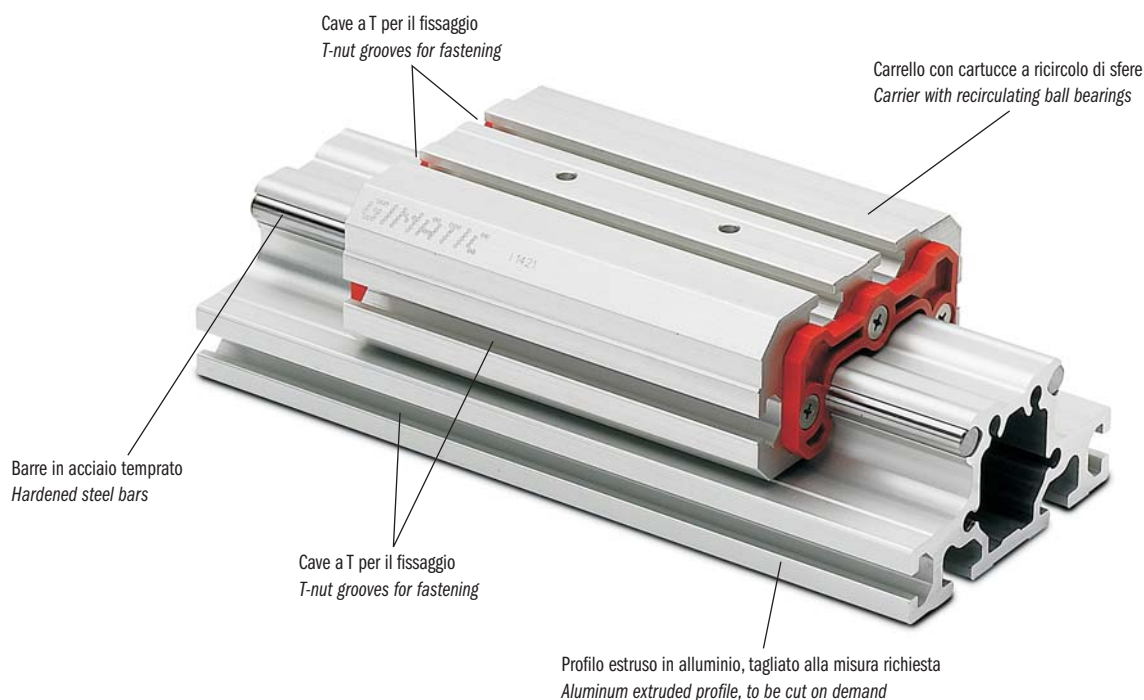


Guide lineari a ricircolo di sfere serie LL

- Sistema di guida a ricircolo di sfere brevettato.
- Semplici da usare ed economiche.
- Diverse possibilità di montaggio con dadi a T.
- Vari kit opzionali per il montaggio di accessori.
- Qualsiasi lunghezza fino a 6000mm è possibile.
- E' possibile montare più di un carrello per ogni profilo.

Linear guidance with recirculating ball-bearing series LL

- Patented bearing system.
- Easy fitting and inexpensive.
- Several mounting options with T-nuts.
- Optional kits for accessories.
- Available in any length up to 6000mm.
- More than one carrier per rail is possible.



Il carrello è ricavato da un estruso di alluminio nel quale sono previste le sedi per le cartucce a ricircolo di sfere e le cave a T per i vari fissaggi.

La particolare forma permette l'azzeramento del gioco e la registrazione del precarico tramite le quattro viti di regolazione. L'assemblaggio completo del carrello, il montaggio sulle barre, la registrazione e la prima lubrificazione sono effettuati in fabbrica.

Sulla guida lineare possono essere montati due o più carrelli, a richiesta, per aumentare la capacità di carico, oppure per avere due o più slitte comandabili in modo indipendente.

The carrier is made from an aluminium extruded profile, in which the housings for the recirculating ball bearings and the T-nut grooves are located.

Thanks to the carrier special profile, with four adjustment screws, it is possible to set to zero the carrier backlash and to adjust the correct bearing preload.

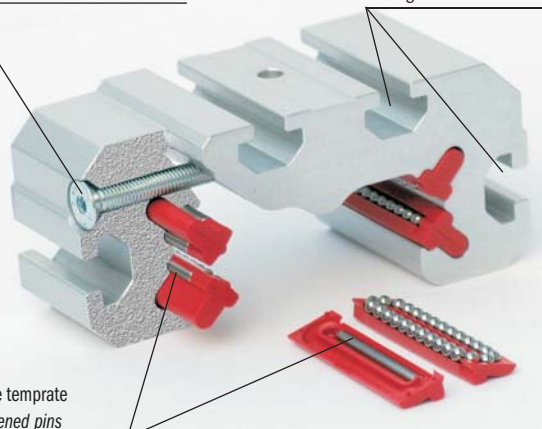
The carrier assembling, mounting on the bars, preloading and the first lubrication are made in Gimatic.

Two or more carriers, on demand, can be mounted on the same rail, to increase the load capacity or to get two or more independent slides.

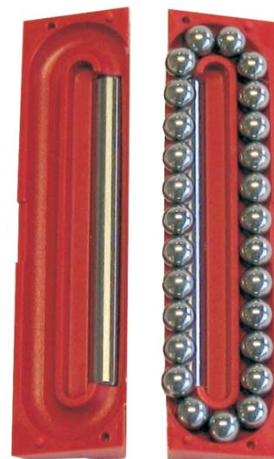
Vite regolazione del gioco
Adjustment screws

Guida per dadi a T
T-nut groove

Spine temprate
Hardened pins



Cartuccia a ricircolo di sfere
Recirculating ball bearing

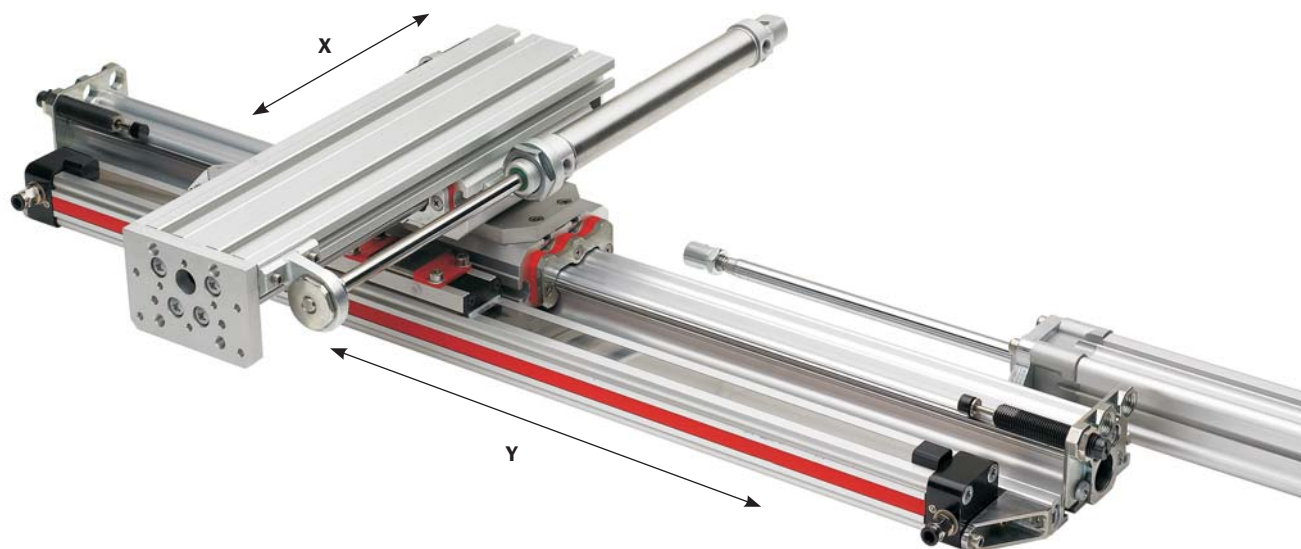


Esempio di applicazione

Manipolatore Y-X con arresto intermedio su Y, azionato da cilindri pneumatici.

Application example

Y-X manipulator with intermediate stop along Y, powered by pneumatic cylinders.

**Esempio di applicazione**

Manipolatore Y-Z tipo Pick & Place, azionato da cilindri pneumatici.

Application example

Y-Z Pick & Place manipulator, powered by pneumatic cylinders.

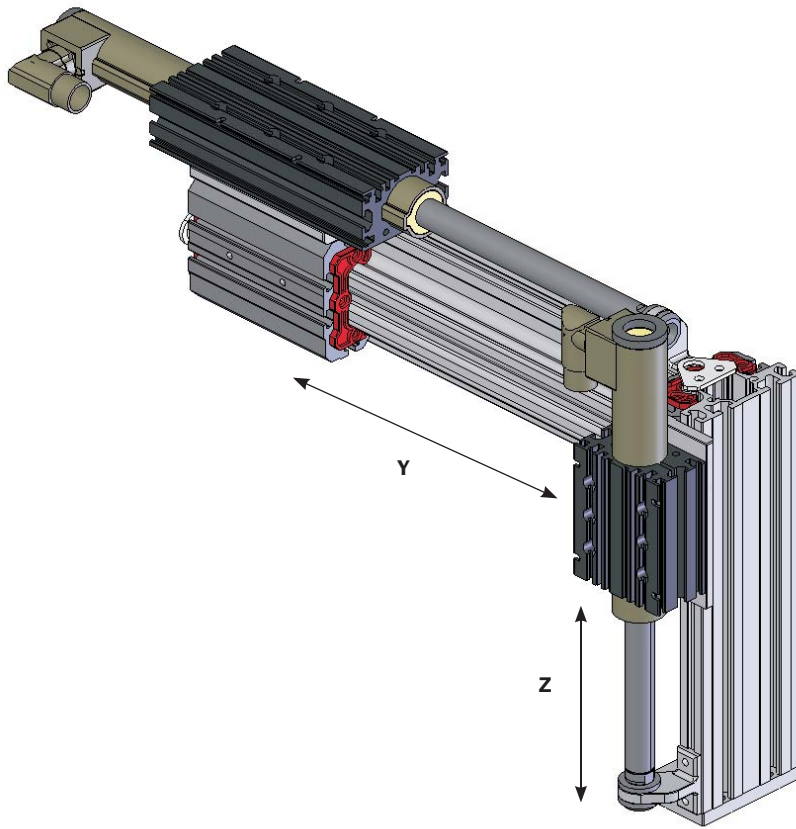


Esempio di applicazione

Manipolatore Y-Z tipo Pick & Place, azionato da motori lineari.

Application example

Y-Z Pick & Place manipulator, powered by linear motors.

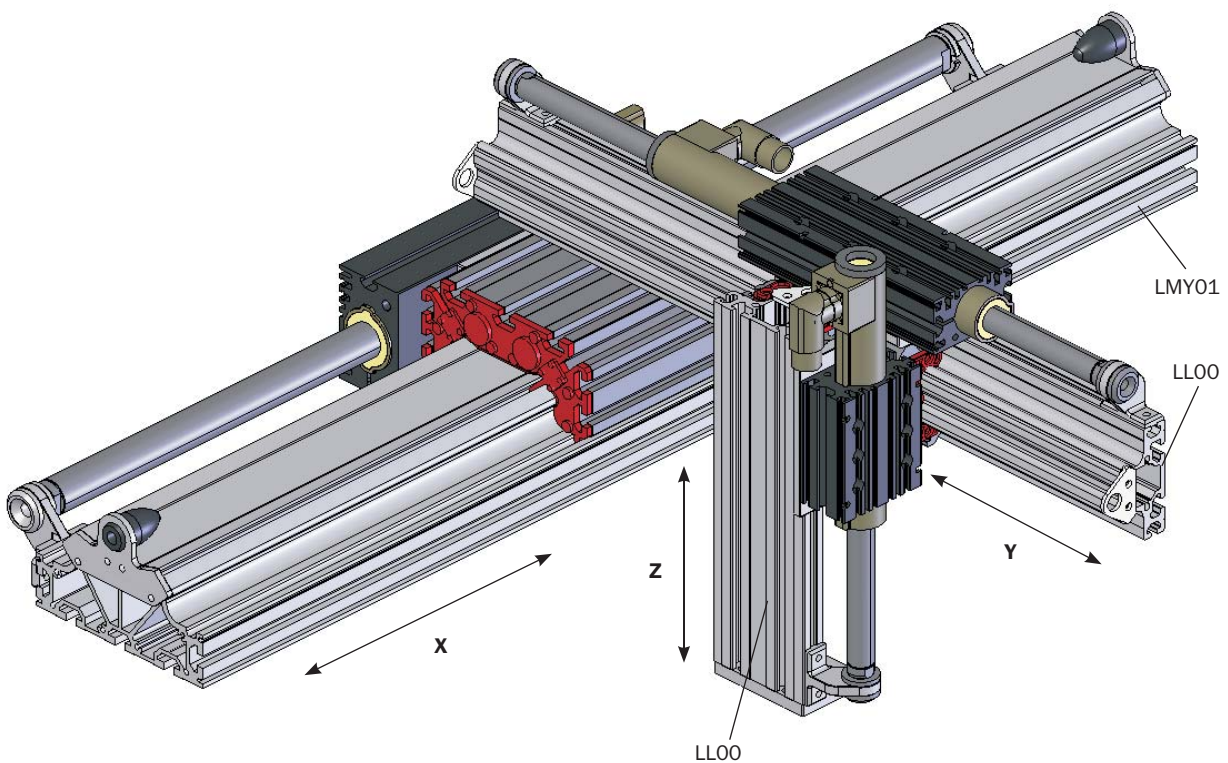


Esempio di applicazione

Manipolatore X-Y-Z, azionato da motori lineari.

Application example

X-Y-Z manipulator, powered by linear motors.

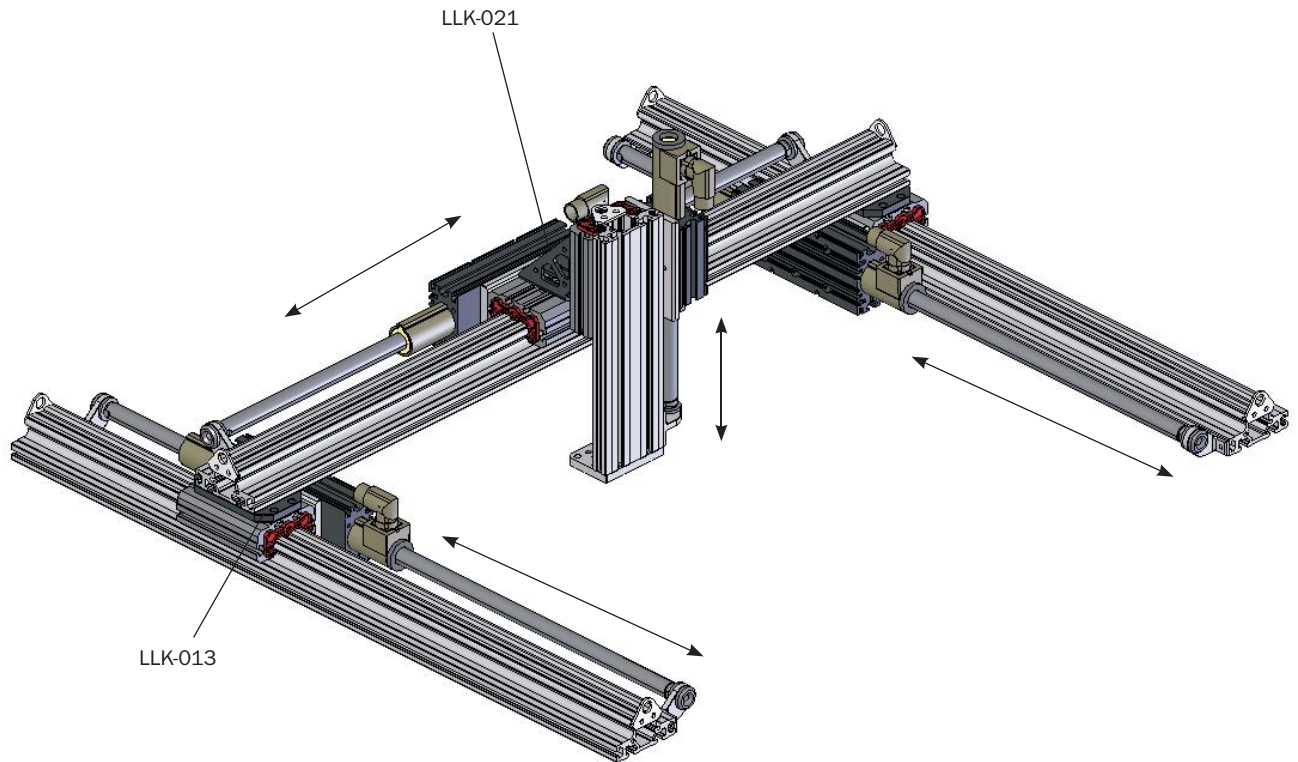


Esempio di applicazione

Portale a 3 assi, costituito da 4 guide LL, azionate da motori lineari.

