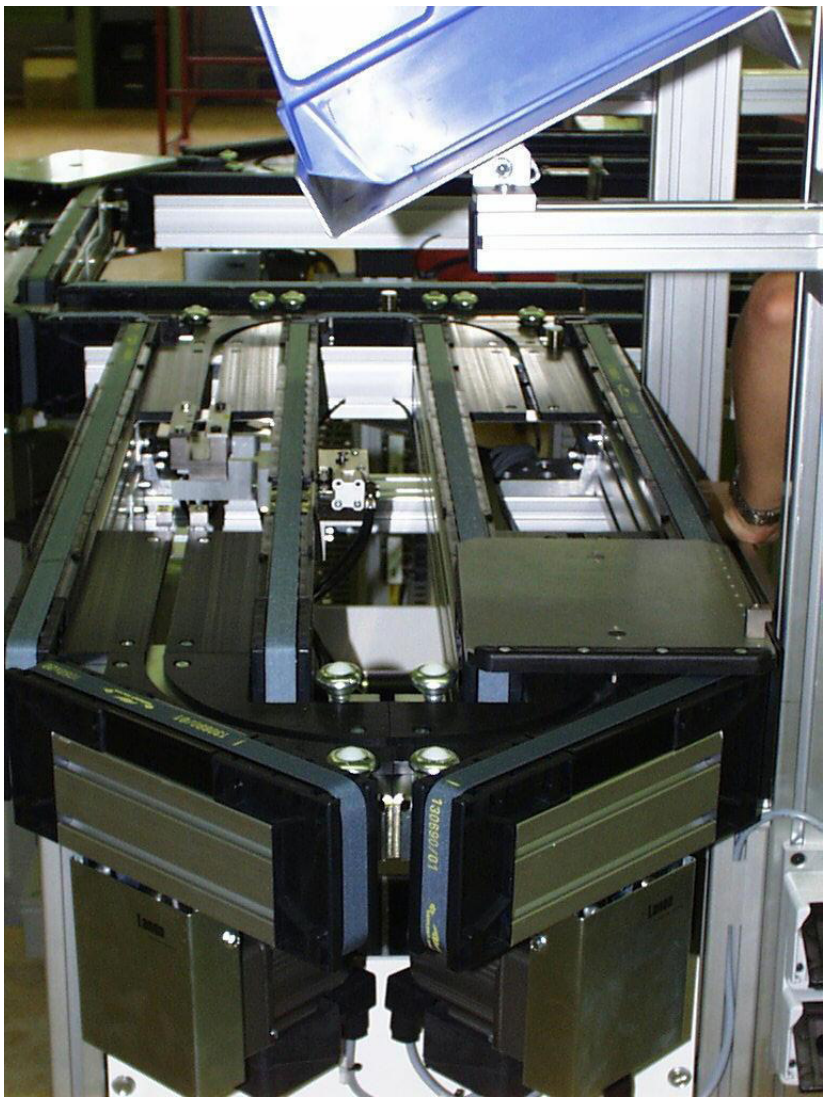
Transfer System
HFL 2002-SMART



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Art.-Nr. 22-9722

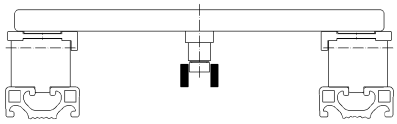
Transfer System HFL 2002-S

The HFL 2002-S Transfer System is a pallet-based transfer system for the efficient construction of modular assembly and test stations.

It is suitable for manual workstations or for building semi- or fully automatic systems.

The HFL 2002 Transfer System can expand, with your demands – flexible and totally modular.

With the HFL 2002 Transfer System you have two systems in one.
You can choose the type of guidance needed at each element:

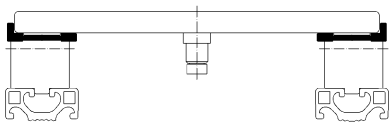


Picture 1

Central guidance with center rail,

for precise, cost-effective, multiple-stop pallet stopping (Picture 1)

or



Picture 2

Side guidance,

which ensures full accessibility from below.
(Picture 2).

The HFL 2002 Transfer System is economical to operate, with a greater than 50 % reduction in motor power consumption.

Guide belt with rollers,
reducing wear and tear and particulate generation.

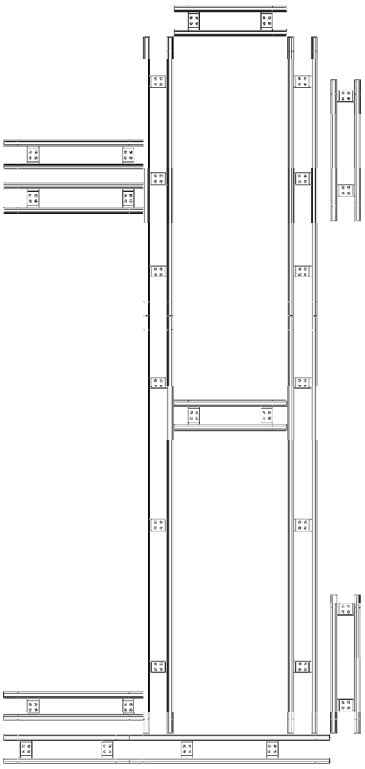
Efficient motor with gearbox.

The HFL 2002 Transfer System is maintenance-friendly.

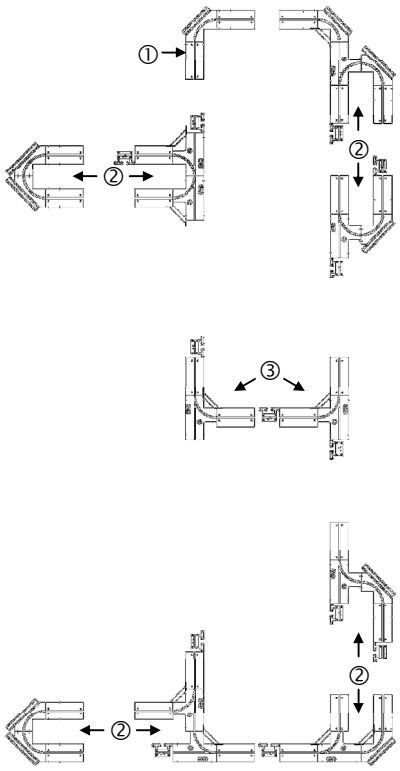
In-stock endless transport belts and drives with automatic belt tensioner guarantee a belt change time of less than 60 seconds.

Lanco: intelligence in transfer systems.

HFL 2002-S System Appliction



Picture 3



Picture 4

The HFL 2002 Transfer System is a modular building block system.

Transport Tracks

The backbone of a transfer conveyor consists of linear tracks (Picture 3) and corner drives ①.

Spur tracks ② and bridge tracks ③ including controlled in/out pallet gating are used for traffic control (Picture 4).

Spur tracks are divided in magazines and parallel tracks, both used for manual workstations, parallel tracks and so on. The option of changing relative rotation helps you on one hand to turn the transfer pallet and on the other hand it allows you to perform cyclic repetitions.

Bridge tracks are divided in IN-Line ③ and OFF-Line tracks, through which you build larger spur tracks.

Putting the spur tracks directly into the corners helps you, saving precious space.

Transfer tracks are mounted on either floor or table stands.

The transfer pallet is driven by a conveyor belt. The belt slides over rollers, reducing energy consumption by 50 %. A double belt drive is mounted below the track and can be freely positioned along the track length. Every drive includes an automatic belt tensioner.

The standard motor is fixed speed. Four speeds are possible. The motor is also available with electronic speed control.

Transfer Pallets

Depending upon system width B (200 ... 300 mm), a variety of transfer pallet lengths are available:

B = 200 mm Length: 250, 300, 350, 400, 450 mm
B = 250 mm Length: 300, 350, 400, 450, 500 mm
B = 300 mm Length: 400, 450, 500 mm

Transfer pallets are supplied with 2 guide pins, which provide accurate stop positioning at stations. Additional positioning pins can be installed in the transfer pallet to provide multiple-stopping capability and to reduce cycle time.

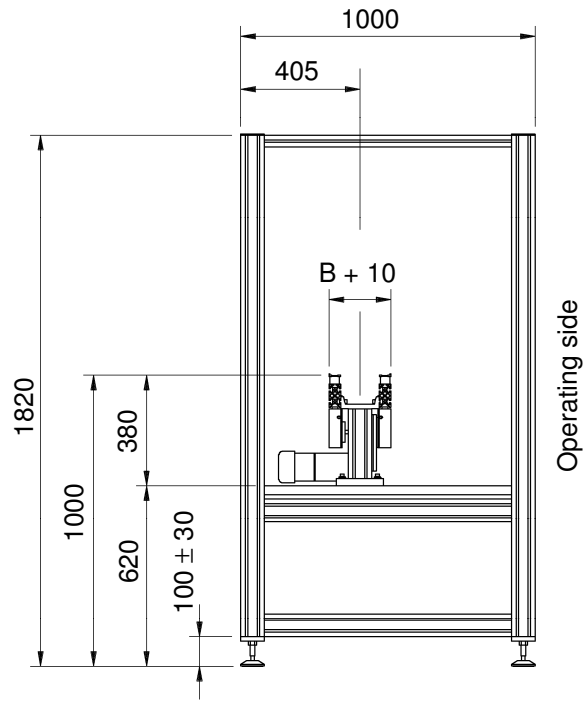
Every transfer pallet is supplied with a shock absorbing bumper.

Pallet Stops

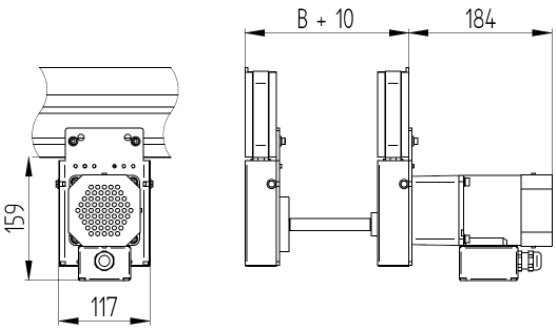
Various pallet stops are available and these can be combined with lifting devices to provide support for high-load applications.

Pallet stops mount directly to the transfer system.

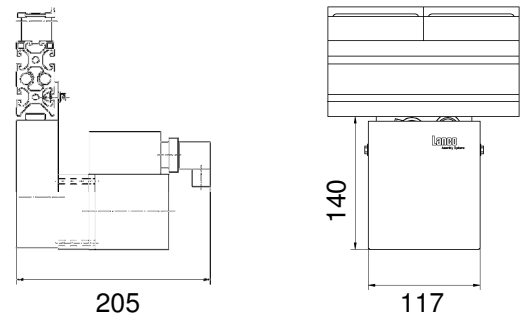
HFL 2002-S Specification



Picture 4



Picture 5



Picture 6

Transport Tracks

Transport Belt Height:	1000 mm
System Width B (Transfer Pallet Width):	200, 250, 300 mm
Track Length L (Length Transport Tracks):	in 100mm steps (min. 500mm to 3000mm)
Stands:	for floor mounting for table mounting for spur tracks for manual workstations
Transfer Pallet Guidance:	central (Picture 1) or side guidance (Picture 2)

Custom transport belt heights and track length are available on request.

Drive for Linear Tracks (Picture 5) & Corners (Picture 6)

AC-motor with gearbox

selectable left or right running

integral capacitor

integral latching thermal protection switch

Temperature Range: 10 ... 40 °C

Protection Class: IP54

External Fusing: 8 A

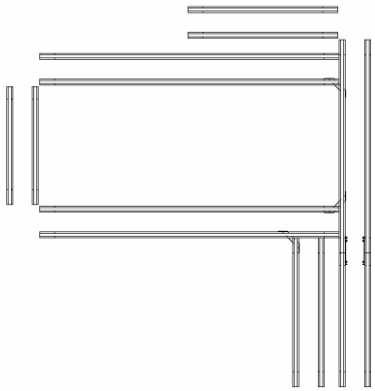
Stationary Load Capacity per Double Belt Drive: max. 50 kg

Double Belt Drive	Single Belt Drive
60 W	25 W
230/ 208 V 50/60 Hz 0.61 A	230 V 50/60 Hz 0.25 A
Belt speed:	
180 mm/s = 10.8 m/min 220 mm/s = 13.2 m/min 270 mm/s = 16.2 m/min 360 mm/s = 21.6 m/min	350 mm/s = 21 m/min

Option:

Electronic Belt Speed Control
10 ... 100 %
Nominal Speed
250 mm/s = 15 m/min

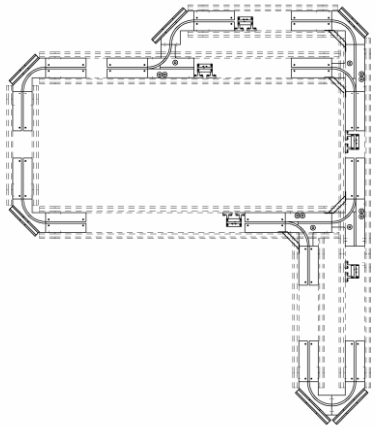
1. Determine Linear Tracks



Select a system width B based upon the transport needs of the product:

B = 200, 250 or 300 mm

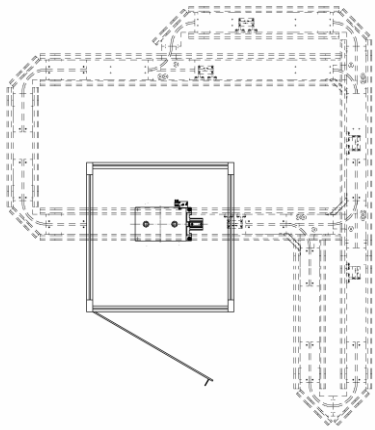
2. Determine Spur Tracks



Determine linear and spur tracks.

- Length of linear tracks see page 3-1
- Number of corner drives see page 3-2
- Type of spur tracks see page 3-3 to 3-8/11
- Type of bridge tracks see page 3-9 to 3-11

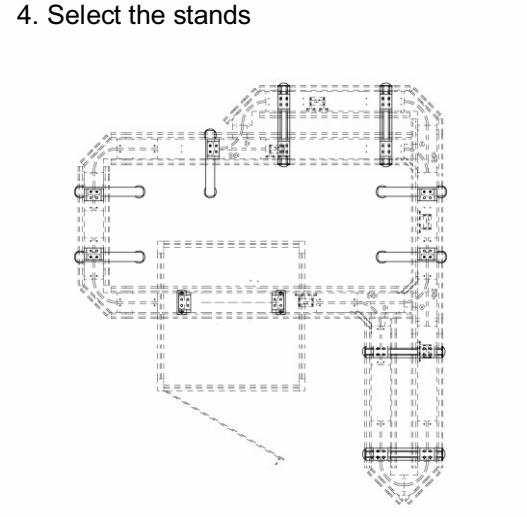
3. Determine table modules



Determine the location and size of the table modules.

- To maintain modularity, place only one station per table. see page 7-1 to 7-2

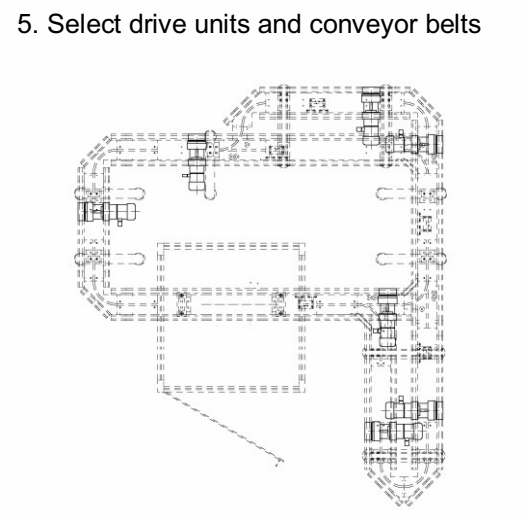
4. Select the stands



Select the stands

- for floor mounting see page 3-12
- for table mounting see page 3-12
- for spur track see page 3-12
- for manual workstation see page 3-12

5. Select drive units and conveyor belts



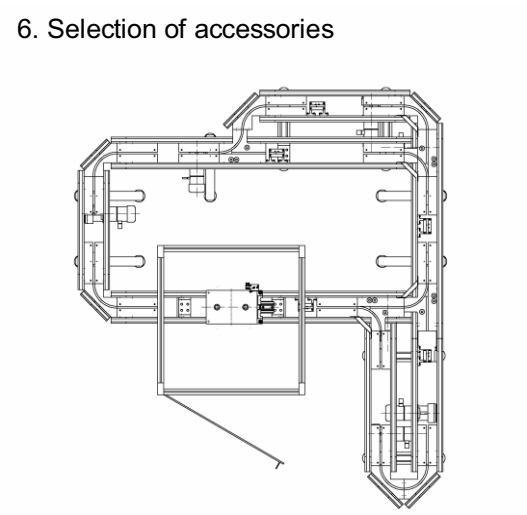
Select drive units and conveyor belts.

