



Model	Load kg	Page
Schienennummer	Last kg	Seite
Friction guides / Gleitführungen		
DFG115-CASSAA	50	132
DFG115-CASSMA	50	135
DFG115-CASSNA	50	138
Recirculating ball guides / Linearführungen mit Kugelumlaufl		
0115RC/RCH (DA)	130	141
0116RC (DA)	360	144
Caged ball bearing guides / Linearführungen mit Kugelkäfig		
0115RS (DZ)	60	147
1312 (DZ)	60	149
2415 (DZ)	18.5	150

- Friction guide with automatic adjustment
- Once loaded onto the track and the installation pins removed* the guide automatically adjusts the friction elements to produce a small preload. This adjustment will continue to operate throughout the life of the product in the unloaded orientations. The friction elements will also act as a preloaded floating bearing
- Lightweight aluminium track, lengths 1m and 2m with pre-drilled fixing holes
- Ultra-low wear
- No lubrication required: maintenance free
- Resistant to dirt and dust
- Suitable for harsh environments
- Vibration resistant and quiet operation
- Corrosion resistant and suitable for high pressure wash down
- The guides can be used in any orientation. They have been designed to absorb equal wear in both the Y and Z orientations
- Two or more tracks can be butted together to create a longer track. Misaligned tracks will cause excessive wear on the guides
- Suitable for flat mounting
- Temperature -40°C to +90°C

- Gleitführung, selbsteinstellend
- Nachdem der Führungswagen auf die Schiene gesetzt und die Montagestifte entfernt wurden, stellt der Führungswagen die Gleitelemente automatisch ein, um eine geringe Vorspannung zu erzeugen.* Diese Einstellung wird während der gesamten Lebensdauer in unbelasteten Anordnungen beibehalten. Die Gleitelemente wirken zudem als vorgespannte Gleitlager
- Aus leichtem Aluminium, Länge 1m und 2m mit vorgebohrten Befestigungsbohrungen
- Extrem geringe Abnutzung
- Keine Schmierung erforderlich: wartungsfrei
- Unempfindlich gegen Schmutz und Staub
- Für schwierige Umgebungsbedingungen
- Vibrationsresistent und geräuscharmer Betrieb
- Korrosionsbeständig und geeignet für Hochdruckreinigung
- Die Führungswagen können in jeder Anordnung verwendet werden. Sie sind so konstruiert, dass sie Last sowohl in der Y- wie auch in der Z-Richtung aufnehmen
- Zwei oder mehr Schienen können für größere Schienenlängen miteinander verbunden werden. Falsch ausgerichtete Schienen verursachen übermäßigen Verschleiß
- Possibilité de montage à plat
- Temperatur -40°C bis +90°C



Item / Artikel	Order code Artikelnummer	W (kg)
Guide x 1 (automatic adjustment) Führungswagen x 1 (selbsteinstellend)	DFG115-CASSAA	0.96
1m track x 1 / 1m Schiene x 1	DFG115-0100	0.48
2m track x 1 / 2m Schiene x 1	DFG115-0200	0.96

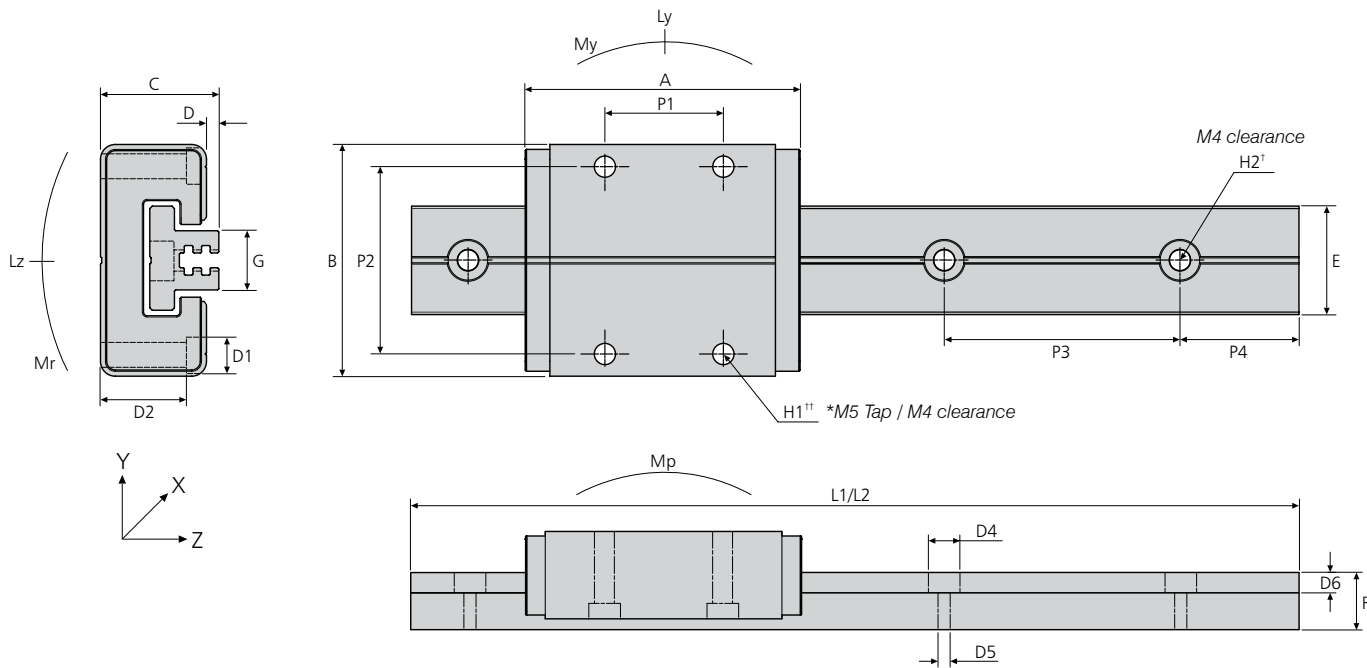
* Pins may become loose if left in place whilst in operation

* Stifte können sich lösen, wenn sie während des Betriebs nicht entfernt werden

Product specifications / Produktspezifikationen	
Track & guide chassis Schiene / Wagengehäuse	Hard anodised aluminium Aluminium harteloxiert
Friction elements Gleitelemente	Advanced technical polymer Technischer Kunststoff
Polymer components Polymerkomponenten	Acetal
Metal components Metallkomponenten	Stainless steel/lead brass Edelstahl/bleihaltiges Messing
Clearance / Spiel	N/A
Preload / Vorspannung	Preload 4.5N (± 1N) / Vorspannung 4,5N (± 1N)
Accuracy** / Genauigkeit**	± 0.675mm (Y axis) / ± 0,675mm (Y axe) / ± 0,675 mm (Y axis) ± 0.75mm (Z axis) / ± 0,75mm (Z axe) / ± 0,75 mm (Z axis)

** Figures refer to the out of the box installation clearance, plus the maximum wear limit over the product's life

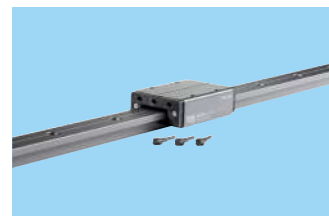
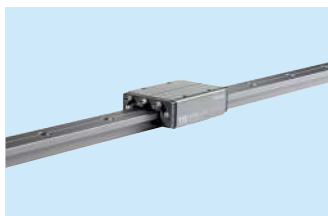
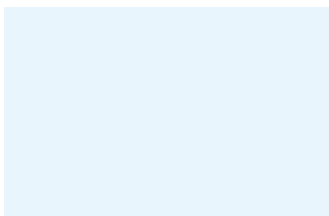
** Angegebene Werte beziehen sich auf das standardmäßig eingestellte Spiel bei Auslieferung zuzüglich des maximalen Verschleißes über die gesamte Lebensdauer der Produkte



Guide dimensions (mm) / Führungsabmessungen (mm)								
A	B	C	D	P1	P2	H1*	D1	D2
70	47	24	2.5	30	38	M5	8	17.5

Track dimensions (mm) / Laufbahnabmessungen (mm)											
E	F	G	L1	L2	P3	L1	L2	H2	D4	D5	D6
						P4					
22	14	12	1000	2000	60	20	40	M4	8	4.3	5

Technical data / Technischeangaben							
Static load (kN) Statische belastung (kN)			Static moments (Nm) Statisches moment (Nm)			Temperature range Temperaturbereich	
Ly	Lz	-Lz	My	Mr	Mp	Min	Max
2	4	4	10	10	10	-40°C	+90°C



Guide can be adjusted in the Z and Y directions

Führungswagen kann in Z und Y-Richtung verstellt werden

The guide automatically adjusts the friction elements to produce a small preload

Führungswagen stellt die Gleitelemente automatisch auf eine kleine Vorspannung ein

Load

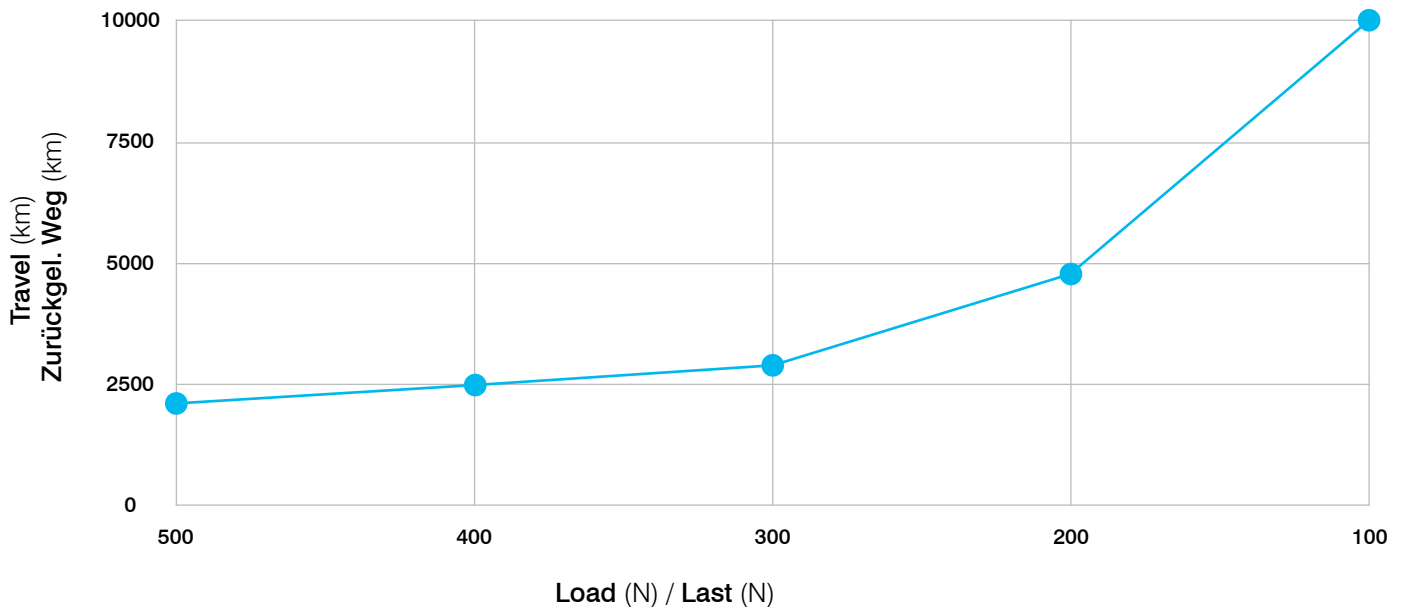
The graph illustrates the travel rating (km) per load (N) for a single guide in a clean environment. Data was taken under a constant speed of 1m/s and at an ambient temperature of 20° C. Travel rating may vary when altering these variables. The guide has been tested to a maximum 2m/s and higher speeds are achievable.

Visit www accuride-europe.com for our load, travel and service life calculator.

Last

Die Grafik zeigt den zurückgelegten Weg (km) abhängig von der Last (N) für einen einzelnen Führungswagen in sauberer Umgebung. Die Daten wurden bei einer konstanten Geschwindigkeit von 1m/s und einer Umgebungstemperatur von 20°C ermittelt. Der zurückgelegte Weg kann variieren, wenn diese Variablen verändert werden. Accuride hat bei maximal 2m/s getestet. Es sind jedoch höhere Geschwindigkeiten möglich.

Unter www accuride.de finden Sie unseren Rechner für Belastung, zurückgelegten Weg und Lebensdauer.



Notes:

- Please ensure loads are applied correctly and within limits specified
- All fixing holes should be used
- Off centre loading will cause additional wear
- Environment, temperature and speed can affect performance
- Test products to your specific requirements

Hinweise:

- Stellen Sie bitte sicher, dass Belastungen korrekt wirken und die angegebenen Grenzwerte nicht überschreiten
- Alle Befestigungsbohrungen sollten verwendet werden
- Exzentrische Last verursacht zusätzlichen Verschleiß
- Umgebung, Temperatur und Geschwindigkeit können sich auf die Leistung auswirken
- Bitte testen Sie das Produkt gemäß Ihren spezifischen Anforderungen

- Friction guide with manual adjustment
- Manually adjust the guide with an Allen key to create the perfect clearance or preload for your application*
- Lightweight aluminium track, lengths 1m and 2m with pre-drilled fixing holes
- Ultra-low wear
- No lubrication required: maintenance free
- Resistant to dirt and dust
- Suitable for harsh environments
- Vibration resistant and quiet operation
- Corrosion resistant and suitable for high pressure wash down
- The guides can be used in any orientation. They have been designed to absorb equal wear in both the Y and Z orientations
- Two or more tracks can be butted together to create a longer track. Misaligned tracks will cause excessive wear on the guides
- Suitable for flat mounting
- Temperature -40°C to +90°C

- Gleitführung manuell einstellbar
- Stellen Sie das Spiel oder die Vorspannung mithilfe eines Inbusschlüssels speziell für Ihre Anwendung ein*
- Aus leichtem Aluminium, Länge 1m und 2m mit vorgebohrten Befestigungsbohrungen
- Extrem geringe Abnutzung
- Keine Schmierung erforderlich: wartungsfrei
- Unempfindlich gegen Schmutz und Staub
- Für schwierige Umgebungsbedingungen
- Vibrationsresistent und geräuscharmer Betrieb
- Korrosionsbeständig und geeignet für Hochdruckreinigung
- Die Führungswagen können in jeder Anordnung verwendet werden. Sie sind so konstruiert, dass sie Last sowohl in der Y- wie auch in der Z-Richtung aufnehmen
- Zwei oder mehr Schienen können für größere Schienenlängen miteinander verbunden werden. Falsch ausgerichtete Schienen verursachen übermäßigen Verschleiß an den Führungselementen
- Possibilité de montage à plat
- Temperatur -40°C bis +90°C



Item / Artikel	Order code Artikelnummer	W (kg)
Guide x 1 (manual adjustment) Führungswagen x 1 (manuell einstellbar)	DFG115-CASSMA	0.99
1m track x 1 / 1m Schiene x 1	DFG115-0100	0.48
2m track x 1 / 2m Schiene x 1	DFG115-0200	0.96

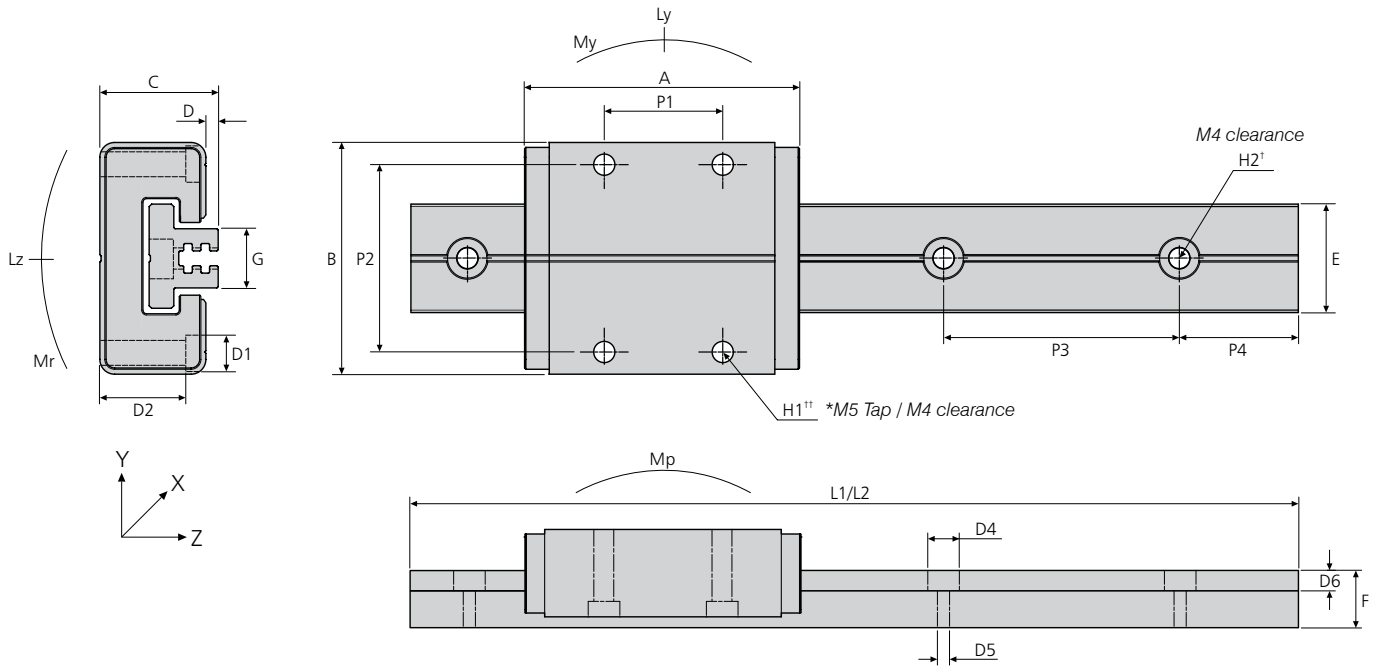
* Do not over tighten grub screws. Max. torque 0.1Nm

* Ziehen Sie die Madenschrauben nicht zu fest an. Max. Drehmoment 0.1Nm

Product specifications / Produktspezifikationen	
Track & guide chassis Schiene / Wagengehäuse	Hard anodised aluminium Aluminium harteloxiert
Friction elements Gleitelemente	Advanced technical polymer Technischer Kunststoff
Polymer components Polymerkomponenten	Acetal
Metal components Metallkomponenten	Stainless steel/lead brass Edelstahl/bleihaltiges Messing
Clearance Spiel	Can be configured to retain a $\pm 0.3\text{mm}$ clearance in Y and $\pm 0.25\text{mm}$ clearance in Z orientation Kann so konfiguriert werden, dass es einen Spiel von $\pm 0,3\text{ mm}$ bei Y und $\pm 0,25\text{ mm}$ Abstand in Z-Orientierung
Preload / Vorspannung	Up to a 30N preload / Bis zu einer Vorspannung von 30 N hält
Accuracy** / Genauigkeit**	$\pm 0.675\text{mm}$ (Y axis) / $\pm 0,675\text{mm}$ (Y axe) / $\pm 0,675\text{mm}$ (Y axis) $\pm 0.75\text{mm}$ (Z axis) / $\pm 0,75\text{mm}$ (Z axe) / $\pm 0,75\text{mm}$ (Z axis)

** Figures refer to the out of the box installation clearance, plus the maximum wear limit over the product's life

** Angegebene Werte beziehen sich auf das standardmäßig eingestellte Spiel bei Auslieferung zuzüglich des maximalen Verschleißes über die gesamte Lebensdauer der Produkte



Guide dimensions (mm) / Führingsabmessungen (mm)

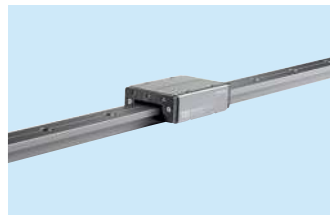
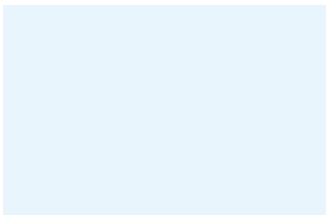
A	B	C	D	P1	P2	H1*	D1	D2
70	47	24	2.5	30	38	M5	8	17.5

Track dimensions (mm) / Laufbahnabmessungen (mm)

E	F	G	L1	L2	P3	L1 / L2		H2	D4	D5	D6
						L1	L2				
22	14	12	1000	2000	60	20	40	M4	8	4.3	5

Technical data / Technische Angaben

Static load (kN) Statische belastung (kN)			Static moments (Nm) Statisches moment (Nm)			Temperature range Temperaturbereich	
Ly	Lz	-Lz	My	Mr	Mp	Min	Max
2	4	4	10	10	10	-40°C	+90°C



Guide can be adjusted in the Z and Y directions

Führungswagen kann in Z und Y-Richtung verstellt werden

Use an Allen key to create the perfect clearance or preload for your application
Manuell einstellbar: Stellen Sie das Spiel oder die Vorspannung mithilfe eines Inbusschlüssels speziell für Ihre Anwendung ein

Load

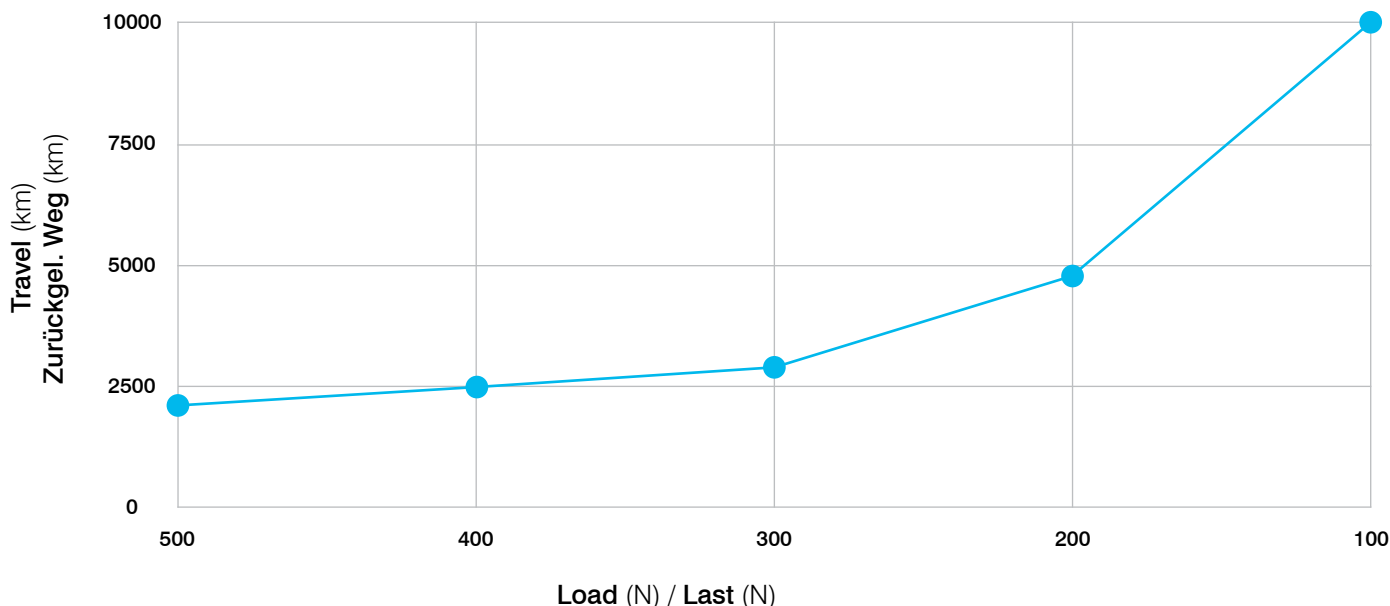
The graph illustrates the travel rating (km) per load (N) for a single guide in a clean environment. Data was taken under a constant speed of 1m/s and at an ambient temperature of 20° C. Travel rating may vary when altering these variables. The guide has been tested to a maximum 2m/s and higher speeds are achievable.

