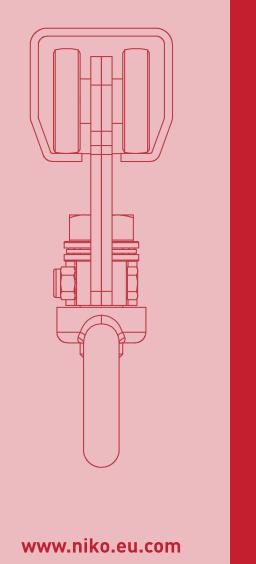
# Personal Safety Systems

**Product Catalogue** 

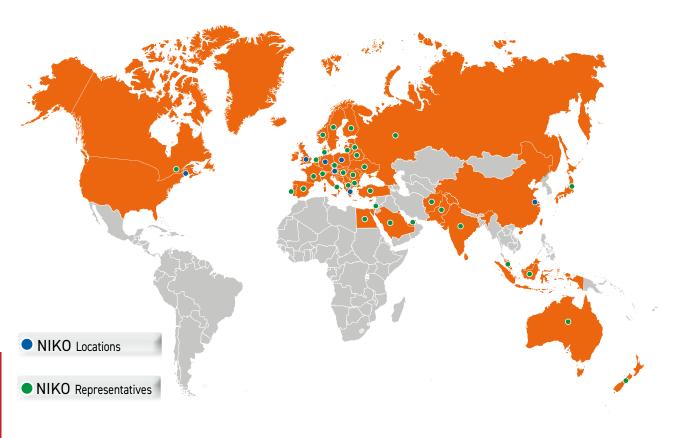
Technical Information Component Specification











# **Company Profile**

Established in 1972, NIKO is focused on designing, developing, producing and marketing high quality sliding door fittings and handling systems at the right price. NIKO currently has a direct presence in 7 countries and indirectly through our representatives to more than 65 countries worldwide.

Our product range includes more than 10.000 different assemblies & components making us capable of providing complete solutions to different industries worldwide. Our team of highly qualified engineers are continually working to improve our current product portfolio & extend it according to market requirements.

NIKO enforces a continuous quality control program and is certified according to ISO:9001 and ISO:14001.









do not always reflect all available sizes.



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Ver. March 2024



# **Application Photos**















### NIKO personal safety system -

# The economic solution tailored to your requirements, while safety is assured

NIKO PERSONAL SAFETY SYSTEMS is a horizontal rigid track system which consists of a mobile anchorage device, allowing for a person or persons to move freely with safety in a monorail or in crane system without the need to disconnect from the system.

The small number of components required, ensure the easy installation of the system which should always be installed horizontally.

The personal safety systems NIKO PSS 25-26-27 is to be used exclusively for the safety of hanging persons. The system does not replace personal safety harnesses (PPE – personal protective equipment).

### **NIKO PERSONAL SAFETY SYSTEMS, consist of:**

- ✓ Rigid track profiles.
- ✓ Splice joints that connect the track profiles.
- Support brackets, for wall or ceiling mounting as well as mounting to a steel structure.
- ✓ Trolleys and carriage trolleys, fitted with 4 wheels.
- Track ens stops which prevent the trolley exit from the track profiles.

The components of NIKO PERSONAL SAFETY SYSTEMS comply with EN 795:2012 & CEN/TS 16415: 2013-D.

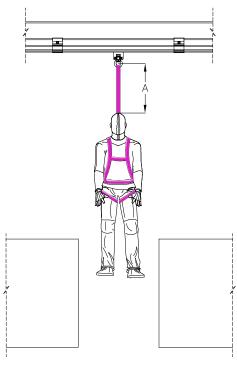
### **Applications**

- · Aircraft service and maintenance
- Safety track for high ropes course
- · Coach service and maintenance
- Sky glide track for soft play areas
- Train service and maintenance