- Double belt drive with various speed possibilities.
  see page 3-13
- Double belt drive with electronic speed reduction for soft stopping of the transfer pallet in the station.
  see page 3-13

Calculate conveyor belt lengths.

- One belt can span more than one transport track (see lift-gate tracks page 3-1)
  Do not exceed 3m when using a single belt over multiple tracks.
- A longer belt is required when connecting spur or bridge tracks, due to the over rollers.
  see page 3-15

6. Selection of accessories



Selection of accessories.

- Transfer pallet see page 4-1
- Manual workstation see pages 9-1 ... 9-8
- Coding system see pages 4-2 ... 4-11
- Pallet stop see page 5-2
- Safety guarding see page 7-2

Select a pallet support device as requested by your production process.

see pages 8-1 ... 8-2

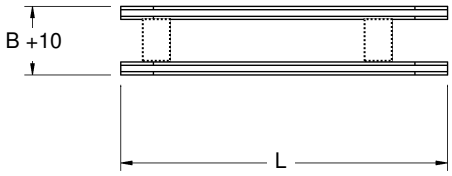
Your system is now ready to order.

Our sales team is waiting to assist you with your technical questions.

Transport Tracks

Linear Tracks

for pallet transporting.



The following basic elements must also be included to completely specify a functional linear track:

- Stands see page 3-12
- Drives see page 3-13
- Conveyor Belts see page 3-15

- Connection of 2 linear tracks
  2 x Art.-No. 22-1628

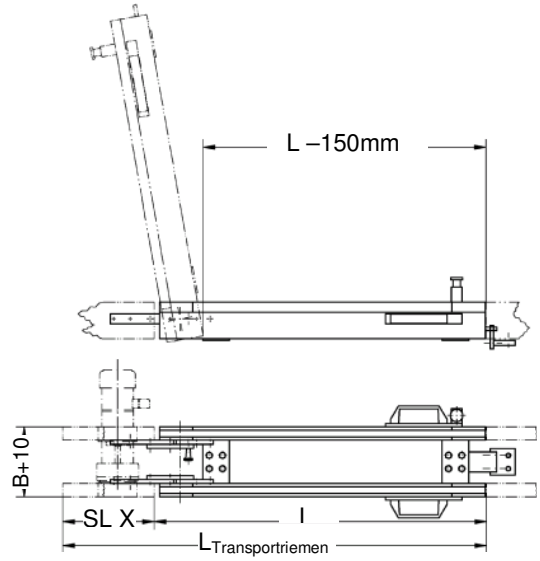
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
SL 0.5	22-7050		-
SL 0.6	22-7060		
SL 0.7	22-7070		
⇩ SL ... ⇩	⇩ 22-7... ⇩		
SL 2.8	22-7280		
SL 2.9	22-7290		
SL 3.0	22-7300		

Example Type designation: **SL** 1.0 — Length L [m]
⇩ Art.-No. **22-7**100 — Length L [cm]

Linear tracks are available from 0.5 - 3.0m in 0.1m-steps.
A special track length can result by using spur tracks like AML, AMR, APL, APR, BOL and BOR (see following pages).
For a track length of 2m and more, 3 stands and 2 additional belt-tensioner (2x Art.-No. 22-1310) are required.

Lift-Gate Tracks

in between 2 linear tracks. These tracks can be lifted and allow you to access the system for service-matters.
A switch turns off the drive.



The following basic elements must also be included to completely specify a functional lift-gate track:

- Conveyor Belts(*) see pages 3-15

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
ST …-0.8	22-0111	22-0211	22-0311
ST …-0.9	22-0112	22-0212	22-0312
ST …-1.0	22-0113	22-0213	22-0313
ST …-1.1	22-0114	22-0214	22-0314
ST ...-1.2	22-0115	22-0215	22-0315
ST …-1.3	22-0116	22-0216	22-0316
ST …-1.4	22-0117	22-0217	22-0317
ST ...-1.5	22-0118	22-0218	22-0318

Example Type designation: ST 200-1.0 — Length L [m]
System Width B
↳ open space = 1000mm-150mm=850mm

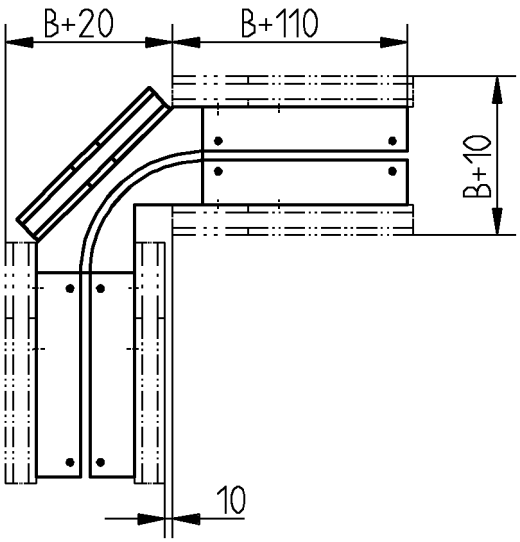
(*) The belt for the linear track (SL X), that is fixed by the hinge-joint, must be calculated for a linear track of a total length of X+L, because the linear track drives the lift-gate track in the same time. The total length should not exceed 3m.

PLC requirements:
none

Corners

Drive units and conveyor belts are included in corners.

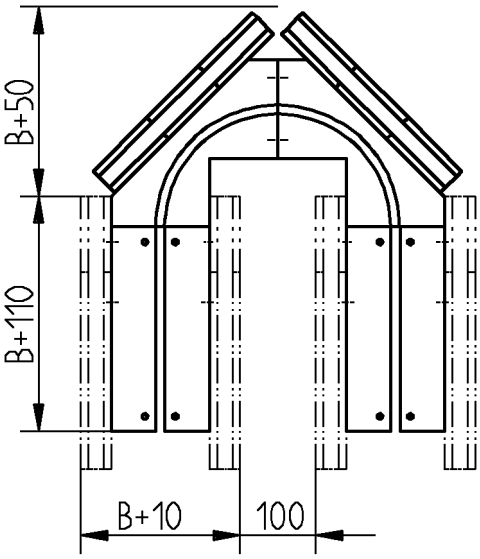
90° Corners



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
K... -90	22-0132	22-0232	22-0332

Example Type designation: **K** 200-90 — 90° corner, System Width
⇩
Art.-No. 22-0132

180° Corners



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
K... -180	22-0137	22-0237	22-0337

Example Type designation: **K** 200-180 — 180° corner, System Width
⇩
Art.-No. 22-0137

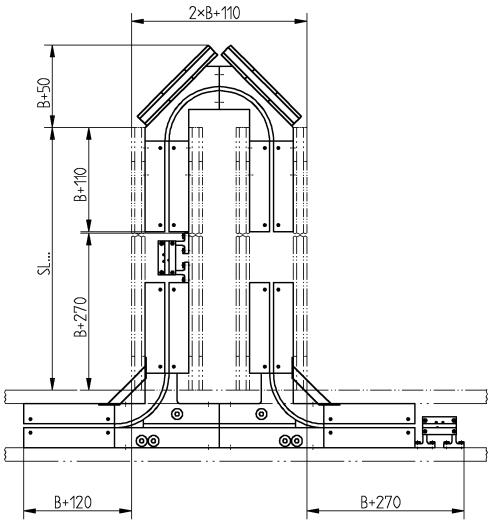
Spur Tracks

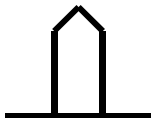
Spur tracks are divided in magazines and parallel tracks, both used for manual workstations, parallel tracks and so on. The option of changing relative rotation helps you on one hand to turn the transfer pallet and on the other hand it allows you to perform cyclic repetitions.

Putting the spur tracks directly into the corners helps you, saving precious space.

PLC requirements: **see page 3-11**

Magazine





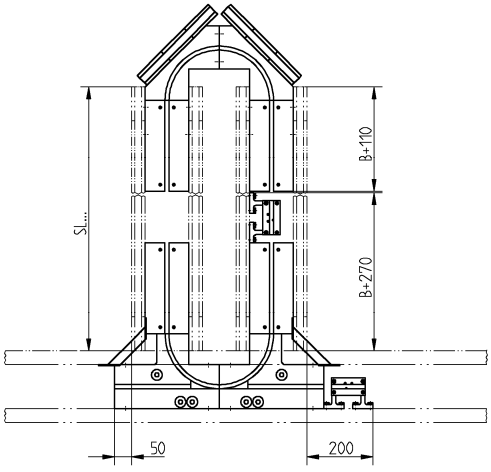
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AM _ _ _	22-0153	22-0253	22-0353

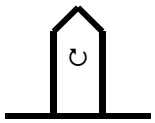
Example Type designation: **AM** 200 — System Width

⇩

Art.-No. 22-0153

Magazine turneD





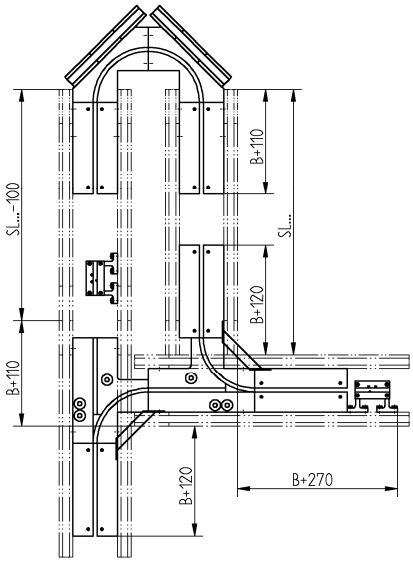
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AMD _ _ _	22-0154	22-0254	22-0354

Example Type designation: **AMD** 200 — System Width

⇩

Art.-No. 22-0154

Magazine Left

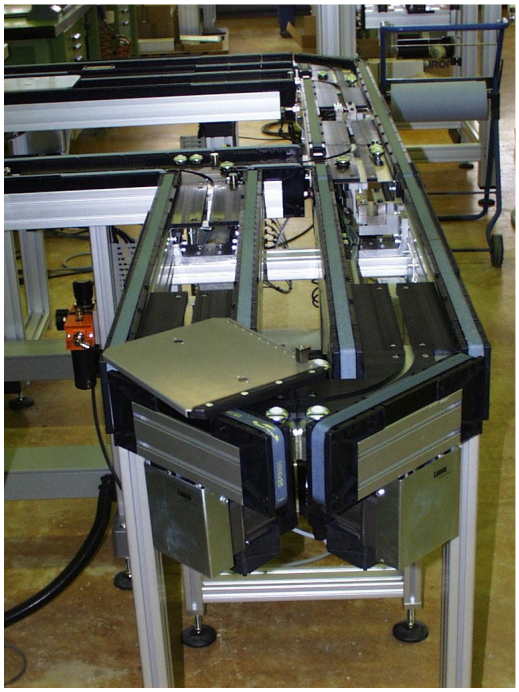


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AML _ _ _	22-0155	22-0255	22-0355

Example Type designation: **AML** 200 — System Width

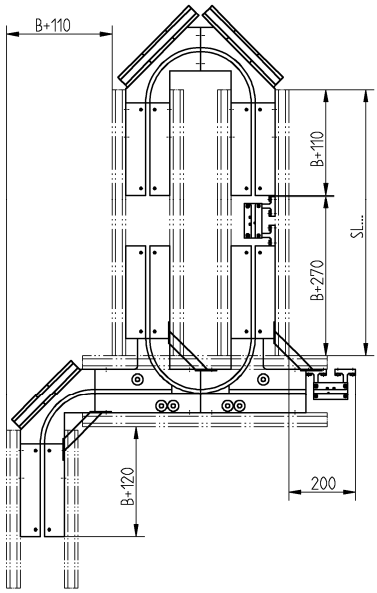
⇩

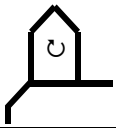
Art.-No. 22-0155



AML 200

Magazine Left turneD





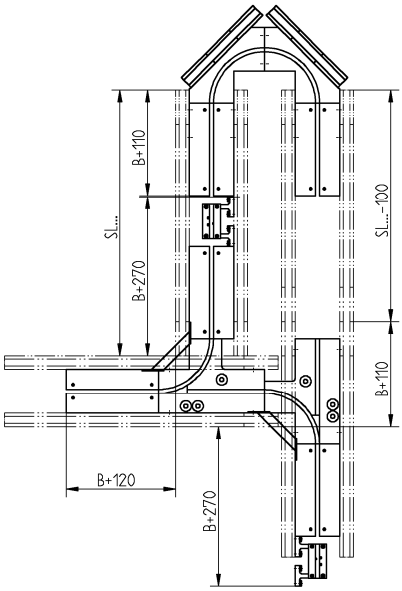
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AMLD _ _ _	22-0156	22-0256	22-0356

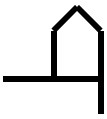
Example Type designation: **AMLD** 200 — System Width

⇩

Art.-No. 22-0156

Magazine Right

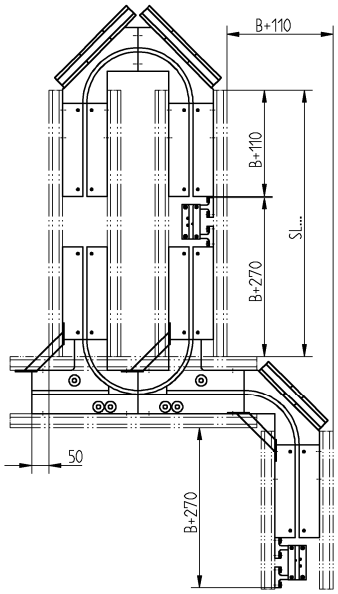




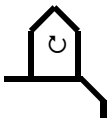
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AMR _ _ _	22-0157	22-0257	22-0357

Example Type designation: **AMR** 200 — System Width
⇩
Art.-No. 22-0156

Magazine Right turneD



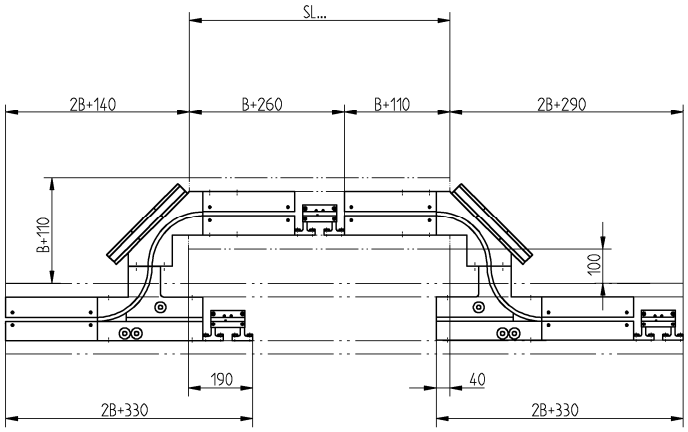
AMRD 200 with manual workstation



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AMRD _ _ _	22-0158	22-0258	22-0358

Example Type designation: **AMRD** 200 — System Width
⇩
Art.-No. 22-0158

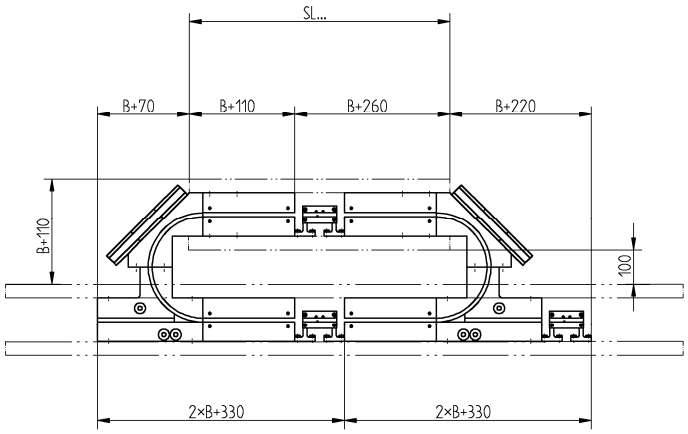
Parallel Track



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AP - - -	22-0163	22-0263	22-0363