Visit www.accuride-europe.com for our load, travel and service life calculator.

Last

Die Grafik zeigt den zurückgelegten Weg (km) abhängig von der Last (N) für einen einzelnen Führungswagen in sauberer Umgebung. Die Daten wurden bei einer konstanten Geschwindigkeit von 1m/s und einer Umgebungstemperatur von 20°C ermittelt. Der zurückgelegte Weg kann variieren, wenn diese Variablen verändert werden. Accuride hat bei maximal 2m/s getestet. Es sind jedoch höhere Geschwindigkeiten möglich.

Unter www.accuride.de finden Sie unseren Rechner für Belastung, zurückgelegten Weg und Lebensdauer.



Notes:

- Please ensure loads are applied correctly and within limits specified
- All fixing holes should be used
- Off centre loading will cause additional wear
- Environment, temperature and speed can affect performance
- Test products to your specific requirements

Hinweise:

- Stellen Sie bitte sicher, dass Belastungen korrekt wirken und die angegebenen Grenzwerte nicht überschreiten
- Alle Befestigungsbohrungen sollten verwendet werden
- Exzentrische Last verursacht zusätzlichen Verschleiß
- Umgebung, Temperatur und Geschwindigkeit können sich auf die Leistung auswirken
- Bitte testen Sie das Produkt gemäß Ihren spezifischen Anforderungen

- Friction guide with no adjustment
- The movement /clearance cannot be adjusted
- Lightweight aluminium track, lengths 1m and 2m with pre-drilled fixing holes
- Ultra-low wear
- No lubrication required: maintenance free
- Resistant to dirt and dust
- Suitable for harsh environments
- Vibration resistant and quiet operation
- Corrosion resistant and suitable for high pressure wash down
- The guides can be used in any orientation. They have been designed to absorb equal wear in both the Y and Z orientations
- Two or more tracks can be butted together to create a longer track. Misaligned tracks will cause excessive wear on the guides
- Suitable for flat mounting
- Temperature -40°C to +90°C

- Gleitführung nicht einstellbar
- Bewegung / Spiel des Gleitelements kann nicht eingestellt werden
- Aus leichtem Aluminium, Länge 1m und 2m mit vorgebohrten Befestigungsbohrungen
- Extrem geringe Abnutzung
- Keine Schmierung erforderlich: wartungsfrei
- Unempfindlich gegen Schmutz und Staub
- Für schwierige Umgebungsbedingungen
- Vibrationsresistent und geräuscharmer Betrieb
- Korrosionsbeständig und geeignet für Hochdruckreinigung
- Die Führungswagen können in jeder Anordnung verwendet werden. Sie sind so konstruiert, dass sie Last sowohl in der wie auch in der Z-Richtung aufnehmen
- Zwei oder mehr Schienen können für größere Schienenlängen miteinander verbunden werden. Falsch ausgerichtete Schienen verursachen übermäßigen Verschleiß
- Für Flachmontage geeignet
- Temperatur -40°C bis +90°C

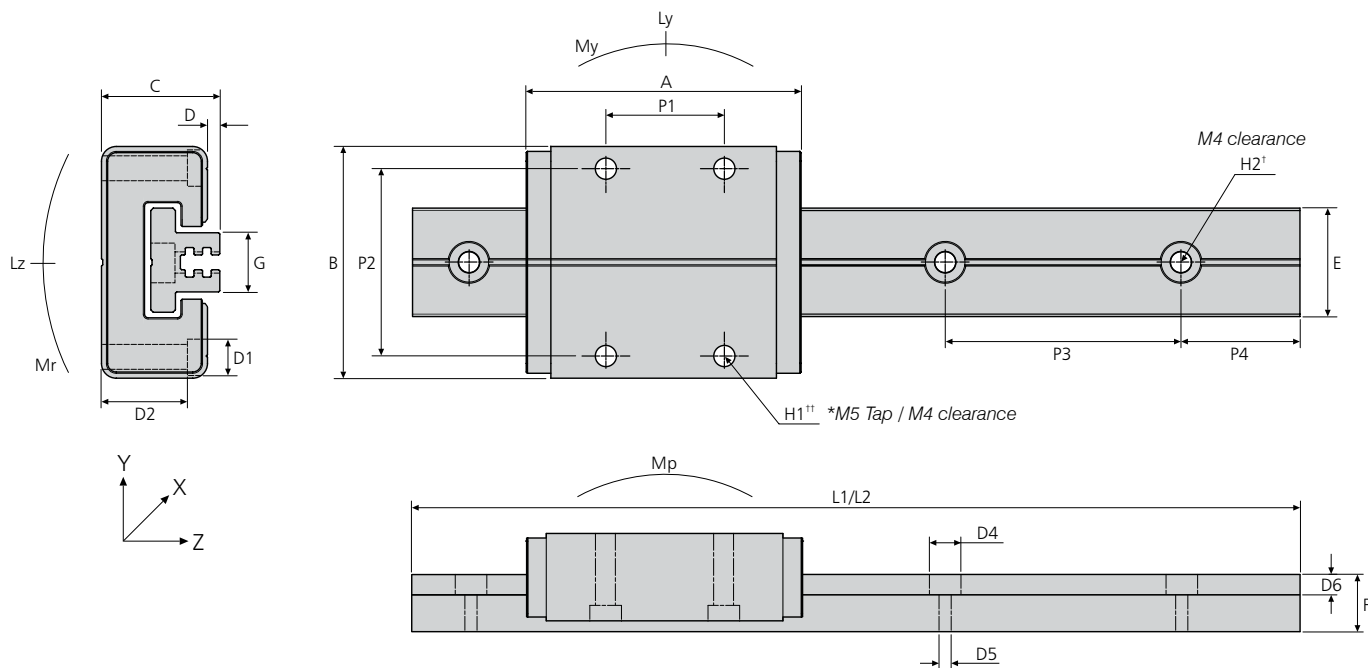


Item / Artikel	Order code Artikelnummer	W (kg)
Guide x 1 (non-adjustable) Führungswagen x 1 (nicht einstellbar)	DFG115-CASSNA	0.92
1m track x 1 / 1m Schiene x 1	DFG115-0100	0.48
2m track x 1 / 2m Schiene x 1	DFG115-0200	0.96

Product specifications / Produktspezifikationen	
Track & guide chassis Schiene / Wagengehäuse	Hard anodised aluminium Aluminium harteloxiert
Friction elements Gleitelemente	Advanced technical polymer Technischer Kunststoff
Polymer components Polymerkomponenten	Acetal
Metal components Metallkomponenten	Stainless steel/leaded brass Edelstahl/bleihaltiges Messing
Clearance Spiel	± 0.125mm clearance in Y and Z orientations Kann so konfiguriert werden, dass es einen Spiel von ± 0,3 mm bei Y und ± 0,25 mm Abstand in Z-Orientierung
Preload / Vorspannung	N/A
Accuracy* / Genauigkeit*	± 0.45mm (Y axis) / ± 0,45mm (Y axe) / ± 0,45mm (Y axis) ± 0.475mm (Z axis) / ± 0,475mm (Z axe) / ± 0,475mm (Z axis)

* Figures refer to the out of the box installation clearance, plus the maximum wear limit over the product's life

* Angegebene Werte beziehen sich auf das standardmäßig eingestellte Spiel bei Auslieferung zuzüglich des maximalen Verschleißes über die gesamte Lebensdauer der Produkte



Guide dimensions (mm) / Führingsabmessungen (mm)

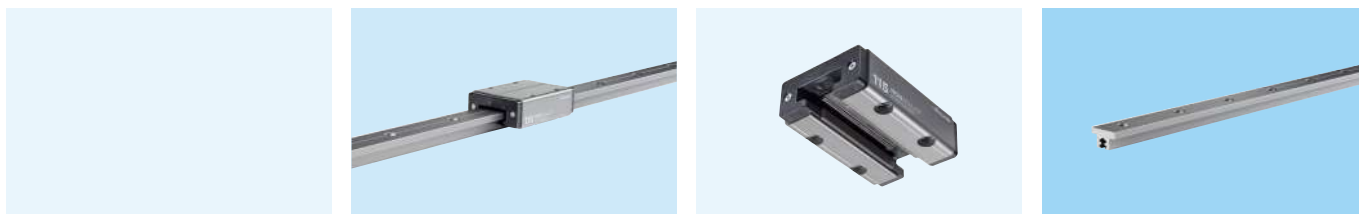
A	B	C	D	P1	P2	H1*	D1	D2
70	47	24	2.5	30	38	M5	8	17.5

Track dimensions (mm) / Laufbahnabmessungen (mm)

E	F	G	L1	L2	P3	L1	L2	H2	D4	D5	D6
						P4					
22	14	12	1000	2000	60	20	40	M4	8	4.3	5

Technical data / Technischeangaben

Static load (kN) Statische belastung (kN)			Static moments (Nm) Statisches moment (Nm)			Temperature range Temperaturbereich	
L _y	L _z	-L _z	M _y	M _r	M _p	Min	Max
2	4	4	10	10	10	-40°C	+90°C



Load

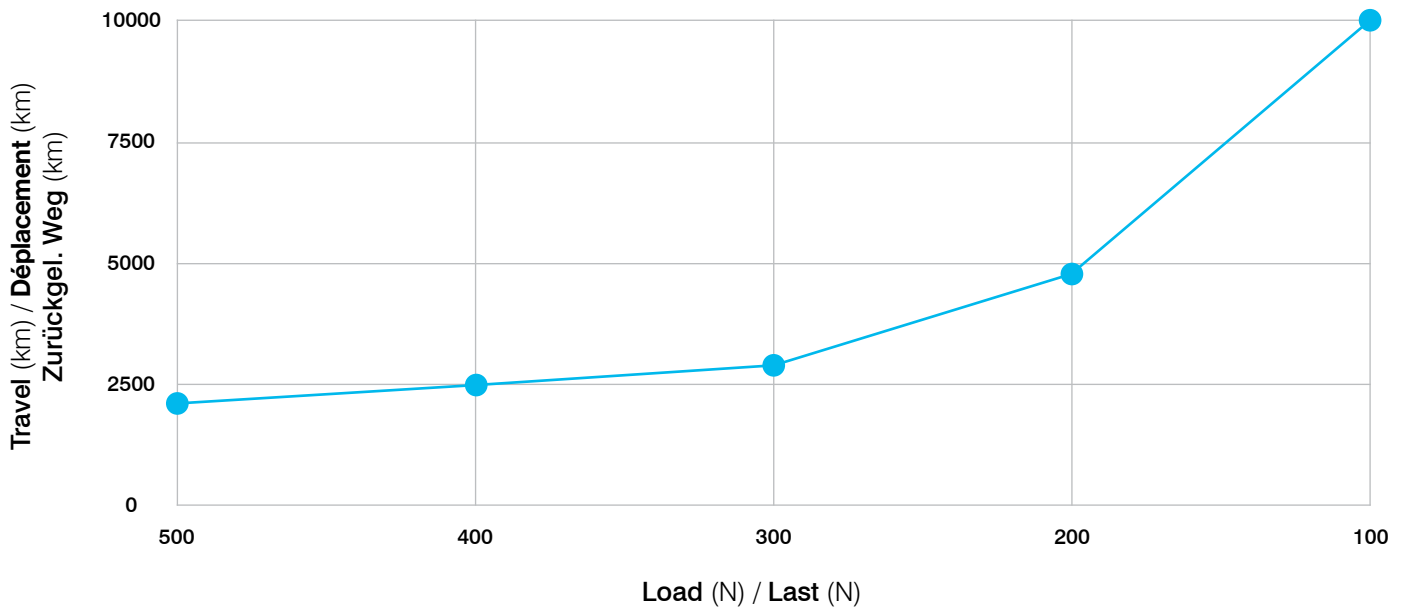
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Last

Die Grafik zeigt den zurückgelegten Weg (km) abhängig von der Last (N) für einen einzelnen Führungswagen in sauberer Umgebung. Die Daten wurden bei einer konstanten Geschwindigkeit von 1m/s und einer Umgebungstemperatur von 20°C ermittelt. Der zurückgelegte Weg kann variieren, wenn diese Variablen verändert werden. Accuride hat bei maximal 2m/s getestet. Es sind jedoch höhere Geschwindigkeiten möglich.

Unter www accuride.de finden Sie unseren Rechner für Belastung, zurückgelegten Weg und Lebensdauer.



Notes:

- Please ensure loads are applied correctly and within limits specified
- All fixing holes should be used
- Off centre loading will cause additional wear
- Environment, temperature and speed can affect performance
- Test products to your specific requirements

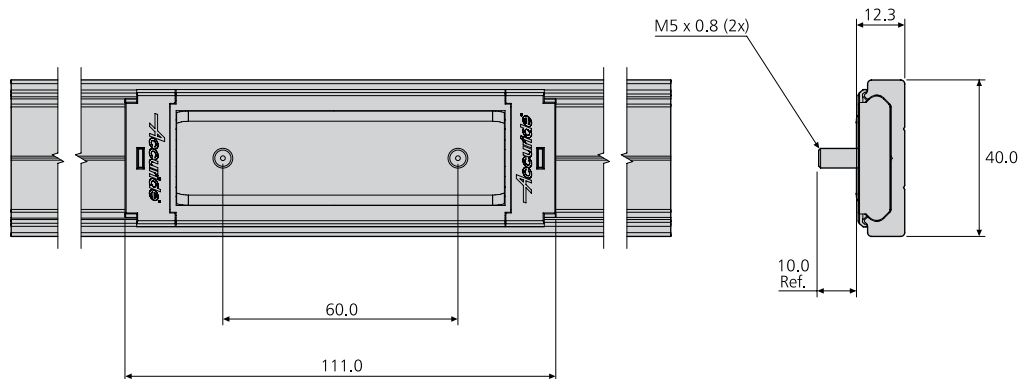
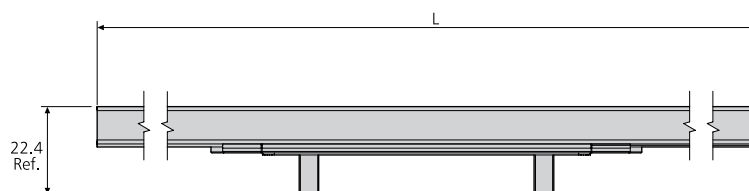
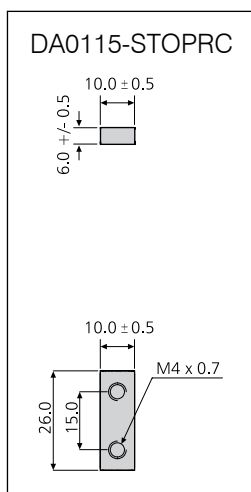
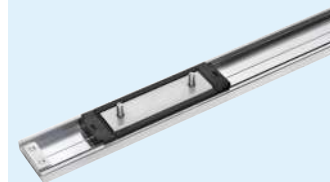
Hinweise:

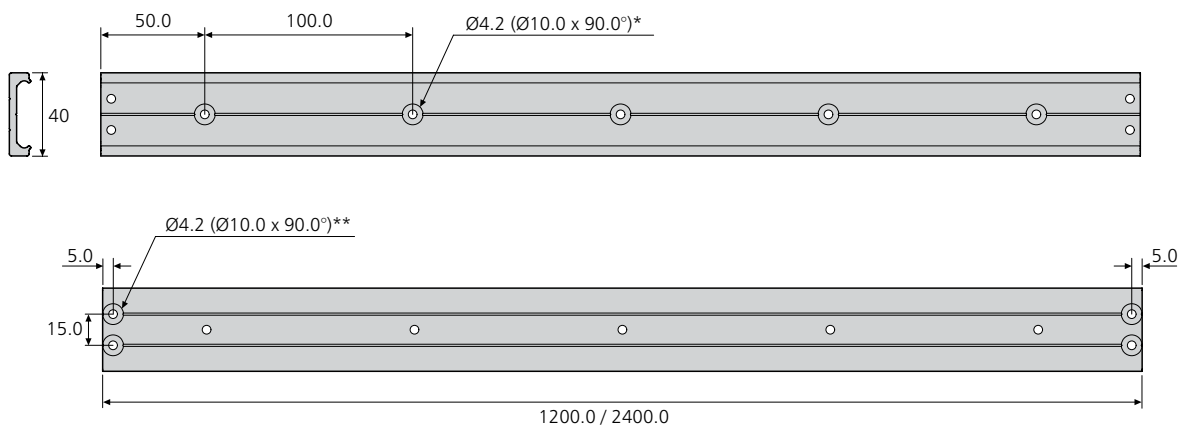
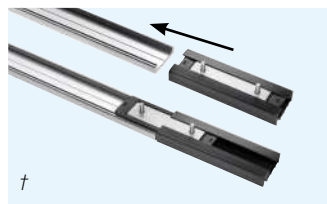
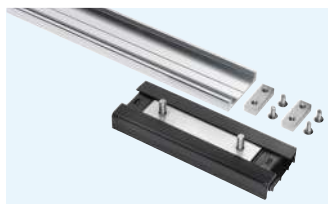
- Stellen Sie bitte sicher, dass Belastungen korrekt wirken und die angegebenen Grenzwerte nicht überschreiten
- Alle Befestigungsbohrungen sollten verwendet werden
- Exzentrische Last verursacht zusätzlichen Verschleiß
- Umgebung, Temperatur und Geschwindigkeit können sich auf die Leistung auswirken
- Bitte testen Sie das Produkt gemäß Ihren spezifischen Anforderungen

- Linear motion guide and recirculating ball carriage
- Load rating up to 130kg
- Aluminium track, lengths 1.2m and 2.4m, available with or without fixing holes
- Customer cuts track to required length
- Carriages sold separately:
 - stainless steel balls
 - polymer balls: grease free, quiet movement
- Corrosion resistant
- Resistant to dirt and dust
- Infinite track lengths possible
- End stops sold separately. Customer drills holes
- Various mounting options
- Suitable for flat mounting
- For mounting options and load rating, refer to DA0115RC/RCH matrix
- Temperature -20°C to +70°C
- DZ - 12 hours salt spray test
- DP - 500 hours salt spray test

80,000m

- Linearführung mit Kugelumlaufwagen
- Lastwert bis zu 130kg
- Aluminium-Profil, Längen in 1,20m und 2,40m, erhältlich mit oder ohne Befestigungslöcher
- Kunde schneidet Schiene auf gewünschte Länge zu
- Kugelumlaufwagen separat erhältlich:
 - Edelstahl-Kugeln
 - Kunststoff-Kugeln: fettfrei – ruhiger Lauf
- Korrosionsbeständig
- Schmutz- und staubbeständig
- Unendliche Schienenlängen möglich
- Endanschläge separat erhältlich. Kunde nimmt Bohrungen vor
- Verschiedene Montageoptionen
- Für Flachmontage geeignet
- Montageoptionen und Lastwerte siehe DA0115RC/RCH-Matrix
- Temperatur -20°C to +70°C
- DZ - 12 Stunden Salzsprühtest
- DP - 500 Stunden Salzsprühtest





* Fixing: drill 4.2mm holes on centre line, fully countersunk.
Montage: 4,2mm-Löcher auf Mittellinie bohren, angesenkt.