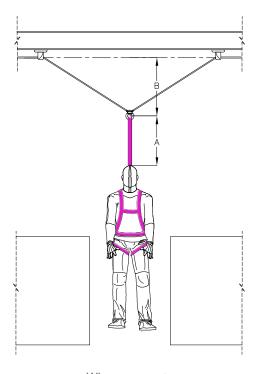


# Advantages of Niko Personal Safety System vs Taut Wire Systems

- There is less distance to fall with NIKO PERSONAL SAFETY SYSTEM and therefore less impact on the body.
- No bouncing effect that can cause injury on secondary falls.
- Multiple person systems are safer with NIKO PERSONAL SAFETY SYSTEM. One person falling on a taut wire fall arrest system can cause other users to fall.
- ✓ Following a fall the NIKO PERSONAL SAFETY SYSTEM can be re-used immediately after passing a visual inspection. Taut wire fall arrest systems need to be completely replaced.
- ✓ The tapered edge design of the NIKO PERSONAL SAFETY SYSTEM achieves very free running movement and eliminates snag effect.
- ✓ Its modular design means that the NIKO PERSONAL SAFETY SYSTEMS can be easily moved, added to and changed after installation
- ✓ NIKO PERSONAL SAFETY SYSTEM offers solutions that enable operators to pass each other without detaching themselves from the system.
- ✓ No length limits to the distance of NIKO PERSONAL SAFETY SYSTEMS.







Wire rope system

A = DISTANCE REQUIRES TO ARREST B = WIRE ROPE SYSTEM DEFLECTION



### **Personal Safety Systems - Mounting Points**

For an effective installation of a NIKO PERSONAL SAFETY SYSTEM it is necessary to specify distance between the support brackets.

The permitted number of users in the system determines the maximum allowable distance between the support points of the track.

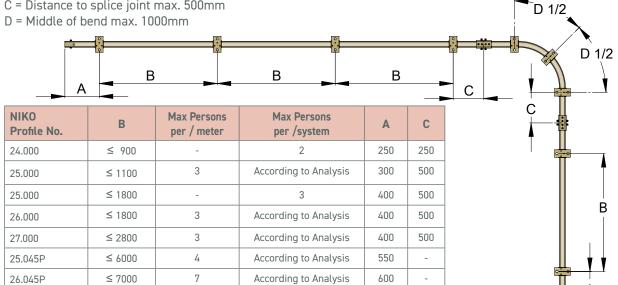
- a.) Determination of the maximum number of persons
- b.) Evaluation of the structural analysis of the supporting structure for the worst case scenario. In this case, all persons that are operating in the system cause at the same time a fall.
- c.) For the first person there must be calculated 12kn dynamic load effecting the system, for each additional person + 1kn.
- d.) For the maximum number of persons important is also an analysis of the rescue options.

#### Example of line

27.045P

- A = Overhanging end max. according to chart
- B = Suspension distance max. according to chart
- C = Distance to splice joint max. 500mm

≤ 9000

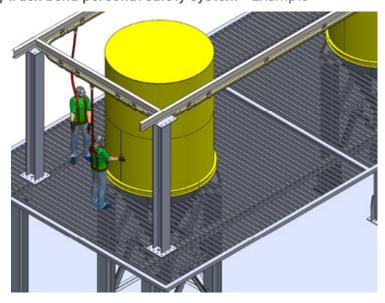


According to Analysis

700

### Free standing track bend personal safety system - Example

8





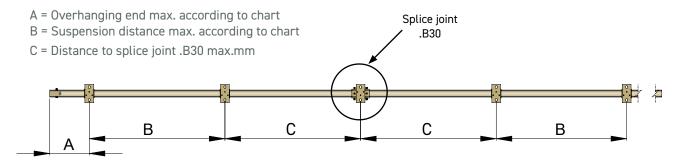
### Example of line with splice joint .B30

The suspension points are indicated on the below depicted line.

The given measurements are maximum distances.

For the connection of two tracks a splice joint .B30 is used.

The distance between the splice joint and the nearest suspension point must not exceed the distance C.



	Suspensions/ max distances						
NIKO Profile No.	В	Α	С				
25.000	1800	300	600				
26.000	1800	400	800				
27.000	2800	500	1200				

### **Restaint Applications**

NIKO Profile No.	В	Max Persons per/ Meter
25.000	≤ 1800	4
25.000	≤ 2500	2
26.000	≤ 2800	4
27.000	≤ 4000	4

### **Abseil Applications**

NIKO Profile No.	В
25.000	≤ 1500
26.000	≤ 3000
25.045P	≤ 5000
26.045P	≤ 7000

\*For monorails at 24.000 we recommend the use of splice joint with support on both side. Please advise table for mounting distances at page 7.