Example Type designation: **AP** 200 — System Width
⇩
Art.-No. 22-0163

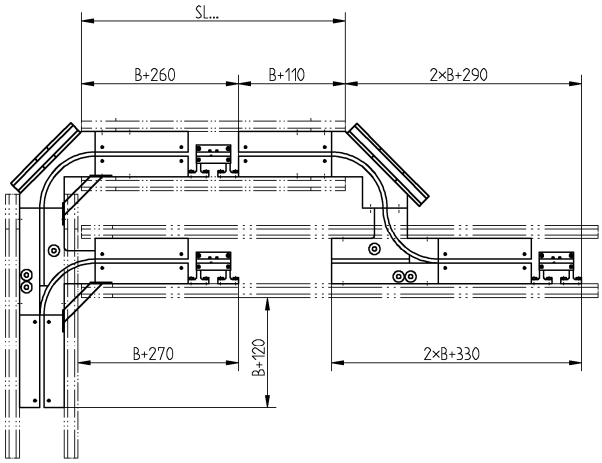
Parallel Track turneD



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
APD - - -	22-0164	22-0264	22-0364

Example Type designation: **APD** 200 — System Width
⇩
Art.-No. 22-0164

Parallel Track Left



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
APL _ _ _	22-0165	22-0265	22-0365

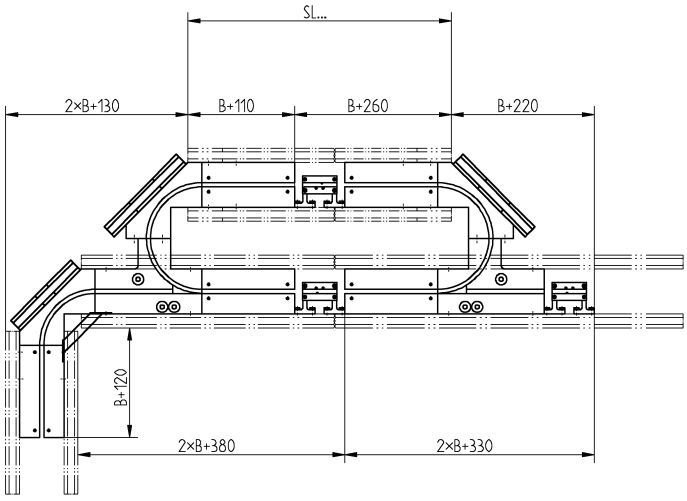
Example Type designation: **APL** 200 — System Width

⇩

Art.-No. 22-0165

APLD 200

Parallel Track Left turneD



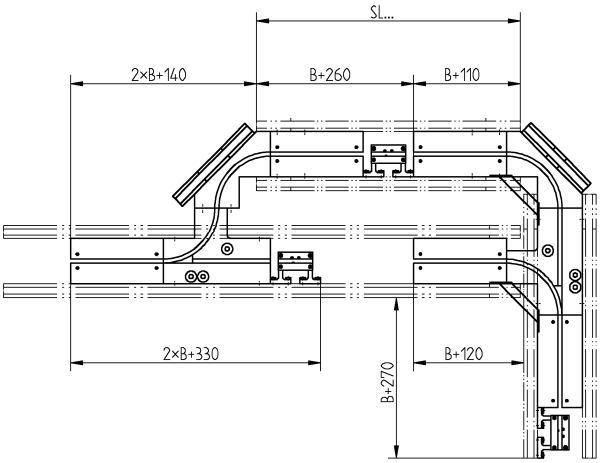
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
APLD _ _ _	22-0166	22-0266	22-0366

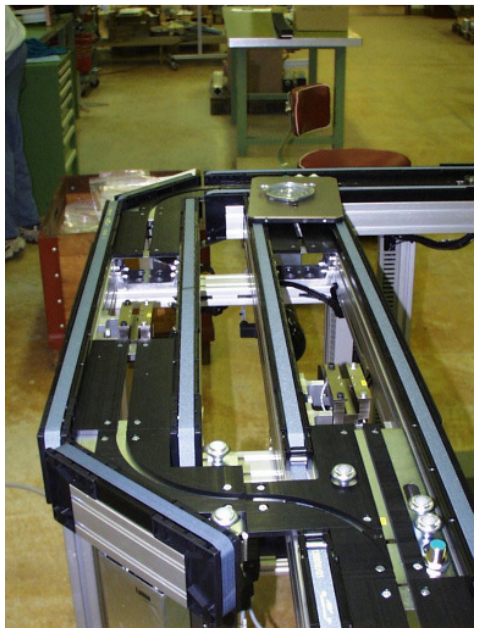
Example Type designation: **APLD** 200 — System Width

⇩

Art.-No. 22-0166

Parallel Track Right





APR 200

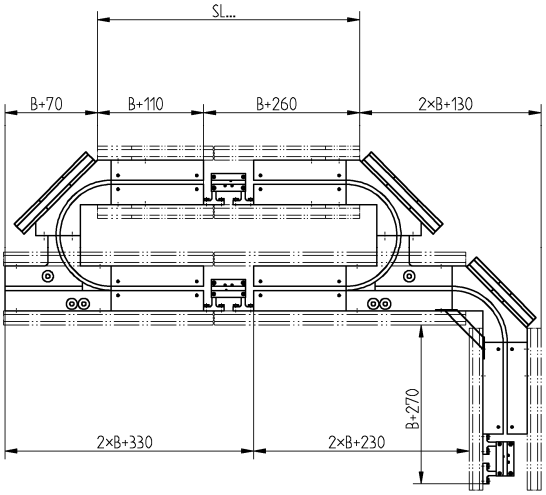
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
APR - - -	22-0167	22-0267	22-0367

Example Type designation: **APR** 200 — System Width

⇩

Art.-No. 22-0167

Parallel Track Right turneD



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
APRD - - -	22-0168	22-0268	22-0368

Example Type designation: **APRD** 200 — System Width

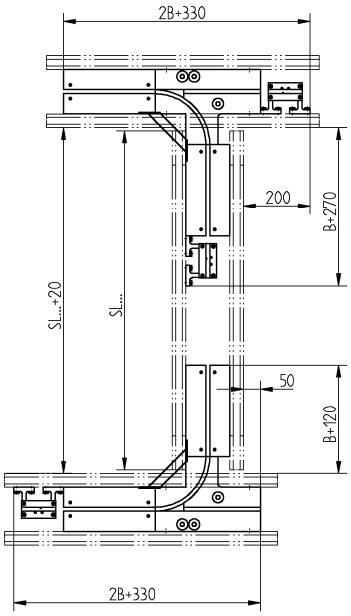
⇩

Art.-No. 22-0168

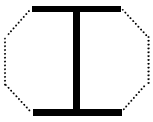
Bridge Tracks

Bridge tracks are divided in IN-Line and OFF-Line tracks, through which you build larger spur tracks.

Inline



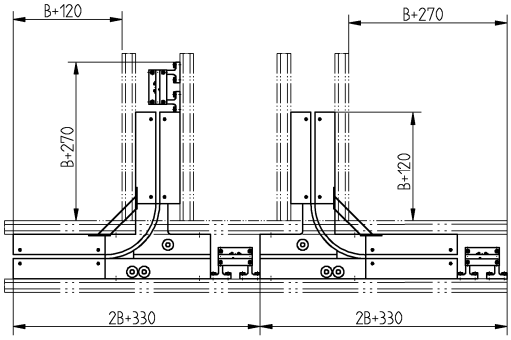
PLC requirement: **see page 3-11**



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BI _ _ _	22-0171	22-0271	22-0371

Example Type designation: **BI** 200 — System Width
⇩
Art.-No. 22-0171

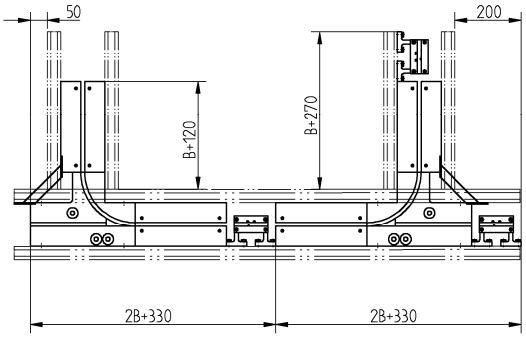
Offline

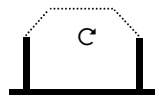


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BO _ _ _	22-0173	22-0273	22-0373

Example Type designation: **BO** 200 — System Width
⇩
Art.-No. 22-0173

Offline turneD

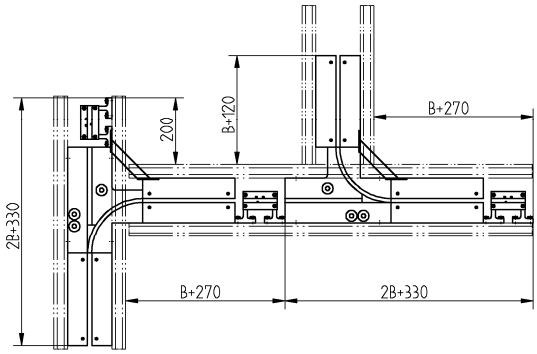


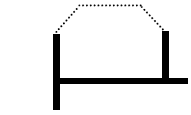


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BOD _ _ _	22-0174	22-0274	22-0374

Example Type designation: **BOD** 200 — System Width
⇩
Art.-No. 22-0174

Offline Left

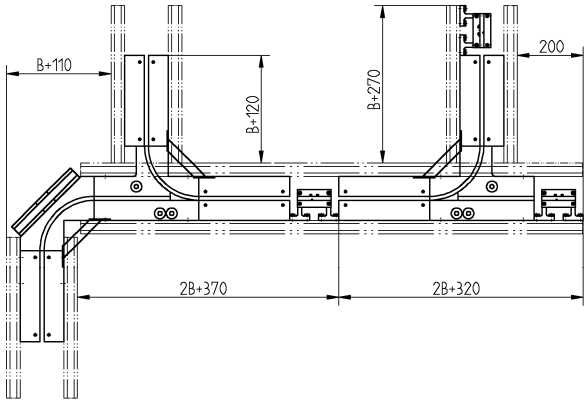


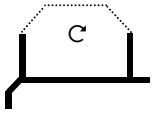


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BOL _ _ _	22-0175	22-0275	22-0375

Example Type designation: **BOL** 200 — System Width
⇩
Art.-No. 22-0175

Offline Left turneD

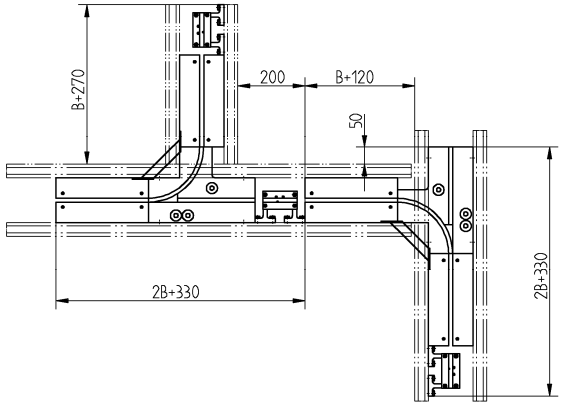


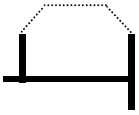


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BOLD _ _ _	22-0176	22-0276	22-0376

Example Type designation: **BOLD** 200 — System Width
⇩
Art.-No. 22-0176

Offline Right

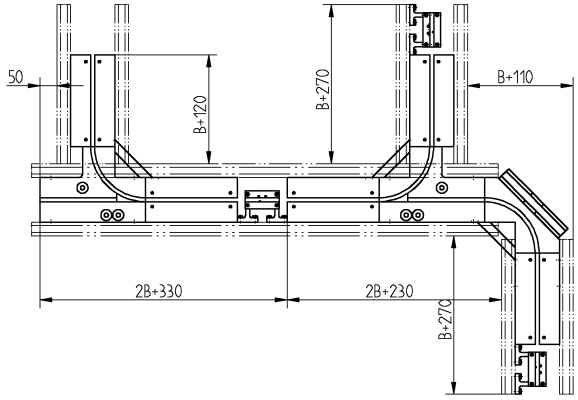


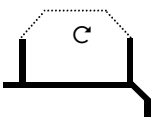


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BOR _ _ _	22-0177	22-0277	22-0377

Example Type designation: **BOR** 200 — System Width
⇩
Art.-No. 22-0177

Offline Right turneD



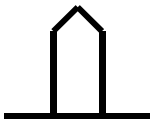


	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
BORD _ _ _	22-0178	22-0278	22-0378

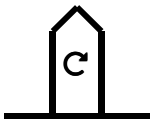
Example Type designation: **BORD** 200 — System Width
⇩
Art.-No. 22-0178

PLC Requirements

Spur Tracks

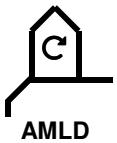


AM



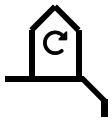
AMD

AML



AMLD

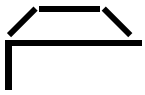
AMD



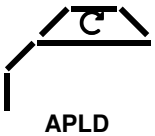
AMRD

AP

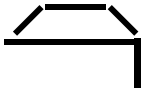
APD



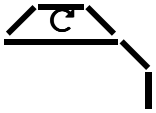
APL



APLD

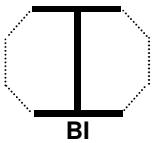


APR

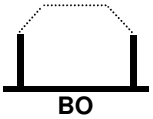


APRD

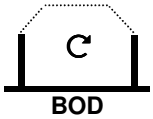
Bridge Tracks



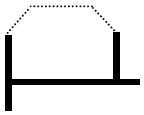
BI



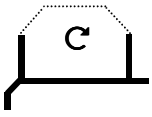
BO



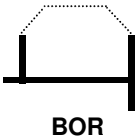
BOD



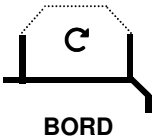
BOL



BOLD



BOR



BORD

		PLC Requirements	
Type designation	**Art.-No.**	**Inputs**	**Outputs**(*)
AM _ _ _	22-0 _ 53	4	3
AMD _ _ _	22-0 _ 54	4	3
AML _ _ _	22-0 _ 55	4	3
AMLD _ _ _	22-0 _ 56	4	3
AMR _ _ _	22-0 _ 57	4	3
AMRD _ _ _	22-0 _ 58	4	3
AP _ _ _	22-0 _ 63	6	4
APD _ _ _	22-0 _ 64	6	4
APL _ _ _	22-0 _ 65	6	4
APLD _ _ _	22-0 _ 66	6	4
APR _ _ _	22-0 _ 67	6	4
APRD _ _ _	22-0 _ 68	6	4
BI _ _ _	22-0 _ 71	6	4
BO _ _ _	22-0 _ 73	6	4
BOD _ _ _	22-0 _ 74	6	4
BOL _ _ _	22-0 _ 75	6	4
BOLD _ _ _	22-0 _ 76	6	4
BOR _ _ _	22-0 _ 77	6	4
BORD _ _ _	22-0 _ 78	6	4

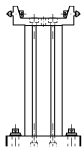
(*)The following basic elements must also be included to completely specify a functional spur track (magazine or parallel track) or bridge track:

- Coding System see page 4-2 bis 4-11
- 1 Valve **for each Output**

Stands

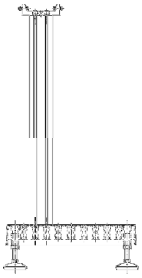
for Table mouting

for table mounting of transport tracks.



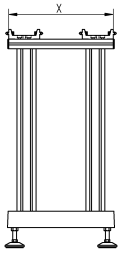
for Floor mounting

for floor mounting of linear tracks.



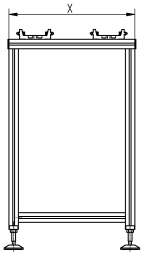
for Spur Tracks

for floor mounting of spur tracks.



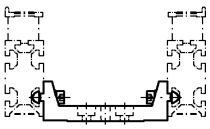
for Manual Workstations

for floor mounting of manual workstations on spur tracks (FAH) or on linear tracks (FLH).



Intermediate Element without Stand

fixes the distance and guaranties the stability of linear tracks. It is allready included in the other stands !



For a track length of 2m and more, 3 stands are required.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
FT _ _ _	22-0125	22-0225	22-0325

Example Type designation: **FT** 200 — System Width
⇩
Art.-No. 22-0125

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
FB _ _ _	22-0126	22-0226	22-0326

Example Type designation: **FB** 200 — System Width
⇩
Art.-No. 22-0126

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
FA _ _ _	22-0127	22-0227	22-0327
X	440 mm	490 mm	540 mm

Example Type designation: **FA** 200 — System Width
⇩
Art.-No. 22-0127

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
FAH _ _ _	22-0128	22-0228	22-0328
X	530 mm	630 mm	730 mm
FLH _ _ _	22-0129	22-0229	22-0329
X	530 mm		

Example Type designation: **FAH** 200 — System Width
⇩
Art.-No. 22-0128

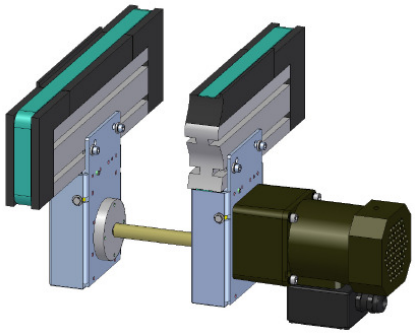
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
_ _ _1	21-1656	21-1657	21-1658

Example Type designation: 200**1** — System Width
⇩
Art.-No. 21-1656

Drives

for 2 Belts with Constant Speed

when a transport track with double belts is required.
Standard speed 220 mm/s
For pallet returns, higher speeds may be specified.