** End stops: drill 4.2mm holes on lines, fully countersunk.
Endanschläge: 4,2mm-Löcher auf Linien bohren, angesenkt.

Item	Order code	W (kg)
1.2m track x 1 (no fixing holes)	DA0115-0120RC	0.635
2.4m track x 1 (no fixed holes)	DA0115-0240RC	1.270
1.2m track x 1 (with fixing holes x 12)	DA0115-0120RCH	0.635
2.4m track x 1 (with fixing holes x 24)	DA0115-0240RCH	1.270
Carriage (stainless steel balls) x 1	DS0115-CASSRC	0.120
Carriage (polymer balls) x 1	DP0115-CASSRC	0.085
End stops (1 stop + 2 screws)	DA0115-STOPRC	0.007
Drilling Jig x 1	DZ0115-DJIGRC	0.080
Soft-close mechanism	DP0115-ECRC-2	0.12

Produkt	Bestellnummer	W (kg)
1,2m-Schiene x 1 (Ohne Befestigungslöcher)	DA0115-0120RC	0,635
2,4m-Schiene x 1 (Ohne Befestigungslöcher)	DA0115-0240RC	1,270
1,2m-Schiene x 1 (mit Befestigungslöcher x 12)	DA0115-0120RCH	0,635
2,4m-Schiene x 1 (mit Befestigungslöcher x 24)	DA0115-0240RCH	1,270
Wagen (Edelstahl-Kugeln) x 1	DS0115-CASSRC	0,120
Wagen (Kunststoff-Kugeln) x 1	DP0115-CASSRC	0,085
Endanschläge (1 Stck. + 2 Schrauben)	DA0115-STOPRC	0,007
Bohrschablone x 1	DZ0115-DJIGRC	0,080
Soft-Close-Mechanismus	DP0115-ECRC-2	0,12

Notes:

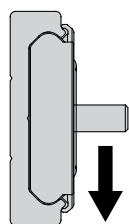
- Fixing recommendation: M4 countersunk screw/ 4mm countersunk wood screw
- Fix the track as recommended on a rigid and level surface
- Care must be taken while sliding the cassette into the track †
- Infinite track lengths possible. Butt tracks end to end and align the centre lines
- For permanent pinned connection (3mm pins not supplied), use drilling jig (sold separately)
- See illustrations for mounting options and load ratings
- Material: track – aluminium 6000 series, carriage – stainless steel and nylon
- For soft-close mechanism, refer to "DP0115-ECRC" in "Mounting kits and accessories" section
- For sliding cabinet door mounting brackets kits, refer to "635xx" in "Mounting kits and accessories" section

Hinweise:

- Empfohlene Befestigung: 4mm-Senkkopf-Holzschrauben/M4 Senkkopfschraube
- Schiene, wie angegeben, auf fester, ebener Oberfläche anbringen
- Beim Einschieben der Kassette in die Schiene vorsichtig vorgehen †
- Unendliche Schienenlängen möglich. Schienenenden aneinander fügen und mithilfe der Mittellinien ausrichten
- Für eine dauerhafte Verbindung mittels Stiften (Stifte nicht im Lieferumfang enthalten) Bohrschablone (separat erhältlich) verwenden
- Für Montageoptionen und Lastwerte siehe Abbildungen
- Material: Schiene – Aluminium 6000er-Serie, Wagen – Edelstahl und Nylon
- Soft-Close-Mechanismus siehe ‚DP0115-ECRC‘ in Abschnitt ‚Montage-Kits und Zubehör‘
- Montagewinkel-Bausätze für Schrankschiebetüren siehe "635xx" in Abschnitt ‚Montage-Kits und Zubehör‘

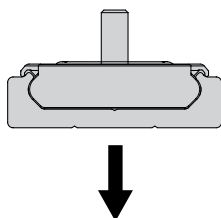
Distance tested: 80,000m
 Prüfdistanz: 80.000m

Mounting options and load ratings
 Montageoptionen und Lastwerte



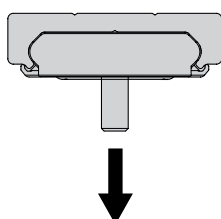
DS0115-CASSRC	kg
x 1	50
x 2	90
x 3	130

DP0115-CASSRC	kg
x 1	30
x 2	54
x 3	75



DS0115-CASSRC	kg
x 1	30
x 2	55
x 3	70

DP0115-CASSRC	kg
x 1	18
x 2	32
x 3	42



DS0115-CASSRC	kg
x 1	40
x 2	70
x 3	90

DP0115-CASSRC	kg
x 1	24
x 2	42
x 3	54

Notes:

- Distribute weight evenly across carriage(s)
- Due to the extensive variety of applications and possible orientations, we recommend that customers test this product to their specific requirements
- Not recommended for high torque applications

Hinweise:

- Gewicht gleichmäßig über den/die Wagen verteilen
- Aufgrund der vielfältigen Einsatzmöglichkeiten und den dadurch bedingten Montageformen empfehlen wir, dass Kunden dieses Produkt im Rahmen ihrer spezifischen Einsatzbedingungen testen
- Nicht empfohlen für Anwendungen mit hohem Drehmoment

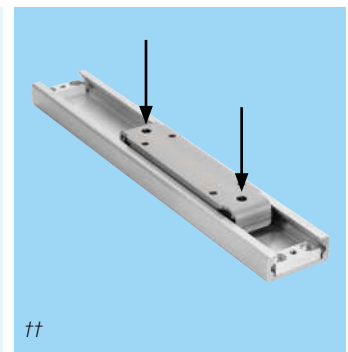
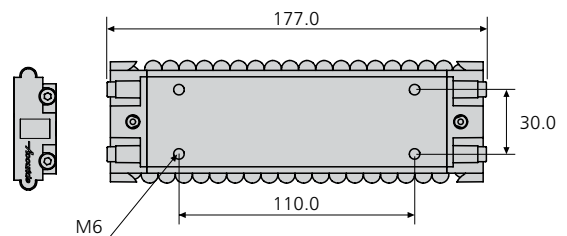
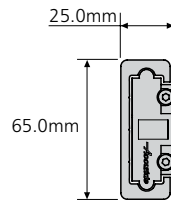
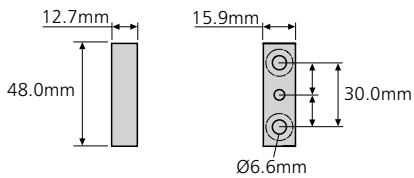
- Linear motion guide and recirculating ball carriage
- Load rating up to 360kg
- Aluminium track, lengths 2.4m and 3.6m
- Customer cuts track to required length and drills mounting holes
- Carriages sold separately:
 - stainless steel balls
 - polymer balls: quiet movement
- End stops sold separately
- Corrosion resistant
- Optional damper with recycling bracket
- Optional door mounting kit
- Suitable for flat mounting
- For mounting options and load ratings, refer to DA0116RC matrix
- Temperature -20°C to +70°C
- DP - 500 hours salt spray test

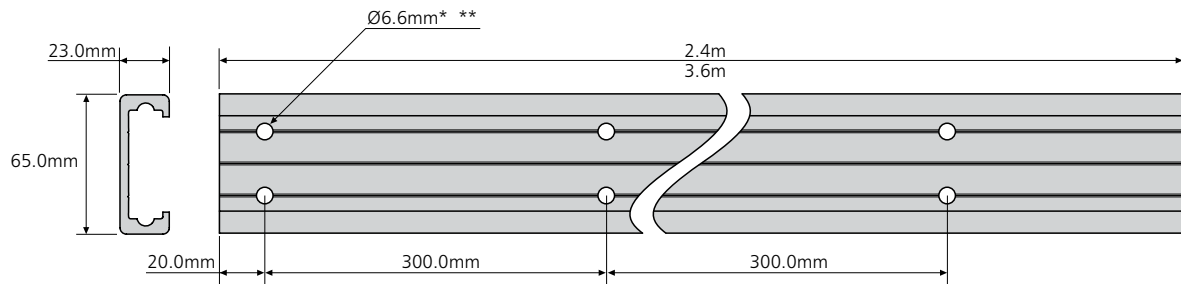
100,000m

- Linearführung mit Kugelumlaufwagen
- Lastwert bis 360kg
- Aluminium-Profil, Längen in 2,4m and 3,6m
- Der Kunde schneidet die Schiene auf die gewünschte Länge zu und bohrt Montagelöcher
- Kugelumlaufwagen separat erhältlich:
 - Edelstahl-Kugeln
 - Kunststoff-Kugeln: ruhiger Lauf
- Endanschläge separate erhältlich
- Korrosionsbeständig
- Wahlweiser Dämpfer mit Spezialwinkel
- Wahlweiser Türmontagesatz
- Für Flachmontage geeignet
- Montageoptionen und Lastwerte siehe DA0116RC-Matrix
- Temperatur -20°C to +70°C
- DP - 500 Stunden Salzsprühtest



DA0116-STOPRC





- * Track: drill 6.6mm holes on parallel lines, fully countersunk
* Schiene: 6,6-mm-Löcher auf parallelen Linien bohren, komplett gesenkt

- ** End stops 1. For optional end stop to keep carriage(s) in place during handling, drill 6.6mm hole on centre line on reverse of track, fully countersunk.

2. For permanent end stops, fixed through the track and into the supporting surface, drill 2 x 6.6mm holes on parallel lines

- ** Endanschläge 1. Für wahlweisen Endanschlag, damit (der) Wagen beim Handhaben in Position bleibt/bleiben, 6,6-mm-Loch auf Mittellinie auf Schienenrückseite bohren, komplett gesenkt.

2. Bei permanenten Endanschlägen, die durch die Schiene hindurch und in der tragenden Oberfläche befestigt sind, 2 Löcher 6,6 mm auf parallelen Linien bohren



Item	Order code	W (kg)
2.4m track x 1	DA0116-0240RC	3.15
3.6m track x 1	DA0116-0360RC	4.72
Carriage (stainless steel balls) x 1	DS0116-CASSRC	0.559
Carriage (polymer balls) x 1	DP0116-CASSRC	0.412
End stops (2 stops + 2 screws)	DA0116-STOPRC	0.051
Damper x 1	DP0116-ECRC	0.135
Recycling bracket	DS0116-BRKT01RC	0.272

Produkt	Bestellnummer	W (kg)
2,4m Schiene x 1	DA0116-0240RC	3.15
3,6m Schiene x 1	DA0116-0360RC	4.72
Wagen (Edelstahl-Kugeln) x 1	DS0116-CASSRC	0.559
Wagen (Kunststoff-Kugeln) x 1	DP0116-CASSRC	0.412
Endanschläge (2 Stck. + 2 Schrauben)	DA0116-STOPRC	0.051
Dämpfer x 1	DP0116-ECRC	0.135
Spezialwinkel x 1	DS0116-BRKT01RC	0.272

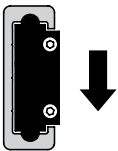
Mounting options and load ratings:

- Distribute weight evenly across carriage(s)
- Bracket DS0116-BRKT01RC must be used to protect plastic components if end stops are subject to impact
- We recommend that additional external stopping arrangements are used for high impact applications
- Due to the extensive variety of applications and possible orientations, we recommend that customers test this product to their specific requirements

100,000m

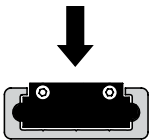
Montageoptionen und Lastwerte:

- Gewicht gleichmäßig über den/die Wagen verteilen
- Der Winkel DS0116-BRKT01RC muss verwendet werden, um Kunststoff-Bauteile zu schützen, wenn Endanschläge einer Schlagbeanspruchung ausgesetzt sind
- Wir empfehlen, bei Anwendungen mit hohen Stoßbelastungen zusätzliche externe Anhaltevorrichtungen vorzusehen
- Aufgrund der vielfältigen Einsatzmöglichkeiten und den dadurch bedingten Montageformen empfehlen wir, dass Kunden dieses Produkt im Rahmen ihrer spezifischen Einsatzbedingungen testen



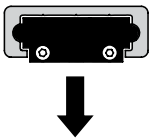
DS0116-CASSRC	kg
x 1	150
x 2	290
x 3	360

DP0116-CASSRC	kg
x 1	100
x 2	180
x 3	240



DS0116-CASSRC	kg
x 1	90
x 2	164
x 3	211

DP0116-CASSRC	kg
x 1	60
x 2	109
x 3	140



DS0116-CASSRC	kg
x 1	120
x 2	211
x 3	270

DP0116-CASSRC	kg
x 1	80
x 2	141
x 3	180

Notes:

- Fixing recommendation: M6 countersunk screw
- Fix track as recommended on a rigid and flat surface
- Tracks can be butted together for longer lengths if aligned accurately
- Care must be taken while sliding the carriage into the track †
- Material: track and carriage –extruded aluminium 6000 series
- Lubrication: Castrol Speherol Grease to NLGI 2 or similar. Apply through holes in carriage/bracket using a conical grease nozzle. †† We recommend re-greasing intervals sufficient to retain a grease film on the track; the track should not be allowed to dry out
- For damper mechanism & recycling bracket, refer to "DP0116-ECRC" in "Mounting kits and accessories" section. Recycling bracket required to re-set damper (not required if used with door mounting kit)
- For door mounting kit, refer to "DS0116-BRKTRC"

Hinweise:

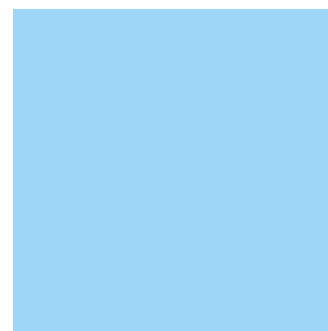
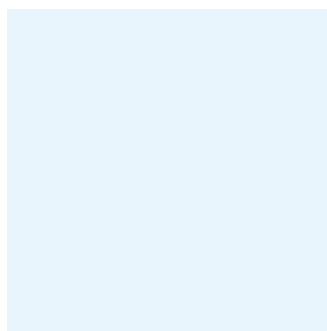
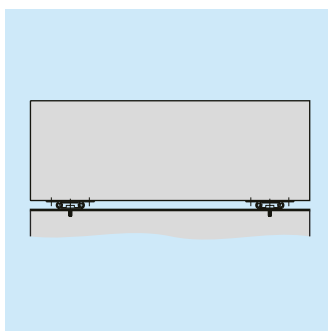
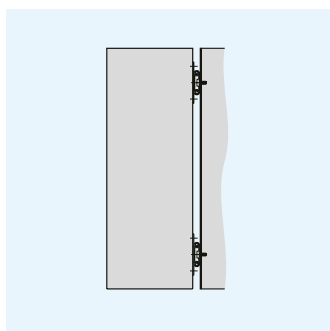
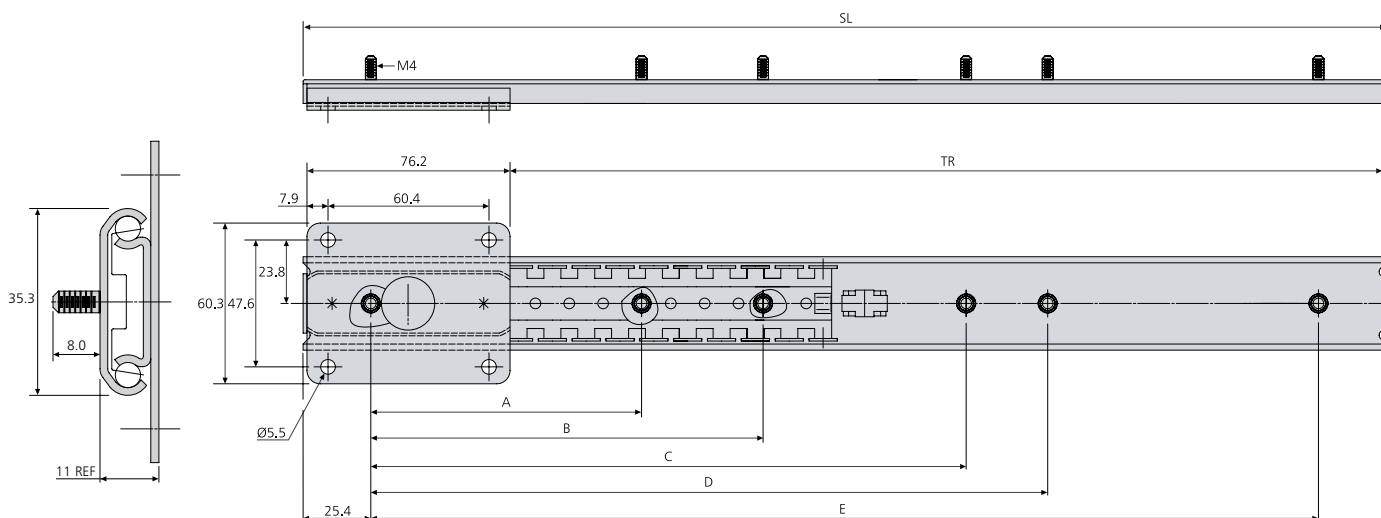
- Empfohlene Befestigung: M6 Senkkopfschraube
- Die Schiene ist wie empfohlen auf einer starren und flachen Oberfläche zu befestigen
- Bei präziser Ausrichtung können Schienen stumpf aneinandergesetzt werden, um größere Längen zu erzielen
- Beim Einschieben der Kassette in die Schiene vorsichtig vorgehen †
- Werkstoff: Schiene und Wagen – stranggepresstes Aluminium der Serie 6000
- Schmierung: Castrol Speherol Grease nach NLGI 2 oder ähnlich. Mit einer konischen Schmierdüse durch Löcher im Wagen/Winkel auftragen. †† Wir empfehlen Nachschmierintervalle, die einen stets ausreichenden Schmierfilm auf der Schiene gewährleisten; die Schiene darf nicht austrocknen
- Dämpfermechanismus und Spezialwinkel siehe „DP0116-ECRC“ in Abschnitt „Montage-Kits und Zubehör“. Der Spezialwinkel ist zum Rückstellen des Dämpfers erforderlich (bei Verwendung mit Türmontagesatz nicht erforderlich)
- Türmontagesatz siehe „DS0116-BRKTRC“

- Load rating up to 60kg
- Retainer synchronization
- Precise linear motion through the full travel
- Moving member fully supported on ball bearings at all times
- Slides sold singly
- Suitable for flat mounting
- Temperature -20°C to +70°C
- DZ - 12 hours salt spray test

10,000

Notes:

- Fixing recommendation: M5 screw
- Can be used upright as a non-load bearing guide



0115RS	mm							kg		
	SL	TR	A	B	C	D	E	W**	†L*	††L*
DZ0115-0030RS	305	226	88.9	-	165.1	-	254.0	0.28	60	50
DZ0115-0035RS	356	276	101.6	-	203.2	-	304.8	0.32	60	50
DZ0115-0040RS	406	327	101.6	-	254.0	-	355.6	0.35	60	50
DZ0115-0045RS	457	378	127.0	-	279.4	-	406.4	0.38	60	50
DZ0115-0050RS	508	429	152.4	-	304.8	-	457.2	0.42	60	50
DZ0115-0055RS	559	480	177.8	-	330.2	-	508.0	0.45	60	50
DZ0115-0060RS	610	530	101.6	203.2	355.6	457.2	558.8	0.48	60	50
DZ0115-0065RS	660	581	127.0	254.0	355.6	482.6	609.6	0.51	60	50
DZ0115-0070RS	711	632	127.0	254.0	406.4	533.4	660.4	0.55	60	50
DZ0115-0080RS	813	734	152.4	304.8	457.2	609.6	762.0	0.61	60	50
DZ0115-0090RS	914	835	177.8	355.6	508.0	685.8	863.6	0.67	60	50
DZ0115-0100RS	1016	937	203.2	406.4	558.8	762.0	965.2	0.74	60	50