Monorail freestanding fall arrest system - Example

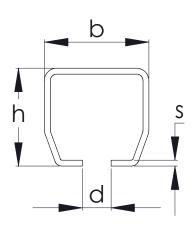


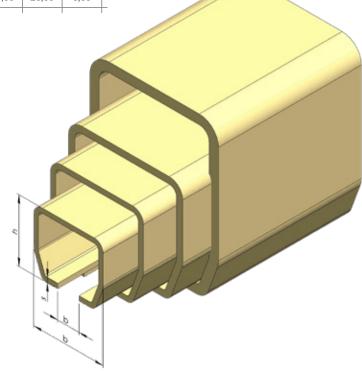


### **NIKO Track Profiles**

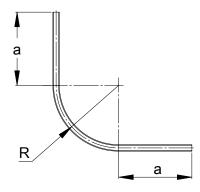
Our fall arrest product range of 4 Track profile sizes can accommodate up to 3 users. For the first person there must be calculated 12kn dynamic load effecting the system, for each additional person + 1kn. The NIKO enclosed track tapered design allows correct alignment of the trolleys and reduces the possibility of dust build up. This ensures the smooth running of the trolleys and the long life of the system.

			nsions		
	NIKO Profile No.	h (mm)	b (mm)	d (mm)	s (mm)
Ī	24.000	43,5	48,5	15	3,2
	25.000	60,00	65,00	18,00	3,60
	26.000	75,00	80,00	22,00	4,50
	27.000	110,00	90,00	25,00	6,50





### Track bend



NIKO Profile No.	24.000	25.000	26.000	27.000
Track bend 90° No.	24.C06P	25.C06P	26.C08P	27.C10P
a (mm)	550 ± 20	550±20	900±20	690±20
R (mm)	580 ± 15	580±15	770±20	1035±20
L (mm)	2000	2000	3000	3000
İ				



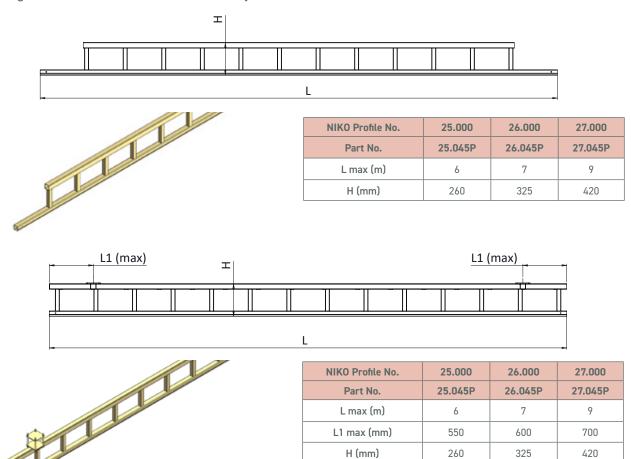
Other bend angles available upon request.



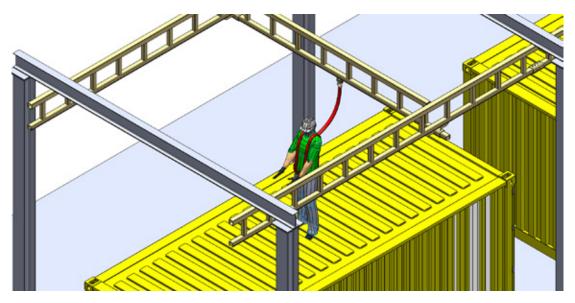
### **Reinforced Track profiles**

# Reinforced track profile with welded square profiles (25/26/27.045P). CEN/TS16415:2013-D

This type of reinforcements are used for applications that require wide spans in a monorail or as a long travel tracks in a fall arrest crane system.



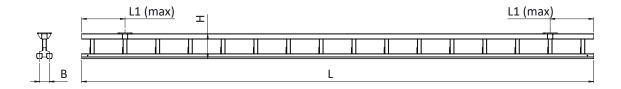
Light crane with reinforced tracks .045P - Example

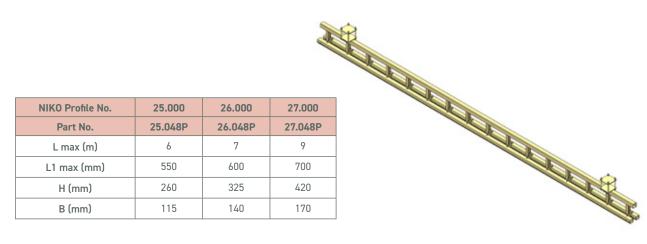




# Dual reinforced track profile with welded square profiles (25/26/27.048P) CEN/TS16415:2013-D

This type of reinforcements are used for monorails with wide spans, dual tracks allow two or more users to pass each other in the same working area.