Application example

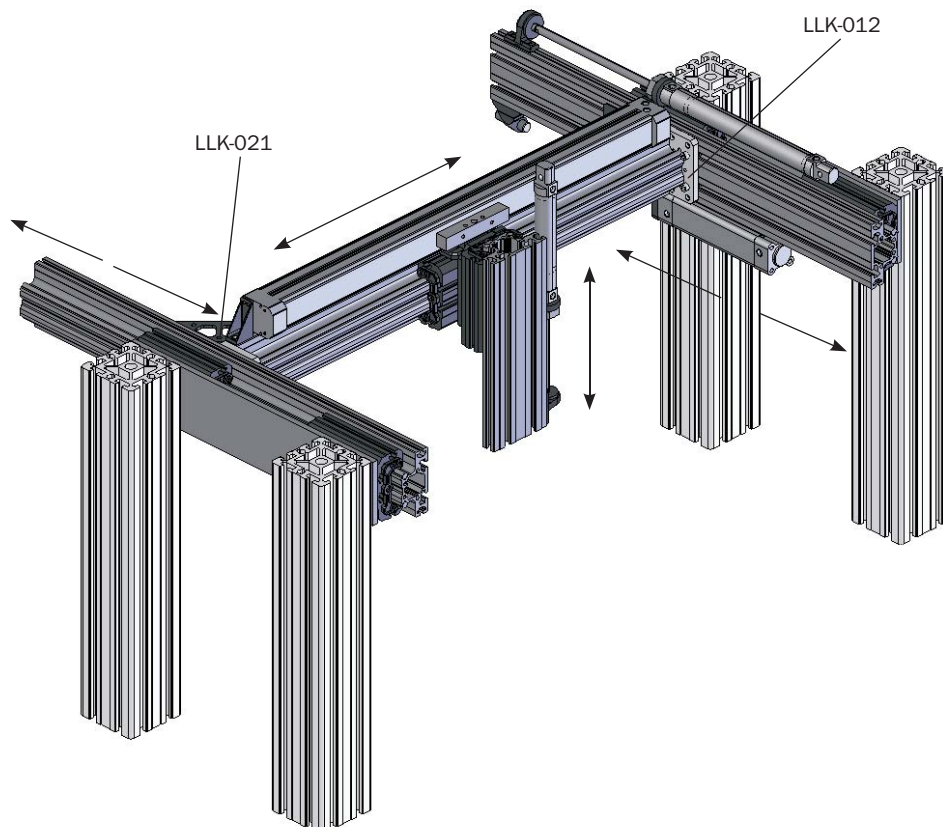
3-axis gantry, assembled with 4 LL guidances, powered by linear motors.

**Esempio di applicazione**

Portale a 3 assi, costituito da 4 guide LL, azionate da cilindri pneumatici.

Application example

3-axis gantry, assembled with 4 LL guidances, powered by pneumatic cylinders.

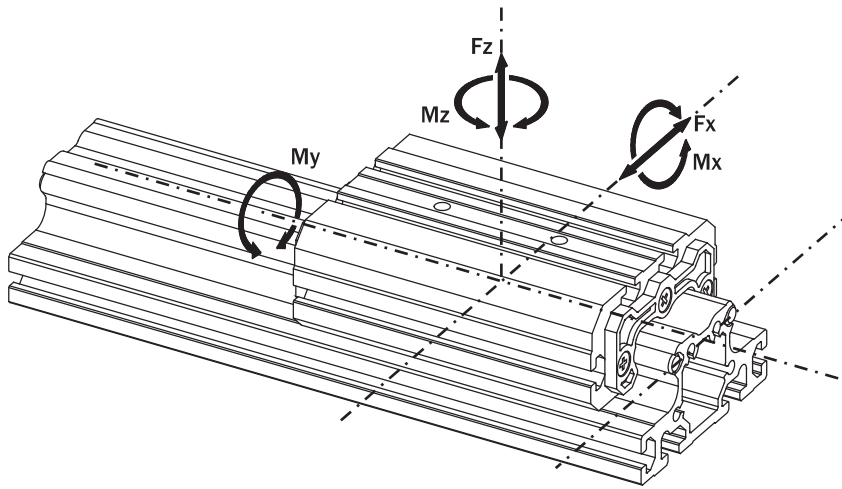


Carichi di sicurezza

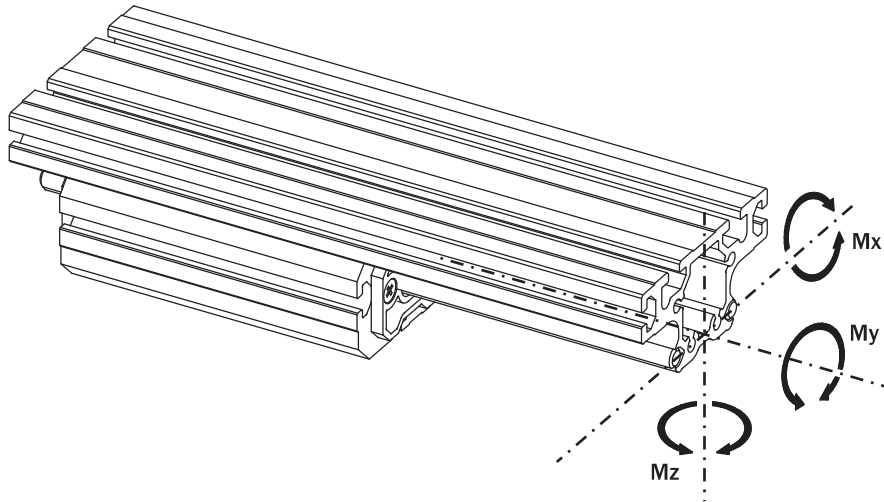
Carichi eccessivi possono danneggiare l'unità, causare difficoltà di funzionamento e compromettere la sicurezza dell'operatore. Verificare che l'indice di carico LF sia inferiore all'unità.

Safety loads

Excessive loads can damage the unit, cause functioning troubles and endanger the safety of the operator. The load factor LF must be lower than 1.



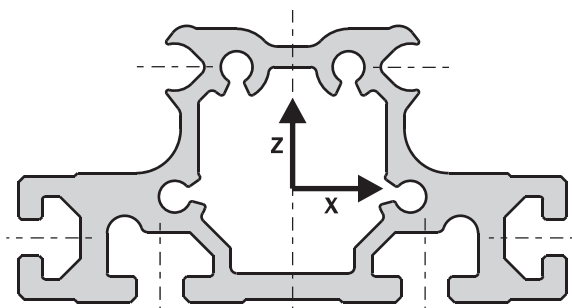
$$LF = \frac{F_x}{F_x \max} + \frac{F_z}{F_z \max} + \frac{M_x}{M_x \max} + \frac{M_y}{M_y \max} + \frac{M_z}{M_z \max} \leq 1$$



	max
Fx	2500 N
Fz	2500 N
Mx	56 Nm
My	50 Nm
Mz	56 Nm

Momenti d'inerzia del profilo estruso in alluminio

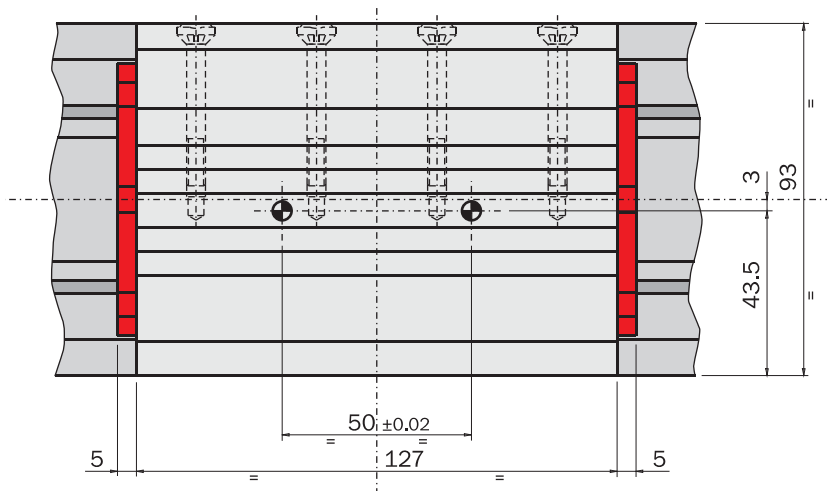
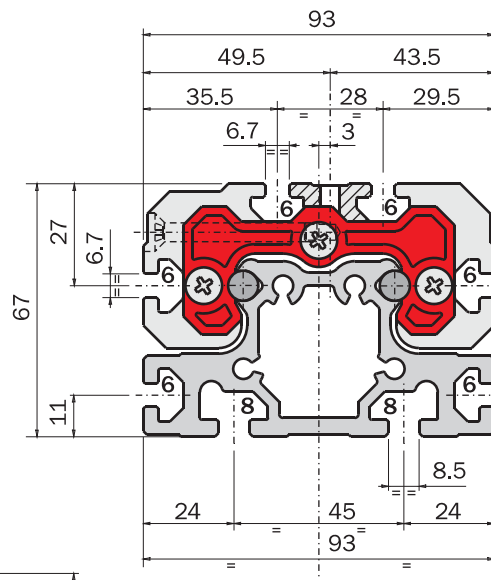
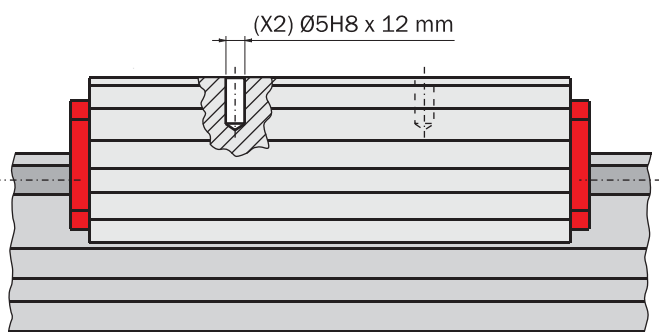
Area moment of inertia for the extruded aluminum profile



I_x= 267709 mm⁴
I_z= 907959 mm⁴

Dimensioni (mm) / Dimensions (mm)

FIRST ANGLE PROJECTION



Calcolo del peso

Ogni carrello completo pesa 0.82 kg .
La guida (profilo in alluminio più barre in acciaio) pesa 4.22 kg/m .

Weight calculation

The weight of the carrier is 0.82 kg .
The weight of the guidance (alu profile plus steel bars) is 4.22 kg/m .

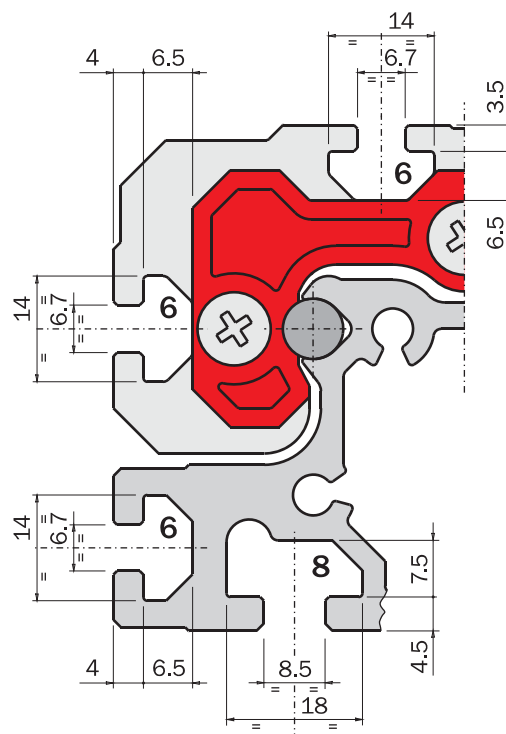
Cave per dadi a "T"

Sulla guida esistono due misure delle cave (6 ed 8).
Ci si possono montare quattro tipi di dadi a T.

T-nut grooves

There are two groove sizes on the guidance (6 and 8).
And it is possible to use in them four T-nut types.

	Cava / Slot	
	6	8
Dado	LL25-09 (M4)	LL25-10 (M6)
Nut	LL25-23 (M5)	VITE-243 (M6 Bosch)



Codice di ordinazione / Ordering code

LL XX - XXXX

Corsa / Stroke [mm] (*)

LL00
Per cilindri ISO Ø20, Ø25, Ø32
For ISO cylinders Ø20, Ø25, Ø32



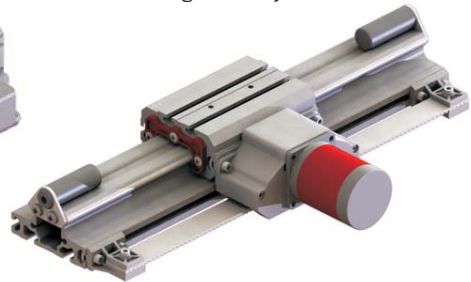
	s [mm]	m
LL00	0÷5830 (1)	1560g+4.2g/mm

LL01
Per cilindri senza stelo Ø25
For rodless cylinders Ø25



	s [mm]	m
LL01	0÷5740 (1)	1980g+4.2g/mm

LL06
Trasmissione a omega, completa di calettatore per alberi Ø12
Omega transmission, with Ø12 shaft locking assembly



	s [mm]	m
LL06	0÷5700 (2)	3220g+4.3g/mm

LL07
Trasmissione a cinghia e pulegge, completa di calettatore per alberi Ø12
Belt drive and pulleys, with Ø12 shaft locking assembly.



	s [mm]	m
LL07	0÷1500 (2)	3660g+4.4g/mm

LL08
Con due carrelli autocentranti
With two self-centering carriers



	s [mm]	m
LL08	140÷2000 (1)	3000g+4.3g/mm

LL10
Per cilindro senza stelo Ø25 a trascinamento magnetico
For rodless cylinder Ø25 magnetically coupled



	s [mm]	m
LL10-0300	300	3600
LL10-0500	500	4550
LL10-1000	1000	6900
LL10-1500	1500	9250

(*) Per LL08 la corsa è il massimo interasse fra i due carrelli.