* Load rating per pair of slides with the load evenly distributed

† Horizontal mount

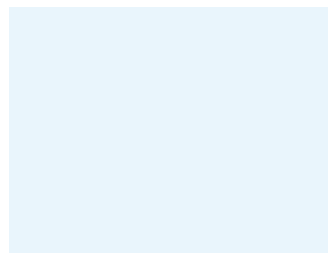
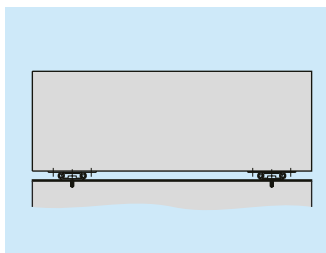
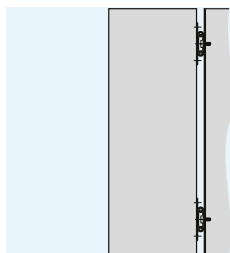
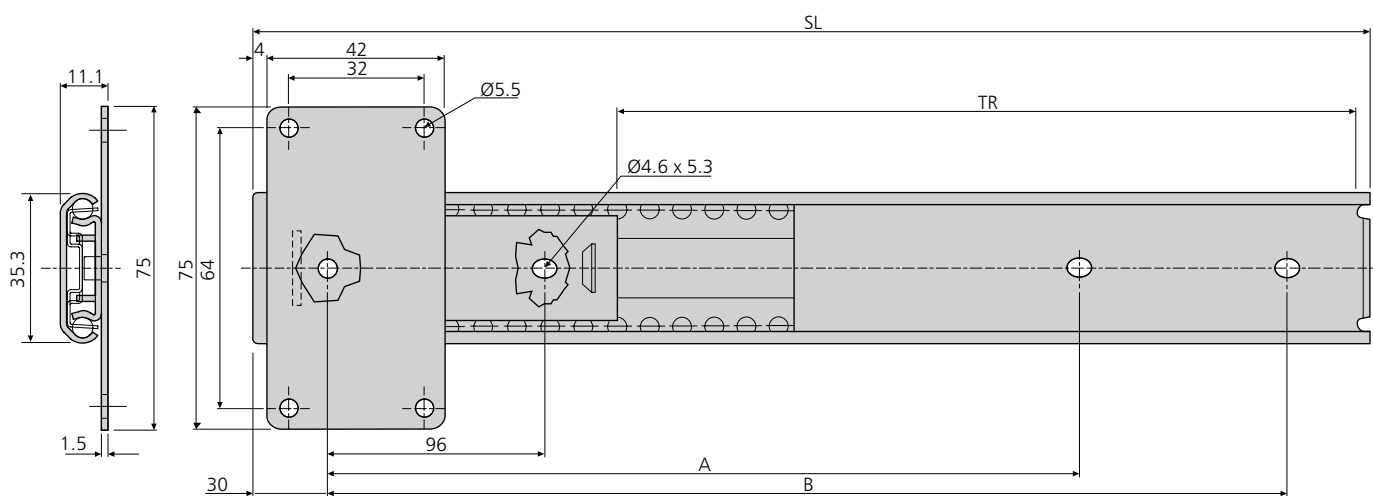
†† Vertical mount

** Weight per individual slide

- Load rating up to 60kg
- Linear motion
- Slide thickness 11.1mm
- Hold-out at one end
- Sold in pairs
- Vertical or horizontal mounting
- Suitable for flat mounting
- Temperature -20°C to +70°C
- DZ - 12 hours salt spray test

10,000

- Lastwert bis 60kg
- Linearbewegung
- 11,1mm Schienendicke
- Rastung in ausgezogener Position an einem Ende
- Verkauf paarweise
- Vertikale oder horizontale Montage
- Für Flachmontage geeignet
- Temperatur -20°C to +70°C
- DZ - 12 Stunden Salzprühtest



1312	mm				kg		
	SL	TR	A	B	W	†L*	††L*
DZ1312-0035	350	257	192	288	0.58	60	50
DZ1312-0040	400	307	224	320	0.66	60	50
DZ1312-0045	450	357	256	352	0.72	60	50
DZ1312-0050	500	407	352	448	0.78	60	50
DZ1312-0055	550	457	352	448	0.84	60	50
DZ1312-0060	600	502	448	544	0.90	60	50

* Load rating per pair of slides with the load evenly distributed
Lastkraft pro Schienenpaar bei gleichmäßiger Lastverteilung

† Horizontal mount
Horizontal montiert

†† Vertical mount
Vertikal montiert

Notes:

- Fixing recommendation: M4
- Cannot be used in the upright position

Hinweise:

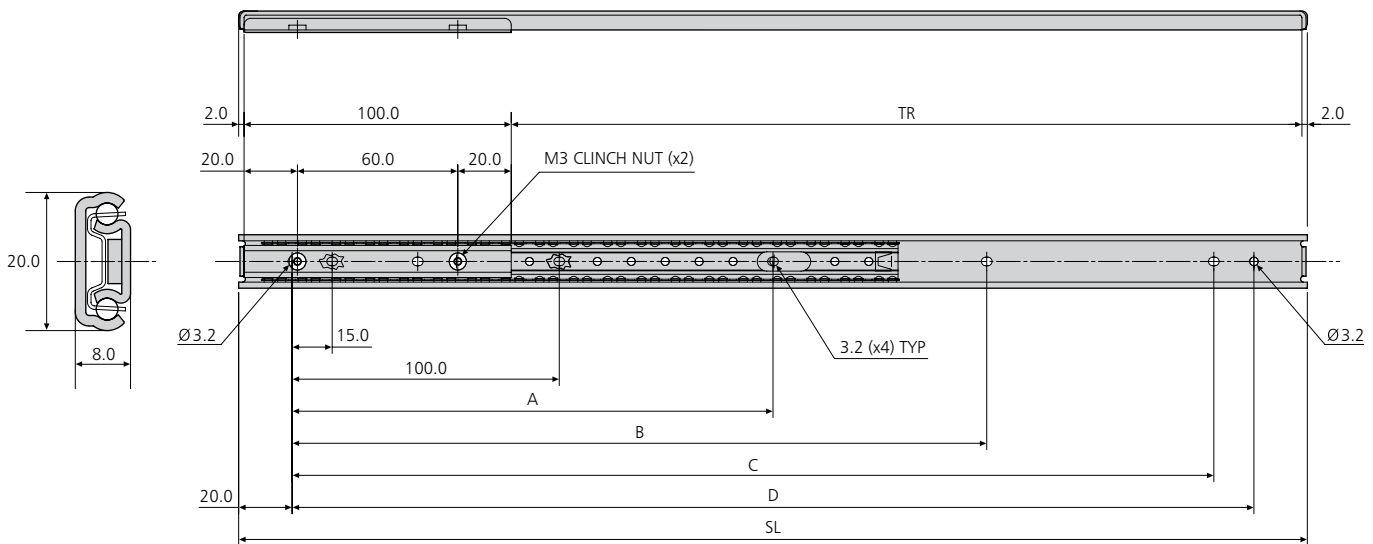
- Empfohlene Befestigung: Schraube M4
- Kann nicht in der aufrechten Position benutzt werden

- Load rating up to 18.5kg
- Linear motion
- 8mm slide thickness
- Sold in pairs
- Vertical or horizontal mounting
- Suitable for flat mounting
- Temperature -20°C to +110°C
- DZ - 12 hours salt spray test

- Lastwert bis 18,5kg
- Linearbewegung
- 8mm Schienendicke
- Verkauf paarweise
- Vertikale oder horizontale Montage
- Für Flachmontage geeignet
- Temperatur -20°C to +110°C
- DZ - 12 Stunden Salzsprühtest



80,000



2415	mm						kg	
	SL	TR±3	A	B	C	D	W	L
DZ2415-0020	200	96	-	-	145.0	160.0	0.21	18.5
DZ2415-0025	250	146	-	-	195.0	210.0	0.26	18.5
DZ2415-0030	300	196	-	160.0	245.0	260.0	0.30	18.5
DZ2415-0035	350	246	-	210.0	295.0	310.0	0.34	18.5
DZ2415-0040	400	296	-	260.0	345.0	360.0	0.38	18.5
DZ2415-0045	450	346	205.0	310.0	395.0	410.0	0.42	18.5
DZ2415-0050	500	396	230.0	360.0	445.0	460.0	0.46	18.5
DZ2415-0055	550	446	255.0	410.0	495.0	510.0	0.50	18.5

Notes:

- Fixing recommendation: M3

Hinweise:

- Empfohlene Befestigung: Schraube M3

Telescopic linear slides
Linear guide rail systems



Telescopic linear slides Linear guide rail systems

2

GN 2402
Linear slides



page 6

GN 2426
Cam rollers



page 26

GN 2404
Telescopic linear slides



page 8

GN 2428
Wipers



page 27

GN 2406
Telescopic linear slides



page 10

GN 2408
Telescopic linear slides



page 11

GN 2410
Telescopic linear slides



page 13

GN 2422
Cam roller
linear guide rails



page 19

GN 2424
Cam roller carriages



page 22

GN 2424.1
Open-end wrenches



page 25

All linear slides consist of an outer rail with a runner moving inside. Anti-friction bearings, kept at a distance and in position by means of a ball cage, lie between the rail and the runner.

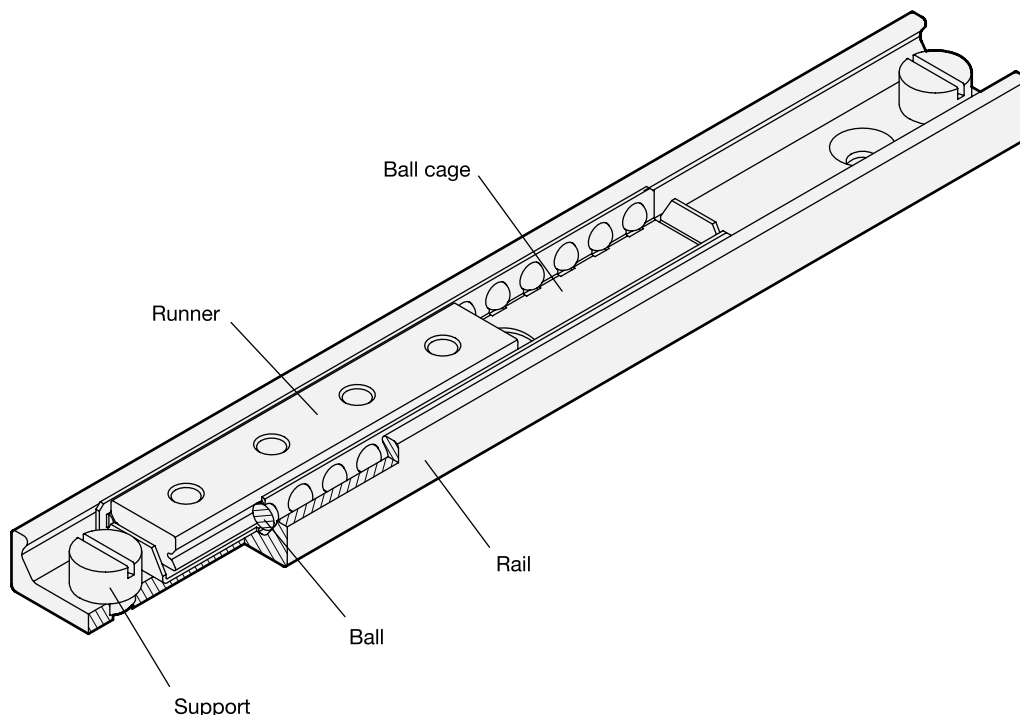
Rail and runner are made of heat treatable steel, enabling their use in industrial environments with higher requirements in terms of load rating, quiet operation and useful service life.

All designs are available in the nominal rail dimensions $h_1 = 28, 35$ and 43 mm and may also be supplied beyond the standard range in lengths from 130 mm to 1970 mm, appropriate for individual requirements.

Linear slides are normally adjusted so that a clearance-free (i.e. moderately pre-stressed) match-up is created between rail and runner. The raceways of the rails and runners are induction hardened, which combined with the antifriction bearings results in lower wear and longer service life. Linear slides are permanently lubricated with a high-grade special grease designed for linear guide rail systems.

Depending on requirements, a variety of different types are available. Sliding distances of the runners are inside, partly outside or entirely outside the length of the rails. Fully extendable telescopic linear slides consist of linear slides directly interconnected at the rails, the runners or with the help of an intermediate profile.

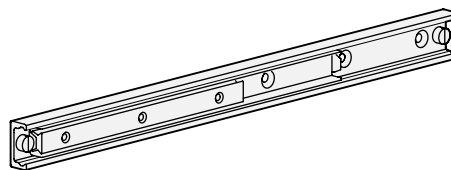
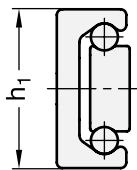
To mount linear slides, countersinks in the rails and, depending on type of construction, threaded or countersunk holes in the runners are available. The compact style is generally advantageous for use in tight spaces.



4

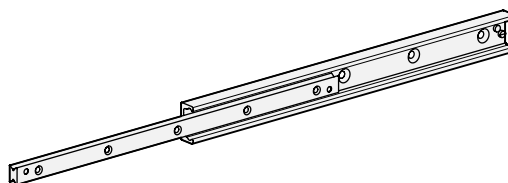
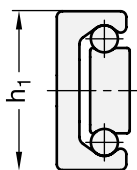
Linear slides

with no extension
GN 2402 / Page 6



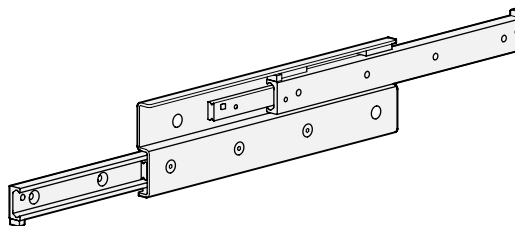
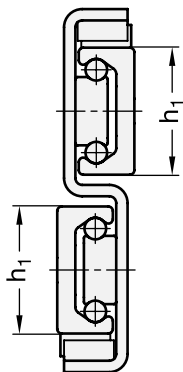
Telescopic linear slides

with partial extension
GN 2404 / Page 8



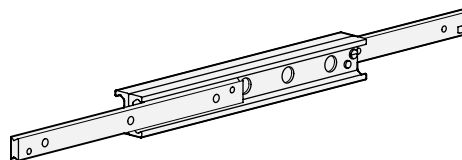
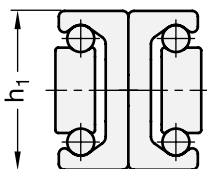
Telescopic linear slides

S-Shaped,
with one side extension
GN 2406 / Page 10



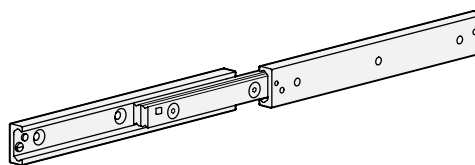
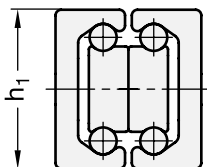
Telescopic linear slides

H-Shaped rail,
with full extension
GN 2408 / Page 11



Telescopic linear slides

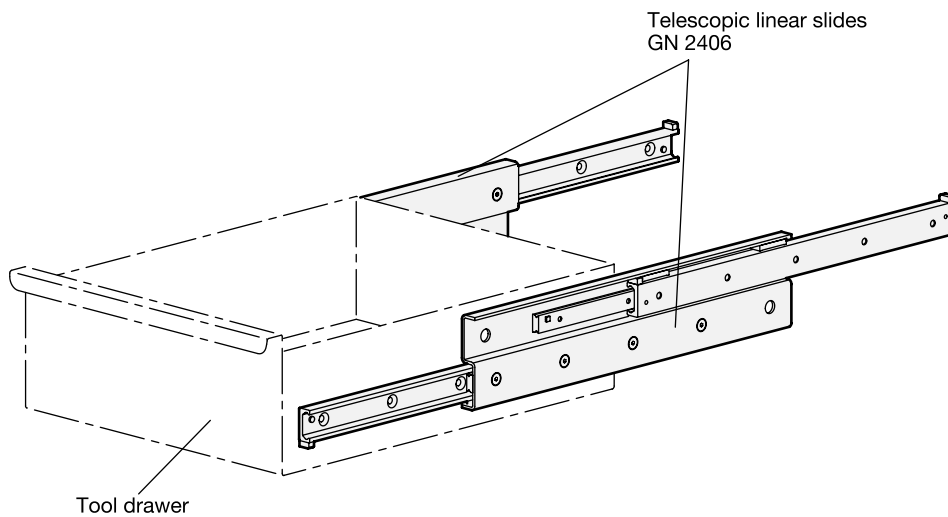
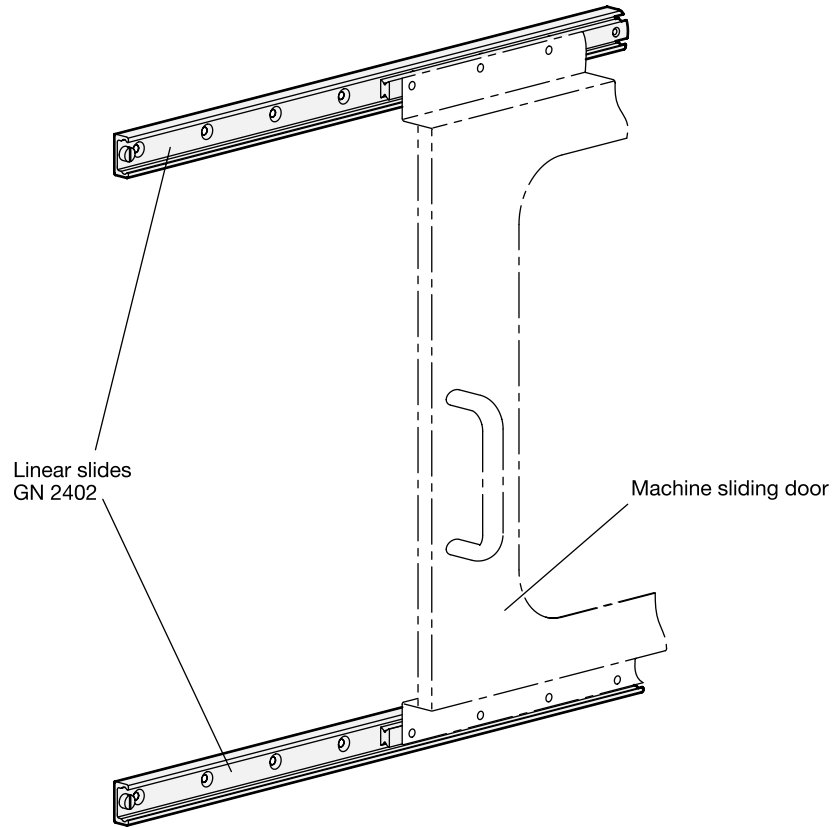
dual configuration,
with full extension
GN 2410 / Page 13



Linear slides / Telescopic linear slides

Assembly examples

(+386) 04 510 53 60
(+386) 041 694 339
info@metalika-kacin.com



Linear slides

Specification

Rail / Runner
 Heat treatable steel
 - zinc plated, blus passivated
 - Raceways hardened

Balls
 Anti-friction bearing steel, hardened

Ball cage
 Steel, zinc plated

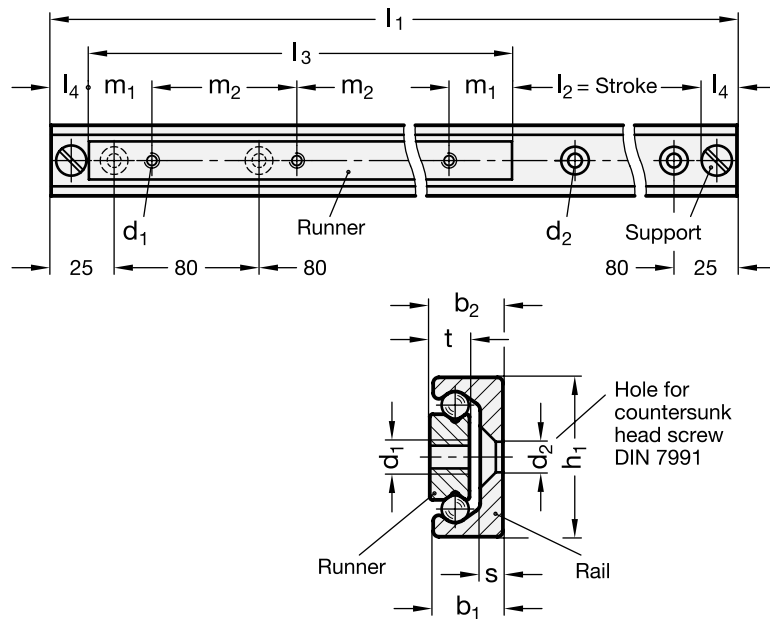
Information

Linear slides GN 2402 with no extension are also known as linear motion bearings. They are used, for example, for storage drawers and sliding doors, or in jigmaking for a sliding motion in a linear direction.

The sliding distance of the runner lies within the length of the rail l_1 . External elements should limit the maximum sliding distance; the supports of the rail have been designed to guard against the inadvertent extraction of the runner from the rail.