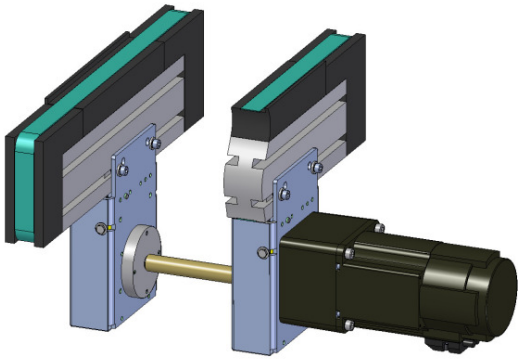
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
B= xxx v= 180	22-0420	22-0430	22-0440
B= xxx v= 220	22-0421	22-0431	22-0441
B= xxx v= 270	22-0422	22-0432	22-0442
B= xxx v= 360	22-0423	22-0433	22-0443

Example Type designation: B= 200 v= 180

Speed (mm/s)
System Width B

for 2 Belts with Controlled Speed

when a transport track with double belts is required. By reducing the drive speed at a station, soft pallet stopping can be achieved



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
ADG _ _ _-250-2	22-0460	22-0461	22-0462

Max. Speed 250 mm/s

adjustable 10 ... 100%

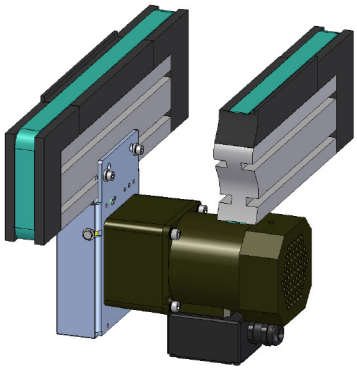
Example Type designation: ADG 200-250-2

Voltage
2 = 230 V
Speed
System Width B

Drives

for 1 Belt with Constant Speed

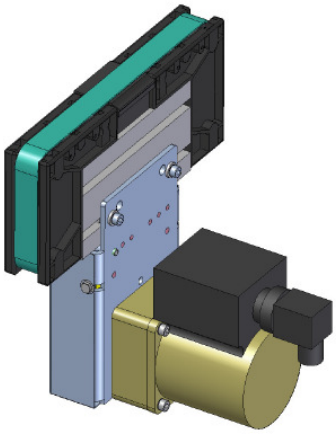
when a transport track with a single belt is required,
e.g. feeder belts, etc



	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
v= 180 mm/s	22-0450		
v= 220 mm/s	22-0451		
v= 270 mm/s	22-0452		
v= 360 mm/s	22-0453		

for 1 Belt with Constant Speed Corner drive unit

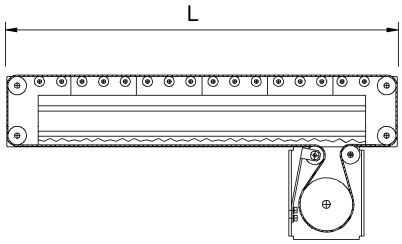
when a transport track with a single belt is required,
e.g. corner, feeder belts, etc

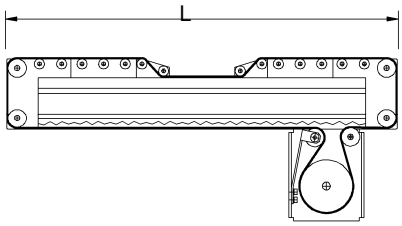


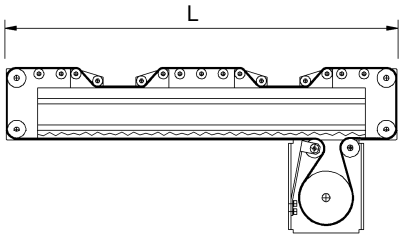
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
AE45	22-0090		

Conveyor Belts

to drive the pallet.







Determination of Art.-No.
22-5xxx
Length in cm

Example:
Length Transport Track
(without over roller) 1.0 m
L_T = 2 x L + 450 mm
L_T = 2 x 1000 + 450 mm
L_T = 2450 mm = 245 cm

⇒ Art.-No. 22-5245

For calculating the conveyor belt length L_T
with explanation by example.
Important: For a beltlength of 4500 mm and more a additional belt-tensioner is required:

L_T > 4500 mm **1 x Art.-No. 22-1310**

Transport track without over rollers

L_T = 2 x L + 450 mm

Transport track with single over roller

L_T = 2 x L + 450 mm

belt lengths up to 25 mm longer can be compensated for
by adjusting a pulley in the drive unit.

Transport track with 2 over roller

L_T = 2 x L + 500 mm

Combination of multiple transport tracks

It is possible to bridge over multiple transport tracks with a single conveyor belt to save drives (see page 3-1 lift-gate tracks). The max. length of combined transport tracks should not exceed 3m.

How to order conveyor belts

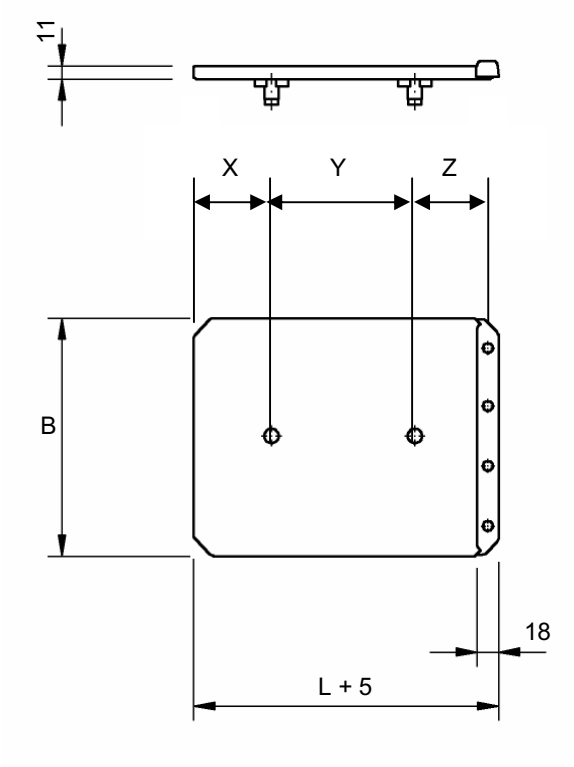
Calculate conveyor belt length

Specify Art.-No.

On request you receive an Exel-program to simplify calculations.

Transfer Pallets

for the transport of work pieces from station to station.



Transfer pallets are supplied with 2 guide pins, which provide accurate stop positioning at stations. Additional positioning pins can be installed in the transfer pallet to provide multiple-stopping capability and to reduce cycle time.
Every transfer pallet is supplied with a shock absorbing bumper.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
WT _ _ -250	22-0700	-	-
WT _ _ -300	22-0701	22-0711	-
WT _ _ -350	22-0702	22-0712	-
WT _ _ -400	22-0703	22-0713	22-0723
WT _ _ -450	22-0704	22-0714	22-0724
WT _ _ -500	-	22-0715	22-0725

Example type designation: WT 200-300
- 200: System width B
- 300: Length L in mm

The proper positioning of the guide pins is dependent on the transfer pallet length.

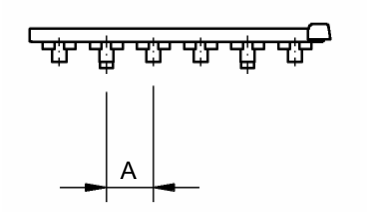
	X [mm]		Y [mm]		Z [mm]
Type designation	Standart	Min-**Max**	Standart	Min-Max	Min-Max
WT **200**-250	50	30-**75**	100	70-100	50-120
WT **200**-300	50	30-**75**	150	120-200	50-120
WT **200**-350	50	30-**75**	200	150-230	50-120
WT **200**-400	50	30-**75**	230	150-230	50-150
WT **200**-450	75	50-**75**	230	180-230	75-180
WT **250**-300	60	40-**75**	120	80-120	60-120
WT **250**-350	60	40-**75**	180	120-200	60-150
WT **250**-400	60	40-**75**	230	150-280	60-180
WT **250**-450	60	40-**75**	280	180-280	60-200
WT **250**-500	75	50-**75**	280	200-280	75-200
WT **300**-400	75	50-**75**	200	150-250	75-180
WT **300**-450	75	50-**75**	250	180-300	75-210
WT **300**-500	75	50-**75**	300	200-330	75-210

If X Max (=75mm) is not respected, transfer pallets will block one another in the corners.
In this event it is necessary to singulate the transfer pallet around the corner with a pallet stop.

A simulation for an optimal arrangement of guide and positioning pins is available.

Positioning Pin

for additional pallet stopping positions.



Type	Art.-No.
Positioning pin	22-2056

A min. 20 mm

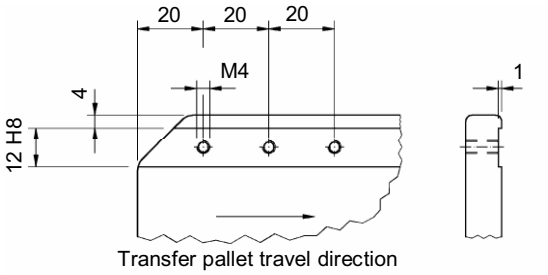
Exception: Shock absorbing pallet stop

A min. 40 mm

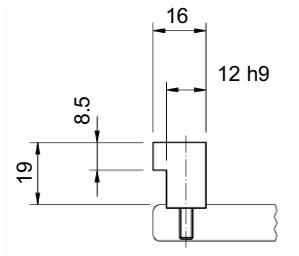
Positioning pins can be added inbetween the 2 guiding pins.
For pins on the outside please contact Lanco.

Coding System

Code Mounting on Transfer Pallets



Fixed Code

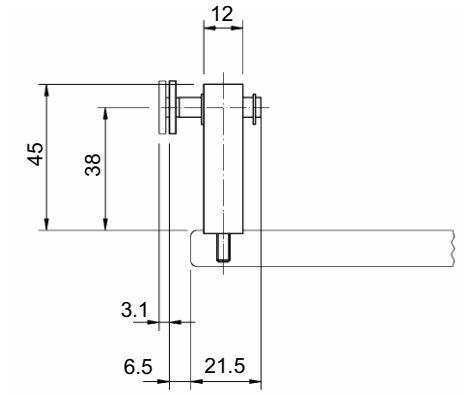


Fixed coding for transfer pallets.
Detected with fixed code reader.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 10F	24-0100

Binary Code

Single Level

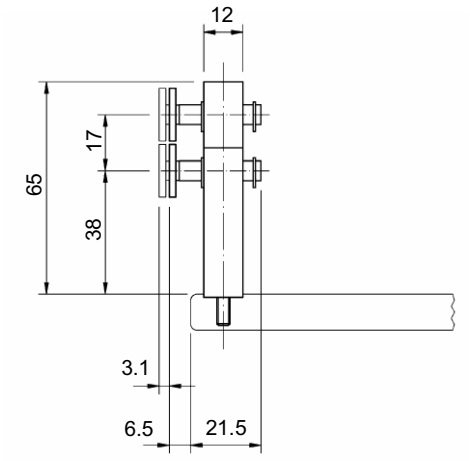


Dynamic coding for transfer pallets.
Detected and actuated with reader/setters or ramps.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 10B S01	24-0105

Data: 1 bit

Dual Level



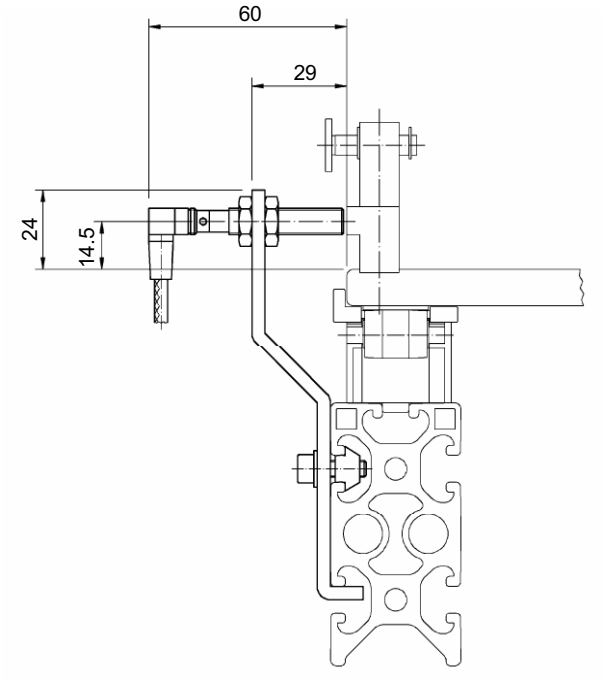
Dynamic coding for transfer pallets.
Detected and actuated with reader/setters or ramps.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 10B S12	24-0110

Data: 2 bit

Coding System

Fixed Code Reader

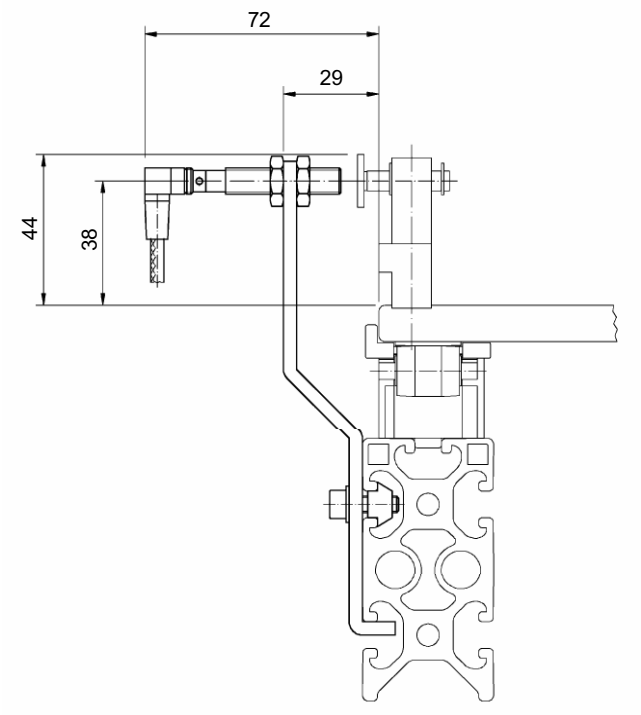


For fixed code reading.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 20F	24-0120

PLC requirement:
1 Input

Code Reader
Lower Flag



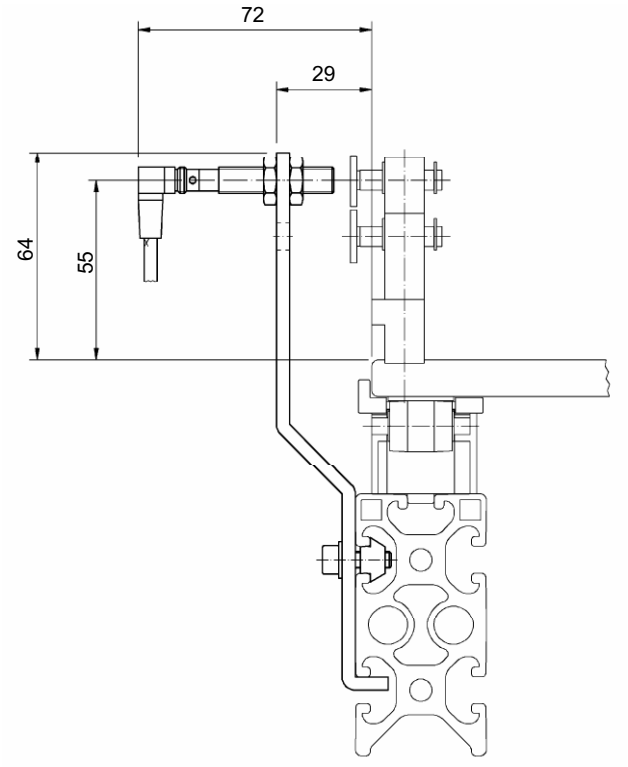
For reading lower flag of dynamics codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 20B S01	24-0125