- (1) E' possibile ordinare lunghezze di guida con step di 1mm.
- (2) E' possibile ordinare lunghezze di guida con step di 100mm.

La lunghezza totale della guida è la somma della corsa utile e dell'ingombro della corsa zero:

- 170mm per LL00;
- 260mm per LL01;
- 265mm per LL06;
- 220mm per LL07;
- 210mm per LL08;
- 170mm per LL10.

La lunghezza totale della guida deve essere inferiore a 6000mm. Esistono varie interfacce e kit opzionali per il fissaggio dei cilindri, dei fine corsa, dei deceleratori e dei sensori.

Sono venduti in confezioni singole, non assemblati alla guida lineare.
I cilindri non sono forniti.

(*) For the LL08 the stroke is intended like the maximum interaxis between the two carriers.

- (1) It is possible to order any guidance length in 1mm steps.
- (2) It is possible to order any guidance length in 100mm steps.

The total length of the guidance is the sum of the carrier travel plus the zero stroke length:

- 170mm for LL00;
- 260mm for LL01;
- 265mm for LL06;
- 220mm for LL07;
- 210mm for LL08;
- 170mm for LL10.

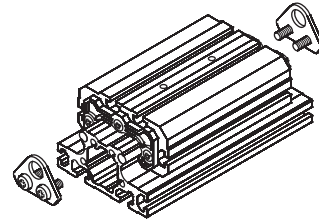
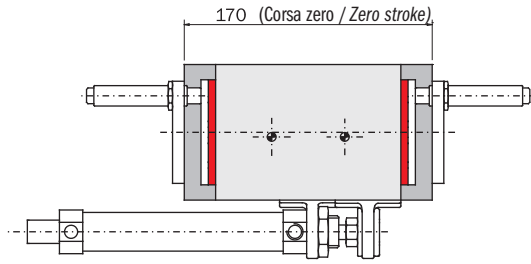
The total length of the guidance must be lower than 6000mm. There are also several optional interfaces and kits with the brackets to mount the cylinders, the end stroke stoppers, the shock-absorbers and the sensors.

They are sold in single packages, not assembled with the guidance.
The cylinders are not supplied.

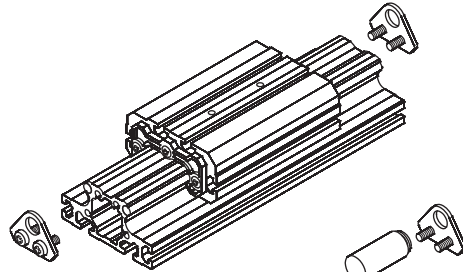
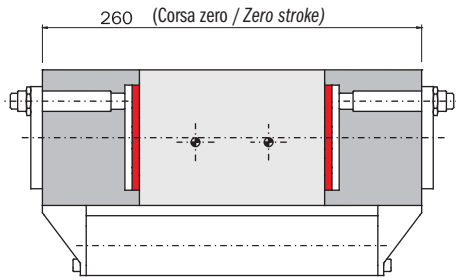
Le parti fornite con ciascun codice di ordinazione sono qui evidenziate.

The parts supplied with the ordering codes are here highlighted.

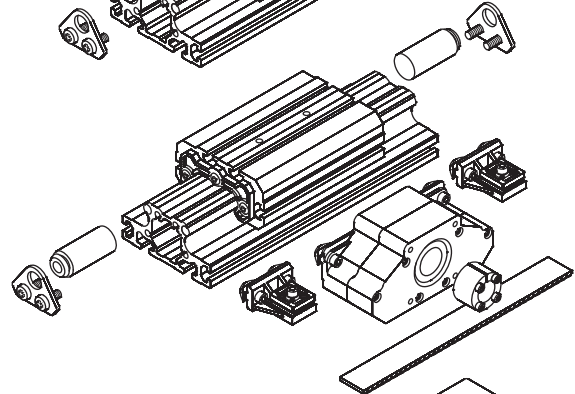
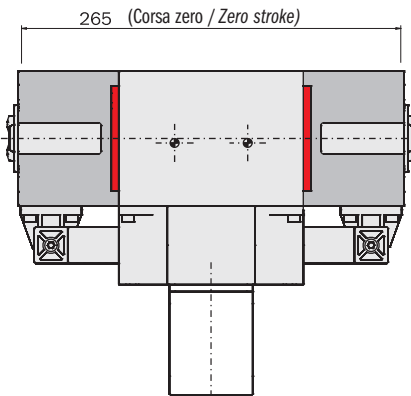
LL00



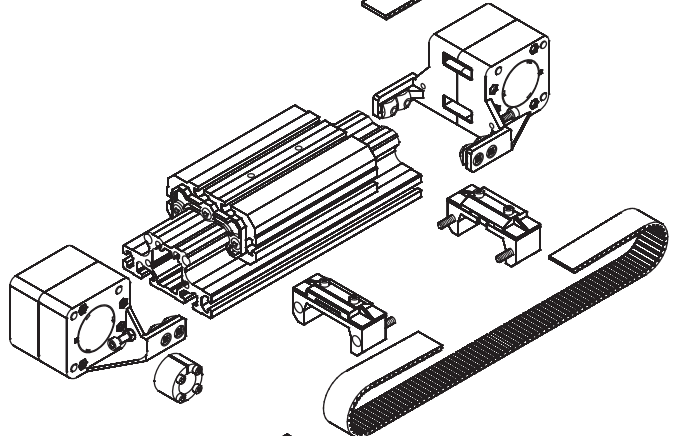
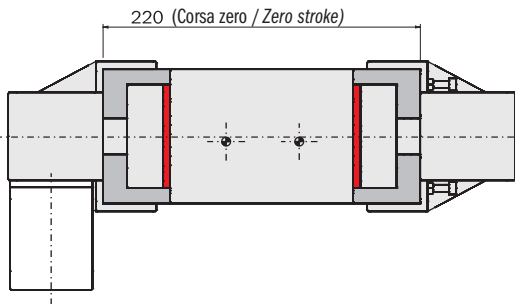
LL01



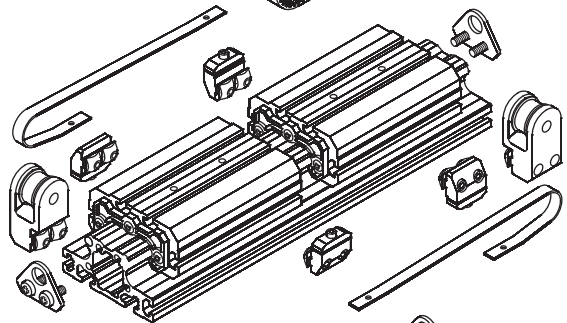
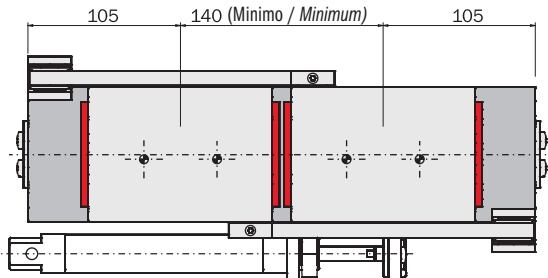
LL06



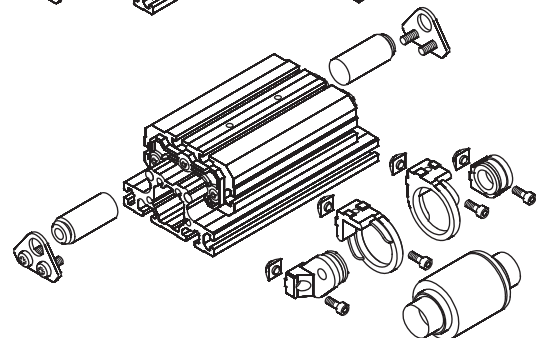
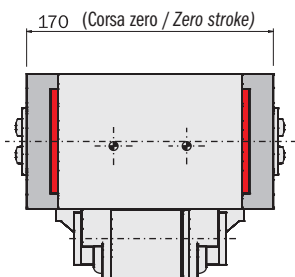
LL07



LL08



LL10

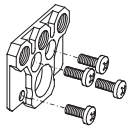


Kit opzionali / Optional kits

Testata per fissaggio deceleratori, sensori induttivi di finecorsa o grani di fermo

End plate for the fastening of shock-absorbers, end stroke grub screws and inductive sensors

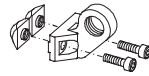
- LLK-008



Staffa fissaggio deceleratori o grani di fermo

Bracket for the side fastening of shock-absorbers, or end stroke grub screws

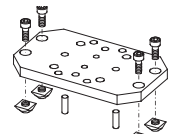
- LLK-007
- LLK-020
- LLK-025
- LLK-026



Interfaccia di montaggio per il carrello

Mounting interface plate for the carrier

- LLK-013



Grano di fermo

End stroke grub screw

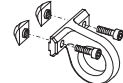
- LLK-024



Staffa per fissaggio cilindro ISO 6432 Ø20 / Ø25

Cylinder holder Ø20 / Ø25

- LLK-002



Cilindro ISO 6432 Ø20 / Ø25 (non fornito)

ISO 6432 cylinder Ø20 / Ø25 (not supplied)

Terminale per cilindro Ø25 e Ø32

End block for cylinder rods Ø25 and Ø32

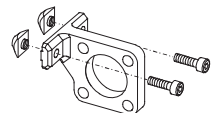
- LLK-016



Anello per fissaggio cilindro ISO 6431 Ø32

Cylinder holder Ø32

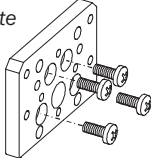
- LLK-019



Testata di trascinamento

End interface plate

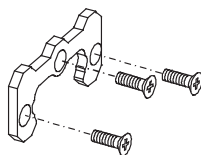
- LLK-012



Protezione in acciaio per il carrello

Steel plate for the carrier

- LLK-004



Cilindro ISO 6431 Ø32 (non fornito)

ISO 6431 cylinder Ø32 (not supplied)

Deceleratore idraulico

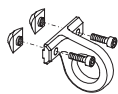
Shock-absorber

- SPM25MC1SB
- PM25MC-2SB-SP22039

Anello per giunto cilindro ISO

Cylinder holder

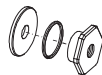
- LLK-002 (Ø20 / Ø25)
- LLK-018 (Ø32)



Giunto per cilindro ISO

Cylinder rod bolt

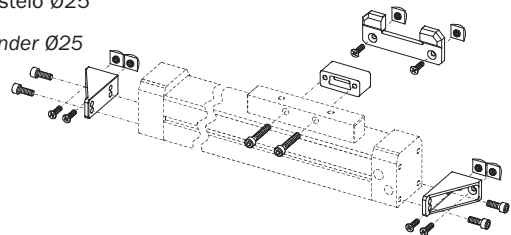
- LLK-003 (Ø25 / Ø32)
- LLK-017 (Ø20)



Kit fissaggio cilindro senza stelo Ø25

Fastening kit for rodless cylinder Ø25

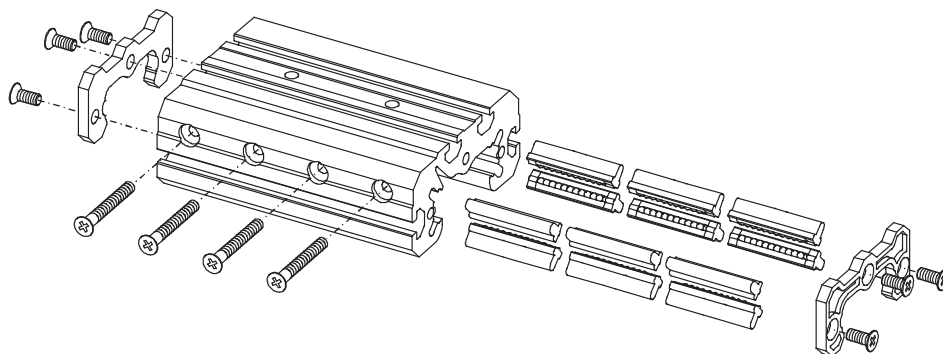
- LLK-005 (Origa)
- LLK-006 (Festo)
- LLK-022 (Ultraline)
- LLK-023 (Norgren)



LLK-001

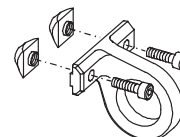
Carrello aggiuntivo
Additional carrier

(832 g)

**LLK-002**

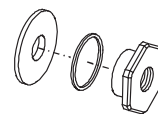
Anello per fissaggio cilindro Ø20 / Ø25
Cylinder holder Ø20 / Ø25

(93 g)

**LLK-003**

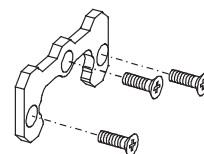
Giunto M10x1.25 per stelo cilindro Ø25 / Ø32
Rod bolt M10x1.25 for cylinder Ø25 / Ø32

(57 g)

**LLK-004**

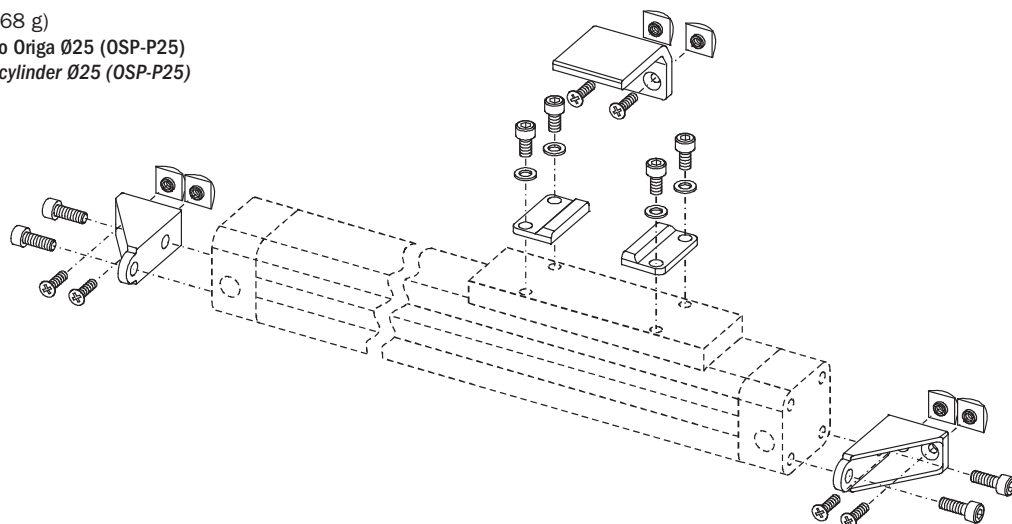
Protezione in acciaio per il carrello
Steel plate for the carrier

(59 g)