On request

- other lengths (based on the standard lengths grid dimension of 80 mm)
- Special lengths (bore, start and end distances)
- more than one runner, special cages



Standard Elements	Main dimensions												△/△
Description	h1	l3	l1 - l2	b1	b2	d1	d2	l4 max.	m1	m2	s	t	g
GN 2402-28-60-130	28	60	130 - 34	12.3	12.9	M 5	5.5	18	10	20	4	7	228
GN 2402-28-60-210	28	60	210 - 114	12.3	12.9	M 5	5.5	18	10	20	4	7	336
GN 2402-28-60-370	28	60	370 - 274	12.3	12.9	M 5	5.5	18	10	20	4	7	540
GN 2402-28-80-290	28	80	290 - 174	12.3	12.9	M 5	5.5	18	10	20	4	7	420
GN 2402-28-80-450	28	80	450 - 334	12.3	12.9	M 5	5.5	18	10	20	4	7	672
GN 2402-28-80-610	28	80	610 - 494	12.3	12.9	M 5	5.5	18	10	20	4	7	890
GN 2402-28-130-290	28	130	290 - 124	12.3	12.9	M 5	5.5	18	25	80	4	7	504
GN 2402-28-130-450	28	130	450 - 284	12.3	12.9	M 5	5.5	18	25	80	4	7	720
GN 2402-28-130-690	28	130	690 - 524	12.3	12.9	M 5	5.5	18	25	80	4	7	1032
GN 2402-28-210-450	28	210	450 - 204	12.3	12.9	M 5	5.5	18	25	80	4	7	792
GN 2402-28-210-610	28	210	610 - 364	12.3	12.9	M 5	5.5	18	25	80	4	7	996
GN 2402-28-210-1010	28	210	1010 - 764	12.3	12.9	M 5	5.5	18	25	80	4	7	1536
GN 2402-35-130-290	35	130	290 - 114	16.5	17	M 6	6.5	23	25	80	3.5	10	847
GN 2402-35-130-450	35	130	450 - 274	16.5	17	M 6	6.5	23	25	80	3.5	10	1135
GN 2402-35-130-770	35	130	770 - 594	16.5	17	M 6	6.5	23	25	80	3.5	10	1711
GN 2402-35-210-450	35	210	450 - 194	16.5	17	M 6	6.5	23	25	80	3.5	10	1335
GN 2402-35-210-690	35	210	690 - 434	16.5	17	M 6	6.5	23	25	80	3.5	10	1767
GN 2402-35-210-1010	35	210	1010 - 754	16.5	17	M 6	6.5	23	25	80	3.5	10	2343
GN 2402-35-290-610	35	290	610 - 274	16.5	17	M 6	6.5	23	25	80	3.5	10	1823
GN 2402-35-290-930	35	290	930 - 594	16.5	17	M 6	6.5	23	25	80	3.5	10	2399
GN 2402-35-290-1330	35	290	1330 - 994	16.5	17	M 6	6.5	23	25	80	3.5	10	3119
GN 2402-43-210-450	43	210	450 - 194	21	22	M 8	8.5	23	25	80	4.5	13.5	2004
GN 2402-43-210-690	43	210	690 - 434	21	22	M 8	8.5	23	25	80	4.5	13.5	2772
GN 2402-43-210-1010	43	210	1010 - 754	21	22	M 8	8.5	23	25	80	4.5	13.5	3816
GN 2402-43-370-770	43	370	770 - 354	21	22	M 8	8.5	23	25	80	4.5	13.5	3456
GN 2402-43-370-1010	43	370	1010 - 594	21	22	M 8	8.5	23	25	80	4.5	13.5	4236
GN 2402-43-370-1490	43	370	1490 - 1074	21	22	M 8	8.5	23	25	80	4.5	13.5	5796

Telescopic linear slides

Specification

Rail / Runner
Heat treatable steel
- zinc plated, blue passivated
- Raceways hardened

Balls
Anti-friction bearing steel, hardened

Ball cage
Steel, zinc plated

Information

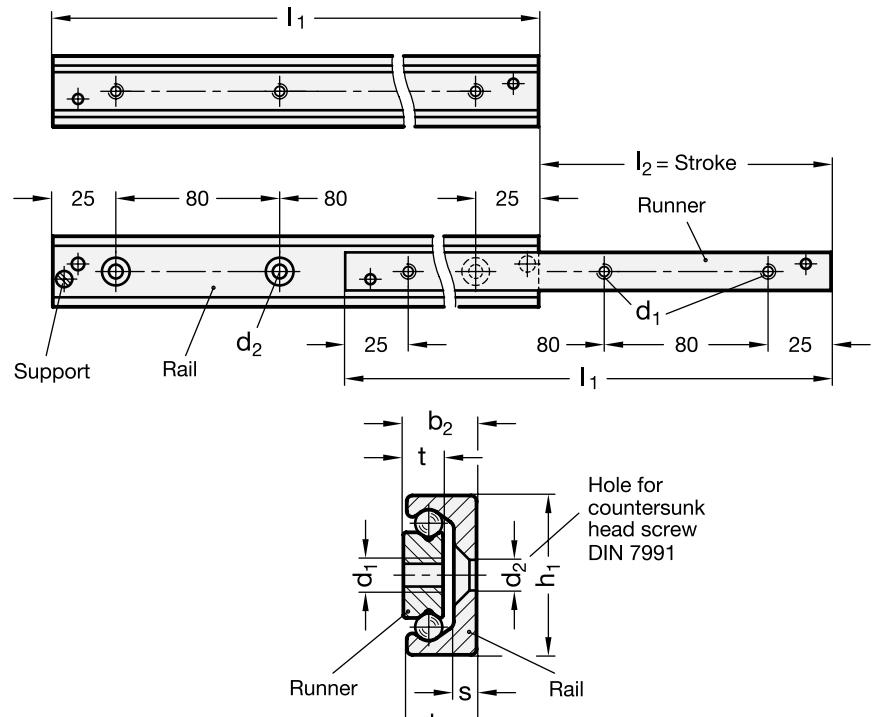
Telescopic linear slides 2404 with partial extension are used, f.e., for storage drawers and sliding doors, or in jigmaking for a sliding motion in a linear direction.

If the support screw is removed on both sides, the sliding distance extends the length of the rail plus an additional distance of slightly more than half the length of the rail.

External elements should limit the maximum sliding distance; the supports of the rail have been designed to guard against the inadvertent extraction of the runner from the rail.

On request

- other lengths (based on the standard lengths grid dimension of 80 mm)
- Special lengths (bore, start and end distances)



Standard Elements	Main dimensions								Δ g
	h_1	$l_1 - l_2$	b_1	b_2	d_1	d_2	s	t	
GN 2404-28-130	28	130 - 74	12.3	12.9	M 5	5.5	4	7	290
GN 2404-28-210	28	210 - 116	12.3	12.9	M 5	5.5	4	7	460
GN 2404-28-290	28	290 - 148	12.3	12.9	M 5	5.5	4	7	640
GN 2404-28-370	28	370 - 190	12.3	12.9	M 5	5.5	4	7	810
GN 2404-28-450	28	450 - 232	12.3	12.9	M 5	5.5	4	7	990
GN 2404-28-530	28	530 - 274	12.3	12.9	M 5	5.5	4	7	1170
GN 2404-35-290	35	290 - 159	16.5	17	M 6	6.5	3.5	10	1170
GN 2404-35-370	35	370 - 203	16.5	17	M 6	6.5	3.5	10	1210
GN 2404-35-450	35	450 - 247	16.5	17	M 6	6.5	3.5	10	1350
GN 2404-35-530	35	530 - 279	16.5	17	M 6	6.5	3.5	10	1590
GN 2404-35-610	35	610 - 323	16.5	17	M 6	6.5	3.5	10	1830
GN 2404-35-690	35	690 - 367	16.5	17	M 6	6.5	3.5	10	2070
GN 2404-43-370	43	370 - 208	21	22	M 8	8.5	4.5	13.5	1920
GN 2404-43-450	43	450 - 243	21	22	M 8	8.5	4.5	13.5	2340
GN 2404-43-530	43	530 - 278	21	22	M 8	8.5	4.5	13.5	2760
GN 2404-43-610	43	610 - 313	21	22	M 8	8.5	4.5	13.5	3170
GN 2404-43-690	43	690 - 363	21	22	M 8	8.5	4.5	13.5	3590
GN 2404-43-770	43	770 - 398	21	22	M 8	8.5	4.5	13.5	3790

Telescopic linear slides

Specification

Type E: with one side extension
Rail / Runner

Heat treatable steel
- zinc plated, blue passivated
- Raceways hardened

Balls
Anti-friction bearing steel, hardened

Ball cage
Steel, zinc plated

Intermediate metal sheet of the ball cage
Steel, zinc plated

Information

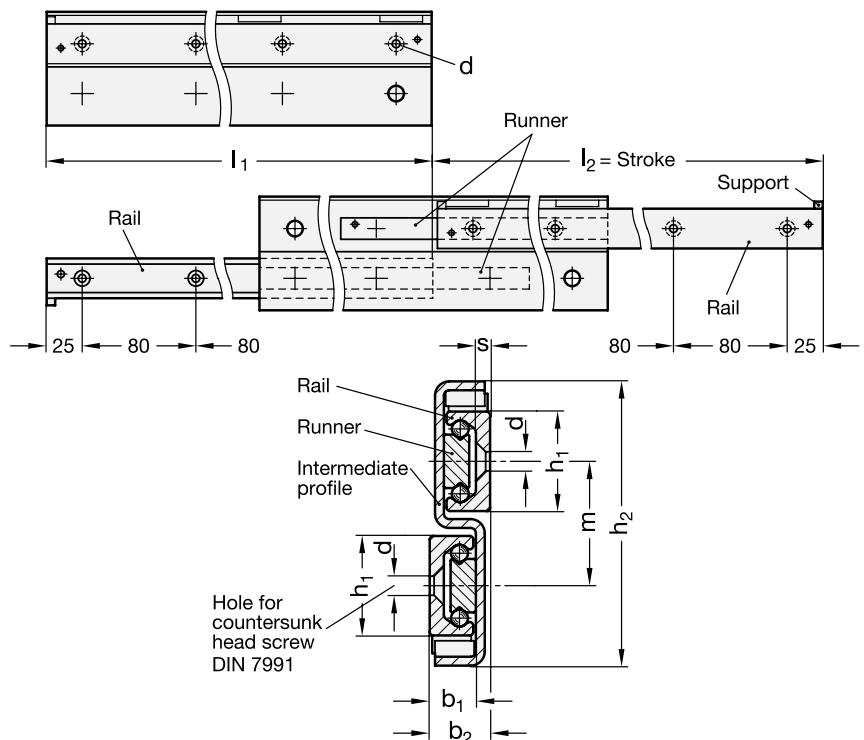
Telescopic linear slides GN 2406, S-shaped, with one side extension consist of two slides linked by an intermediate profile. They are used when the lateral space requires a small width, and when large extension is required. The S-shape of the intermediate profile gives the configuration a high degree of sturdiness.

The rails and the intermediate profile are equal in length. Both rails can be extended so that an extension is reached which is longer than the base length l_1 .

External elements should limit the maximum sliding distance; the supports of the rail have been designed to guard against the inadvertent extraction of the runner from the rail.

On request

- other lengths (based on the standard lengths grid dimension of 80 mm)
- Special lengths (bore, start and end distances)
- Extensions on both side of each rail (Type D)



Standard Elements	Main dimensions								Δ
Description	h_1	$l_1 - l_2$	b_1	b_2	d	h_2	m	s	g
GN 2406-28-290-E	28	290 - 296	12.3	17	5.5	80	35	4	1890
GN 2406-28-370-E	28	370 - 380	12.3	17	5.5	80	35	4	2410
GN 2406-28-450-E	28	450 - 464	12.3	17	5.5	80	35	4	2930
GN 2406-28-530-E	28	530 - 548	12.3	17	5.5	80	35	4	3450
GN 2406-28-610-E	28	610 - 630	12.3	17	5.5	80	35	4	3970
GN 2406-35-450-E	35	450 - 494	16.5	22.5	6.5	97	43	3.5	4000
GN 2406-35-530-E	35	530 - 558	16.5	22.5	6.5	97	43	3.5	4710
GN 2406-35-690-E	35	690 - 734	16.5	22.5	6.5	97	43	3.5	5990
GN 2406-35-850-E	35	850 - 886	16.5	22.5	6.5	97	43	3.5	7450
GN 2406-43-530-E	43	530 - 556	21	28	8.5	117	52	4.5	7740
GN 2406-43-690-E	43	690 - 726	21	28	8.5	117	52	4.5	10070
GN 2406-43-850-E	43	850 - 866	21	28	8.5	117	52	4.5	12410
GN 2406-43-1010-E	43	1010 - 1036	21	28	8.5	117	52	4.5	14750
GN 2406-43-1490-E	43	1490 - 1516	21	28	8.5	117	52	4.5	21750

Telescopic linear slides

Specification

Types

- Type **GG**: Runner with thread, on both sides
- Type **DG**: Runner 1x with countersink and 1 x with thread
- Type **DD**: Runner with countersink, on both sides

Rail / Runner

- Heat treatable steel
- zinc plated, blue passivated
- Raceways hardened

Balls

Anti-friction bearing steel, hardened

Ball cage

Steel, zinc plated, blue passivated

Rail Connection

- Blank rivets, Stainless Steel ($h_1 = 28$ and 35)
- Screws, Steel zinc plated ($h_1 = 43$)

Information

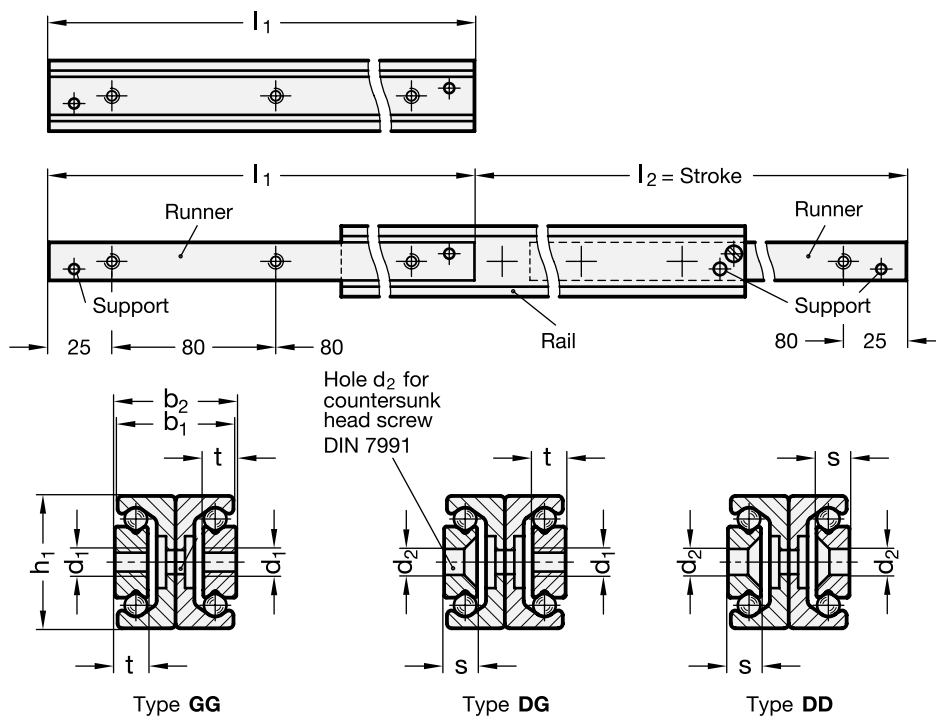
Telescopic linear slides GN 2408 with H-shaped rail consist of two interconnected linear slides. They are used, for example, in handling or automation applications and in jigmaking, for straight-line traversal distance when large extension and a low construction height of the rail are required. The H-shape of the rails profile gives the configuration a high degree of sturdiness.

The rails and runners are equal in length. Both rails can be extended so that an extension is reached which is longer than the base length l_1 . Removing the support screws from the rails allows a stroke of the runners on both sides.

External elements should limit the maximum sliding distance; the supports of the rail have been designed to guard against the inadvertent extraction of the runner from the rail.

On request

- other lengths (based on the standard lengths grid dimensions of 80 mm)
- Special lengths (bore, start and end distances)



Standard Elements	Main dimensions								\triangle
Description	h ₁	l ₁ - l ₂	b ₁	b ₂	d ₁	d ₂	s	t	g
GN 2408-28-210-GG	28	210 - 232	24.6	25.8	M 5	-	-	7	920
GN 2408-28-370-GG	28	370 - 380	24.6	25.8	M 5	-	-	7	1630
GN 2408-28-450-GG	28	450 - 464	24.6	25.8	M 5	-	-	7	1980
GN 2408-28-530-GG	28	530 - 548	24.6	25.8	M 5	-	-	7	2330
GN 2408-35-370-GG	35	370 - 406	33	34	M 6	-	-	10	2260
GN 2408-35-450-GG	35	450 - 494	33	34	M 6	-	-	10	2750
GN 2408-35-530-GG	35	530 - 558	33	34	M 6	-	-	10	3220
GN 2408-35-610-GG	35	610 - 464	33	34	M 6	-	-	10	3720
GN 2408-43-450-GG	43	450 - 486	42	44	M 8	-	-	13.5	4730
GN 2408-43-610-GG	43	610 - 626	42	44	M 8	-	-	13.5	6410
GN 2408-43-770-GG	43	770 - 796	42	44	M 8	-	-	13.5	8090
GN 2408-43-930-GG	43	930 - 966	42	44	M 8	-	-	13.5	9770
GN 2408-28-210-DG	28	210 - 232	24.6	25.8	M 5	5.5	4	-	920
GN 2408-28-370-DG	28	370 - 380	24.6	25.8	M 5	5.5	4	-	1630
GN 2408-28-450-DG	28	450 - 464	24.6	25.8	M 5	5.5	4	-	1980
GN 2408-28-530-DG	28	530 - 548	24.6	25.8	M 5	5.5	4	-	2330
GN 2408-35-370-DG	35	370 - 406	33	34	M 6	6.5	3.5	-	2260
GN 2408-35-450-DG	35	450 - 494	33	34	M 6	6.5	3.5	-	2750
GN 2408-35-530-DG	35	530 - 558	33	34	M 6	6.5	3.5	-	3220
GN 2408-35-610-DG	35	610 - 646	33	34	M 6	6.5	3.5	-	3720
GN 2408-43-450-DG	43	450 - 486	42	44	M 8	8.5	4.5	-	4730
GN 2408-43-610-DG	43	610 - 626	42	44	M 8	8.5	4.5	-	6410
GN 2408-43-770-DG	43	770 - 796	42	44	M 8	8.5	4.5	-	8090
GN 2408-43-930-DG	43	930 - 966	42	44	M 8	8.5	4.5	-	9770
GN 2408-28-210-DD	28	210 - 232	24.6	25.8	-	5.5	4	-	920
GN 2408-28-370-DD	28	370 - 380	224.6	25.8	-	5.5	4	-	1630
GN 2408-28-450-DD	28	450 - 464	24.6	25.8	-	5.5	4	-	1980
GN 2408-28-530-DD	28	530 - 548	24.6	25.8	-	5.5	4	-	2330
GN 2408-35-370-DD	35	370 - 406	33	34	-	6.5	3.5	-	2260
GN 2408-35-450-DD	35	450 - 494	33	34	-	6.5	3.5	-	2750
GN 2408-35-530-DD	35	530 - 558	33	34	-	6.5	3.5	-	3220
GN 2408-35-610-DD	35	610 - 646	33	34	-	6.5	3.5	-	3720
GN 2408-43-450-DD	43	450 - 486	42	44	-	8.5	4.5	-	4730
GN 2408-43-610-DD	43	610 - 626	42	44	-	8.5	4.5	-	6410
GN 2408-43-770-DD	43	770 - 796	42	44	-	8.5	4.5	-	8090
GN 2408-43-930-DD	43	930 - 966	42	44	-	8.5	4.5	-	9770

Telescopic linear slides

Specification

Rail / Runner
Heat treatable steel
- zinc plated, blue passivated
- Raceways hardened

Balls
Anti-friction bearing steel, hardened

Ball cage
Steel, zinc plated

Rail connection
Screw
Steel, zinc plated

Information

Telescopic linear slides GN 2410 dual configuration, with full extension consist of two linear motion ball slide rails connected at the runners. They are used, for example, in material handling or automation applications, or in jigmaking, to achieve a sliding motion in a linear direction when long extensions with low construction height of the rail are required.

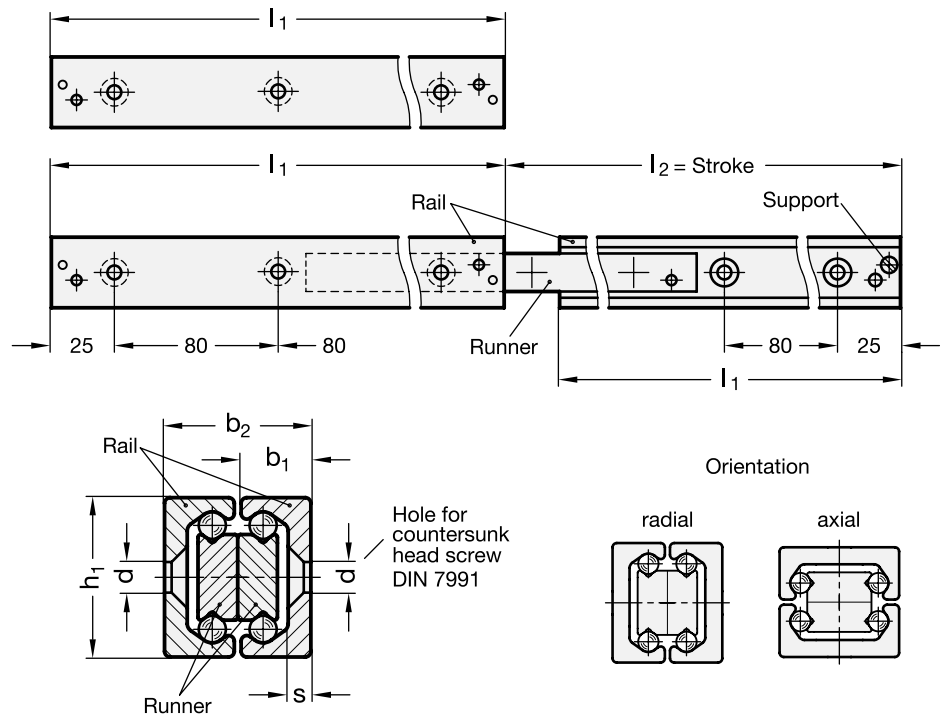
The dual configuration has the advantage that both the radial and axial load capacities are identical. Meanwhile this design has proven less susceptible to dirt in practical use.

