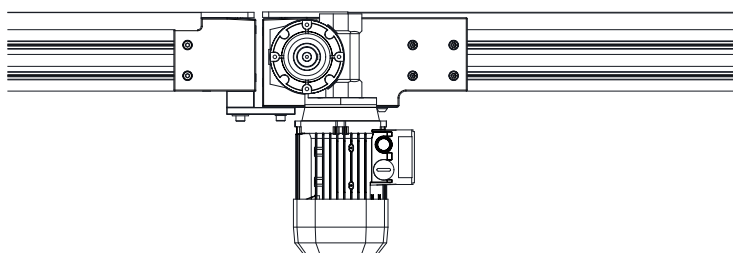
PSC-90 

PSB-90 

The connecting coupling between 17CDMH/17BDMH and 17CRU/17BRU.

The kit consists of:

- 2x connecting plate
- connecting elements



Code

EXAMPLE OF ORDERING

17VE 003

Connecting coupling III

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