### Fall arrest application

		Span (m)												
NIKO Profil Nr.	1	2	3	4		5	(	5		7		8		9
				Ma	x Pers	ons/M	eter							
24.000	2													
25.000		3												
26.000			3											
25.045P				3					2					
26.045P					ı	7							3	
27.045P							7							
25.048P		7												
26.048P		7												
27.048P						8								



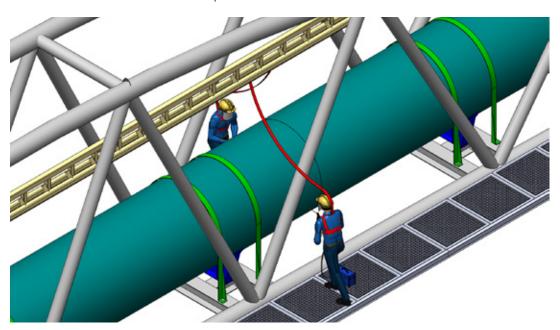
### **Restaint Applications**

	Span (m)											
NIKO Profil Nr.	1	2	2 3		2		4	<b>'</b>	5		6	5
		Max Persons/Meter										
24.000	3	2										
25.000		3		2								
26.000	3 2						) -					
27.000		3						2	2			

### **Abseil Applications**

	Span (m)																
NIKO Profil Nr.	1		2		3		4		5 6		5	7		8		(	9
25.000	1,3(m	)															
26.000	2,7(m	1)															
25.045P			4,7(m	1)													
26.045P		7(m)															
27.045P								9(	(m)								

### Reinforced track .048P - Example



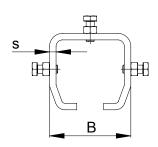


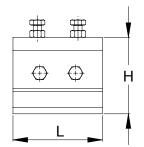
## **Support bracket**

**B00P** 

Zinc plated or plain, that can be used and adapted for specific applications where standard supports are unsuitable. CEN/TS16415:2013-D





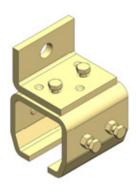


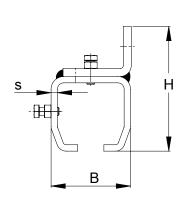
NIKO Profile No.	24.000	25.000	26.000	27.000
Part No.	24.B00P	25.B00P	26.B00P	27.B00P
L (mm)	68	90	110	120
H (mm)	54	75	94	133
B (mm)	61	81	100	116
s (mm)	4,5	6	8	10

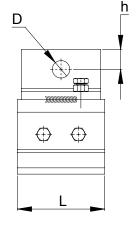
# Wall support bracket

.B01P

This kind of support is used for mounting the track directly on a wall or on other constructions with mounting bolts. CEN/TS16415:2013-D







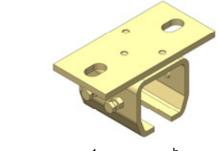
NIKO Profile No.	24.000	25.000	26.000	27.000
Part No.	24.B01P	25.B01P	26.B01P	27.B01P
L (mm)	68	90	110	120
H (mm)	95	123	156	205
B (mm)	61	81	100	116
d (mm)	8,2	-	-	-
s (mm)	4,5	6	8	10
D (mm)	13	17	22	26
h (mm)	16	18	24	27
				i i

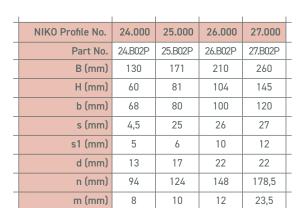


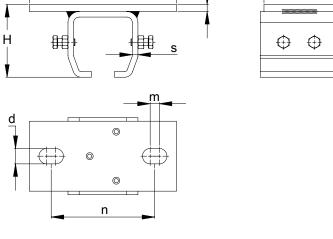
### Ceiling support bracket

.B02P

This bracket is designed for bolting direct to overhead steelwork or ceiling. CEN/TS16415:2013-D





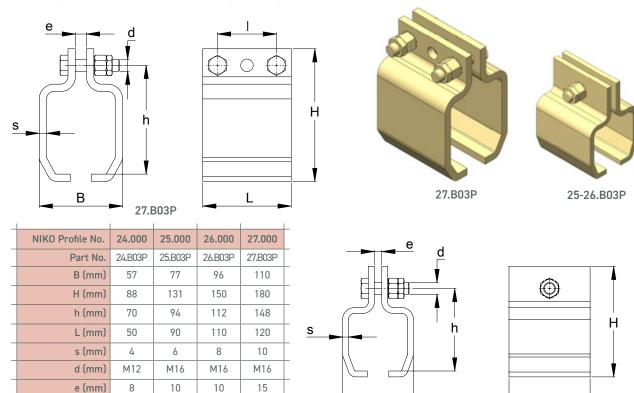


В

# Split support bracket (CEN/TS16415 Cert.)

.B03P

.B03 is generally used for variable height configurations. CEN/TS16415:2013-D



I (mm)