PLC requirement:
1 Input

Coding System

Code Reader
Upper Flag

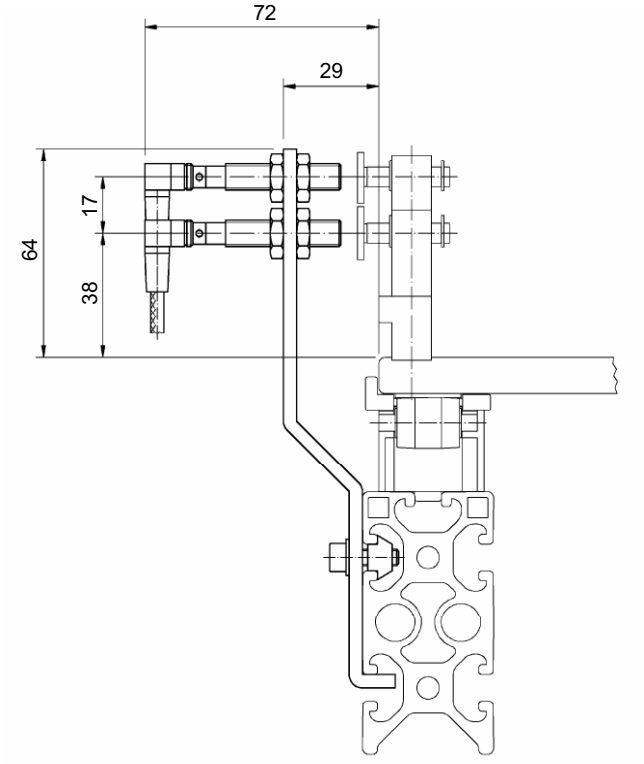


For reading upper flag of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 20B S02	24-0130

PLC requirement:
1 Input

Code Reader
Lower and Upper Flag



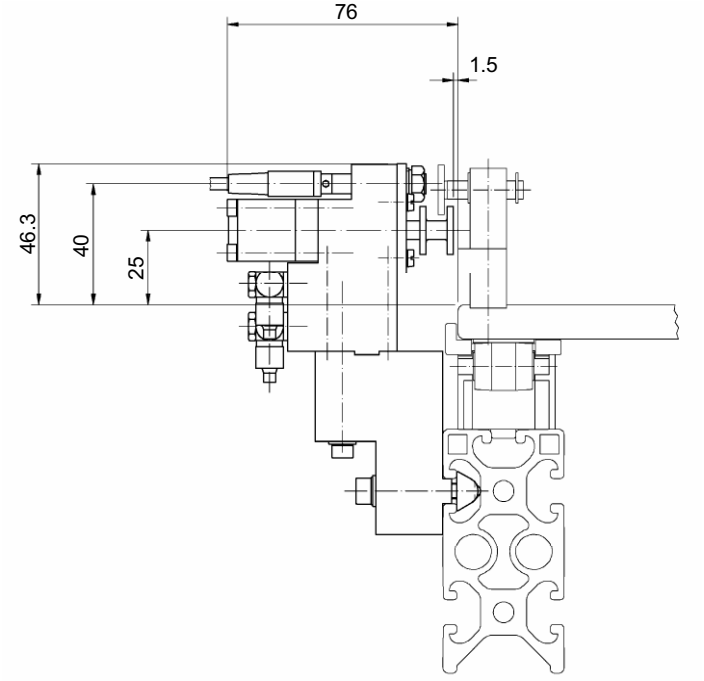
For reading lower and upper flag of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 20B S12	24-0135

PLC requirement:
2 Inputs

Coding System

Code Reader / Setter
Lower Flag



For reading and setting lower flag of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 30B S01	24-0140

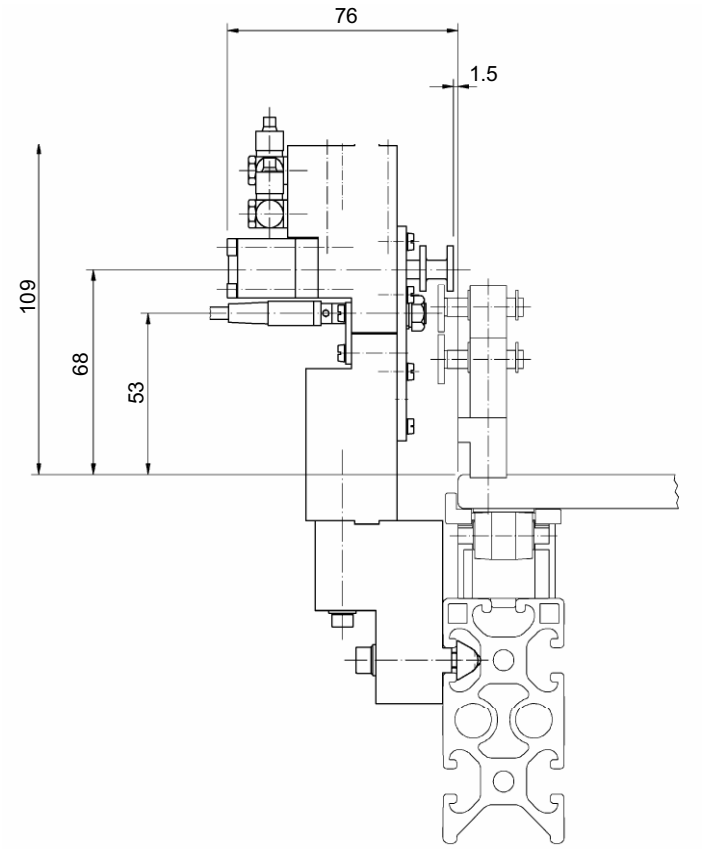
PLC requirement:

1 Input
1 Output

For proper functioning, the following accessory must be specified:

- Valve

Code Reader / Setter
Upper Flag



For reading and setting upper flag of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 30B S02	24-0145

PLC requirement:

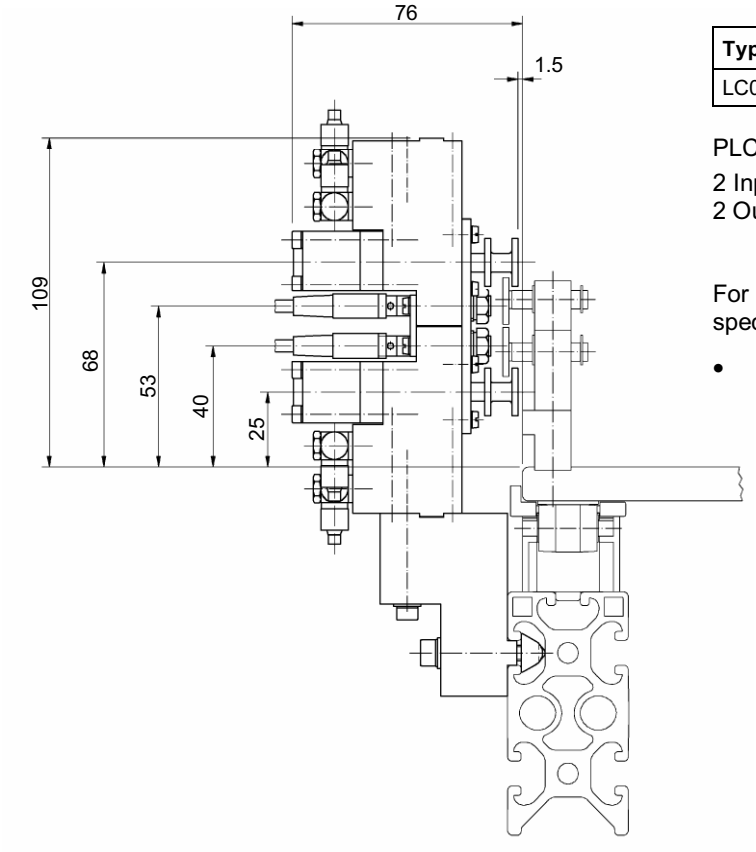
1 Input
1 Output

For proper functioning, the following accessory must be specified:

- Valve

Coding System

Code Reader / Setter
Lower and Upper Flag



For reading and setting lower and upper flags of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 30B S12	24-0150

PLC requirement:

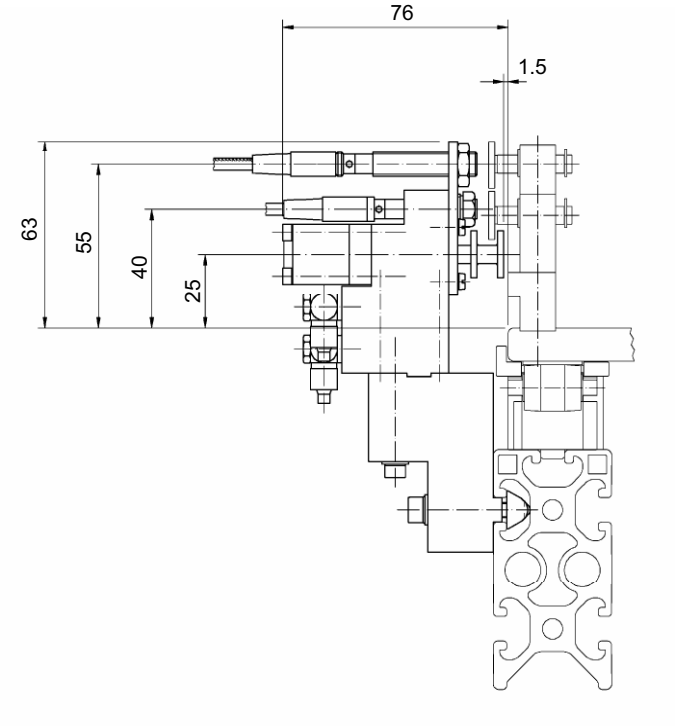
2 Inputs
2 Outputs

For proper functioning, the following accessory must be specified:

- Valve

Coding system

Combined Code Reader / Setter
Code Reader / Setter Lower Flag
Code Reader Upper Flag



For reading and setting lower flag and for reading upper flag of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 40B 1S2L	24-0155

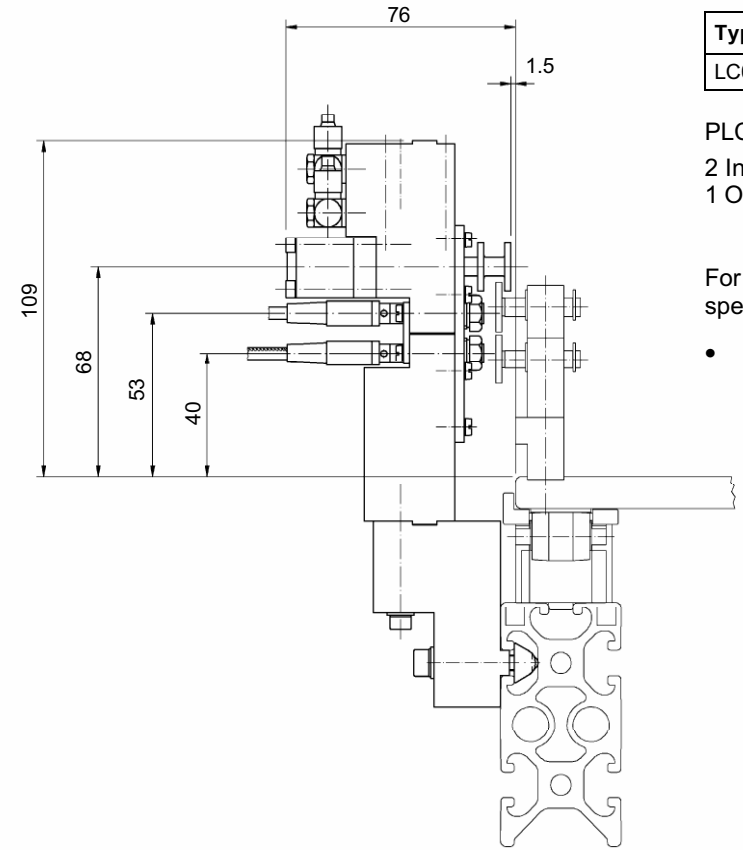
PLC requirement:

2 Inputs
1 Output

For proper functioning, the following accessory must be specified:

- Valve

Combined Code Reader / Setter
Code Reader Lower Flag
Code Reader / Setter Upper Flag



For reading lower flag and for reading and setting upper flag of dynamic codes.
Multiple fixing at 20 mm intervals.

Type designation	Art.-No.
LC002 40B 1L2S	24-0160

PLC requirement:

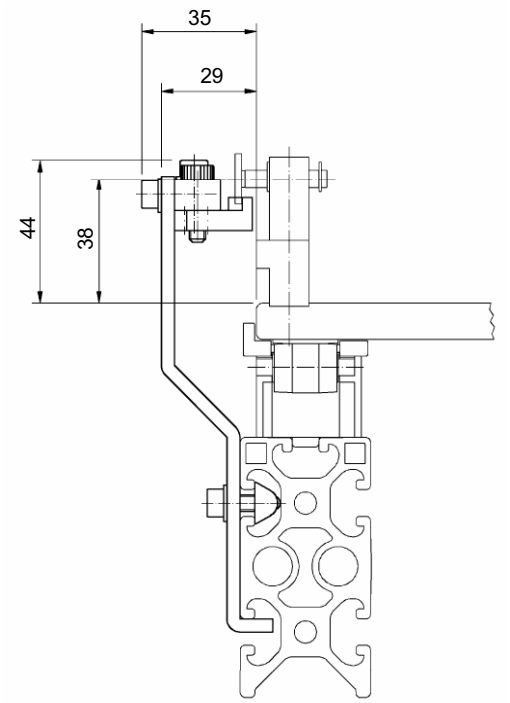
2 Inputs
1 Output

For proper functioning, the following accessory must be specified:

- Valve

Coding System

Ramp
Code Setter Lower Flag

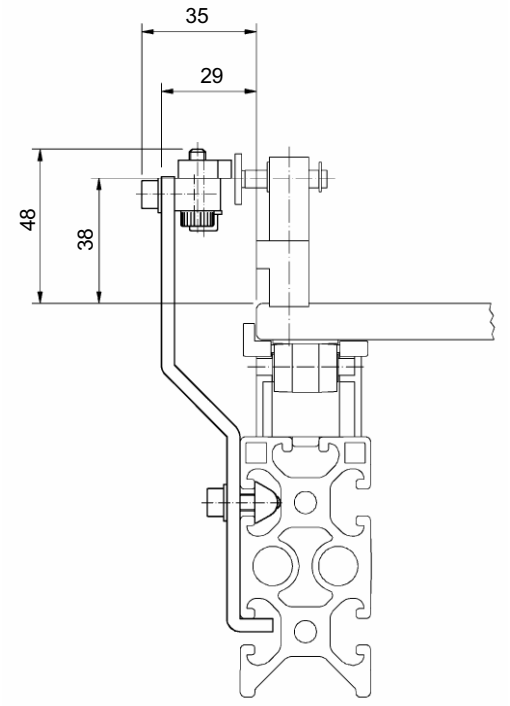


For setting lower flag of dynamic codes.
Ramp length = 80 mm

Type designation	Art.-No.
LC002 50B 1S	24-0165

PLC requirement:
passive
Setting by pallet motion.
Resetting by code reader / setter or by hand.

Code Resetter Lower Flag



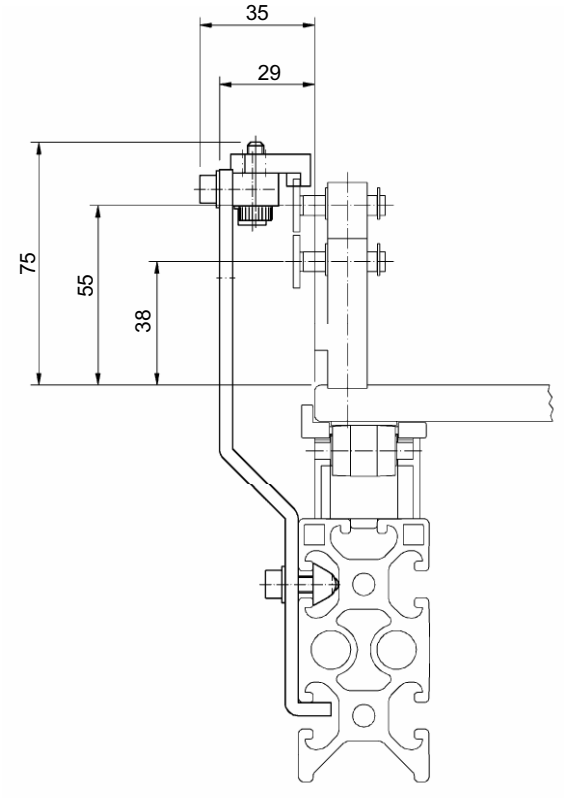
For resetting lower flag of dynamic codes.
Ramp length = 80 mm

Type designation	Art.-No.
LC002 50B 1R	24-0170

PLC requirement:
passive
Resetting by pallet motion.
Setting by code reader / setter or by hand.