**LLK-005**

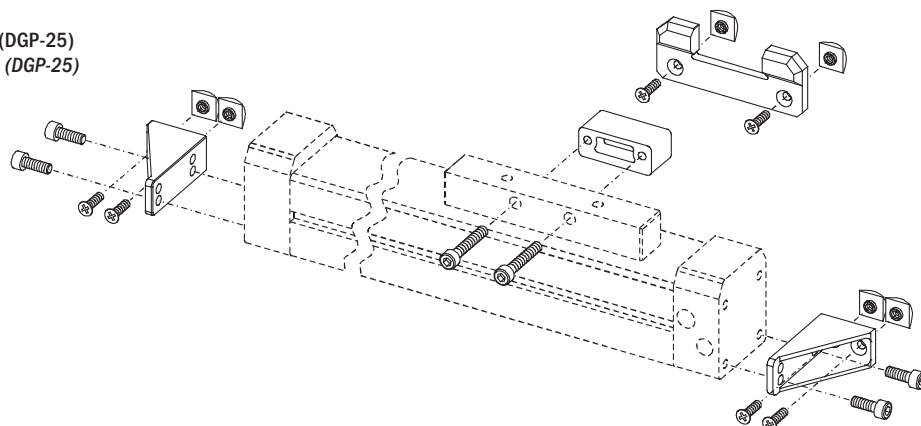
Kit fissaggio cilindro senza stelo Origa Ø25 (OSP-P25)
Fastening kit for Origa rodless cylinder Ø25 (OSP-P25)

(268 g)

**LLK-006**

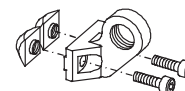
Kit fissaggio cilindro senza stelo Festo Ø25 (DGP-25)
Fastening kit for Festo rodless cylinder Ø25 (DGP-25)

(314 g)

**LLK-007**

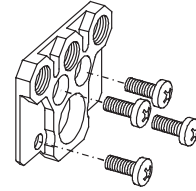
Staffa filettata M14x1.5 per il fissaggio laterale di deceleratori o grani di fermo per cilindri Ø20 e Ø25
Threaded bracket (M14x1.5) for the side fastening of shock absorbers or end stroke grub screws for cylinders Ø20 and Ø25

(69 g)



LLK-008 (137 g)

Testata
End plate

**LL25-09** (5 g)

Dado a T M4 per cava 6 (1 pezzo)
M4 T-nut for slot 6 (1 piece)

**LL25-10** (9 g)

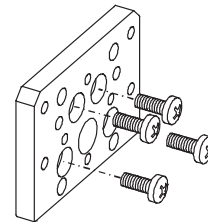
Dado a T M6 per cava 8 (1 pezzo)
M6 T-nut for slot 8 (1 piece)

**VITE-243** (7 g)

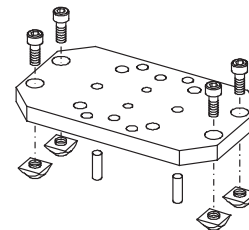
Dado a T M6 intercambiabile Bosch per cava 8 (1 pezzo)
M6 T-nut Bosch interchangeable for slot 8 (1 piece)

**LLK-012** (137 g)

Testata di trascinamento
End interface plate

**LLK-013** (262 g)

Interfaccia di montaggio per il carrello
Mounting interface plate for the carrier

**LL25-23** (5 g)

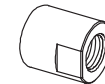
Dado a T M5 per cava 6 (1 pezzo)
M5 T-nut for slot 6 (1 piece)

**LLK-015** (16 g)

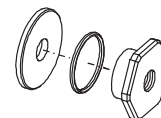
Riduzione porta-sensori M14x1.5 / M8x1 (1 pezzo)
Sensor holder adaptor M14x1.5 / M8x1 (1 piece)

**LLK-016** (24 g)

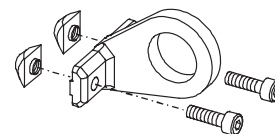
Terminale M10x1.25 per stelo cilindro Ø25 / Ø32 (1 pezzo)
End block M10x1.25 for the rod of a cylinder Ø25 / Ø32 (1 piece)

**LLK-017** (57 g)

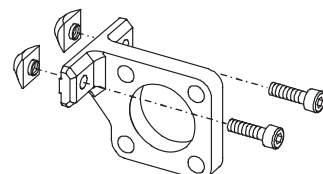
Giunto M8 per stelo cilindro Ø20
Rod bolt M8 for cylinder Ø20

**LLK-018** (130 g)

Anello fissaggio giunto per cilindro Ø32
Rod bolt holder for cylinder Ø32

**LLK-019** (172 g)

Anello per fissaggio cilindro Ø32
Cylinder holder Ø32

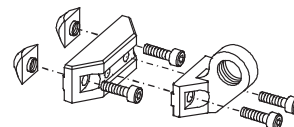


LLK-020

(96 g)

Staffa filettata M14x1.5 per il fissaggio laterale di deceleratori o grani di fermo per cilindro Ø32

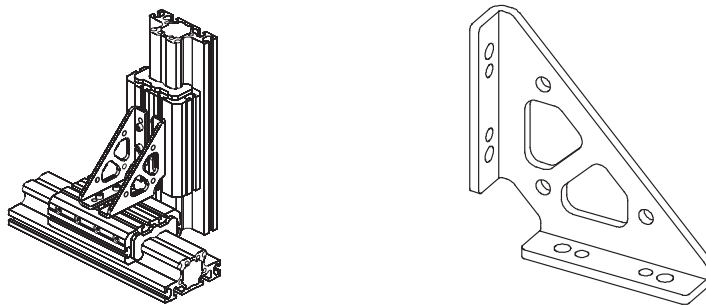
Threaded bracket (M14x1.5) for the side fastening of shock absorbers or end stroke grub screws for cylinder Ø32

**LLK-021**

(170 g)

Squadra di fissaggio (1 pezzo)

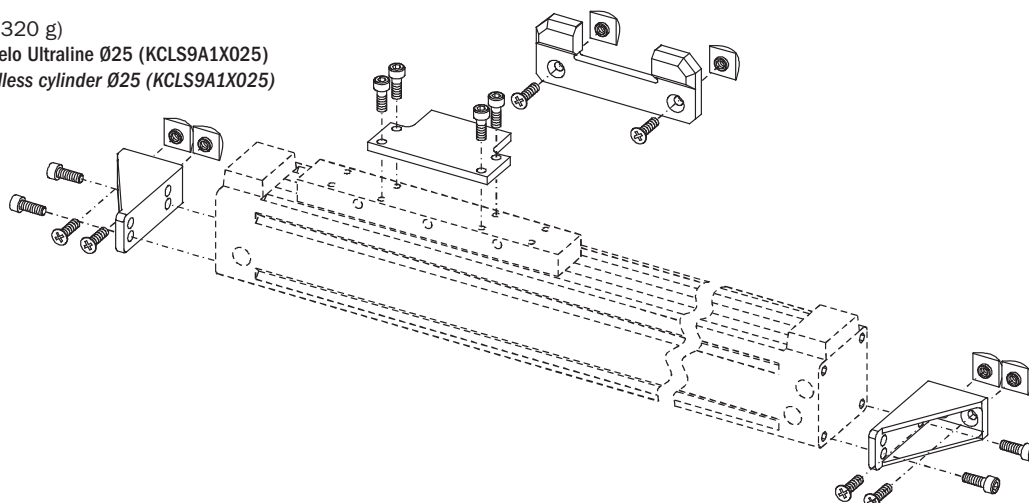
90° mounting bracket (1 piece)

**LLK-022**

(320 g)

Kit fissaggio cilindro senza stelo Ultraline Ø25 (KCLS9A1X025)

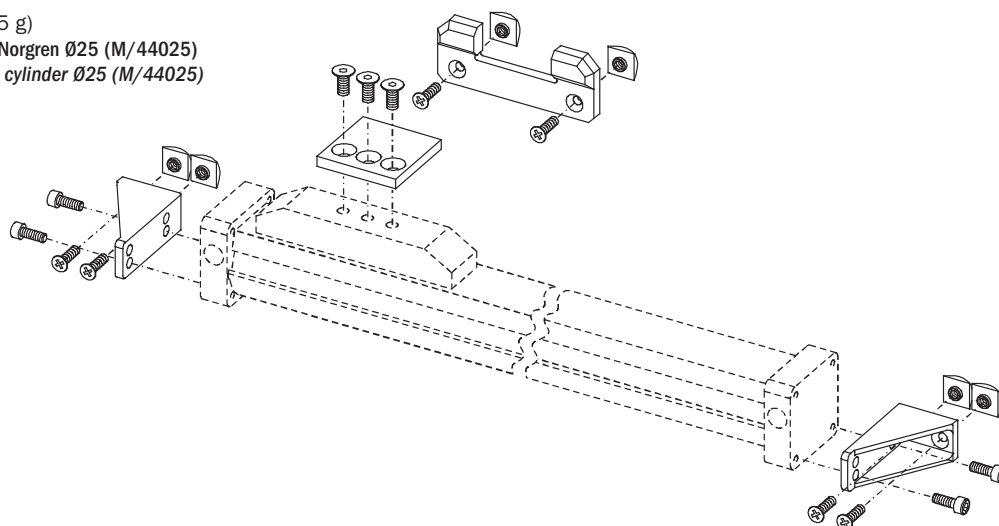
Fastening kit for Ultraline rodless cylinder Ø25 (KCLS9A1X025)

**LLK-023**

(315 g)

Kit fissaggio cilindro senza stelo Norgren Ø25 (M/44025)

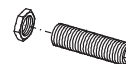
Fastening kit for Norgren rodless cylinder Ø25 (M/44025)

**LLK-024**

(55 g)

Grano di fermo

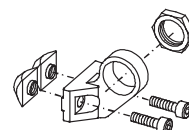
End stroke grub screw

**LLK-025**

(72 g)

Staffa Ø15 per il fissaggio laterale di deceleratori o grani di fermo per cilindri Ø20 e Ø25

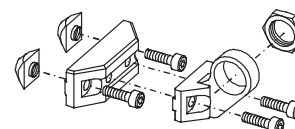
Bracket Ø15 for the side fastening of shock absorbers or end stroke grub screws for cylinders Ø20 and Ø25

**LLK-026**

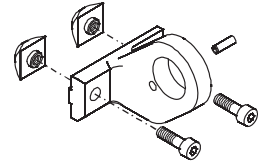
(100 g)

Staffa Ø15 per il fissaggio laterale di deceleratori o grani di fermo per cilindro Ø32

Bracket Ø15 for the side fastening of shock absorbers or end stroke grub screws for cylinder Ø32



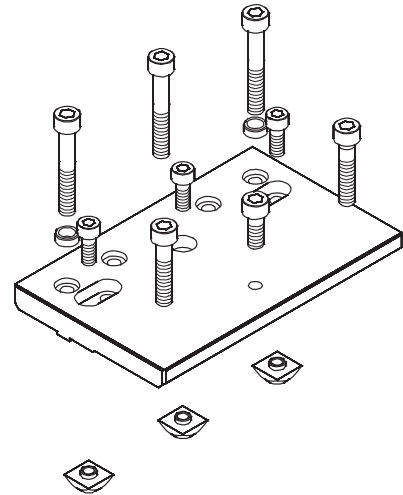
LLK-027 (100 g)
Anello per giunto slider LinMot PL01-20
Bracket for slider bolt for LinMot PL01-20



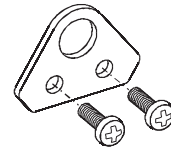
LLK-028 (60 g)
Giunto per slider LinMot PL01-20
Slider bolt for LinMot PL01-20



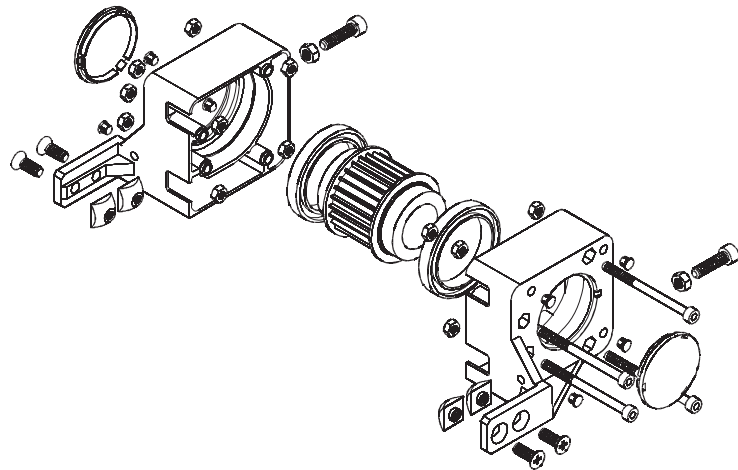
LLK-029 (280 g)
Piastra di interfaccia per flangia LinMot PF02-37
Interface plate for LinMot flange PF02-37



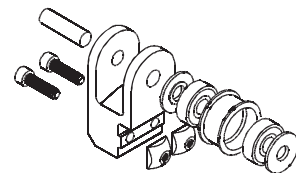
LLK-031 (30 g)
Piastra per fine corsa d'emergenza
Emergency stopper plate



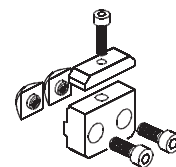
LLK-034 (800 g)
Puleggia per trasmissione a cinghia
Pulley for belt drive



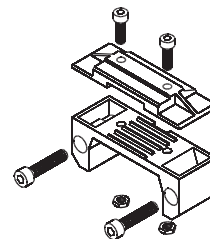
LLK-035 (135 g)
Rinvio per autocentraggio pinza
Transmission wheel for self-centering gripper



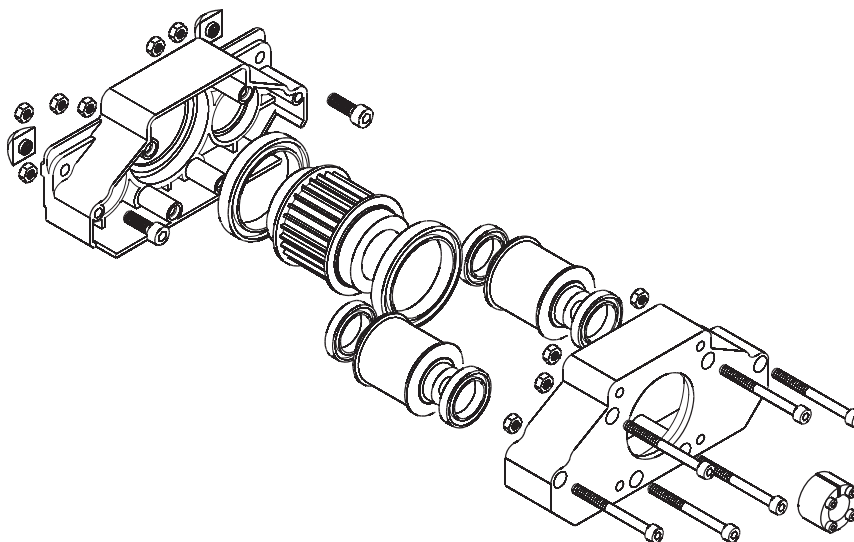
LLK-036 (35 g)
Blocca cinghia per autocentraggio pinza
Belt clamp for self-centering gripper



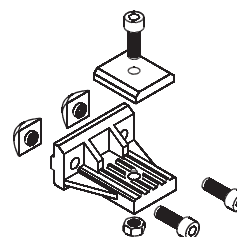
LLK-037 (135 g)
 Blocca cinghia per trasmissione a cinghia
Belt clamp for belt drive



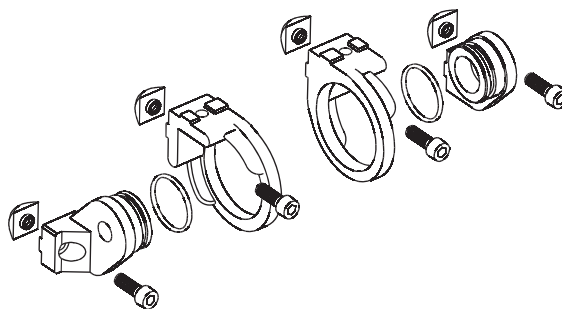
LLK-038 (950 g)
 Gruppo pulegge per trasmissione a omega
Pulleys assembly for omega transmission