80

В

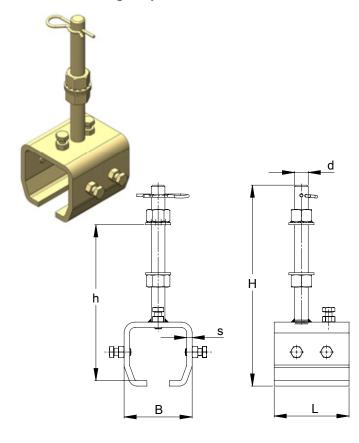
25-26.B03P



# Adjustable bracket with safety device

.B04P

.B04 allows the height adjustment of the rails and to correct any misalignments. CEN/TS16415:2013-D

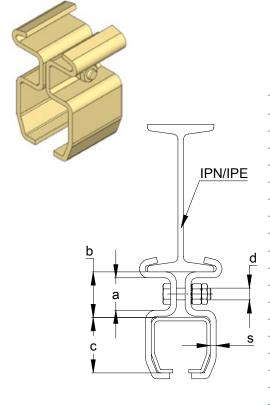


NIKO Profile No.	24.000	25.000	26.000	27.000
Part No.	24.B04P	25.B04P	26.B04P	27.B04P
B (mm)	61	81	100	116
H (mm)	146	215	295	348
h (mm)	132	170	250	295
L (mm)	68	90	110	120
s (mm)	4,5	6	8	10
d (mm)	M16	M20	M20	M30

# Split suspension bracket

.B10P/.B26P

This bracket is used for mounting directly to the underside flange of a parallel I-beam. CEN/TS16415:2013-D



	NIKO Profile No.	NIKO Profile No. 24.000 25.000		26.000	27.000
	Dimension a in mm.	25	42	45	69
_	Dimension b in mm.	34	54	61	89
_	Dimension c in mm.	43,5	60	75	110
	Dimension d in mm.	9Ф	17 Ф	17 Ф	17 Ф
	s (mm)	4	6	8	10
	Material	50x4	90x6	110x8	120x10
	Split Suspension Bracket	Joist IPN DIN	1025		
	For IPN 80X42	24.B08			
	for IPN 100X50	24.B10P	25.B10P		
	for IPN 120X58	24.B12P	25.B12P		
	for IPN 140X66	24.B14P	25.B14P		
	for IPN 160X74	24.B16P	25.B16P	26.B16P	
	for IPN 180X82	24.B18P	25.B18P	26.B18P	
	for IPN 200X90	24.B20P	25.B20P	26.B20P	27.B20P
	for IPN 200X98		25.B22P	26.B22P	27.B22P
	for IPN 240X106		25.B24P	26.B24P	27.B24P
	for IPN 260X113		25.B26P	26.B26P	27.B26P

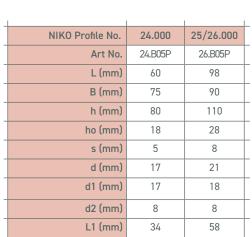
### Personal Safety Systems

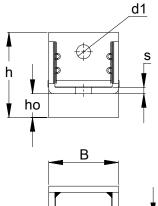


### Adjustable wall bracket

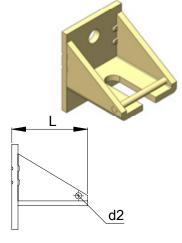
.B05P

.B05 is used in combination with the .B04 adjustable bracket and it usually mounts on the wall. CEN/TS16415:2013-D





d

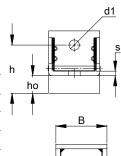


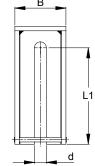
# Double adjustable wall bracket with safety device

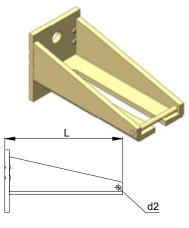
.B06P

Double zinc plated steel wall bracket for twin tracks, for use with bracket .B04 CEN/TS16415:2013-D  $\,$ 

NIKO Profile No.	24.000	25.000 / 26.000	27.000
Part No.	24.B06P	26.B06P	27.B06P
L (mm)	60	208	208
B (mm)	75	90	90
h (mm)	80	84	80
ho (mm)	18	28	28
s (mm)	5	8	8
d (mm)	17	21	32
d1 (mm)	17	18	22
d2 (mm)	8	8	8
L1 (mm)	129	172	168