The rails and runners are equal in length. Both runners can be extended so that an extension is reached which is longer than the rail base length l_1 . Removing the support screws from the rails, allows an extension of the rails on both sides.

External elements should limit the maximum sliding distance; the supports of the rail have been designed to guard against the inadvertent extraction of the runner from the rail.

On request

- other lengths (based on the standard lengths grid dimension of 80 mm)
- Special lengths (bore, start and end distances)



Standard Elements	Main dimensions						\triangle
Description	h_1	$l_1 - l_2$	b_1	b_2	d	s	g
GN 2410-28-210	28	210 - 232	12.3	25.8	5.5	4	898
GN 2410-28-370	28	370 - 380	12.3	25.8	5.5	4	1630
GN 2410-28-450	28	450 - 464	12.3	25.8	5.5	4	1980
GN 2410-28-530	28	530 - 548	12.3	25.8	5.5	4	2300
GN 2410-35-370	35	370 - 406	16.5	34	6.5	3.5	2331
GN 2410-35-450	35	450 - 494	16.5	34	6.5	3.5	2835
GN 2410-35-530	35	530 - 558	16.5	34	6.5	3.5	3339
GN 2410-35-610	35	610 - 646	16.5	34	6.5	3.5	3843
GN 2410-43-450	43	450 - 486	21	44	8.5	4.5	5000
GN 2410-43-610	43	610 - 626	21	44	8.5	4.5	6770
GN 2410-43-770	43	770 - 796	21	44	8.5	4.5	8550
GN 2410-43-930	43	930 - 966	21	44	8.5	4.5	10320

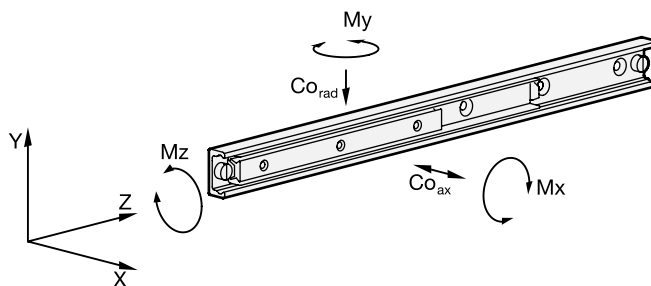
Load rating of telescopic linear slides

in ascending order of the standard numbers

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When selecting a suitable linear slide, it is primarily the available space, the desired stroke and the load carried which must be taken into consideration. The values listed below are intended as guidelines for selecting the most suitable nominal rail size.

The details on load rating are non-binding guide values given without liability and does not constitute any type of guarantee or warranty of its intended use. The user must determine in each individual case whether a product is suitable for the intended application. Environmental factors and aging may affect the stated values.



Static load rating

Description	Load ratings		Permissible load torques		
	Co rad in N	Co ax in N	Mx in Nm	My in Nm	Mz in Nm
GN 2402 -28- 60-...	3580	2500	37	25	18
-28- 80-...	4780	3345	65	45	23
-28-130-...	7765	5435	166	117	38
-28-210-...	12545	8780	430	300	62
-35-130-...	9980	6985	219	156	50
-35-210-...	16125	11290	560	397	87
-35-290-...	22270	15590	1085	745	109
-43-210-...	23140	16200	790	552	157
-43-370-...	40775	28540	2445	1710	275
GN 2404 -28-130	645	452	30	23	17
-28-210	1165	816	86	60	27
-28-290	2015	1410	190	135	41
-28-370	2540	1780	309	215	52
-28-450	3065	2145	540	316	64
-28-530	3595	2515	625	435	74
-35-290	2100	1470	218	155	56
-35-370	2685	1880	348	247	69
-35-450	3270	2285	515	365	80
-35-530	4350	3045	787	553	101
-35-610	4930	3450	1025	722	113
-35-690	5510	3860	1295	914	125
-43-370	3540	2480	444	313	119
-43-450	4905	3435	735	514	151
-43-530	6305	4415	1090	766	184
-43-610	7725	5410	1525	1065	210
-43-690	8185	5730	1850	1295	240
-43-770	9490	6530	2405	1685	273

Load rating of telescopic linear slides

in ascending order of the standard numbers

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Description	Load ratings	
	Co rad in N	
GN 2406 -28- 290-E	587	
	793	
	999	
	1205	
	1510	
-28- 370-E	1265	
	1700	
	2150	
	2830	
	2140	
-35- 450-E	2885	
	4010	
	4755	
	3820	
-35- 530-E		
-35- 610-E		
-35- 690-E		
-35- 850-E		
-43- 530-E		
-43- 610-E		
-43- 690-E		
-43- 850-E		
-43-1010-E		
-43-1490-E		

Description	Load ratings	
	Co rad in N	
GN 2408 -28-210-...	447	
	1000	
	1205	
	1140	
	1035	
-28-370-...	1265	
	1705	
	1930	
	1890	
	3035	
-35-370-...	3145	
	2580	
-35-450-...		
-35-530-...		
-35-610-...		
-35-690-...		
-35-850-...		
-43-450-...		
-43-610-...		
-43-770-...		
-43-930-...		

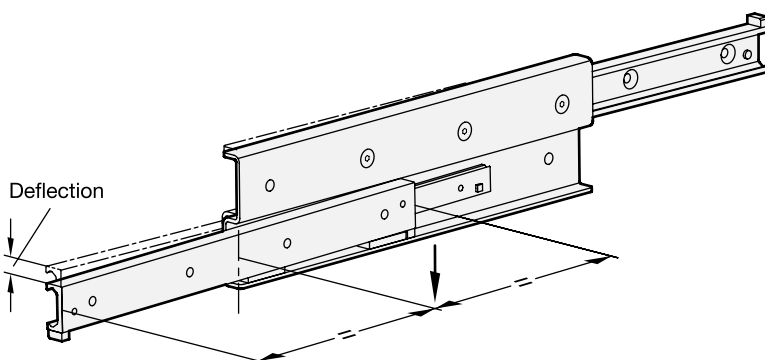
Description	Load ratings	
	Co rad in N	
GN 2410 -28-210	444	
	496	
	405	
	342	
	534	
-28-370	439	
	403	
	346	
	1370	
	1115	
-35-370	870	
	714	
-35-450		
-35-530		
-35-610		
-35-690		
-35-850		
-43-450		
-43-610		
-43-770		
-43-930		

No details on the permissible load torques are given for the telescopic linear slides as these are normally used for paired applications. Loads of these dimensions occur to a minor degree because it may be assumed that the surrounding construction has sufficient rigidity and stiffness. Transferring load torques within certain limited is permitted.

Static load and deflection

The load values given in the tables refer to a maximum permissible force allowed to act in the middle of the fully extended profile rail at the third segment.

If the given values are observed and if the telescopic linear slide is fully extended, a minor deflection (sag) occurs at the end of the runner or of the rail. This has normally no detrimental effect on the proper function of the application. If required, guide values may be given if requested.



Mounting screws, assignment of the mounting holes

The standard mounting hardware is DIN 7991-10.9 countersunk head screws, to be mounted with the recommended tightening torque. Depending on type, not all mounting holes may be utilized. In general, these holes can be left unused. In exceptional cases, especially in bilateral stroke, mounting holes can be accessed by loosening the support screws and by pulling out the runner. The support screws are then put back in place.

Travel speed, cage slip

The traversal speed in linear slides can be as much as 0.8 m/s. The particular application and the installation length can have an effect on this value. In the event of rapid changes of direction and high accelerating forces, cage slip may occur in some cases, especially in long ball cages. In cases such as these, the cage does not move synchronously with half the speed of the runner, but gradually loses its correct position owing to the slip. Whenever possible, running a blank stroke to the end of the traversal distance should be provided for back positioning.

Linear guide rail systems allow the reliable and economical linear movement of hardware modules. Their outstanding attributes are low-maintenance operation, long service life and quiet running. These are attributes which make roller guide systems indispensable components for efficient and safe movement of devices, and meet the needs of facilities with low energy requirements.

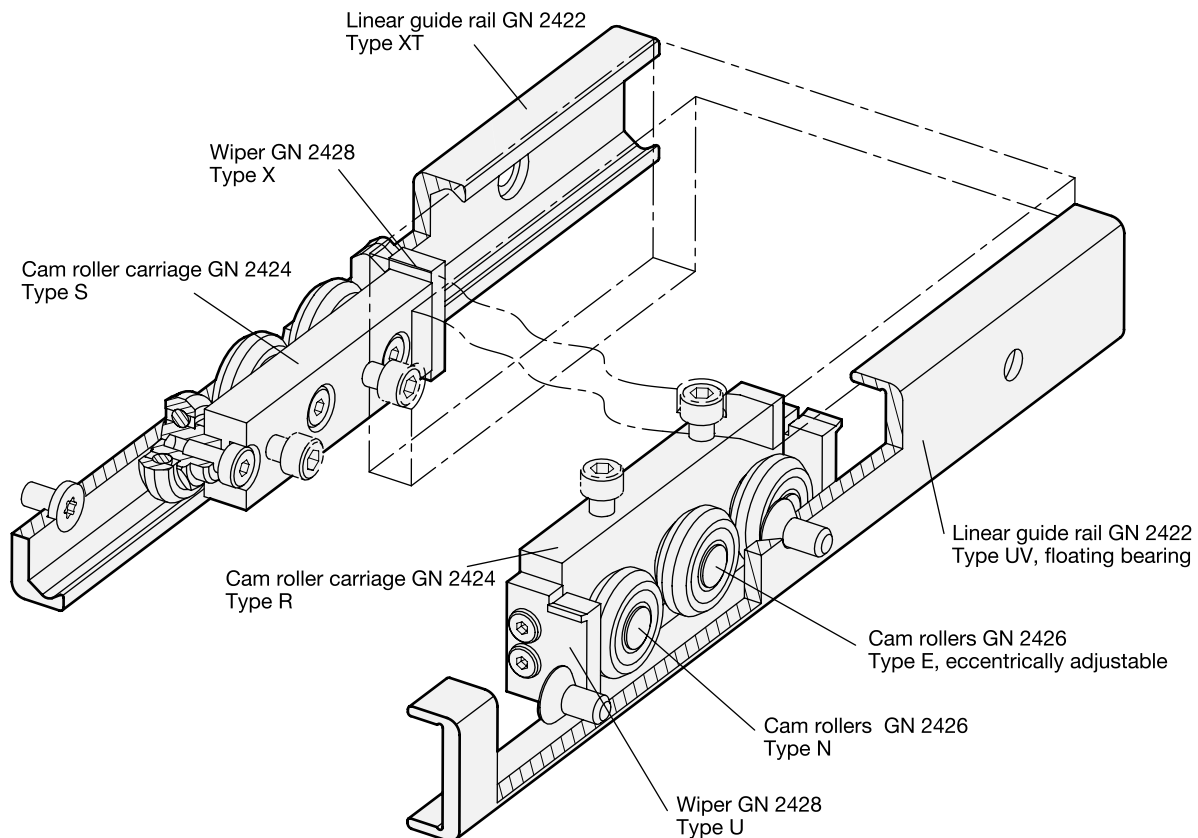
The product range includes all components necessary for constructing linear guide rail systems that are compact and easy to assemble and install. All linear guide rail systems consist of one outer rail with rollers or roller carriages moving inside the rail.

Rails are the foundations for linear guide rail systems. They can be constructed as fixed or floating bearing versions, with the fixed bearing type guiding the rollers running inside the rail on two levels, while the floating bearing type does so only on one level. By combining both versions, any misalignments or parallelism errors in the connected construction can be corrected. Complex preliminary work caused by the precision machining of surrounding parts can thus be kept to a minimum. Both rail versions can be mounted in one of two ways: cylindrical countersunk holes, or 90° conical holes for self-centering.

Cam roller carriages are available in 3 different types of designs, differing by their radial or axial assembly arrangement, their material, and their degree of sealing. All cam roller carriages consist of 3 rollers, with the middle one always supplied with an eccentrically adjustable bearing pivot for determining the initial tension or the clearance/play inside the rail. Depending on the rail version, a wiper is mounted on either end of the roller carriage.

Cam rollers are similar in structure to deep-groove ball bearings, with a non-detachable bearing pivot used as mounting point. For special applications, cam rollers and wipers can also be supplied separately from the cam roller carriages under separate standards.

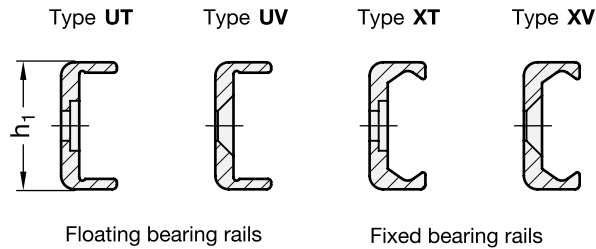
All design variants are available in the nominal rail dimensions $h_1 = 18, 28, 35$ and 43 mm. Beyond the standard range, they can also be supplied in lengths of up to 3600 mm in one piece, or as combined rails for individual and customized requirements.



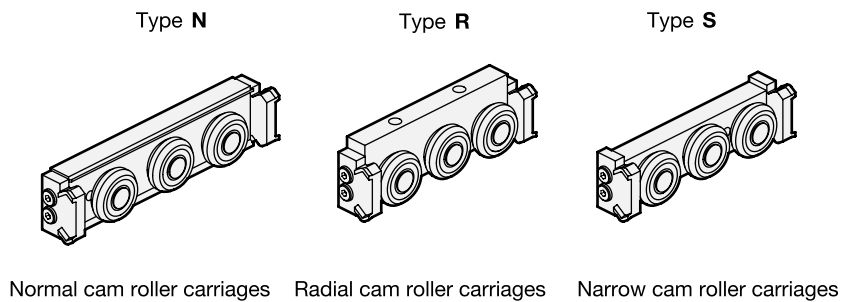
To insure maximum flexibility, linear guide rail systems are made from the components listed below. Depending on the requirement, the appropriate components can be supplied in the desired quantity. Because the linear guide rails and the cam roller carriages must be assembled separately in many applications, these items will be supplied unassembled and packed separately.

Upon request, fully pre-assembled cam roller linear guide rail systems including rails GN 2422 and cam roller carriages GN 2424 are available.

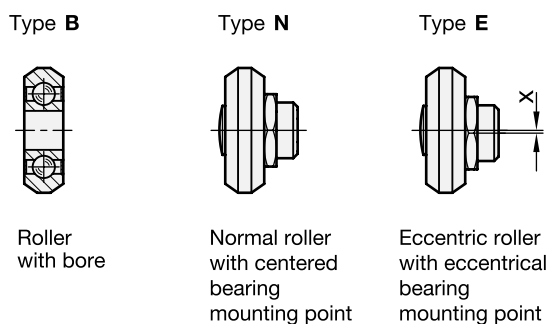
Cam roller linear guide rails GN 2422 / Page 19



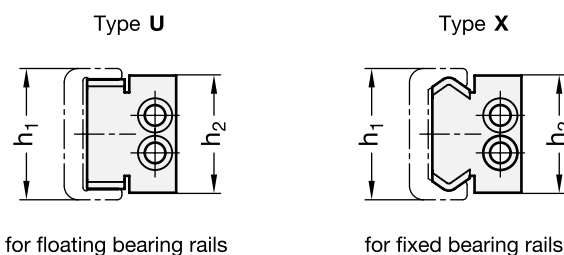
Cam roller carriages for rails GN 2424 / Page 22

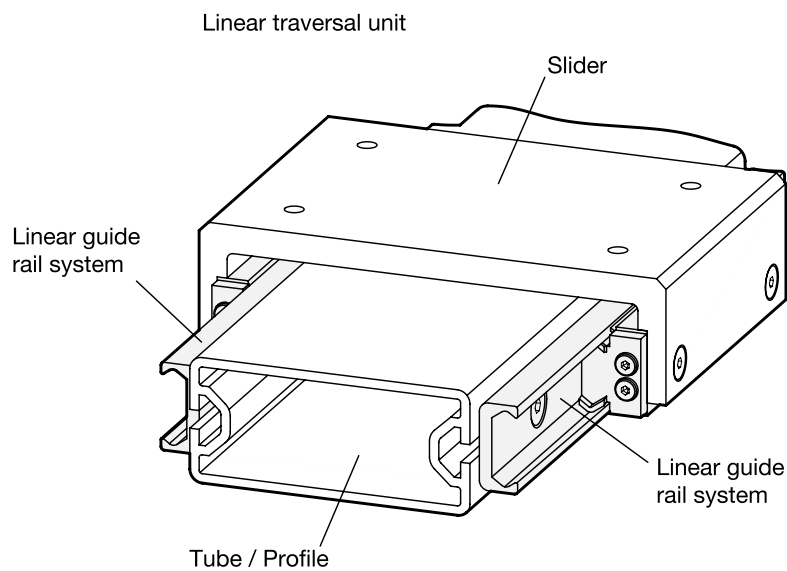
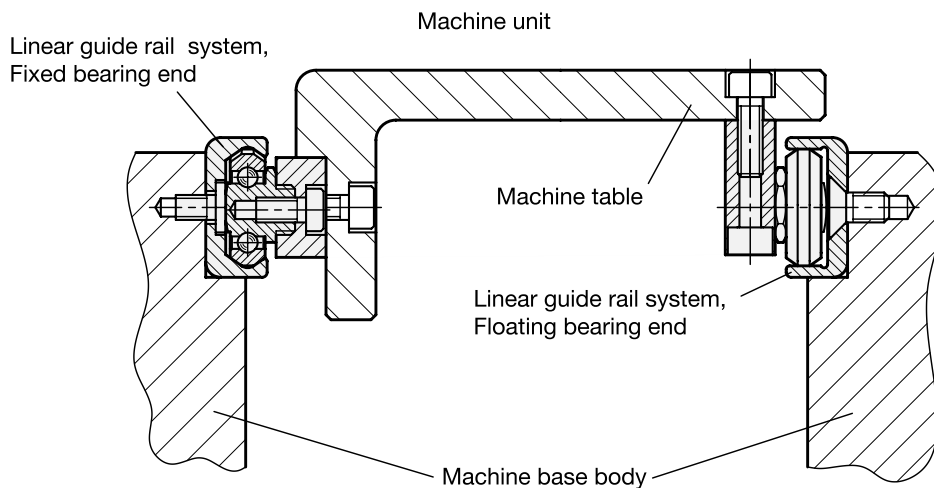


Cam rollers for rails GN 2426 / Page 26



Wipers for rails GN 2428 / Page 27





Cam roller linear guide rails

Specification

Types

- Type **UT**: Floating bearing rail, with mounting hole for flat head screw
- Type **UV**: Floating bearing rail, with mounting hole for countersunk screw
- Type **XT**: Fixed bearing rail, with mounting hole for flat head screw
- Type **XV**: Fixed bearing rail, with mounting hole for countersunk screw

Heat treatable steel

- zinc plated, blue passivated
- Raceways hardened, ground

Flat head screws (only for type UT / XT)

Steel

- zinc plated, blue passivated

Information

Cam roller linear guide rails GN 2422 can be combined with cam roller carriages GN 2424 or cam rollers GN 2426 to construct linear guide rail systems. These space-saving units are used, for example, for carrying sliding doors, or in mechanical engineering or jigmaking for the linear movement of plant equipment.

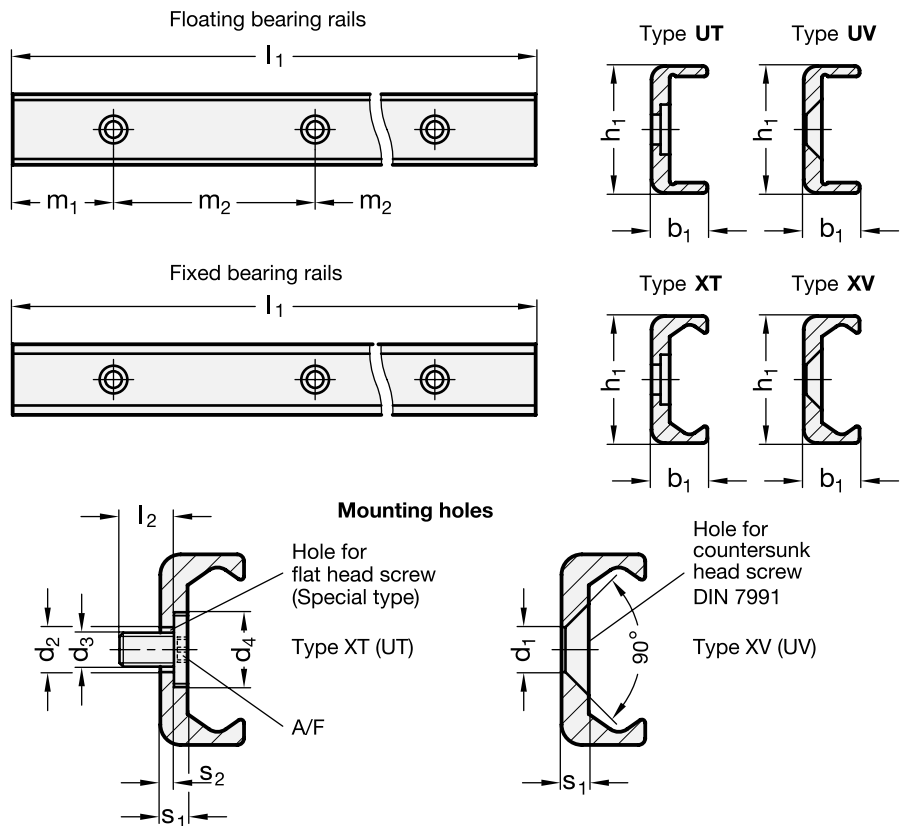
These systems feature high stability and quiet running at high traversal speeds. Thanks to the option of combining fixed and floating bearing rails, they cause no great stress to the surrounding construction, and thus allow parallelism errors to be compensated for. Flat head screws with extra low head are included with the rail Types UT and XT.