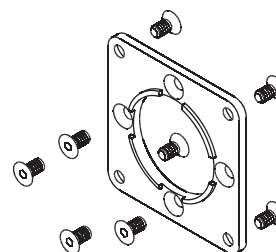
LLK-039 (100 g)
 Blocca cinghia per trasmissione a omega
Belt clamp for omega transmission



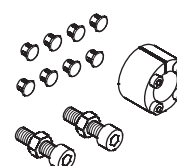
LLK-040 (275 g)
 Kit di fissaggio per cilindro senza stelo a trascinamento magnetico LPK-039
Fastening kit for magnetically coupled rodless cylinder LPK-039



LLK-041 (25 g)
 Interfaccia per riduttore epicicloidale
Adapter plate for planetary gear



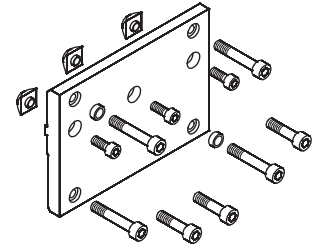
LLK-042 (35 g)
 Calettatore, tensionatore e tappi per LL07
Locking assembly, belt tensioner and plugs for LL07



LLK-043

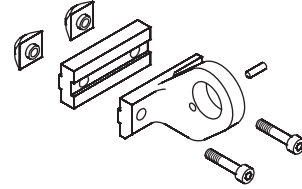
(380 g)

Piastra di interfaccia per flangia LinMot PF01-48 (per guida Gimatic LL01)
 Interface plate for LinMot flange PF01-48 (for Gimatic LL01 guidance)

**LLK-044**

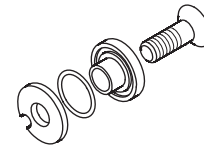
(120 g)

Anello per giunto per slider LinMot PL01-48 (per guida Gimatic LL01)
 Bracket for slider bolt for LinMot PL01-48 (for Gimatic LL01 guidance)

**LLK-045**

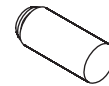
(55 g)

Giunto per slider LinMot PL01-48 (per guida Gimatic LL01)
 Slider bolt for LinMot PL01-48 (for Gimatic LL01 guidance)

**LLK-046**

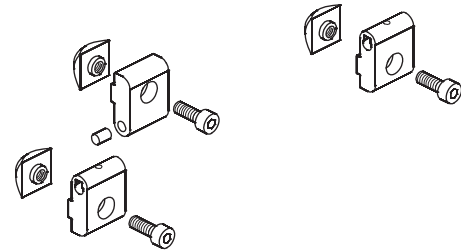
(8 g)

Ammortizzatore in gomma
 Rubber stopper

**LLK-050**

(30 g)

Staffe per sensori
 Sensor brackets

**LL25-97**

(3 g)

Dado ad innesto M4 per cava 6 (1 pezzo)
 M4 rhombus T-nut for slot 6 (1 piece)

**LL25-98**

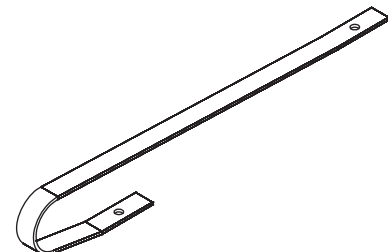
(6 g)

Dado ad innesto M6 per cava 8 (1 pezzo)
 M6 rhombus T-nut for slot 8 (1 piece)

**LP23-54**

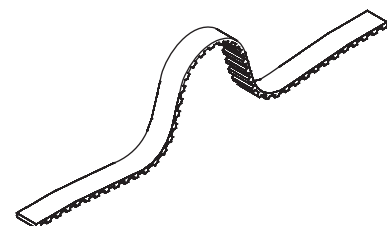
(20 g/m)

Cinghia piana per LL08
 Flat belt for LL08

**LL25-108**

(90 g/m)

Cinghia dentata per LL06
 Timing belt for LL06

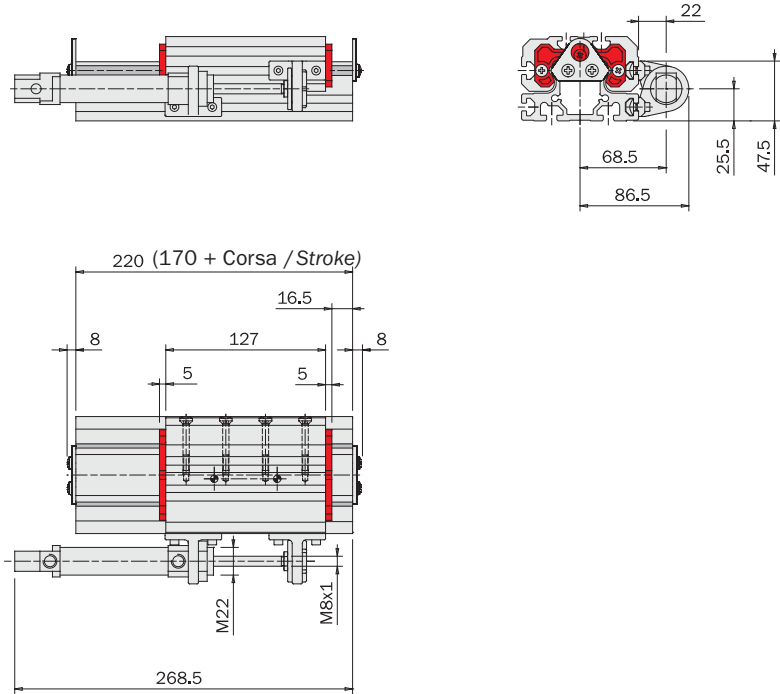
**LM-111**

(90 g/m)

Cinghia dentata per LL07
 Timing belt for LL07

Esempio: Slitta di alesaggio 20mm (cilindro ISO 6432) e corsa 50mm

Example: Slide with 20mm piston bore (ISO 6432) and 50mm stroke



FIRST ANGLE PROJECTION

(A)

Avvertenza

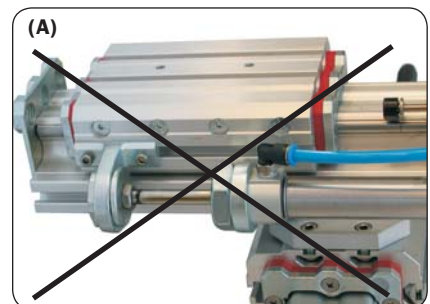
Il lato del carrello con le viti di regolazione si flette, quando si fa le registrazione del precarico.

Quindi si deve evitare di collegare il cilindro, o altri componenti che necessitino di un posizionamento preciso, su quel lato.

Caution

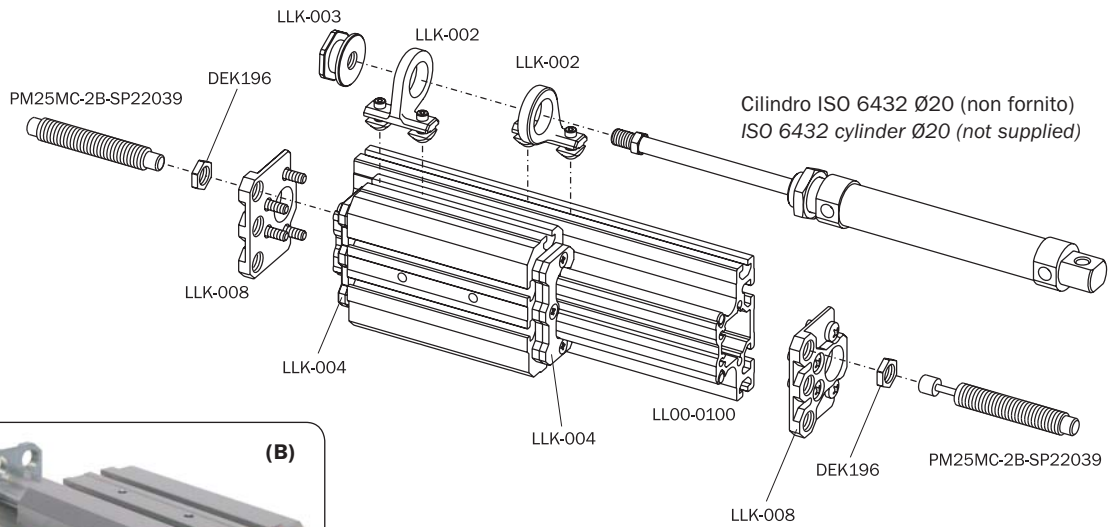
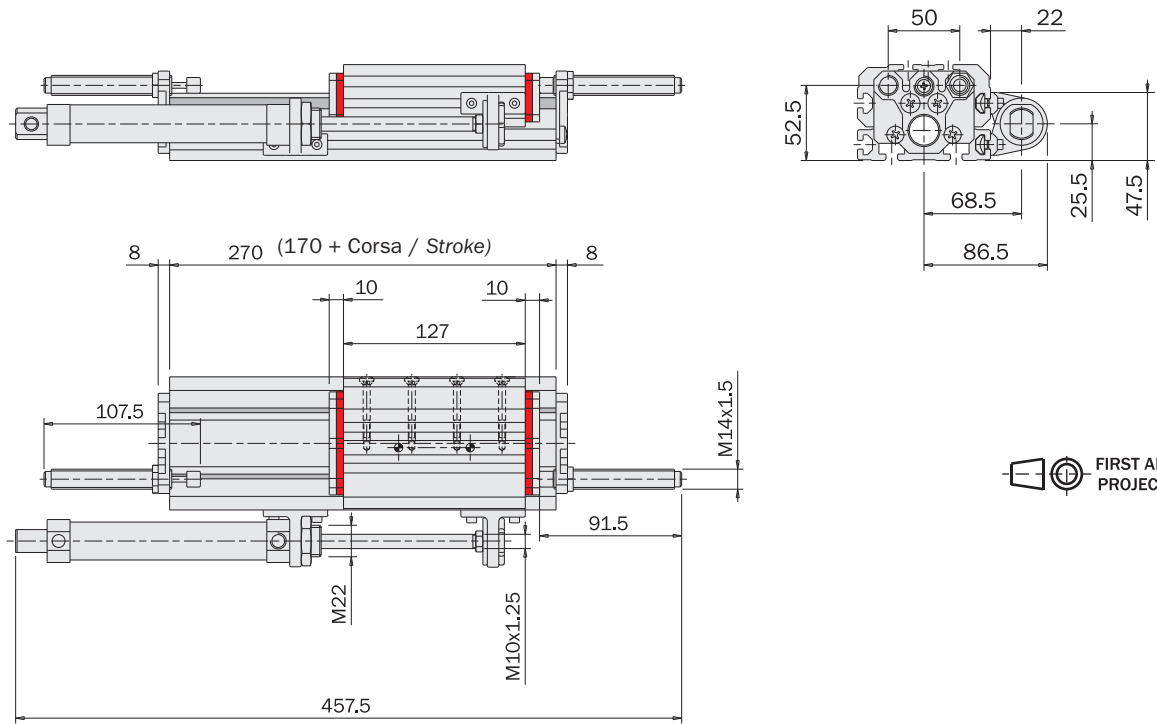
The side of the carrier with the adjustment screws bends, when the preload is set.

Thus, the cylinder, or other parts needing a precise positioning, should not be mounted on that side.

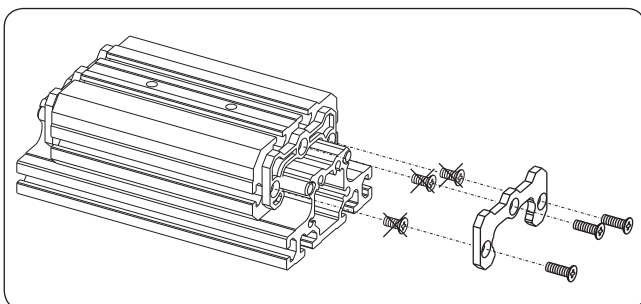


Esempio: Slitta di alesaggio 25mm (cilindro ISO 6432) e corsa 100mm, con deceleratori idraulici sulle testate

Example: Slide with 25mm piston bore (ISO 6432) and 100mm stroke, with hydraulic shock-absorbers on the end plates



(B)



(B)

Avvertenza

La protezione di plastica rossa non deve essere rimossa, quando si applica la protezione in acciaio LLK-004, che fa da riscontro per il deceleratore.

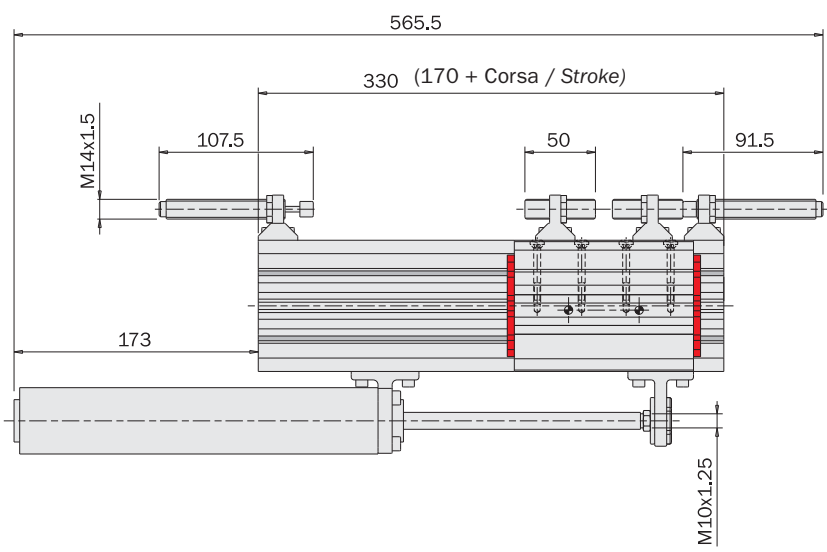
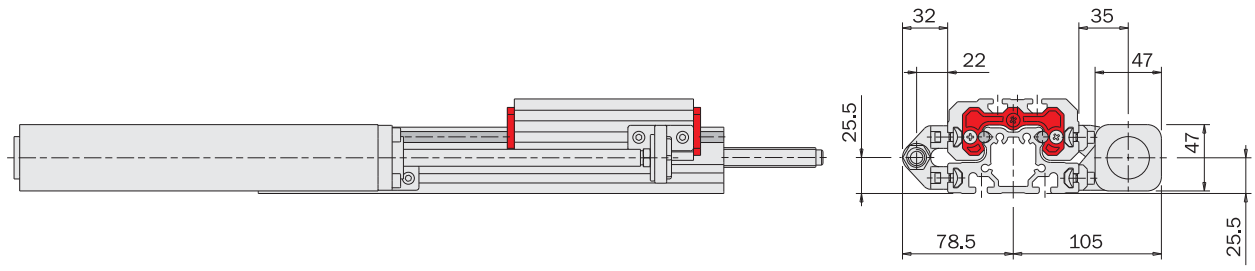
Si devono rimuovere solo le sue tre viti corte, per poi fissare insieme entrambe le protezioni con le viti lunghe fornite nel kit LLK-004.