Coding System

Ramp
Code Setter Upper Flag

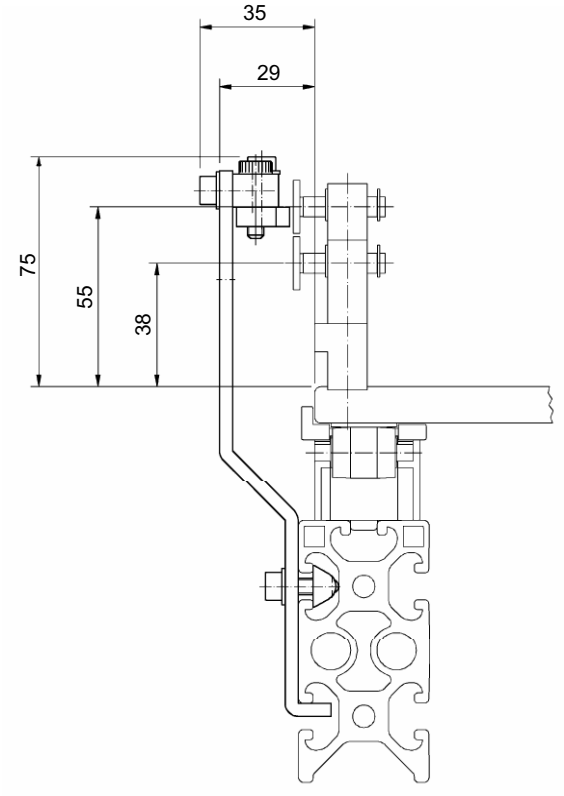


For setting upper flag of dynamic codes.
Ramp length = 80 mm

Type designation	Art.-No.
LC002 50B 2S	24-0175

PLC requirement:
passive
Setting by pallet motion.
Resetting by code reader / setter or by hand.

Code Resetter Upper Flag



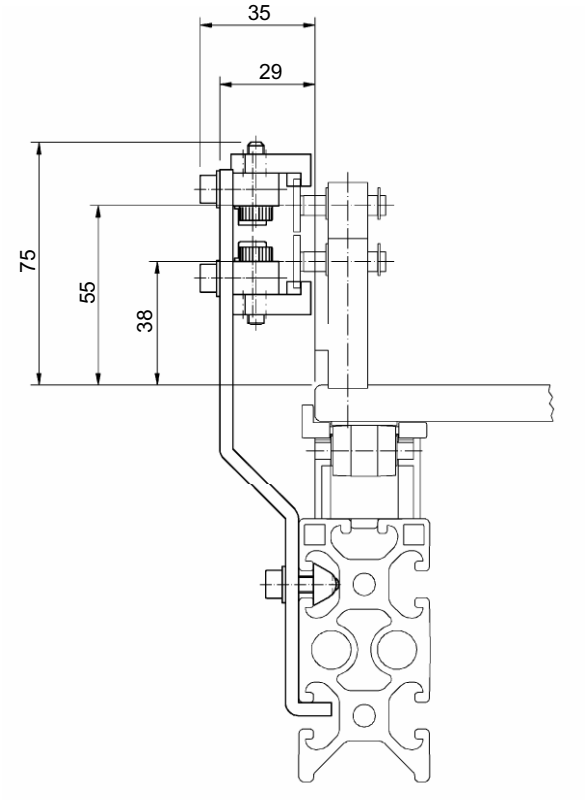
For resetting upper flag of dynamic codes.
Ramp length = 80 mm

Type designation	Art.-No.
LC002 50B 2R	24-0180

PLC requirement:
passive
Resetting by pallet motion.
Setting by code reader / setter or by hand.

Coding System

Ramp
Code Setter Lower and Upper Flag

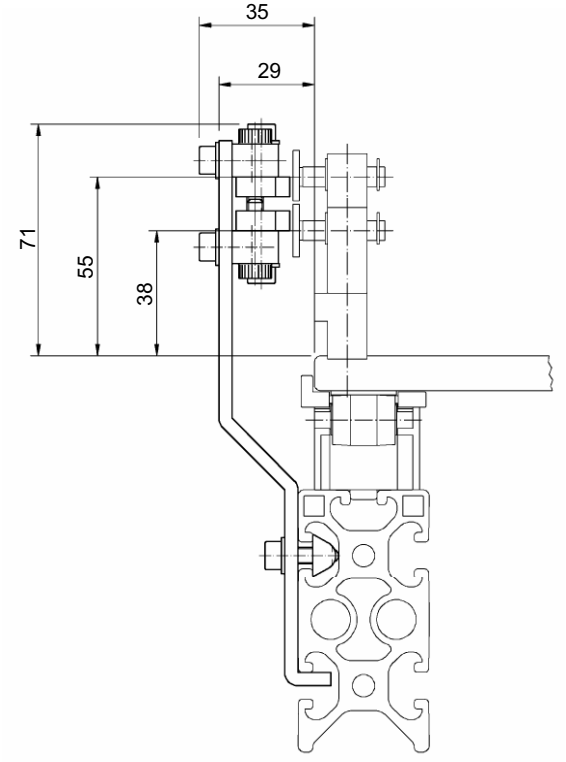


For setting lower and upper flags of dynamic codes.
Ramp length = 80 mm

Type designation	Art.-No.
LC002 50B 1S2S	24-0185

PLC requirement:
passive
Setting by pallet motion.
Resetting by code reader / setter or by hand.

Code Resetter Lower and Upper Flag



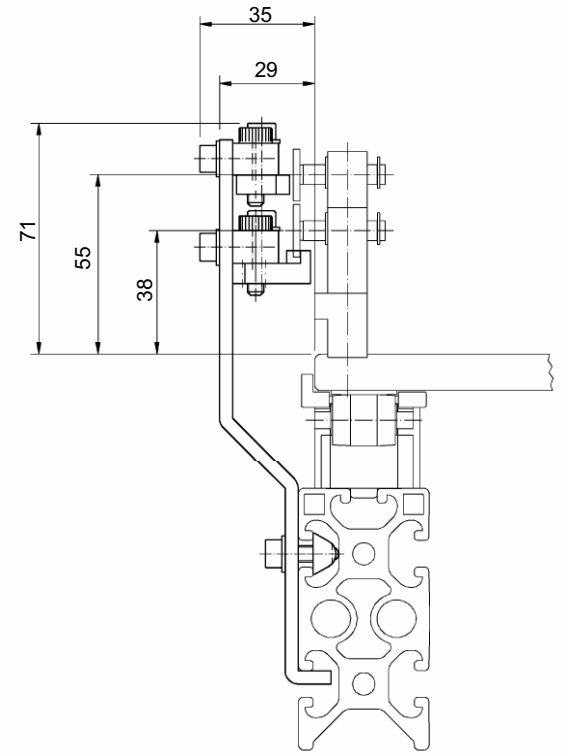
For resetting lower and upper flags of dynamic codes.
Ramp length = 80 mm

Type designation	Art.-No.
LC002 50B 1R2R	24-0190

PLC requirement:
passive
Resetting by pallet motion.
Setting by code reader / setter or by hand.

Coding System

Ramp
Code Setter Lower Flag
Code Resetter Upper Flag



For setting lower flag and resetting upper flag of dynamic codes.

Ramp length = 80 mm

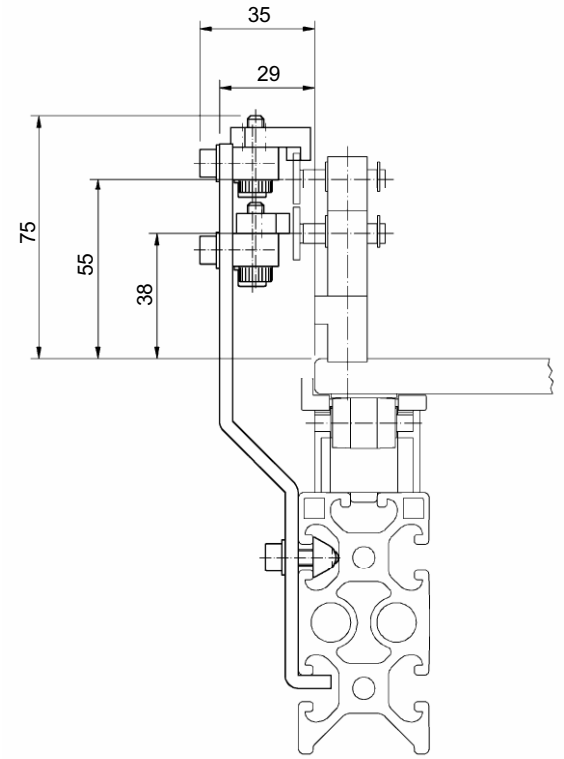
Type designation	Art.-No.
LC002 50 1S2R	24-0195

PLC requirement:

passive

Setting / resetting by pallet motion.
Resetting / setting by code reader / setter or by hand.

Code Resetter Lower Flag
Code Setter Upper Flag



For resetting lower flag and setting upper flag of dynamic codes.

Ramp length = 80 mm

Type designation	Art.-No.
LC002 B50 1R2S	24-0200

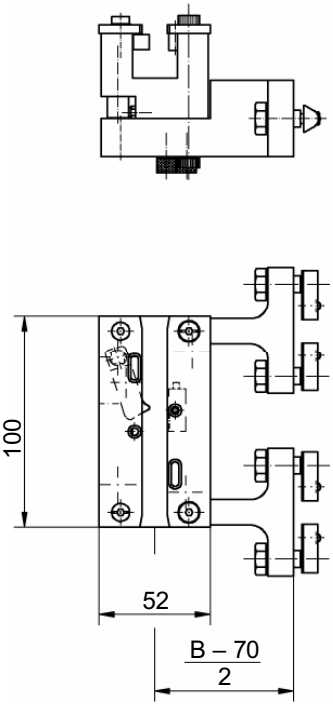
PLC requirement:

passive

Setting / resetting by pallet motion.
Resetting / setting by code reader / setter or by hand.

Pallet Stop

for Mounting to the Transport Track Profile



For stopping and positioning the transfer pallet in the X and Y direction.
Mounts directly to the transport track profile.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
PP _ _ _	22-0620	22-0630	22-0640

Example type designation: PP 200
System width B

Positioning accuracy: ± 0.02 mm

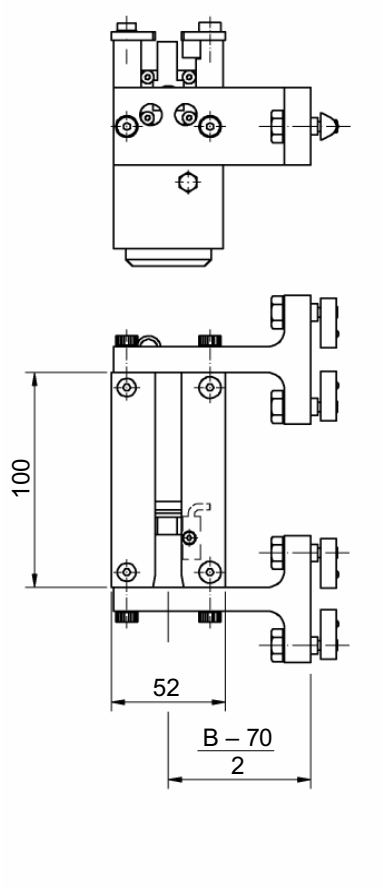
PLC requirement:
1 Input
1 Output

For proper functioning,
the following element must be specified:

- Valve

Options	Art.-No.	PLC Input
Ratchet Pawl	22-1643	-
Stop Latch Detecting sensor	22-1644	1
Sensor for Soft-Stop	22-1644	1

with Shock-Absorber
for Mounting to the Transport Track Profile



For stopping and positioning the transfer pallet in the X and Y direction.
Mounts directly to the transport track profile.
The spacing Z between the positioning pin on the transfer pallet **must be at least 40 mm**.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
PD _ _ -1-10	22-0626	22-0636	22-0646
PD _ _ -3-35	22-0627	22-0637	22-0647

Example type designation: PD 200-1-10
Damping factor in kg
System width B

Positioning accuracy: ± 0.02 mm

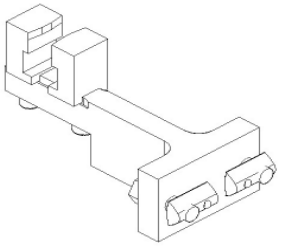
PLC requirement:
1 Input
1 Output

For proper functioning,
the following element must be specified:

- Valve

Pallet Stop

Supplemental Pallet Guide
for Mounting to the Transport Track Profile

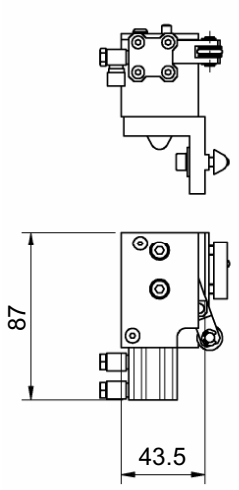


To locate a second positioning pin in the Y direction.
Mounts directly to the transport track profile.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
PZ _ _ _	22-0623	22-0633	22-0643

Example type designation: PZ 200
System width B

for Manual Workstation
for Mounting to the Transport Track Profile



For stopping and positioning the transfer pallet in the X and Y direction.
Mounts directly to the transport track profile.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
PHA VW	22-0670		
PHA RW	22-0671		

Example type designation: PHA VW
Travel direction

VW for counterclockwise travel direction
RW for clockwise travel direction

Positioning accuracy: ± 2.0 mm

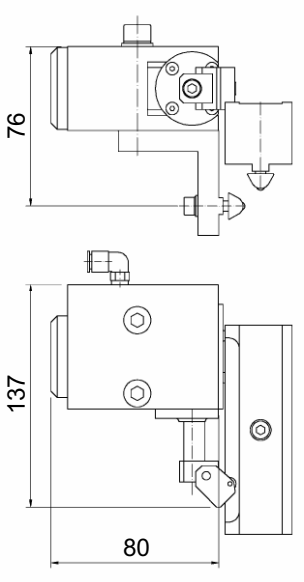
PLC requirement:
1 Output

For proper functioning,
the following element must be specified:

- Valve
- Supplemental Pallet Guide PZ _ _ _

Pallet Stop

for Manual Workstation, with Shock-Absorber for Mounting to the Transport Track Profile



For stopping and positioning the transfer pallet in the X and Y direction.
Mounts directly to the transport track profile.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
PDH 001-1-10	22-0676		
PDH 001-3-35	22-0677		

Example type designation: PDH 001-1-10
Damping factor in kg

Positioning accuracy: ± 2.0 mm

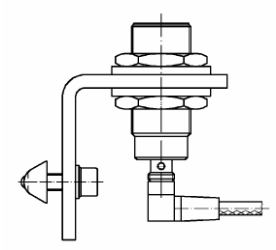
PLC requirement:
1 Output

By turning the absorber module 180°, the pallet stop may be used as well in clockwise travel direction.

For proper functioning,
the following element must be specified:

- Valve

Queue Sensor

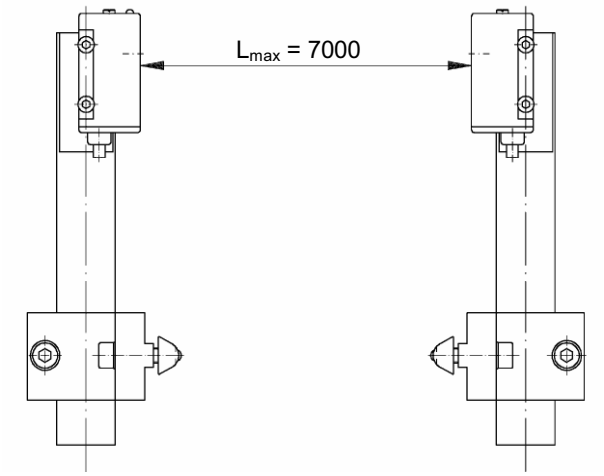


Detects transfer pallet queue at a station.
Mounts directly to the transport track profile.

Type designation	Art.-No.
ZSI 001-18	22-0750

PLC requirement:
1 Input

Light Barrier

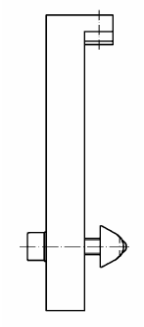


For presence checking of parts.
Universal adjustment.
Mounts directly to the transport track profile.