Accessory

- Cam roller carriages GN 2424 (see page 22)
- Cam rollers GN 2426 (see page 26)

On request

- other rail lengths (up to max. 3600 mm)
- other fixing hole distance m_1 / m_2



Standard Elements	Main dimensions													△△
	h ₁	l ₁	m ₁	b ₁	d ₁	d ₂	d ₃	d ₄	l ₂	m ₂	s ₁	s ₂	A/F	
GN 2422-18-240-40-UT	18	240	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	132
GN 2422-18-400-40-UT	18	240	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	220
GN 2422-18-560-40-UT	18	560	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	308
GN 2422-18-800-40-UT	18	800	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	440

Standard Elements	Main dimensions													△△
	Description	h ₁	l ₁	m ₁	b ₁	d ₁	d ₂	d ₃	d ₄	l ₂	m ₂	s ₁	s ₂	
GN 2422-18-1040-40-UT	18	1040	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	572
GN 2422-18-1200-40-UT	18	1200	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	660
GN 2422-28-400-40-UT	28	400	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	484
GN 2422-28-560-40-UT	28	560	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	678
GN 2422-28-800-40-UT	28	800	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	968
GN 2422-28-1040-40-UT	28	1040	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	1258
GN 2422-28-1200-40-UT	28	1200	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	1452
GN 2422-28-1440-40-UT	28	1440	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	1742
GN 2422-35-400-40-UT	35	400	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	636
GN 2422-35-560-40-UT	35	560	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	890
GN 2422-35-800-40-UT	35	800	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	1272
GN 2422-35-1040-40-UT	35	1040	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	1654
GN 2422-35-1200-40-UT	35	1200	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	1908
GN 2422-35-1440-40-UT	35	1440	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	2290
GN 2422-43-400-40-UT	43	400	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	1004
GN 2422-43-560-40-UT	43	560	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	1406
GN 2422-43-800-40-UT	43	800	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	2008
GN 2422-43-1040-40-UT	43	1040	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	2610
GN 2422-43-1200-40-UT	43	1200	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	3012
GN 2422-43-1520-40-UT	43	1520	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	3815
GN 2422-43-2000-40-UT	43	2000	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	4500
GN 2422-18-240-40-UV	18	240	40	8.3	4.5	-	-	-	-	80	2.8	-	-	132
GN 2422-18-400-40-UV	18	400	40	8.3	4.5	-	-	-	-	80	2.8	-	-	220
GN 2422-18-560-40-UV	18	560	40	8.3	4.5	-	-	-	-	80	2.8	-	-	308
GN 2422-18-800-40-UV	18	800	40	8.3	4.5	-	-	-	-	80	2.8	-	-	440
GN 2422-18-1040-40-UV	18	1040	40	8.3	4.5	-	-	-	-	80	2.8	-	-	572
GN 2422-18-1200-40-UV	18	1200	40	8.3	4.5	-	-	-	-	80	2.8	-	-	660
GN 2422-28-400-40-UV	28	400	40	12.3	5.5	-	-	-	-	80	4	-	-	484
GN 2422-28-560-40-UV	28	560	40	12.3	5.5	-	-	-	-	80	4	-	-	678
GN 2422-28-800-40-UV	28	800	40	12.3	5.5	-	-	-	-	80	4	-	-	968
GN 2422-28-1040-40-UV	28	1040	40	12.3	5.5	-	-	-	-	80	4	-	-	1258
GN 2422-28-1200-40-UV	28	1200	40	12.3	5.5	-	-	-	-	80	4	-	-	1452
GN 2422-28-1440-40-UV	28	1440	40	12.3	5.5	-	-	-	-	80	4	-	-	1742
GN 2422-35-400-40-UV	35	400	40	16.5	6.5	-	-	-	-	80	3.5	-	-	636
GN 2422-35-560-40-UV	35	560	40	16.5	6.5	-	-	-	-	80	3.5	-	-	890
GN 2422-35-800-40-UV	35	800	40	16.5	6.5	-	-	-	-	80	3.5	-	-	1272
GN 2422-35-1040-40-UV	35	1040	40	16.5	6.5	-	-	-	-	80	3.5	-	-	1654
GN 2422-35-1200-40-UV	35	1200	40	16.5	6.5	-	-	-	-	80	3.5	-	-	1908
GN 2422-35-1440-40-UV	35	1440	40	16.5	6.5	-	-	-	-	80	3.5	-	-	2290
GN 2422-43-400-40-UV	43	400	40	21	8.5	-	-	-	-	80	4.5	-	-	1004
GN 2422-43-560-40-UV	43	560	40	21	8.5	-	-	-	-	80	4.5	-	-	1406
GN 2422-43-800-40-UV	43	800	40	21	8.5	-	-	-	-	80	4.5	-	-	2008
GN 2422-43-1040-40-UV	43	1040	40	21	8.5	-	-	-	-	80	4.5	-	-	2610
GN 2422-43-1200-40-UV	43	1200	40	21	8.5	-	-	-	-	80	4.5	-	-	3012
GN 2422-43-1520-40-UV	43	1520	40	21	8.5	-	-	-	-	80	4.5	-	-	3815
GN 2422-43-2000-40-UV	43	2000	40	21	8.5	-	-	-	-	80	4.5	-	-	4500
GN 2422-18-240-40-XT	18	240	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	132
GN 2422-18-400-40-XT	18	400	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	220

Standard Elements	Main dimensions													△△
	Description	h ₁	l ₁	m ₁	b ₁	d ₁	d ₂	d ₃	d ₄	l ₂	m ₂	s ₁	s ₂	
GN 2422-18-560-40-XT	18	560	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	308
GN 2422-18-800-40-XT	18	800	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	440
GN 2422-18-1040-40-XT	18	1040	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	572
GN 2422-18-1200-40-XT	18	1200	40	8.3	-	5	M 4	9.5	8	80	2.8	0.8	T20	660
GN 2422-28-400-40-XT	28	400	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	484
GN 2422-28-560-40-XT	28	560	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	678
GN 2422-28-800-40-XT	28	800	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	968
GN 2422-28-1040-40-XT	28	1040	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	1258
GN 2422-28-1200-40-XT	28	1200	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	1452
GN 2422-28-1440-40-XT	28	1440	40	12.3	-	6.4	M 5	11	10	80	4	2	T25	1742
GN 2422-35-400-40-XT	35	400	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	636
GN 2422-35-560-40-XT	35	560	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	890
GN 2422-35-800-40-XT	35	800	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	1272
GN 2422-35-1040-40-XT	35	1040	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	1654
GN 2422-35-1200-40-XT	35	1200	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	1908
GN 2422-35-1440-40-XT	35	1440	40	16.5	-	8	M 6	15	12	80	3.5	0.8	T30	2290
GN 2422-43-400-40-XT	43	400	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	1004
GN 2422-43-560-40-XT	43	560	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	1406
GN 2422-43-800-40-XT	43	800	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	2008
GN 2422-43-1040-40-XT	43	1040	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	2610
GN 2422-43-1200-40-XT	43	1200	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	3012
GN 2422-43-1520-40-XT	43	1520	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	3815
GN 2422-43-2000-40-XT	43	2000	40	21	-	10.5	M 8	18	16	80	4.5	1.5	T40	4500
GN 2422-18-240-40-XV	18	240	40	8.3	4.5	-	-	-	-	80	2.8	-	-	132
GN 2422-18-400-40-XV	18	400	40	8.3	4.5	-	-	-	-	80	2.8	-	-	220
GN 2422-18-560-40-XV	18	560	40	8.3	4.5	-	-	-	-	80	2.8	-	-	308
GN 2422-18-800-40-XV	18	800	40	8.3	4.5	-	-	-	-	80	2.8	-	-	440
GN 2422-18-1040-40-XV	18	1040	40	8.3	4.5	-	-	-	-	80	2.8	-	-	572
GN 2422-18-1200-40-XV	18	1200	40	8.3	4.5	-	-	-	-	80	2.8	-	-	660
GN 2422-28-400-40-XV	28	400	40	12.3	5.5	-	-	-	-	80	4	-	-	484
GN 2422-28-560-40-XV	28	560	40	12.3	5.5	-	-	-	-	80	4	-	-	678
GN 2422-28-800-40-XV	28	800	40	12.3	5.5	-	-	-	-	80	4	-	-	968
GN 2422-28-1040-40-XV	28	1040	40	12.3	5.5	-	-	-	-	80	4	-	-	1258
GN 2422-28-1200-40-XV	28	1200	40	12.3	5.5	-	-	-	-	80	4	-	-	1452
GN 2422-28-1440-40-XV	28	1440	40	12.3	5.5	-	-	-	-	80	4	-	-	1752
GN 2422-35-400-40-XV	35	400	40	16.5	6.5	-	-	-	-	80	3.5	-	-	636
GN 2422-35-560-40-XV	35	560	40	16.5	6.5	-	-	-	-	80	3.5	-	-	890
GN 2422-35-800-40-XV	35	800	40	16.5	6.5	-	-	-	-	80	3.5	-	-	1272
GN 2422-35-1040-40-XV	35	1040	40	16.5	6.5	-	-	-	-	80	3.5	-	-	1654
GN 2422-35-1200-40-XV	35	1200	40	16.5	6.5	-	-	-	-	80	3.5	-	-	1908
GN 2422-35-1440-40-XV	35	1440	40	16.5	6.5	-	-	-	-	80	3.5	-	-	2290
GN 2422-43-400-40-XV	43	400	40	21	8.5	-	-	-	-	80	4.5	-	-	1004
GN 2422-43-560-40-XV	43	560	40	21	8.5	-	-	-	-	80	4.5	-	-	1406
GN 2422-43-800-40-XV	43	800	40	21	8.5	-	-	-	-	80	4.5	-	-	2008
GN 2422-43-1040-40-XV	43	1040	40	21	8.5	-	-	-	-	80	4.5	-	-	2610
GN 2422-43-1200-40-XV	43	1200	40	21	8.5	-	-	-	-	80	4.5	-	-	3012
GN 2422-43-1520-40-XV	43	1520	40	21	8.5	-	-	-	-	80	4.5	-	-	3815
GN 2422-43-2000-40-XV	43	2000	40	21	8.5	-	-	-	-	80	4.5	-	-	4500

Cam roller carriages

Specification

Types

- Type **N**: Normal roller carriage, central arrangement
- Type **R**: Radial roller carriage, lateral arrangement
- Type **S**: Narrow roller carriage, central arrangement

Version

- Version **U**: with wiper for floating bearing rail (U-rail)
- Version **X**: with wiper for fixed bearing rail (X-rail)

Base Body

- Aluminium (Type N)
- Steel (Type R / Type S)
zinc plated, blue passivated

Rollers

- Anti-friction bearing steel, hardened
- Ball mounted, sealed (2RS)
- permanent lubrication

Wiper

- Plastic, PUR, grey
- Steel insert, zinc plated

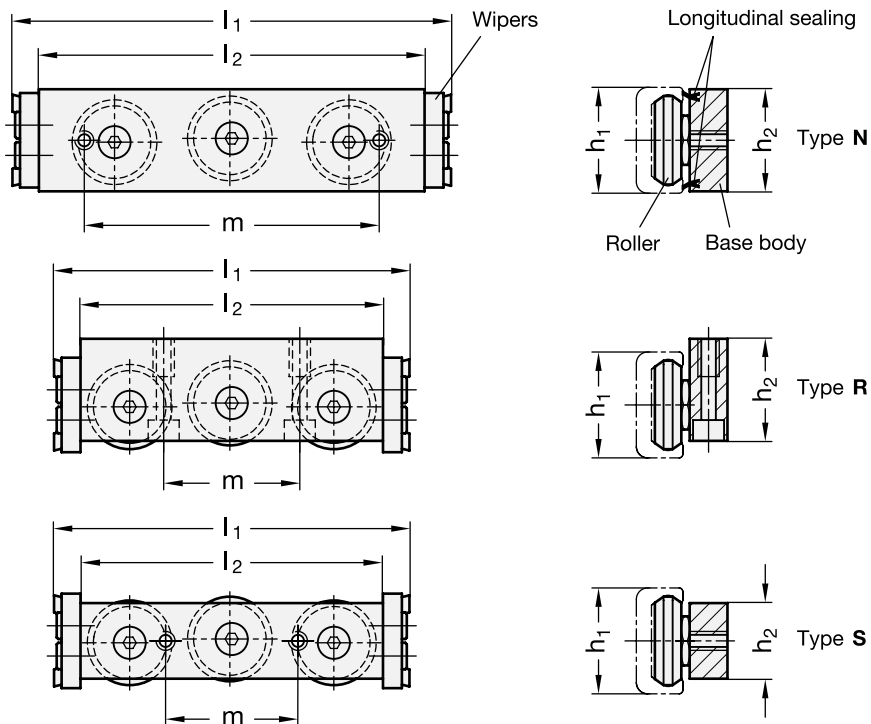
Information


Cam roller carriages GN 2424 are combined with cam roller linear guide rails GN 2422 to build cam roller linear guide rail systems. They are used in mechanical engineering or jigmaking for the linear movement of plant equipment.

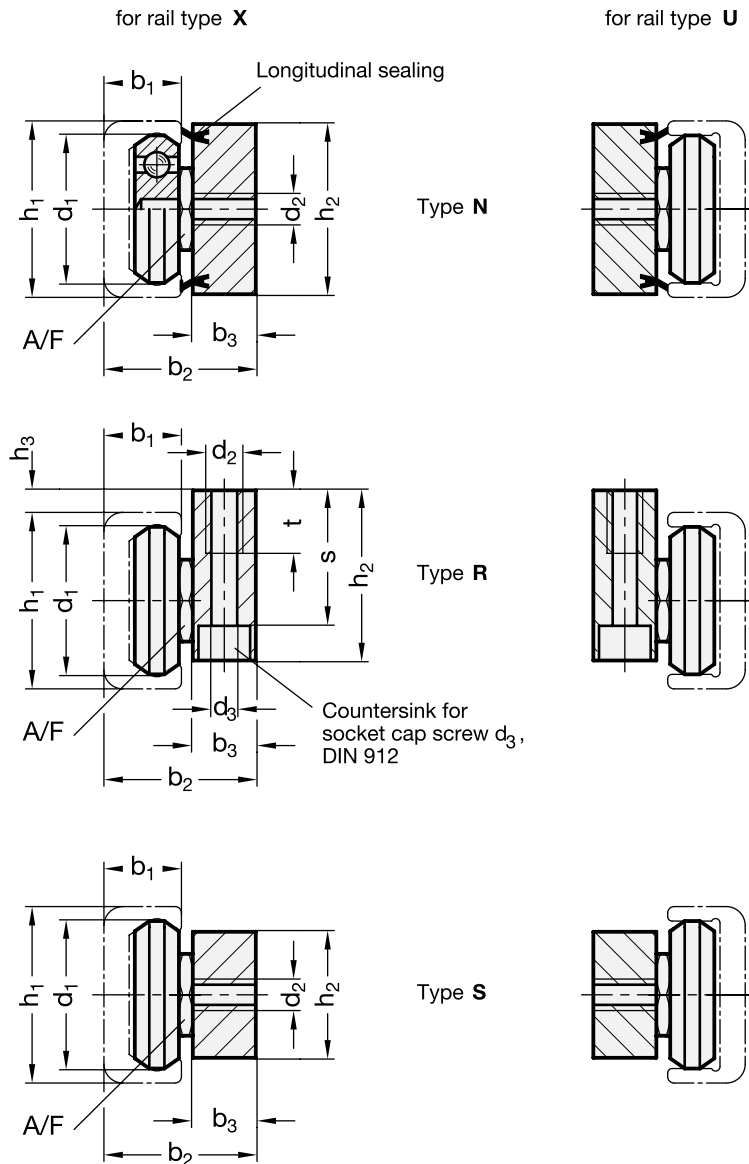
Depending on cam roller carriage type, these can be mounted in axial or radial direction to the roller axes. Also depending on rail type, matching wipers are mounted, with Type N featuring additional sealing lips in longitudinal direction.

On request

- Cam roller carriages with more than 3 rollers
- other roller arrangements



Standard Elements	Main dimensions															
Description	h1	b1	b2	b3	d1	d2	d3	h2	h3	l1	l2	m	s	t	A/F	g
GN 2424-18-N-X	18	8.3	16.5	7.2	14	M 5	-	17	-	94	80	52	-	-	8	30
GN 2424-18-N-U	18	8.3	16.5	7.2	14	M 5	-	17	-	94	80	52	-	-	8	30
GN 2424-28-N-X	28	12.3	24.1	10	22.4	M 6	-	25	-	116	102	78	-	-	13	120
GN 2424-28-N-U	28	12.3	24.1	10	22.4	M 6	-	25	-	116	102	78	-	-	13	120
GN 2424-43-N-X	43	21	37.5	15	35	M 8	-	40	-	148	134	114	-	-	15	415
GN 2424-43-N-U	43	21	37.5	15	35	M 8	-	40	-	148	134	114	-	-	15	415
GN 2424-18-R-X	18	8.3	17.3	8	14	M 5	M 4	20	4	74	60	20	17	8	8	86
GN 2424-18-R-U	18	8.3	17.3	8	14	M 5	M 4	20	4	74	60	20	17	8	8	86
GN 2424-28-R-X	28	12.3	24.1	10	22.4	M 6	M 5	30	4	94	80	36	24.5	10	13	240
GN 2424-28-R-U	28	12.3	24.1	10	22.4	M 6	M 5	30	4	94	80	36	24.5	10	13	240
GN 2424-35-R-X	35	16.5	30	12	28	M 8	M 6	36	3	114	100	45	29.5	15	15	486
GN 2424-35-R-U	35	16.5	30	12	28	M 8	M 6	36	3	114	100	45	29.5	15	15	486
GN 2424-43-R-X	43	21	37.5	15	35	M 8	M 6	45	4	134	120	56	38.5	16	15	697
GN 2424-43-R-U	43	21	37.5	15	35	M 8	M 6	45	4	134	120	56	38.5	16	15	697
GN 2424-18-S-X	18	8.3	15	5.7	14	M 5	-	9.5	-	74	60	20	-	-	8	40
GN 2424-18-S-U	18	8.3	15	5.7	14	M 5	-	9.5	-	74	60	20	-	-	8	40
GN 2424-28-S-X	28	12.3	23.8	9.7	22.4	M 6	-	15	-	94	80	35	-	-	13	146
GN 2424-28-S-U	28	12.3	23.8	9.7	22.4	M 6	-	15	-	94	80	35	-	-	13	146
GN 2424-35-S-X	35	16.5	30	12	28	M 8	-	20	-	114	100	45	-	-	15	368
GN 2424-35-S-U	35	16.5	30	12	28	M 8	-	20	-	114	100	45	-	-	15	368
GN 2424-43-S-X	43	21	37	14.5	35	M 8	-	25	-	134	120	55	-	-	15	542
GN 2424-43-S-U	43	21	37	14.5	35	M 8	-	25	-	134	120	55	-	-	15	542

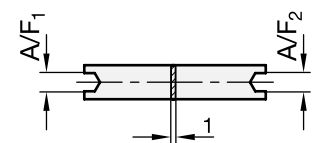


Assembly information

The initial tension or the clearance of the cam roller carriage in the rail can be determined during assembly. Both outer rollers carry the cam roller carriage, with the middle roller (for eccentric adjustment) supporting the carriage on the opposing rail side. Detailed assembly instructions and the necessary tool are included with every cam roller carriage.

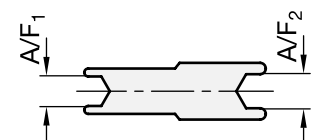
If required, the open-end wrench may also be ordered separately (GN 2424.1), with two sizes being available:

$A/F_1 / A/F_2 = 8$ for construction size with $h_1 = 18$, Article No. **GN 2424.1-8-8**



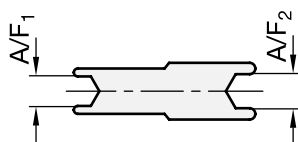
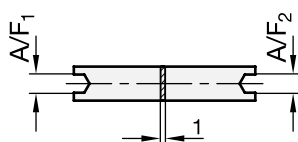
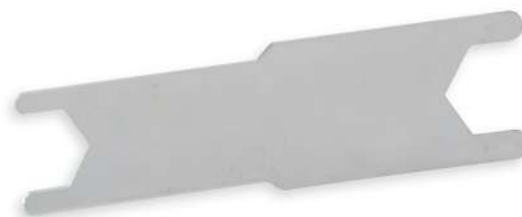
$A/F_1 = 13$ and $A/F_2 = 15$ for construction size with $h_1 = 28 / 35 / 43$,

Article No. **GN 2424.1-13-15**



Open-end wrenches

Specification
Steel



Standard Elements	Main dimensions		\triangle
Description	A/F_1	A/F_2	g
GN 2424.1-8-8	8	8	10
GN 2424.1-13-15	13	15	14

Cam rollers

Specification

Types

- Type **N**: Normal roller with centered bearing mounting point
- Type **E**: Eccentric roller with eccentric bearing mounting point
- Type **B**: Roller with bore

Roller

- Anti-friction bearing steel, hardened
- Dust and splash water protected
- permanent lubrication

Sealing disc

Plastic NBR **2RS**

Bearing pivot

Steel
zinc plated, blue passivated



Information

Cam rollers GN 2426 are combined with cam roller linear guide rails GN 2422 to build individual and space-saving linear roller guide systems.