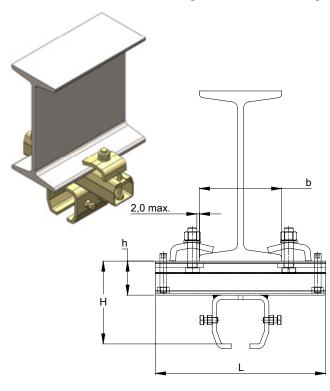




# **Double joist clamp** (Parallel to the I-Beam)

.B35P

This bracket is used for mounting to the underside flange of a parallel I-beam. CEN/TS16415:2013-D

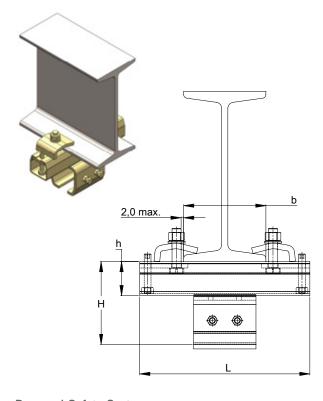


1		I.	I.	I.
NIKO Profile No.	24.000	25.000	26.000	27.000
Part No.	24.B35P	25.B35P	26.B35P	27.B35P
L (mm)	250	300	300	330
H (mm)	94	129	146	199
h (mm)	43,5	60	60	75
b max (mm)	150	175	175	205

# **Adjustable joist clamp** (90° to the I-Beam)

**.**B36P

This bracket is used for mounting to the underside flange of a vertical I-beam. CEN/TS16415:2013-D



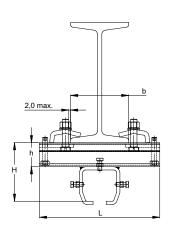
NIKO Profile No.	24.000	25.000	26.000	27.000
Part No.	24.B36P	25.B36P	26.B36P	27.B36P
L (mm)	250	300	300	330
H (mm)	94	129	146	199
h (mm)	43,5	60	60	75
b max (mm)	150	175	175	205
1				

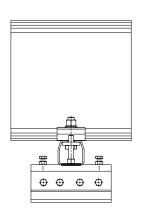


# Adjustable joist clamp with splice joist (Parallel to I-Beam)

.B71P

This bracket is used to support and connect track profiles to the underside flange of a parallel I-beam. CEN/TS16415:2013-D





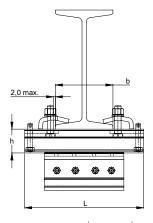
I	ı	I	I
Profil Nr.	25.000	26.000	27.000
Part No.	25.B71P	26.B71P	27.B71P
L (mm)	300	300	330
H (mm)	129	146	199
h (mm)	60	60	75
b max (mm)	175	175	205

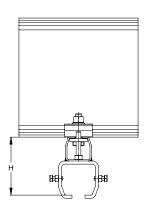
# Adjustable joist clamp with splice joist

**.**B72P

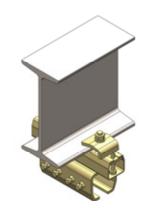
(90° to the I-Beam)

This bracket is used to support and connect track profiles to the underside flange of a vertical I-beam. CEN/TS16415:2013-D





Profil Nr.	25.000	26.000	27.000
Part No.	25.B72P	26.B72P	27.B72P
L (mm)	300	300	330
H (mm)	129	146	199
h (mm)	60	60	75
b max (mm)	175	175	205



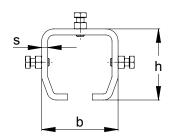


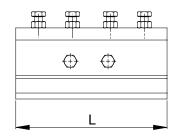
## Splice joint for tracks

**B49P** 

The track sections are joined using the track joint by tightening the top screws first then aligning the profiles by means of the side screws. CEN/TS16415:2013-D





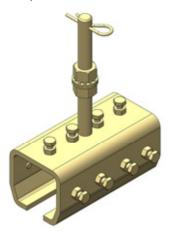


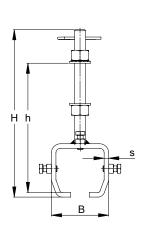
_	l .				
	NIKO Profile No.	24.000	25.000	26.000	27.000
	Part No.	Part No. 24.B49P		26.B49P	27.B49P
	L (mm)	150	180	200	250
	<b>h (mm)</b> 54		75	94	133
	b (mm)	61	81	100	116
	s (mm)	4,5	6	8	10
_					

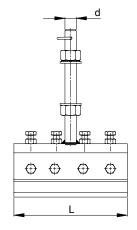
# Height adjustable support joint

.B11P

.B11 is a combination of a height adjustable bracket and a splice joint for mounting on adjustable wall brackets. CEN/TS16415:2013-D