Caution

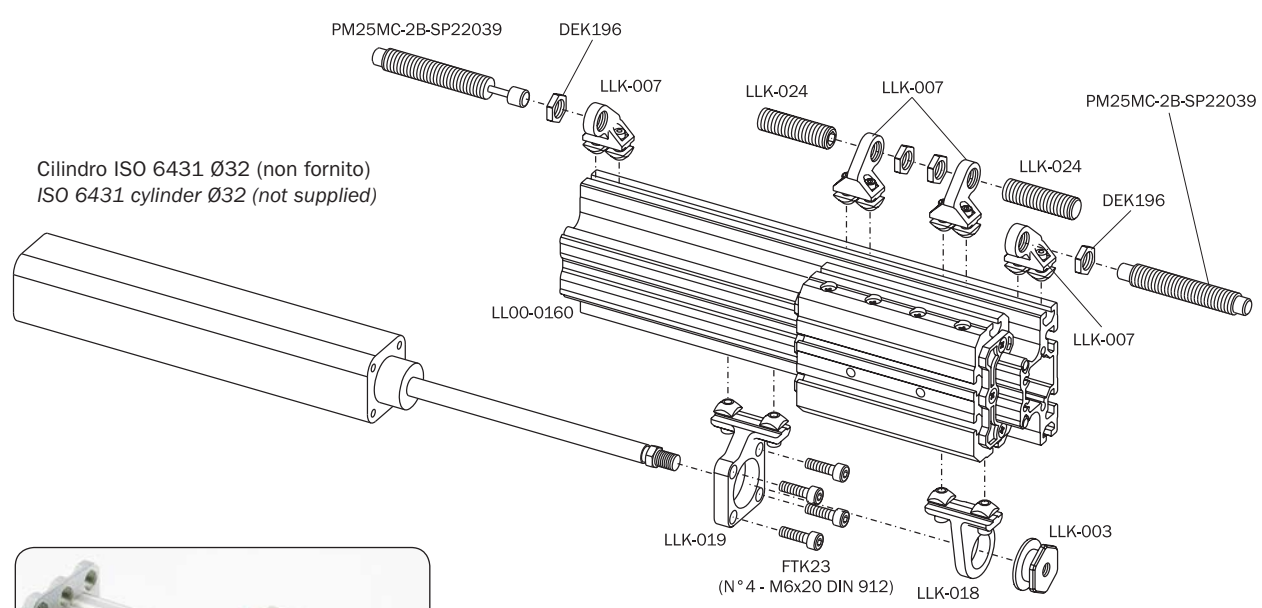
The red plastic cover must not be removed, when the steel plate LLK-004 (working against the shock-absorber) is used. Remove only its three short screws and then fasten both the plastic and steel protections, with the longer screws, supplied in the kit LLK-004.

Esempio: Slitta di alesaggio 32mm (cilindro ISO 6431) e corsa 160mm, con deceleratori idraulici sul fianco

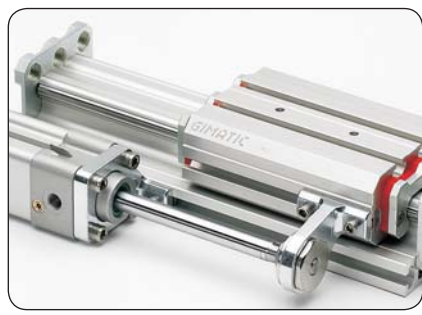
Example: Slide with 32mm piston bore (ISO 6431) and 160mm stroke, with hydraulic shock-absorbers on one side



FIRST ANGLE PROJECTION

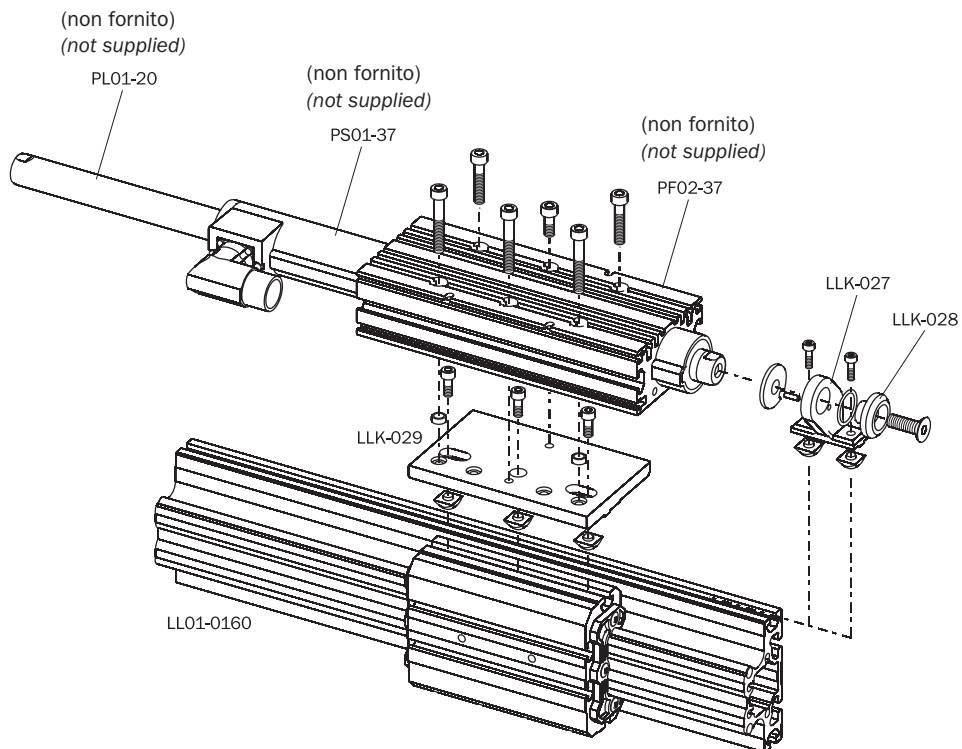
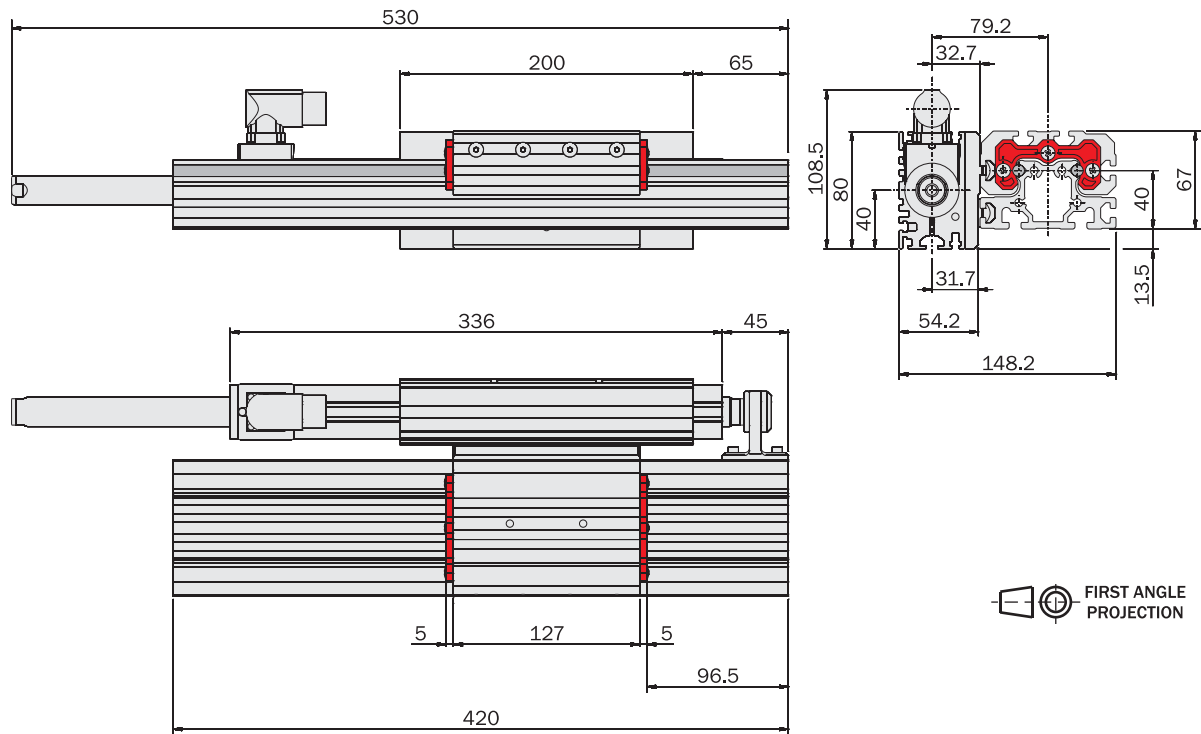


Cilindro ISO 6431 Ø32 (non fornito)
ISO 6431 cylinder Ø32 (not supplied)



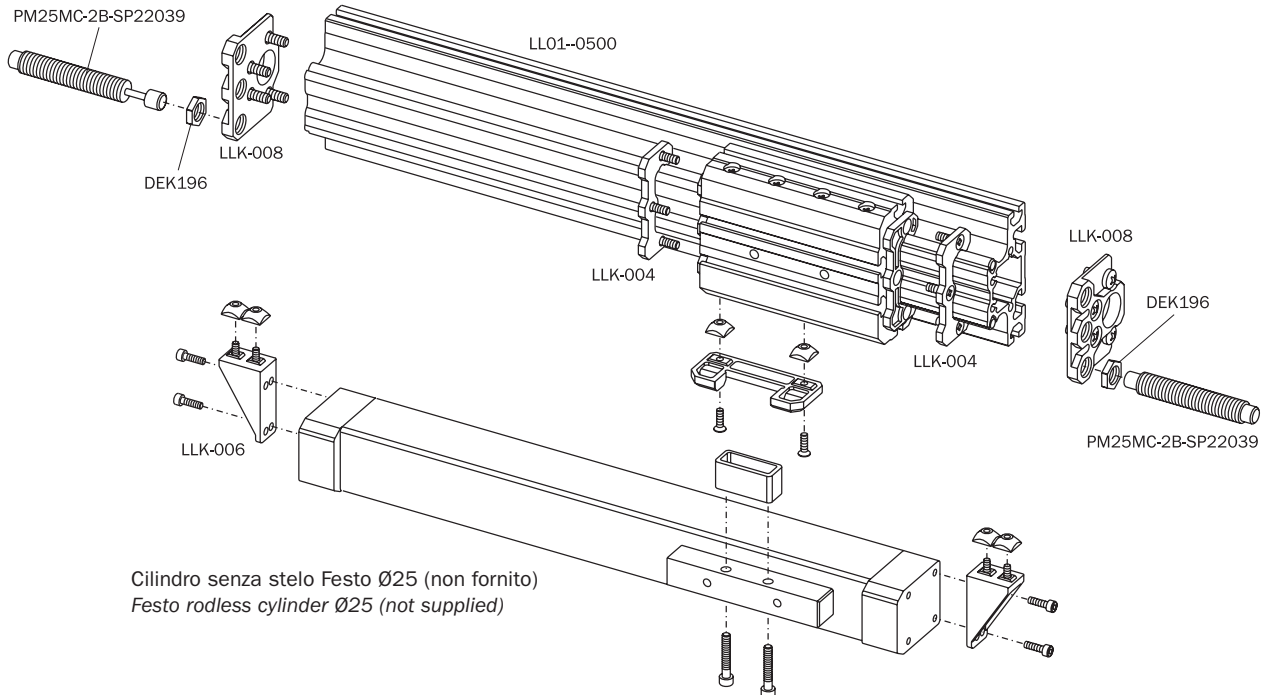
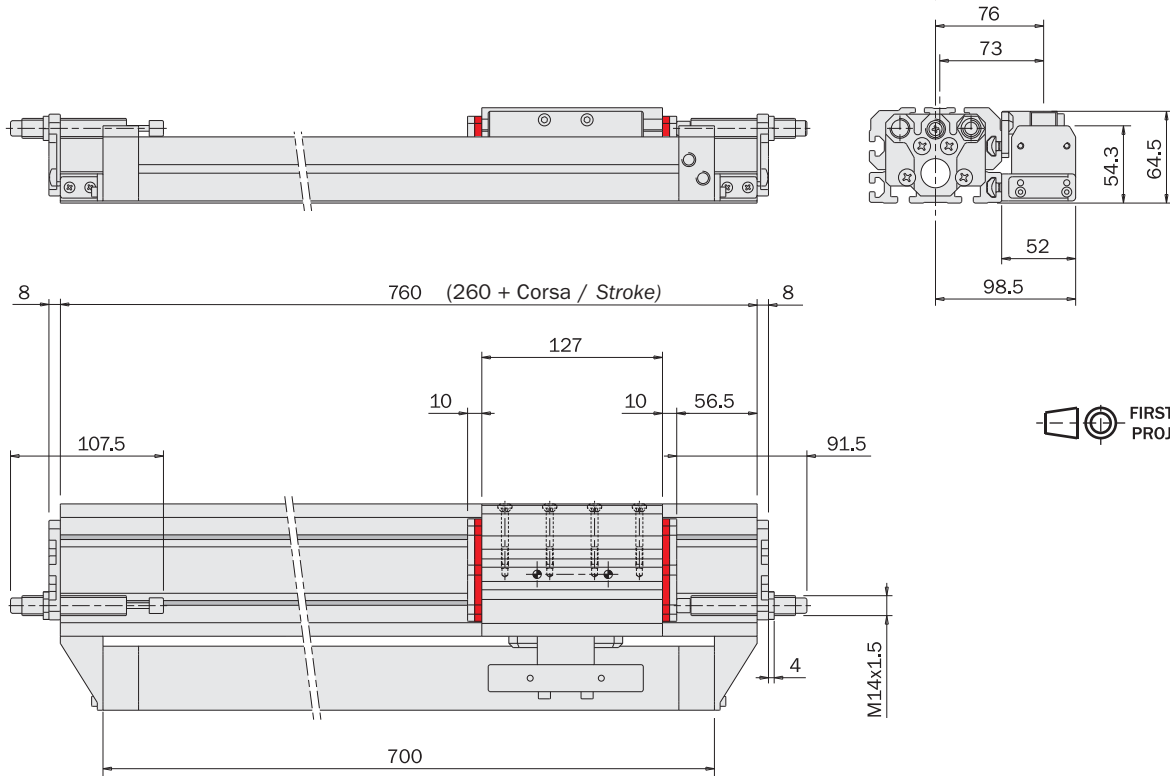
Esempio: Slitta di corsa 160mm azionata da motore lineare LinMot.

Example: Slide, 160mm stroke, powered by a LinMot linear motor.