Outer rim surfaces of the rollers are slightly convex, so that in conjunction with the correspondingly-shaped bearing rails (Type XT or XV) there is an accurate and smooth run across four contact points.

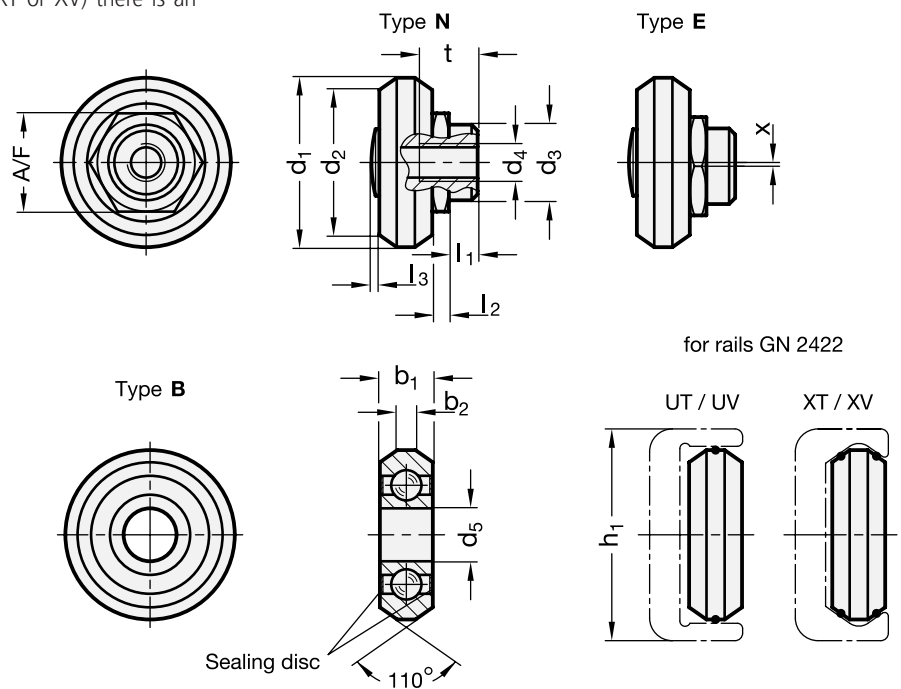
The same applies to floating bearing rails (Type UT or UV), but with only two contact points.

Combined with the rail, clearance freedom or the initial tension of several rollers can be determined during assembly by using the adjustable eccentric roller (Type E). The required open-end wrench, GN 2424.1 is available separately.

The sealed and permanently lubricated rollers guarantee long service life and superior running performance.

On request

Sealing discs, sheet metal profile with gap seal (ZZ)



Standard Elements	Main dimensions														△
Description	h1	b1	b2	d1	d2	d3 -0.05	d4	d5 -0.008	l1	l2	l3 max.	A/F	t	x	g
GN 2426-18-B-2RS	18	4	1.6	14	12.4	-	-	5	-	-	-	-	-	-	4
GN 2426-28-B-2RS	28	7	2.4	22.4	19.2	-	-	7	-	-	-	-	-	-	13
GN 2426-35-B-2RS	35	7.5	3.3	28	25.1	-	-	8	-	-	-	-	-	-	23
GN 2426-43-B-2RS	43	11	5	35	30.8	-	-	10	-	-	-	-	-	-	40
GN 2426-18-N-2RS	18	4	1.6	14	12.4	6	M 4	-	1.8	1.5	0.5	8	5	-	4
GN 2426-28-N-2RS	28	7	2.4	22.4	19.2	10	M 5	-	3.8	2.2	0.6	13	8	-	17
GN 2426-35-N-2RS	35	7.5	3.3	28	25.1	12	M 5	-	4.2	2.5	0.7	15	9	-	32
GN 2426-43-N-2RS	43	11	5	35	30.8	12	M 6	-	4.3	2.5	0.7	15	11	-	63
GN 2426-18-E-2RS	18	4	1.6	14	12.4	6	M 4	-	1.8	1.5	0.5	8	5	0.4	4
GN 2426-28-E-2RS	28	7	2.4	22.4	19.2	10	M 5	-	3.8	2.2	0.6	13	8	0.5	17
GN 2426-35-E-2RS	35	7.5	3.3	28	25.1	12	M 5	-	4.2	2.5	0.7	15	9	0.7	32
GN 2426-43-E-2RS	43	11	5	35	30.8	12	M 6	-	4.3	2.5	0.7	15	11	0.8	63

Wipers

Specification

Types

- Type **U**: for floating bearing rails
- Type **X**: for fixed bearing rails

Wiper

Plastic PUR, grey

Bracing core

Steel, zinc plated

Cylinder head screw DIN 912

Steel

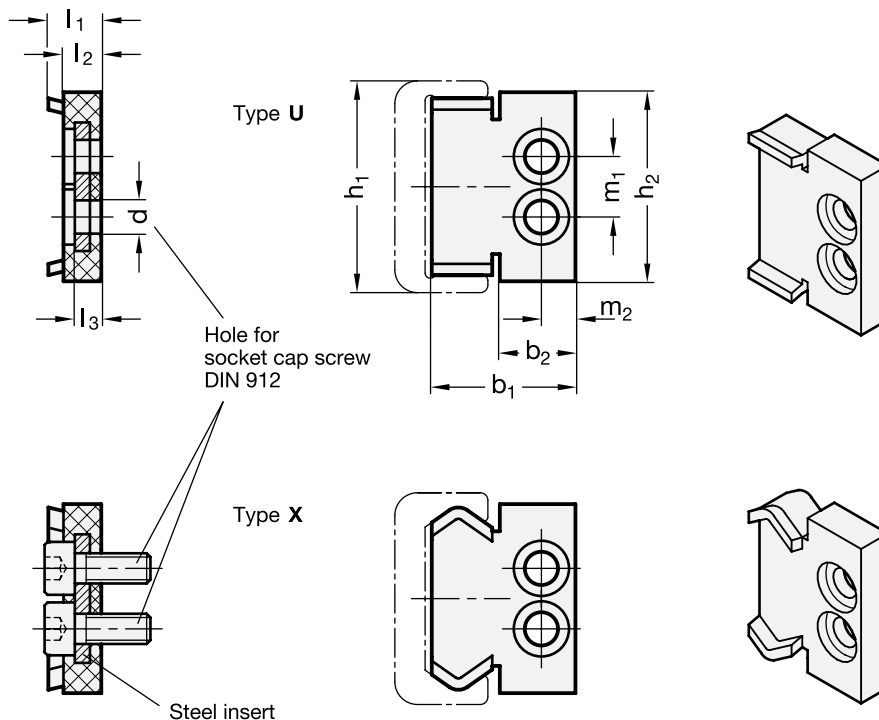
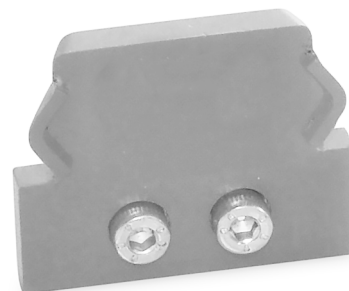
zinc plated, blue passivated

Information

Wipers GN 2428 protect against dirt deposits on rails and rollers.

For size $h_1 = 18$ the wiper is attached with only one central screw.

Screws are included parts of the order.



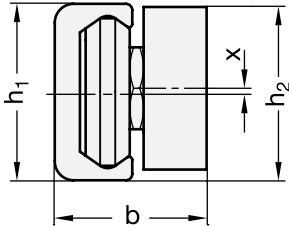
Standard Elements	Main dimensions										
Description	h1	b1	b2	d	h2	l1	l2	l3 max.	m1	m2	g
GN 2428-18-U	18	12.6	5.6	M 3	17	7	5	3.5	-	3.5	2
GN 2428-28-U	28	19	10	M 4	25	7	5	3.5	8	4.5	5
GN 2428-35-U	35	25.5	12.5	M 4	32	7	5	3.5	10	5.5	10
GN 2428-43-U	43	32.2	15	M 4	40	7	5	3.5	12	7.5	16
GN 2428-18-X	18	12.6	5.6	M 3	17	7	5	3.5	-	3.5	2
GN 2428-28-X	28	19	10	M 4	25	7	5	3.5	8	4.5	5
GN 2428-35-X	35	25.5	12.5	M 4	32	7	5	3.5	10	5.5	10
GN 2428-43-X	43	32.2	15	M 4	40	7	5	3.5	12	7.5	16

Tolerance for mounted linear guide rail systems

28

In the combination of rails GN 2422 and cam roller carriages GN 2424, the following dimensions / tolerances exist.

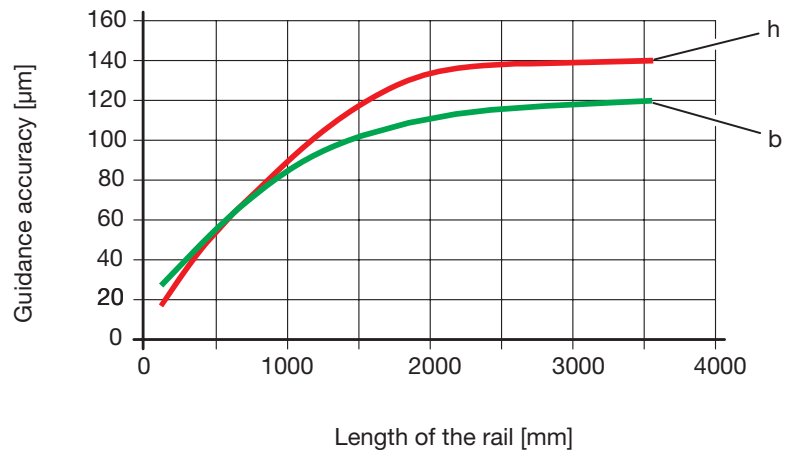
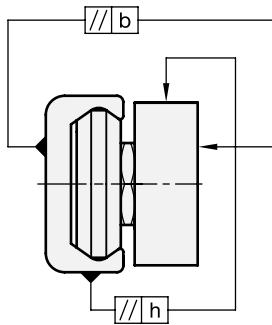
If several cam roller carriages are installed into one rail, an offset x can occur between the cam roller carriages which must be added to the dimension h_2 .



h_1	b	h_2	x
18 +0.25/-0.10	+0.15/-0.16	+0.25/-0.25	± 0.20
28 +0.25/-0.10	+0.25/-0.10	+0.15/-0.35	± 0.20
35 +0.35/-0.10	+0.25/-0.10	+0.10/-0.30	± 0.20
43 +0.36/-0.10	+0.25/-0.10	+0.20/-0.35	± 0.20

Guidance accuracy

Linear guide rail systems feature the linear guidance accuracy shown in the diagram.



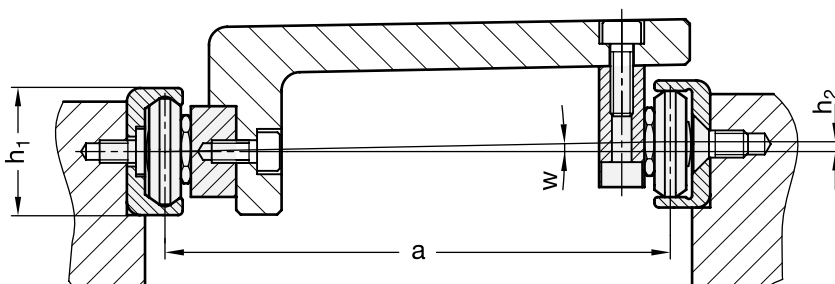
Permissible height offset

The fixed and floating bearing principle ensures that misalignments in the base construction are compensated. However, when using Type UV / UT and XV / XT rails, certain limits should not be exceeded. The following table shows the maximum permissible angle of the height offset of the fixed and floating bearing rails. Please note that the load rating must be reduced by 30% once the specified value is reached.

To calculate h_2 , the following equation should be used: $h_2 = a \times \tan w$, with the tabular values shown below used for w .

Example: $h_1 = 43$, $a = 650$ mm, $w \text{ max.} = 0.171^\circ$

$$h_2 = 650 \text{ mm} \times \tan 0.171^\circ = 1.94 \text{ mm}$$

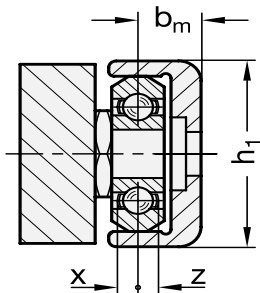


h_1	$w \text{ max.}$
18	0.057°
28	0.143°
35	0.151°
43	0.171°

Permissible lateral offset

It is possible to compensate for angular defects and the offset of the mounting surface with the help of fixed and floating bearing rails. The permissible offset of cam rollers and cam roller carriages in the Type UT / UV rails is given by the values for x and z . The reference is the nominal middle of the raceway b_m .

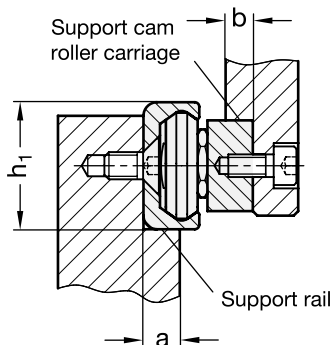
A parallelism or angular error can thus be compensated for across the whole length of the rail, which corresponds to an offset from the sum of the values for x and z .



h_1	b_m	x	z
18	6.3	1.1	0.3
28	8.6	1.3	0.7
35	10.5	2.7	1.3
43	14.5	2.5	1.5

Support widths

To guarantee the proper running motion, outside dimensions must be observed during the assembly of cam roller linear guide rail systems. Suitable components include supports at the rail and at the roller carriage which should not be smaller than the widths a or b . Also, forces acting from the outside can thus be transferred reliably from the linear guide rail system without submitting the mounting screw to shear stress.

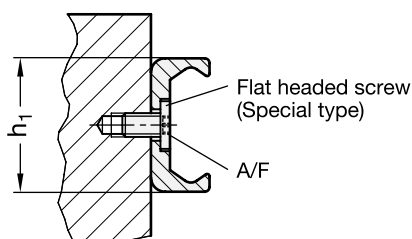


h_1	a	b
18	5	4
28	8	4
35	11	5
43	14	5

Tightening torque

When positioning the rails with countersunk mounting holes, Type UT and XT, make sure the surface is flat and the mating tapped holes are tapped deep enough so the flat head screw is flush with the rail.

The specified tightening torque of the flat head screws must be maintained.



h_1	Screw	A/F Drive	Tightening torque
18	M 4 x 8	T20	3 Nm
28	M 5 x 10	T25	9 Nm
35	M 6 x 12	T30	14 Nm
43	M 8 x 16	T40	24 Nm

Traversal speed

Depending on application and installation length, the maximum traversal speed of cam roller linear guide rail systems is 7 m/s.

Lubrication

Once the cam roller carriage has been placed in the rail, it is recommended to slightly grease the raceway surfaces of the rail with a heavy duty lubricant for linear guide rail systems, such as Klüberplex BE 31-222, using a brush.

Check the lubricant film at regular intervals for any dirt or pollution, e.g. with metal chips.

In the event of visible pollution or clear discoloration of the lubricant, use a clean rag to clean the rails and the rollers and apply new lubricant.

Applying new lubricant is normally necessary once a year or after 100 km of running distance.

Operational temperatures

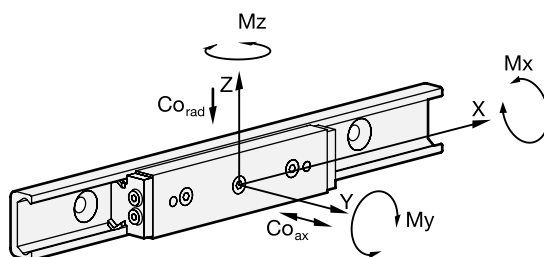
The components of the roller guide systems are suitable for use in a temperature range of -30 °C to 130 °C.

Load rating

The installation space, the desired mode of attachment and the load to be carried are the determining factors when selecting the best possible roller guide system. The values given below will help in selecting the most suitable cam roller carriage or the most suitable cam rollers.

The details on load capacity are non-binding guide values given without liability and does not constitute any type of guarantee or warranty of intended use. The user must determine in each individual case whether a product is suitable for the intended application. Environmental factors and aging may affect the stated values.

Description	Load ratings in main load direction		Permissible load torques		
	Co rad in N	Co ax in N	Mx in Nm	My in Nm	Mz in Nm
GN 2424 -18-...	825	260	1.6	8.3	4.8
-28-...	2210	650	6.4	28	16.4
-35-...	3550	1070	13.2	63	34.1
-43-...	5520	1580	23.7	104.7	60.1
GN 2426 -18-...	410	-	-	-	-
-28-...	1100	-	-	-	-
-35-...	1760	-	-	-	-
-43-...	2700	-	-	-	-



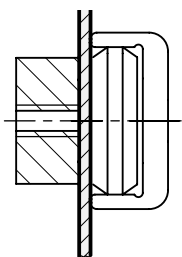
Cam roller carriages

Instructions for installation - Linear guide rail systems

Linear guide rail systems consist of a cam roller linear guide rail GN 2422 and a cam roller carriage GN 2424. All components are packed separately and supplied not assembled. When delivered, the play between cam roller carriage and rail is not preset.

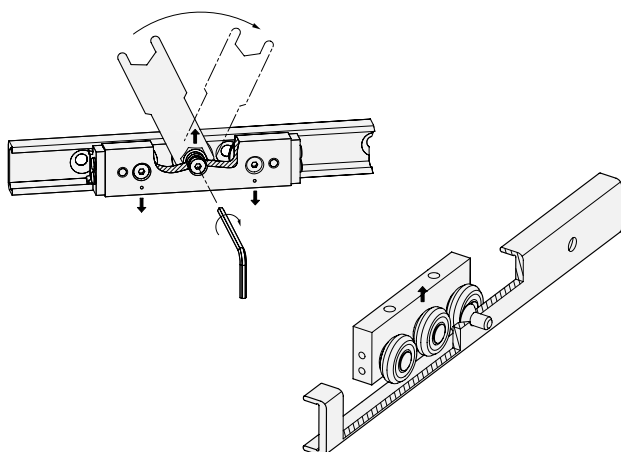
During assembly, set the cam roller carriage as follows:

1. Make sure that the raceways and the cam rollers are clean.
2. Slightly loosen the mounting screw of the central, eccentrically adjustable roller and insert the cam roller carriage (without the wipers supplied) into the rail (see also items 4 and 6).
3. Position the cam roller carriage at one end of the rail. For the floating bearing rails of Type UT and UV, a thin and stable support (e.g. open-end wrench or a feeler gauge) must be placed underneath the ends of the cam roller carriage body and the rail to ensure the parallel alignment of the cam roller carriage in the level raceways.

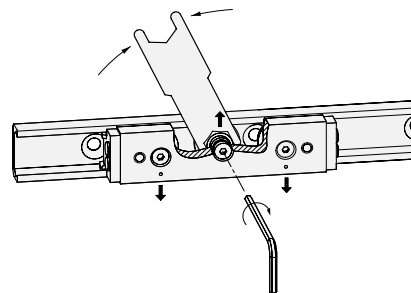


Use support for floating bearing rails!

4. Insert the open-end wrench GN 2424.1 (included) between the eccentric cam roller and the cam roller carriage body. (The centering bores to the left and right mark the position of the running side of the concentric cam rollers / load-bearing cam rollers.)



5. Turning the open-end wrench clockwise will press the cam roller to be adjusted against the top raceway which will set the roller carriage free of play. Excessive pre-tensioning must be avoided because this will increase friction and reduce useful service life.



6. While using the open-end wrench to hold the bearing pivot in the correct position, the mounting screw may be moderately tightened. The correct tightening torque will be checked later.

7. Move the cam roller carriage in the rail and make sure that the play / the moderate pre-tensioning is constant along the full length of the rail. The running motion should be free-moving, with the cam roller carriage having any play or jamming at no point inside the rail.

8. Now tighten the mounting screw with the recommended tightening torque shown in the table, with the open-end wrench holding the angular position of the cam rollers in place.

h1	Tightening torque
18	3 Nm
28	7 Nm
35	7 Nm
43	12 Nm

9. Now mount the wipers, and for cam rollers carriage Type N, the longitudinal seal. To do so, remove the cam roller carriage from the rail.

10. Before reinserting the cam roller carriage, make sure that the raceways / rollers are properly lubricated using a heavy duty lubricant for linear guidance.