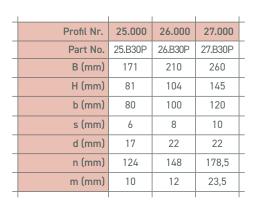
Profil Nr.	25.000	26.000	27.000
Part No.	25.B11P	26.B11P	27.B11P
B (mm)	81	100	116
H (mm)	215	295	348
h (mm)	170	250	295
L (mm)	180	200	250
s (mm)	6	8	10
d (mm)	M20	M20	M30

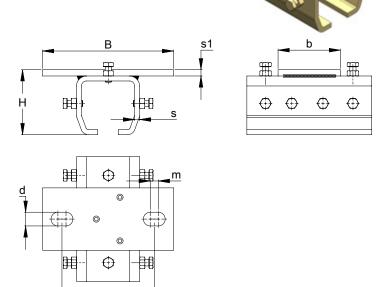


# **Ceiling support joint**

**.**B30P

Zinc plated splice joint, for mounting direct to ceiling. Combination of a ceiling support and a splice joint. CEN/TS16415:2013-D





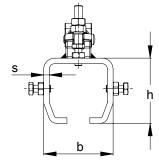
# Scaffolding splice joint

**.**B80P

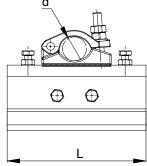
This clamp is suitable for connecting and supporting the track profiles to existing scaffolding structure. CEN/TS16415:2013-D



Profil Nr.	25.000	26.000	27.000
Part No.	25.B80P	26.B80P	27.B80P
L (mm)	180	200	250
h (mm)	75	94	133
b (mm)	81	100	116
s (mm)	6	8	10
d MIN (mm)	40	40	40
d MAX (mm)	48,3	48,3	48,3



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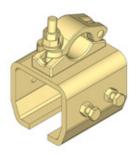


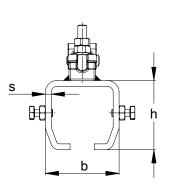


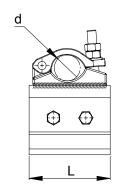
# Scaffolding support bracket

.B81P

This clamp is suitable for supporting the track profiles to existing scaffolding structure. CEN/TS16415:2013-D





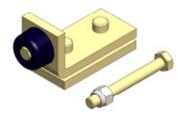


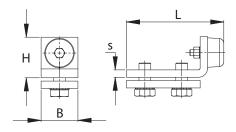
Profil Nr.	25.000	26.000	27.000
Part No.	25.B81P	26.B81P	27.B81P
L (mm)	90	110	120
h (mm)	75	94	133
b (mm)	81	100	116
s (mm)	6	8	10
d MIN (mm)	40	40	40
d MAX (mm)	48,3	48,3	48,3
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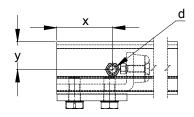
# Track end stop

.X01P

At the end of the open profiles, an end stop with a rubber buffer must be positioned. Used in conjuction with a fixed cross belt. CEN/TS16415:2013-D







24.000	25.000	26.000	27.000
			27.000
24.X01P	25.X01P	26.X01P	27.X01P
75	120	130	130
30	47	60	60
30	40	50	50
4	8	10	10
60	85	85	85
20	30	30	60
M8X60	M8X80	M12X100	M16X120
8,5	8,5	13	17
	75 30 30 4 60 20 M8X60	75 120 30 47 30 40 4 8 60 85 20 30 M8X60 M8X80	75 120 130 30 47 60 30 40 50 4 8 10 60 85 85 20 30 30 M8X60 M8X80 M12X100

### Personal Safety Systems



### 4-Wheel trolley with hole

.T10P

This trolley is ideal for non standard self built applications. EN 795:2012-D CERT

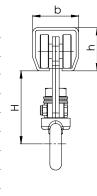
-	NIKO Profile No.	24.000	25.000	26.000	27.000	
	Part No.	24.T10P	25.T10P	26.T10P	27.T10P	
_	L (mm)	100	120	145	210	, b . L .
	H (mm)	54	62	70	180	
	h (mm)	43,5	60	75	110	
	b (mm)	48,5	65	80	90	
	D (mm)	14	18	22	26	
_	e (mm)	15	20	24	35	H \ d1
_	d1 (mm)	10	12	17	20	e e
_						D