Esempio: Slitta di alesaggio 25mm e corsa 500mm con deceleratori idraulici movimentata da cilindro senza stelo Festo

Example: Slide with 25mm piston bore and 500mm stroke, with hydraulic shock-absorbers, powered by the Festo rodless cylinder



Kit di fissaggio per cilindro senza stelo

Kit for fastening rodless cylinder

LLK-005 + Origa OSP-P25



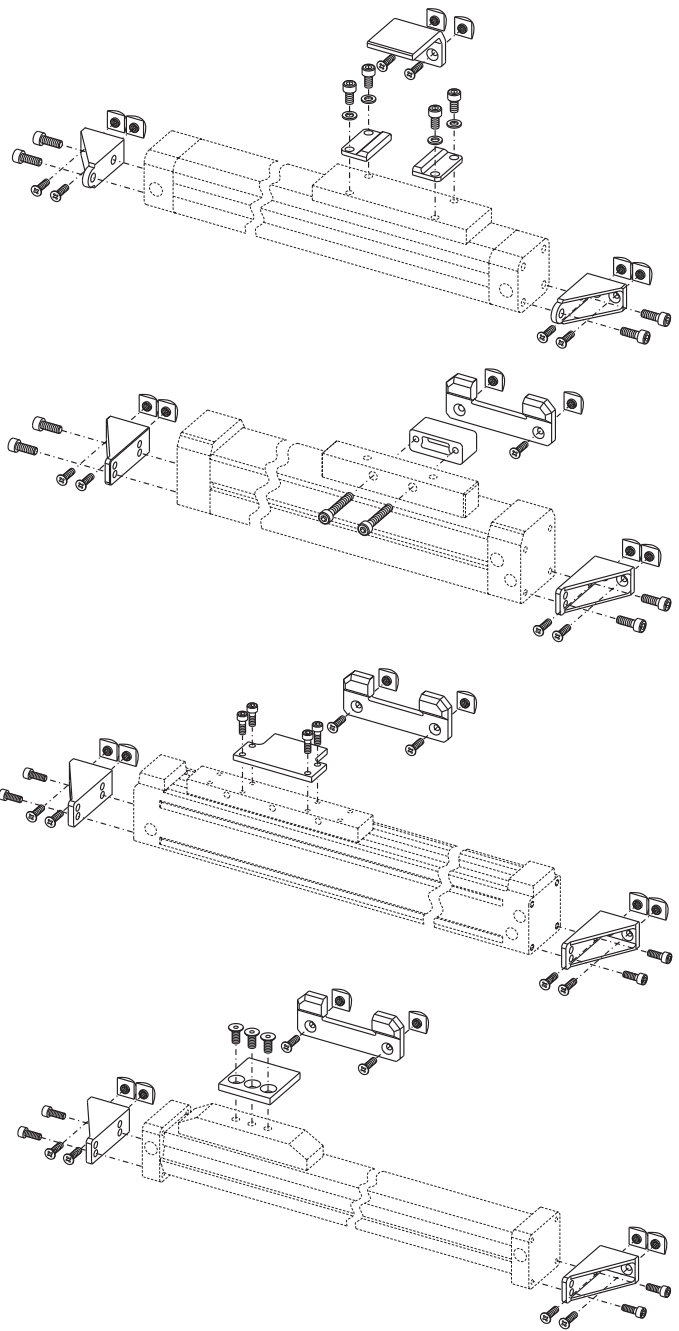
LLK-006 + Festo DGP-25



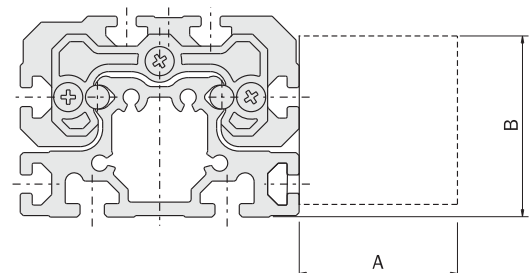
LLK-22 + Ultraline KCLS9A1X025



LLK-023: Norgren LINTRA M/44025

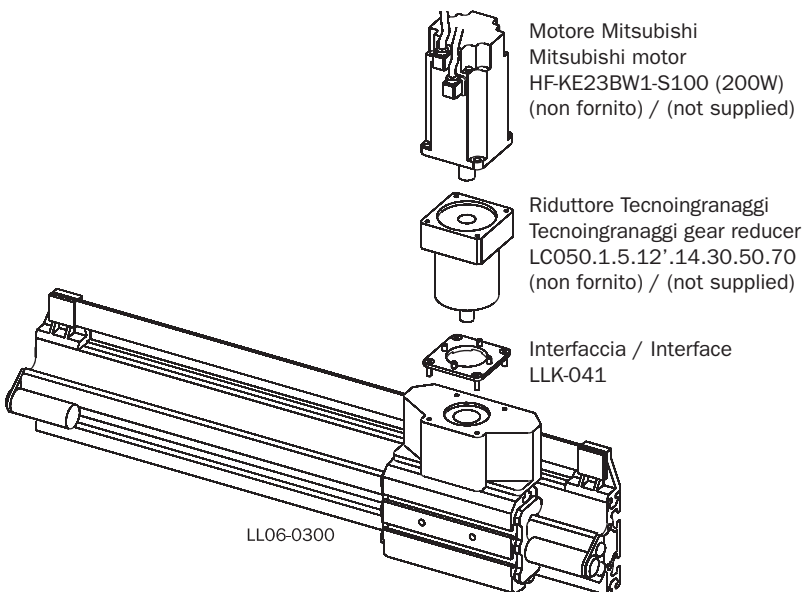
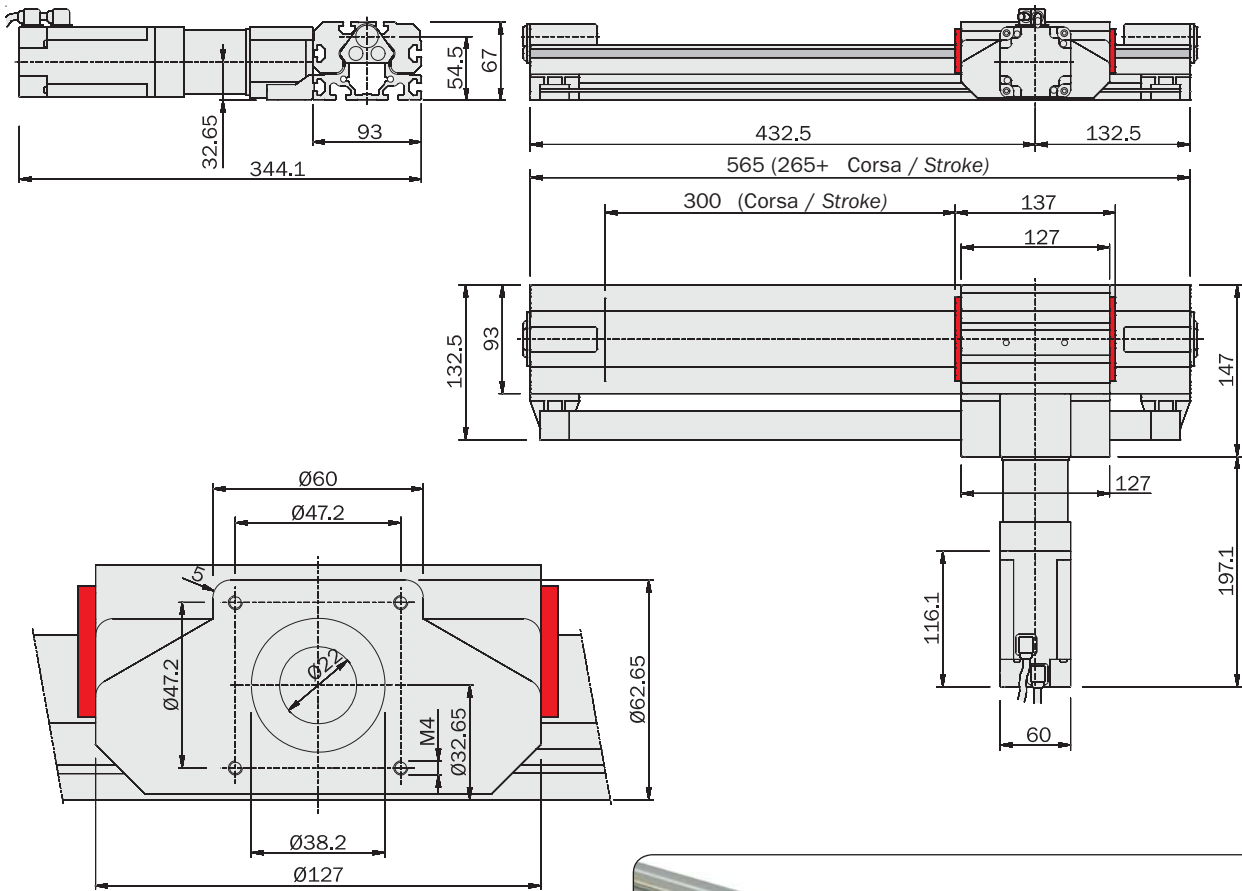


	A	B
Origa OSP-P25 + LLK-005	48 mm	65 mm
Festo DGP-25 + LLK-006	52 mm	65 mm
Ultraline KCLS9A1X025 + LLK-022	52 mm	65 mm
Norgren Lintra M/44025 + LLK-023	52 mm	65 mm



**Esempio: Slitta con trasmissione ad omega
(corsa 300mm) azionata da motoriduttore**

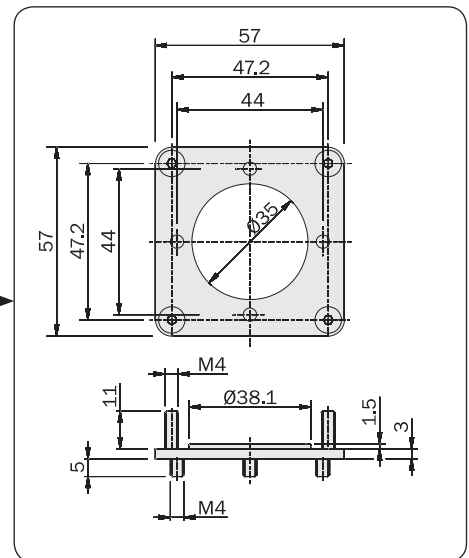
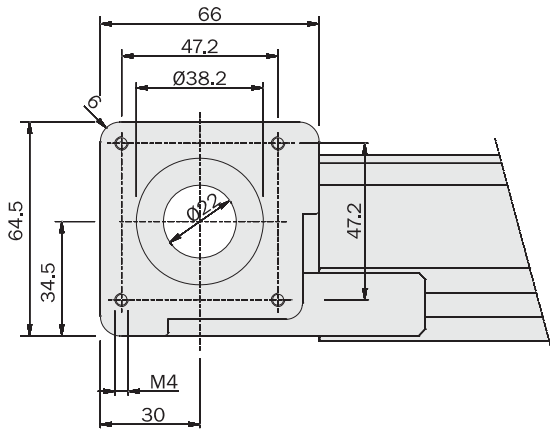
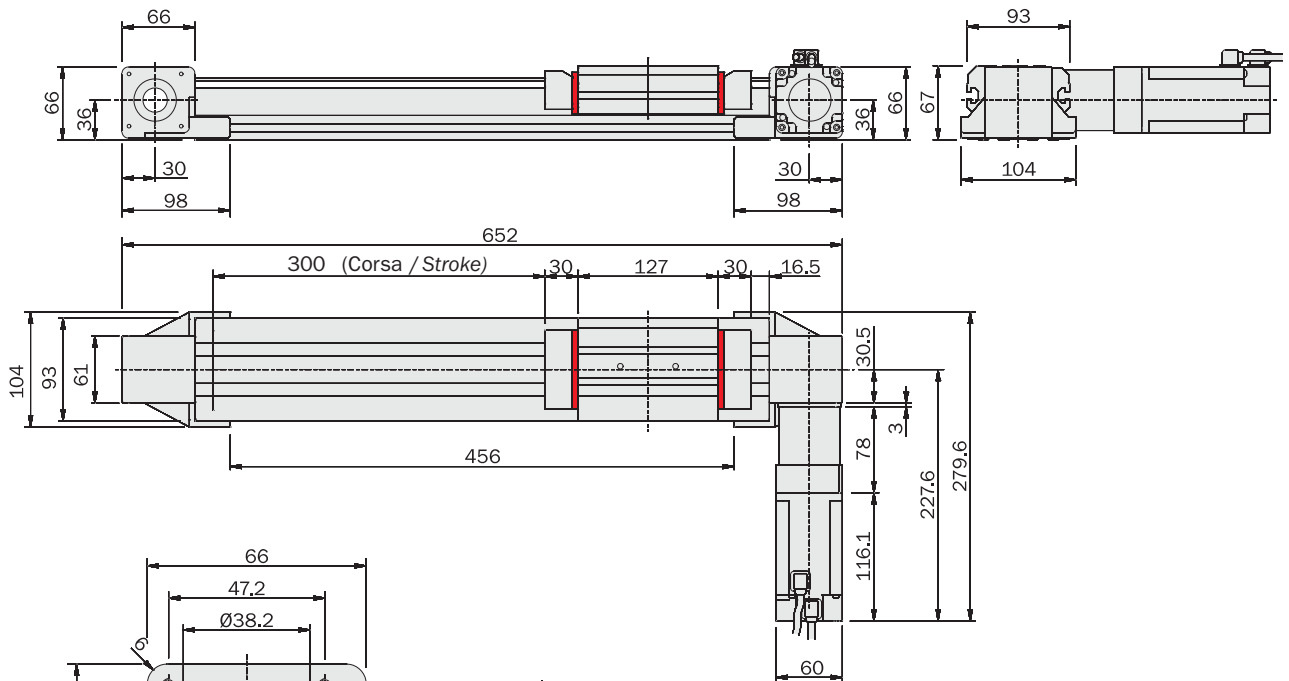
**Example: Slide with omega transmission (300mm
stroke) powered by servomotor and gear reducer**



Cinghia Belt	T5-25
Carico ammesso sulla cinghia Allowable tensile load on the belt	1960 N
Diametro calettatore Lock unit diameter	12 mm
Corsa per ogni rotazione puleggia Stroke per pulley revolution	130 mm
Inerzia pulegge Pulleys inertia	57 Kgmm ²
Massa del carrello Carrier mass	1.77 kg
Attrito del carrello Carrier friction	30 N
Carico dinamico dei cuscinetti (C) Bearings dynamic load rate (C)	4940 N
Carico statico dei cuscinetti (Co) Bearings static load rate (Co)	3450 N
Velocità massima Maximum speed	2 m/s
Ripetibilità Repeatability	±0.1 mm

Esempio: Slitta con trasmissione a cinghia (corsa 300mm) azionata da motoriduttore

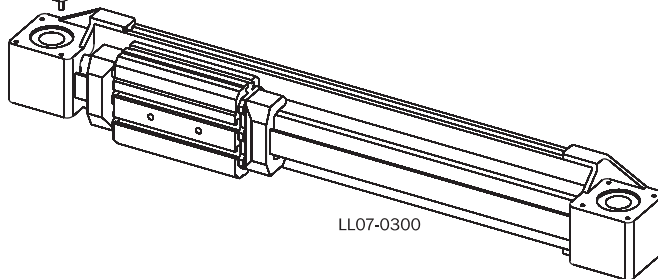
Example: Slide with belt drive (300mm stroke) powered by servomotor and gear reducer



Motore Mitsubishi / Mitsubishi motor
HF-KE23BW1-S100 (200W)
(non fornito) / (not supplied)

Riduttore Tecnoingranaggi
Tecnoingranaggi gear reducer
LC050.1.5.12'.14.30.50.70
(non fornito) / (not supplied)