Type designation	Art.-No.
ZLS 001	21-0474

PLC requirement:
1 Input

Retainer

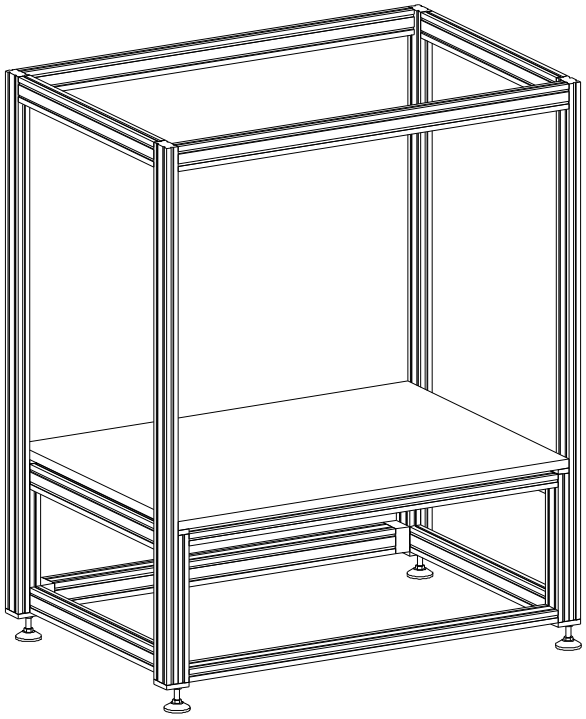


Serves as a hold-down when lifting parts from the transfer pallet.
Prevents tilting of a transfer pallet when used with a lifting device.
Mounts directly to the transport track profile.

Type designation	Art.-No.
ZNH 001	22-0754

Station Modules

with Frame for Safety Guarding



Station Module with integrated compressed air and exhaust manifolds and profile frame for safety guarding.

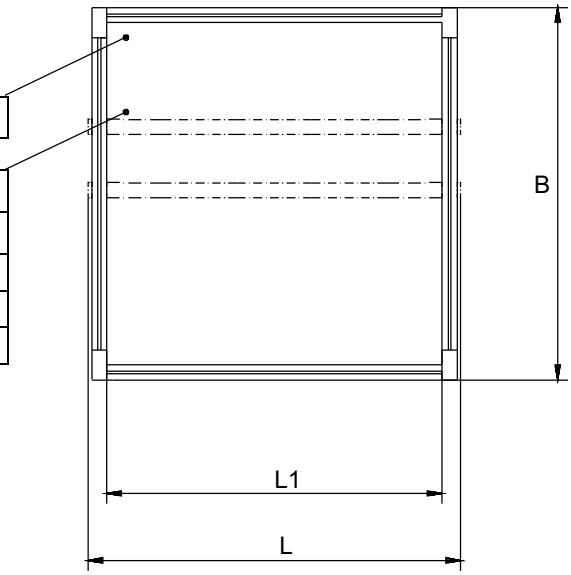
Safety guarding must be ordered separately,
see page 7-2.

	System Width B [mm]		
	200	250	300
Length L	**Art.-No.**	**Art.-No.**	**Art.-No.**
1.0 m	21-0034		
1.5 m	21-0036		
2.0 m	21-0037		

Capacity: 500 kg / Station

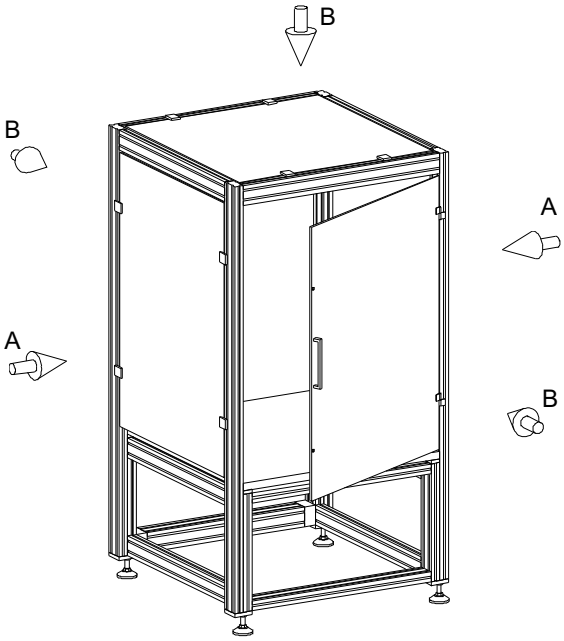
Table top plate: Aluminum, 30 mm thick

Usable area			
Art.-No.	**L**	**L1**	**B**
21-0034	1000	898	1000
21-0036	1500	1398	1000
21-0037	2000	1898	1000



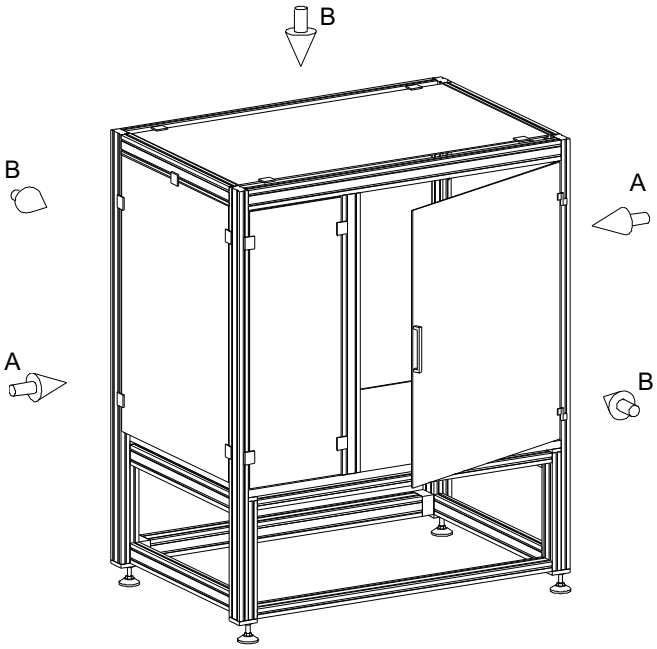
Safety Guarding

for Station Module



Doors and Panels			Art.-No. for Module Length [mm]
Model			1000
Acrylic (PMMA)	lateral	A	21-9500
Acrylic (PMMA)	front/rear	B	21-9501
Polycarbonate (PC)	lateral	A	21-9510
Polycarbonate (PC)	front/rear	B	21-9511

For module length 1000 mm
no additional strut included.



Doors and Panels			Art.-No. for Module Length [mm]	
Model			1500	2000
Acrylic (PMMA)	lateral	A	21-9500	
Acrylic (PMMA)	front/rear	B	21-9503	21-9504
Polycarbonate (PC)	lateral	A	21-9510	
Polycarbonate (PC)	front/rear	B	21-9513	21-9514

For module length 1500 and 2000 mm,
an additional strut is provided.

Fastening Elements		Art.-No.
Left-hand Hinge	with Safety Switch	21-0320
	with Safety Interlock	21-0322
Right-hand Hinge	with Safety Switch	21-0321
	with Safety Interlock	21-0323
Panel	Fastening Set	21-0326

500 N

To lift the transfer pallet off the conveyor belt.

Technical Data

Lifting Capacity	(5 bar)	500 N
Support Capacity	(5 bar)	500 N
Stroke	(adjustable)	0 ... 25 mm
Air Consumption per Stroke		0.05 l

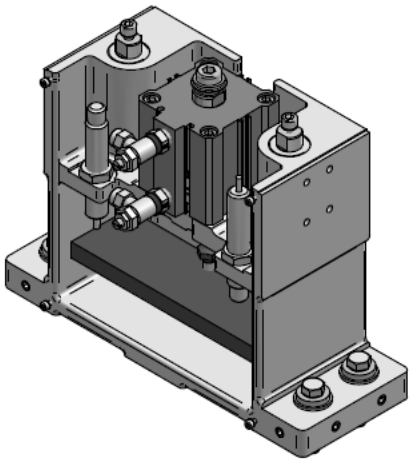
	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
500 N	22-0960		

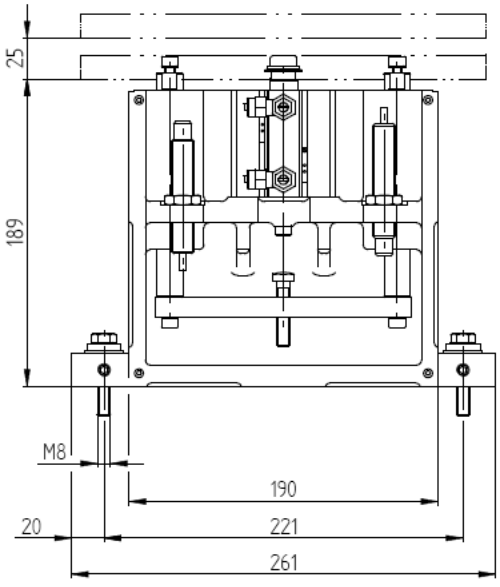
PLC requirement:

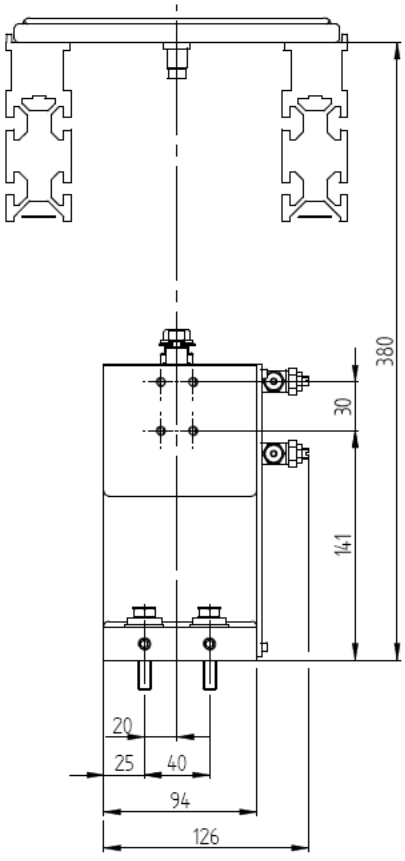
2 Inputs
2 Outputs

For proper functioning,
the following elements must be specified:

- Pallet Stop see page 5-1, 5-3
- Support Element,
  custom depending on the transfer pallet
- Valve







500kN

To lift the transfer pallet off the conveyor belt.

Technical Data

Lifting Capacity	(5 bar)	1 kN
Support Capacity	(5 bar)	500 kN
Stroke		12 mm
Air Consumption per Stroke		0.15 l

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
500 kN	21-0415		

PLC requirement:

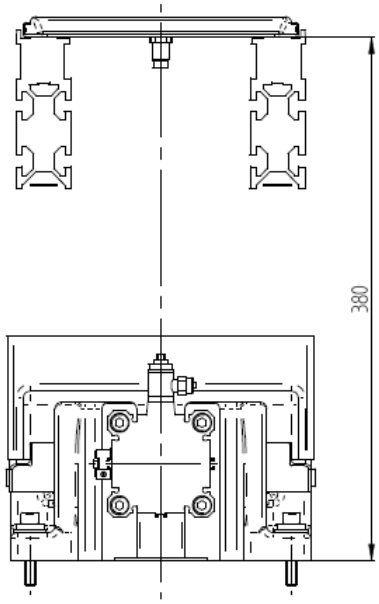
2 Inputs
2 Outputs

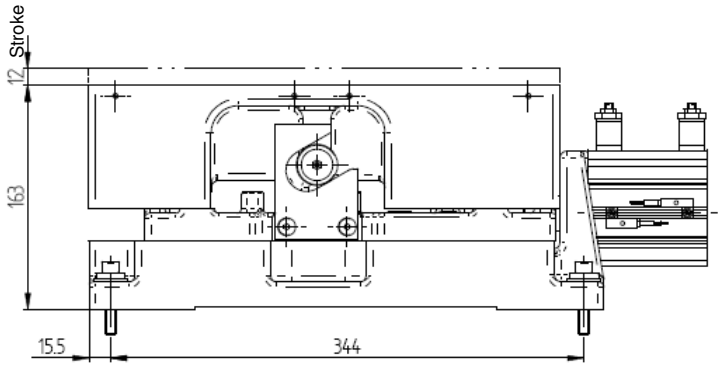
For proper functioning,
the following elements must be specified:

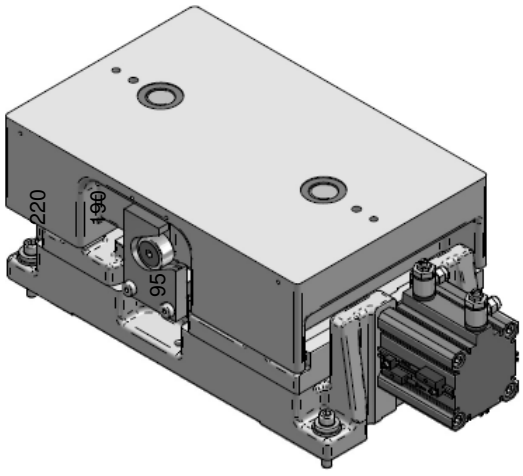
- Pallet Stop see page 5-1, 5-3
- Support Element,
  custom depending on the transfer pallet
- Valve