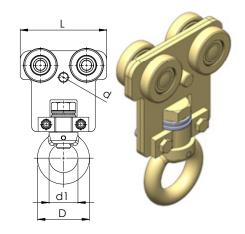
# 4-Wheel trolley with a rotating eye nut DIN 582

.T40P

4-wheel trolleys are suitable for hanging safety belts for fall arrest. EN 795:2012-D CERT

I	I	I	ı	l I
NIKO Profile No.	24.000	25.000	26.000	27.000
Part No.	24.T40P	25.T40P	26.T40P	27.T40P
L (mm)	90	110	150	200
H (mm)	82	93	123	163
h (mm)	43,5	60	75	110
b (mm)	48,5	65	80	90
D (mm)	63	72	90	108
d (mm)	10	12	17	20
d1 (mm)	35	40	50	60

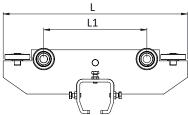




# End carriage with track joint

.T54P

This end carriage trolley with horizontal bearings are used to connecting the bridge crane to the long travel tracks in a fall arrest crane system. EN/795:2012-D



			<b>(</b>	/ I
e No.	25.000	26.000	27.000	
t No.	25.T54P	26.T54P	27.T45P	

NIKO Profile No.	25.000	26.000	27.000
Part No.	25.T54P	26.T54P	27.T45P
L (mm)	450	500	600
L1 (mm)	276	280	340
H (mm)	91	106	163





NOTES			
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Ver. March 2024



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### Baumusterprüfbescheinigung Certificate



Nr.: 1911-1911-PSA19-081-Z

Hersteller: Manufacturer: NIKO Vertriebs GmbH Hainfelder Straße 48 Originalhersteller: Helm Hellas S.A. P.O. Box 209

A - 2560 Berndorf

OEM:

GR - 20100 Korinthos

Produkt:

Product:

Persönliche Absturzschutzausrüstung – Anschlageinrichtungen Typ D

Personal fall protection equipment - Anchor devices type D

Тур:

NIKO PSS 25-26-27

Type:

NIKO PSS 25-26-27

Beschreibungen:

Zulässige Varianten, Komponenten – Siehe Anhang

Description:

Valid types, components - see annex

Prüfgrundlagen: Tested according to: ÖNORM EN 795:2012 (ident EN 795:2012) CEN/TS 16415:2013

to:

ÖNORM EN 365:2004 (ident EN 365:2004)

Bemerkungen:

Siehe Anhang

Remarks:

ZERTIFIKAT | CERTIFICATE | CERTIFICAT | CERTIFICADO | CEPTИФИКАТ | ふんか | 证书 | 인증서

See annex

Hiermit bestätigt die TÜV AUSTRIA SERVICES GMBH, dass das oben angeführte Produkt den grundlegenden Sicherheits-Anforderungen entspricht. Grundlage dieses Zertifikates ist das zur Prüfung und Zertifizierung vorgelegte Prüfmuster und die technische Dokumentation.

Hereby TÜV AUSTRIA SERVICES GMBH confirms that the above-mentioned product meets the essential safety requirements. The certificate is based on the test specimen and the technical documentation subjected to the test and the certification.

TÜV-A-MHF/FT-14/FT04-026

Vorgängerdokument / former document

10.11.2014

Datum / date

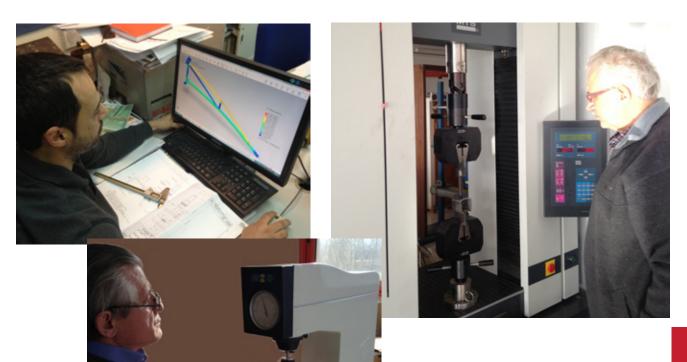
01.11.2019 Datum Dipl.-Ing. Georg Sonntag Geprüft examined Ing. Georg Gottschlich Freigegeben released 31.10.2024 Gültig bis



TÜV AUSTRIA SERVICES GMBH Deutschstraße 10 A-1230 Wien FM-INE-PSA-Z-0100a (Rov.03



Our quality control department is manned by experienced and highly skilled engineers. Our test lab is equipped with endurance test stands, tensile stress equipment, hardness test machines and other laboratory equipment. Virtual stress analysis is also performed during the developing phase of every component.















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