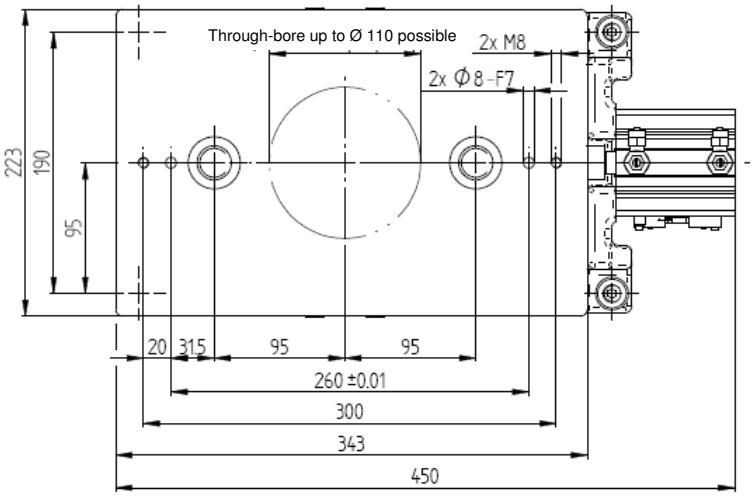
Accessories

Type designation	Art.-No.
Adjustment Block	31-1970
Guarding	21-0416

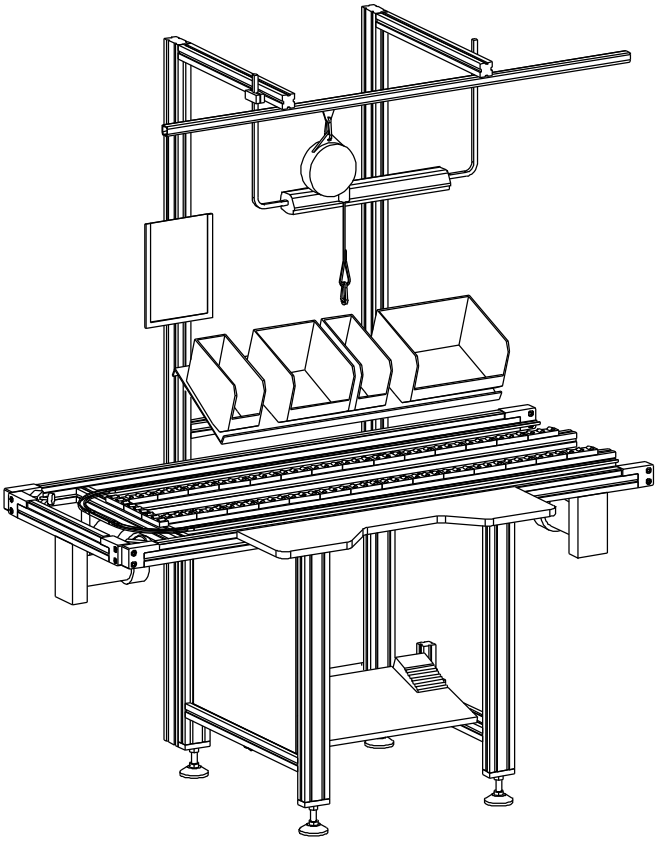






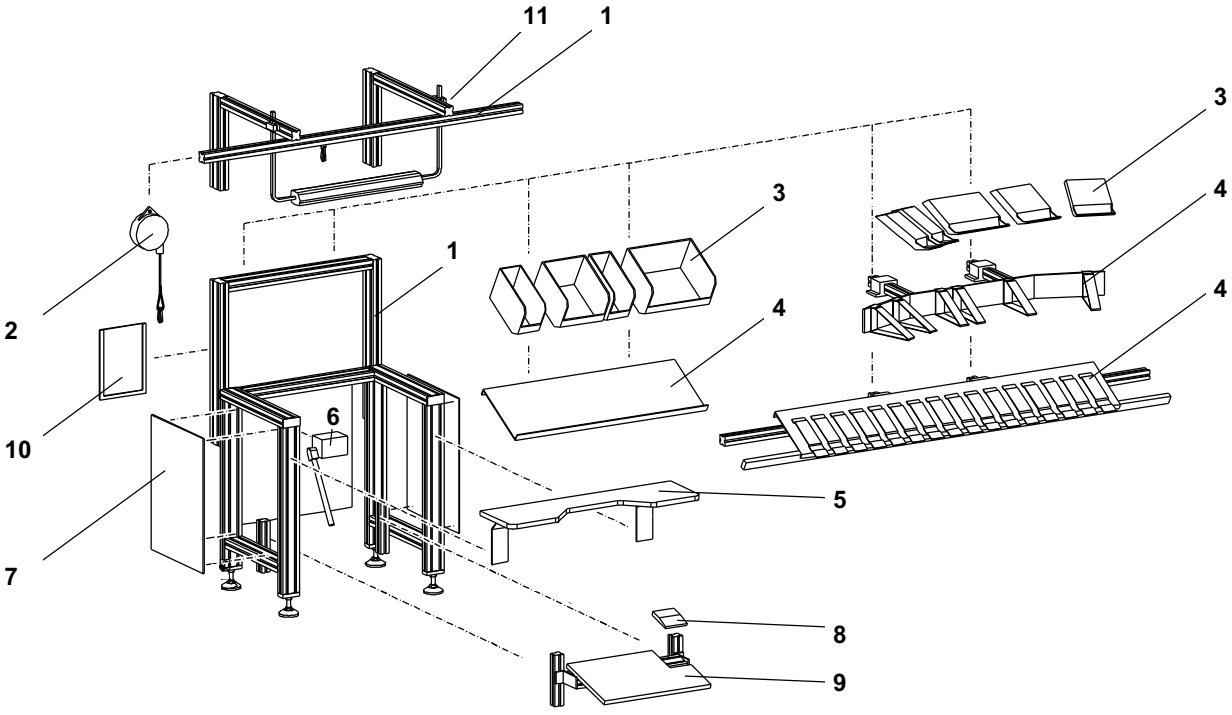


Overview



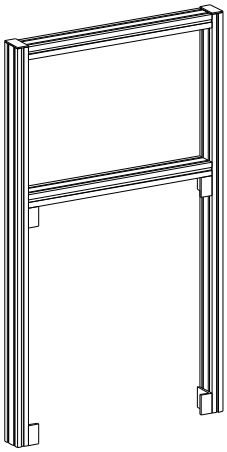
Manual workstation with selected accessories for seated or standing operations:

Pos.	Type designation
1	Frame
2	Tool Hanger
3	Part Bins
4	Holder for Part Bins
5	Work Surface
6	Knee Switch
7	Courtesy Panel
8	Foot Switch
9	Foot Rest
10	Worksheet Holder
11	Workplace Lamp



Individual Components

Frame

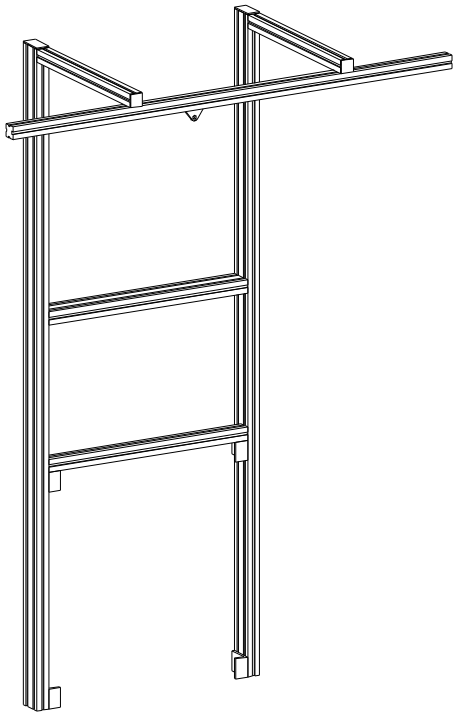


Frame for manual workstation.
For attachment to transport track.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
Frame	21-0610		

Height: 1200
Width: 760
Profile: 40/80

Frame with Slide Rail



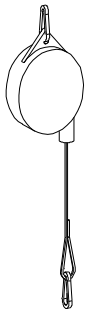
Frame with slide rail for manual workstation.
For attachment to Spur Tracks or Linear Tracks*.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
Frame with Slide Rail	22-0143	22-0243	22-0343
For Linear Tracks*	22-0143		

Height: 2000
Width: 760
Depth: 570 / 670 / 770
Length of slide rail: 1500
Profile: 40/80

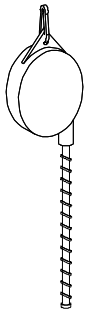
Individual Components

Tool Hanger with Counterbalance



Tool hanger with counterbalance.
Model with steel cable.

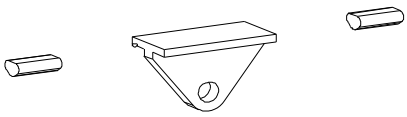
Type designation		Art.-No.
Tool Hanger	0 ... 1 kg	21-0710
Tool Hanger	1 ... 2 kg	21-0711
Tool Hanger	2 ... 4 kg	21-0712
Tool Hanger	4 ... 7 kg	21-0713
Tool Hanger	7 ... 10 kg	21-0714
Tool Hanger	10 ... 14 kg	21-0715



Tool hanger with counterbalance.
Model with compressed air connection.
Connector = R ¼". Max. pressure 6 bar.

Type designation		Art.-No.
Tool Hanger	1 ... 2.5 kg	21-0718

Glider

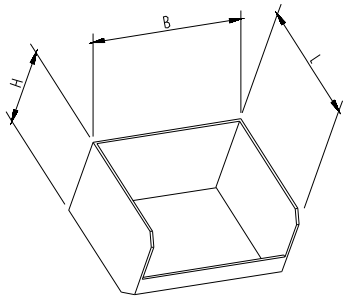


Glider with two stops.

Type designation	Art.-No.
Glider	21-1668

Individual Components

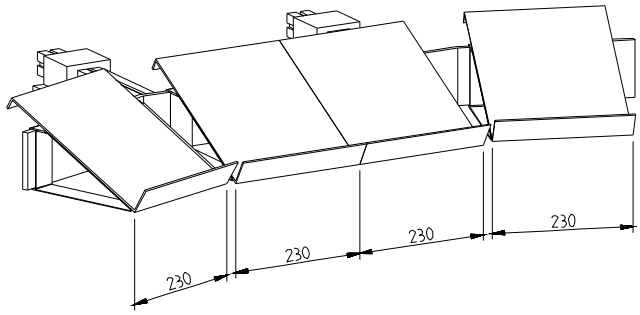
Part Bins Plastic



Color: blue
Universal design, range of sizes available.

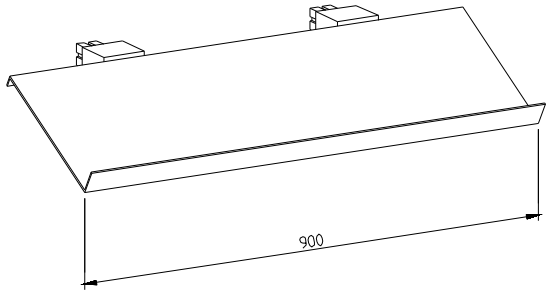
Type designation	L		B		H		Art.-No.
Part Bin	90	x	95	x	54	mm	21-1180
Part Bin	170	x	95	x	77	mm	21-1182
Part Bin	230	x	140	x	132	mm	21-1184
Part Bin	350	x	200	x	145	mm	21-1186
Part Bin	350	x	200	x	200	mm	21-1188
Part Bin	500	x	300	x	200	mm	21-1190

Holder for Plastic Part Bins



Fan-shaped holder for plastic part bins.
Space for 8 bins of 95 mm wide part bins.

Type designation	Art.-No.
Fan-Shaped Holder	21-0631

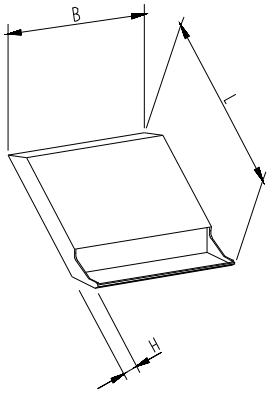


Linear holder for plastic part bins.
Space for 9 bins of 95 mm wide part bins.

Type designation	Art.-No.
Linear Holder	21-0634

Individual Components

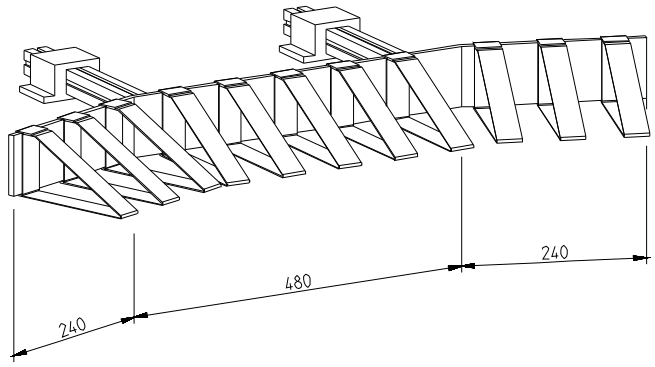
Part Bins Metal



Color: green
Universal design, range of sizes available, stackable.

Type designation	L		B		H		Art.-No.
Part Bin	240	x	80	x	40	mm	21-1110
Part Bin	240	x	160	x	40	mm	21-1115
Part Bin	240	x	80	x	80	mm	21-1120
Part Bin	240	x	160	x	80	mm	21-1125
Part Bin	240	x	80	x	160	mm	21-1130
Part Bin	240	x	160	x	160	mm	21-1135
Part Bin	240	x	240	x	160	mm	21-1140
Part Bin	240	x	240	x	80	mm	21-1145
Part Bin	240	x	160	x	240	mm	21-1150
Part Bin	240	x	240	x	240	mm	21-1155

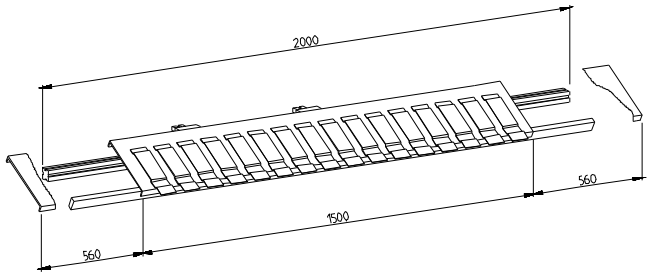
Holder for Metal Part Bin



Fan-shaped holder for metal part bins.
Space for 12 bins of 80 mm wide part bins (3 + 6 + 3).

Type designation	Art.-No.
Fan-Shaped Holder	21-0630

Sliding Tray for Metal Part Bins

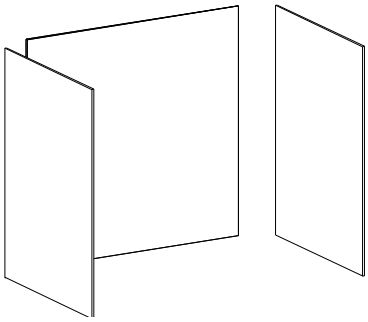


Sliding tray for metal part bins.
Part bins may be moved to the optimal position.
Space for 16 bins of 80 mm wide part bins.

Type designation	Art.-No.
Sliding Tray	21-0632

Individual Components

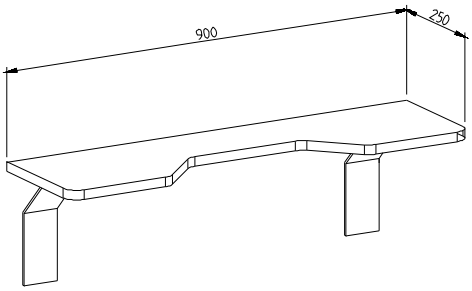
Courtesy Panels Composite Material



Set of courtesy panels for manual workstation.

	System Width B [mm]		
	200	250	300
Type designation	**Art.-No.**	**Art.-No.**	**Art.-No.**
for Linear Track		22-0142	
for Spur Track	22-0142	22-0242	22-0342

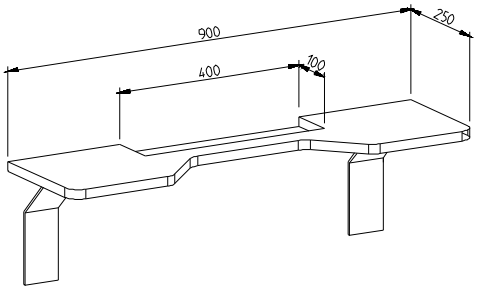
Work Surface



Work surface with mounting brackets.

Type designation	Art.-No.
Work Surface	21-0705

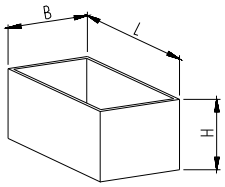
Work Surface for Part Bins



Work surface with mounting brackets and cut-out for part bins.

Type designation	Art.-No.
Work Surface for Part Bins	21-0706

Part Bins for Work Surface

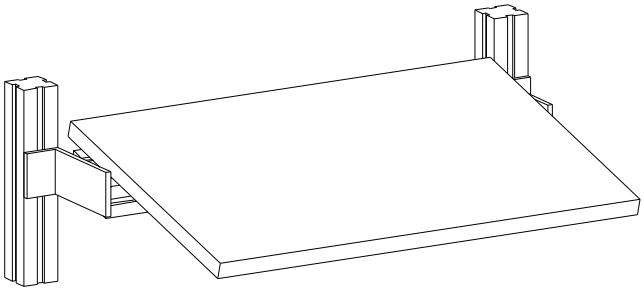


Color: blue
Universal design, range of sizes available.

Type designation	L		B		H		Art.-No.
Part Bin	198	x	99	x	40	mm	21-1198
Part Bin	99	x	99	x	40	mm	21-1196
Part Bin	99	x	49	x	40	mm	21-1194

Individual Components

Foot Rest

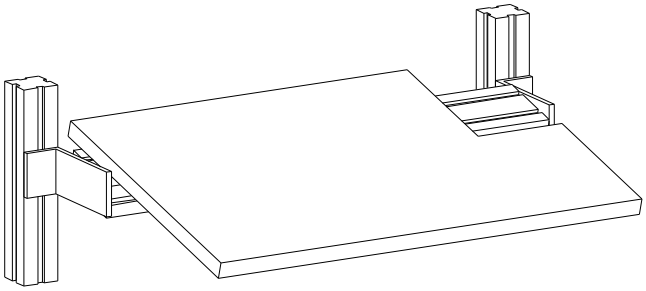


with mounting brackets.

Type designation	Art.-No.
Foot Rest	22-0680

Foot Rest: 320 x 500

Foot Rest for Foot Switch



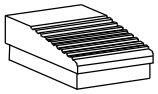
with mounting brackets and cut-out for foot switch.

Type designation	Art.-No.
Foot Rest for Foot Switch	22-0681

Foot Rest: 320 x 500

Cut-out: 150 x 100

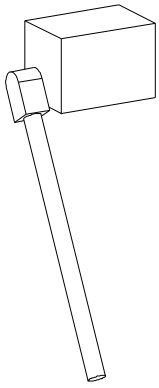
Foot Switch



for foot rest.

Type designation		Art.-No.
Foot Switch	electric	21-0685
Foot Switch	pneumatic	21-0682

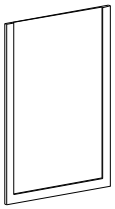
Knee Switch



Type designation		Art.-No.
Knee Switch	electric	21-0695
Knee Switch	pneumatic	21-0692

Individual Components

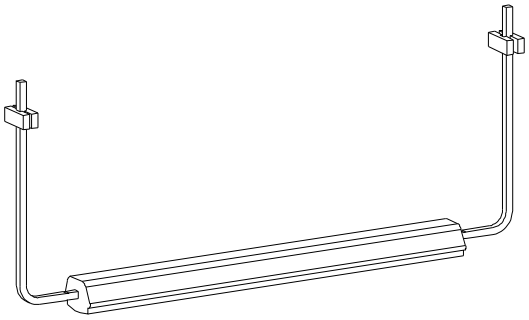
Worksheet Holder



Worksheet holder with fastening set.
Paper size: A4

Type designation	Art.-No.
Worksheet Holder	21-0740

Workplace Lamp



Workplace Lamp 36 W, with fastening set for frame with slide rail.

Type designation		Art.-No.
Workplace Lamp	36 W, 230 V / 50 Hz	21-0730