Interfaccia / Interface
LLK-041

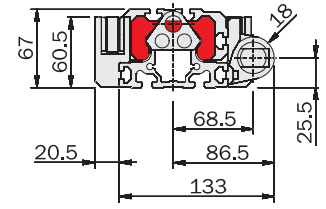
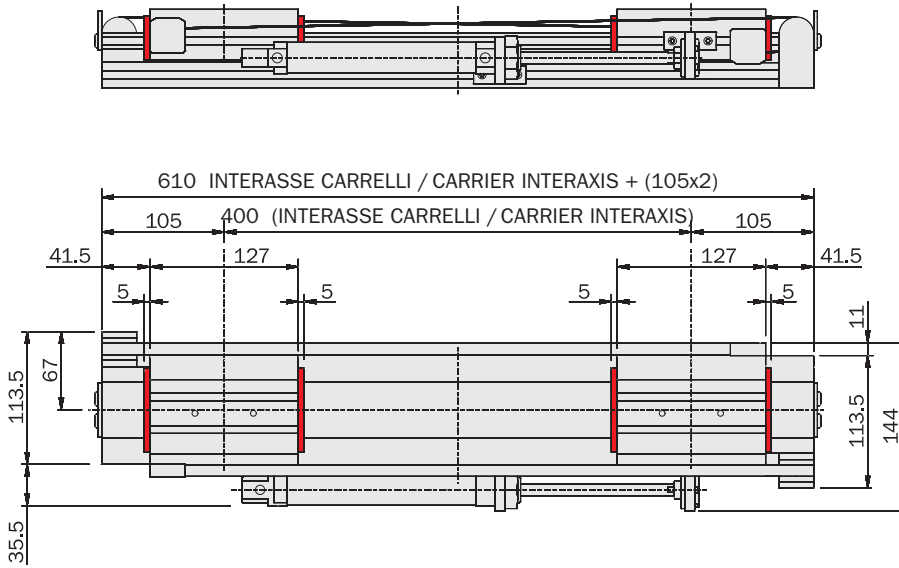


LL07-0300

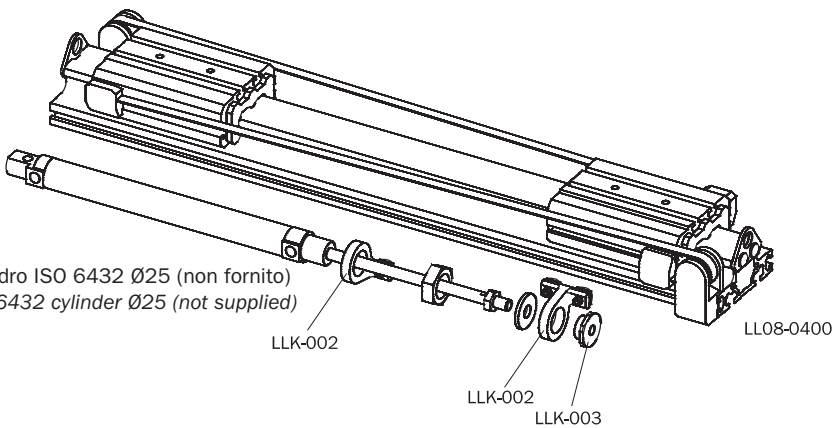
Cinghia Belt	AT5-25
Carico ammesso sulla cinghia Allowable tensile load on the belt	1840 N
Diametro calettatore Lock unit diameter	12 mm
Corsa per ogni rotazione puleggia Stroke per pulley revolution	130 mm
Inerzia pulegge Pulleys inertia	78 Kgmm ²
Massa del carrello Carrier mass	1.09 kg
Attrito del carrello Carrier friction	24 N
Carico dinamico dei cuscinetti (C) Bearings dynamic load rate (C)	4940 N
Carico statico dei cuscinetti (Co) Bearings static load rate (Co)	3450 N
Velocità massima Maximum speed	2 m/s
Ripetibilità Repeatability	±0.1 mm

**Esempio: Pinza autocentrante
(interasse: 400mm) azionata da cilindri
ISO 6432 alesaggio 25mm**

**Example: Selfcentering gripper
(interaxis: 400mm) powered by 25mm
ISO 6432 cylinders**



FIRST ANGLE PROJECTION



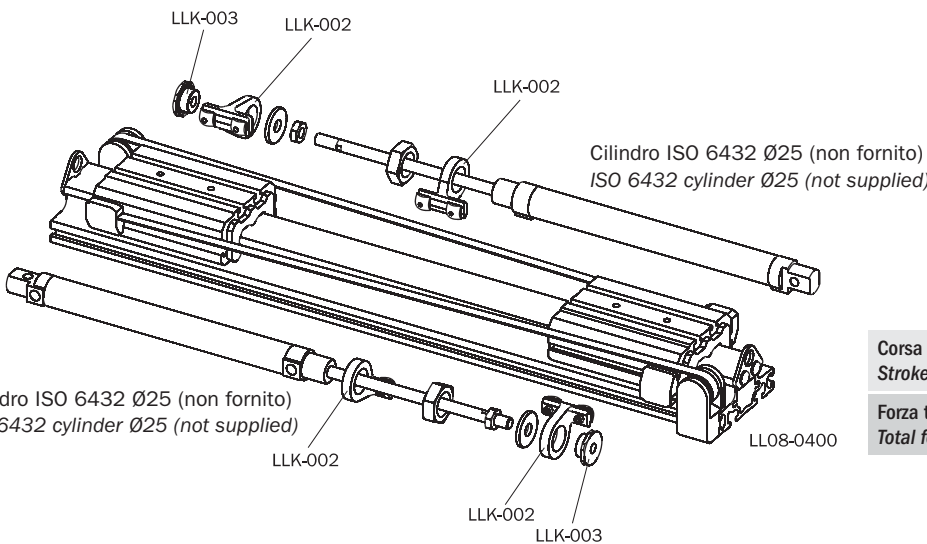
Cilindro ISO 6432 Ø25 (non fornito)
ISO 6432 cylinder Ø25 (not supplied)

LLK-002

LLK-002
LLK-003

LL08-0400

Corsa Stroke	2x130 mm
Forza totale a 6 bar Total force at 6 bar	250 N



Cilindro ISO 6432 Ø25 (non fornito)
ISO 6432 cylinder Ø25 (not supplied)

LLK-002

LLK-002
LLK-003

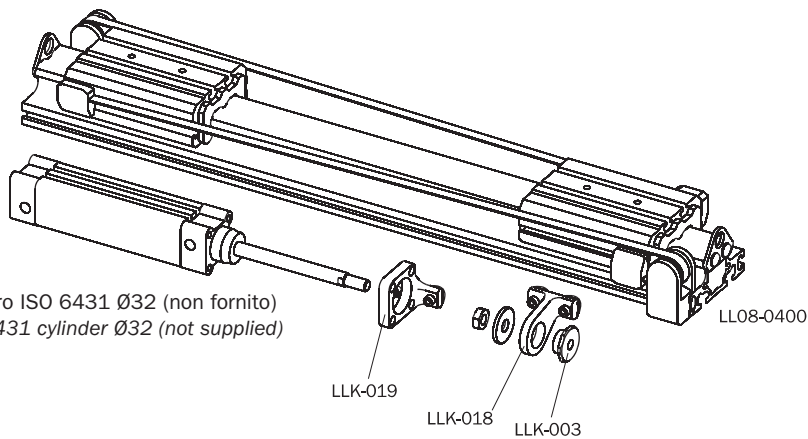
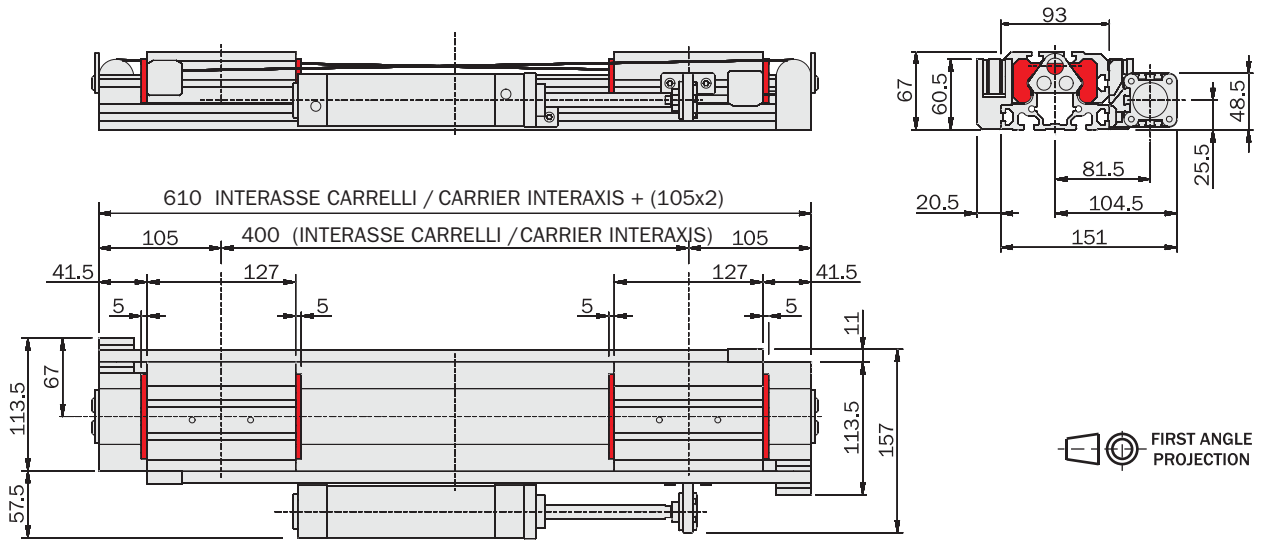
LL08-0400

Cilindro ISO 6432 Ø25 (non fornito)
ISO 6432 cylinder Ø25 (not supplied)

Corsa Stroke	2x130 mm
Forza totale a 6 bar Total force at 6 bar	500 N

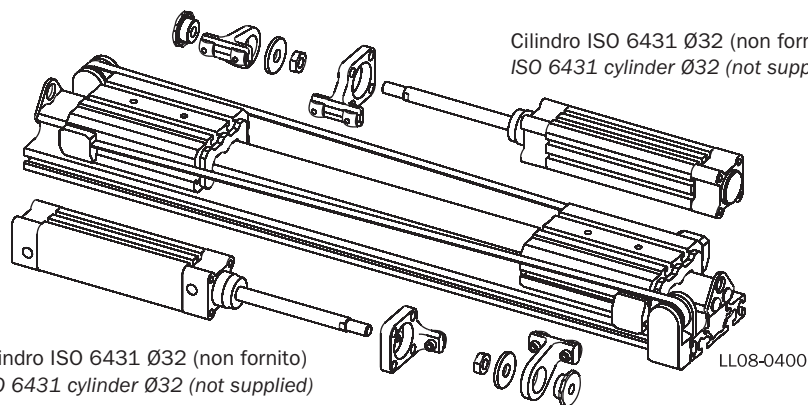
**Esempio: Pinza autocentrante
(interasse: 400mm) azionata da cilindri
ISO 6431 alesaggio 32mm**

**Example: Selfcentering gripper
(interaxis: 400mm) powered by 32mm
ISO 6431 cylinders**



Cilindro ISO 6431 Ø32 (non fornito)
ISO 6431 cylinder Ø32 (not supplied)

Corsa Stroke	2x130 mm
Forza totale a 6 bar Total force at 6 bar	400 N



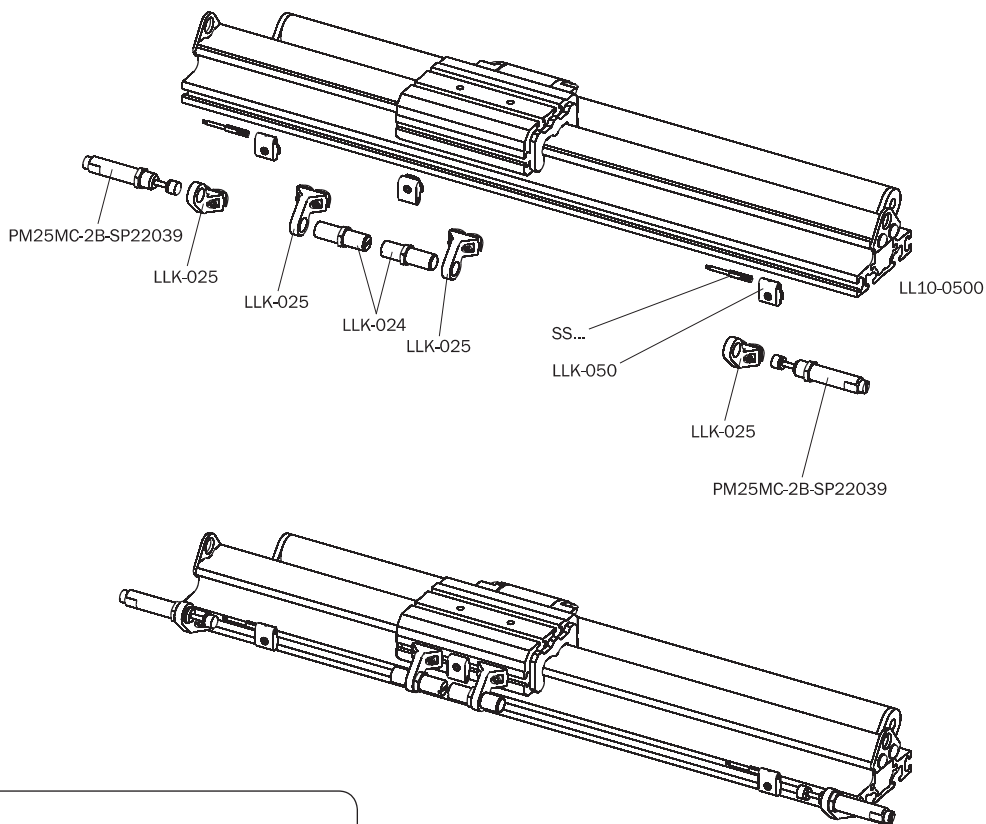
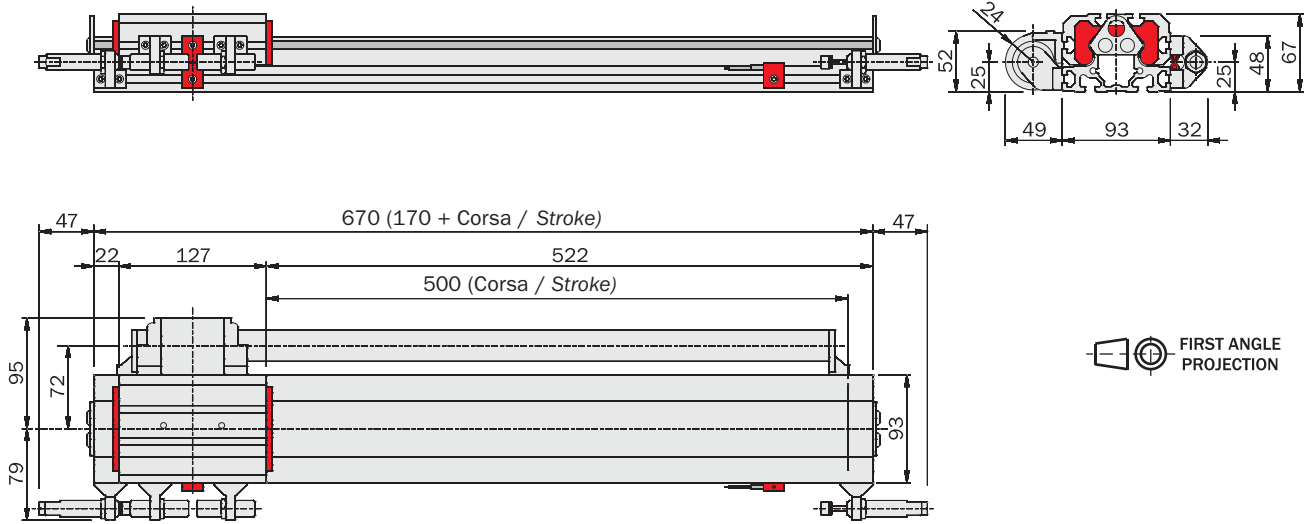
Cilindro ISO 6431 Ø32 (non fornito)
ISO 6431 cylinder Ø32 (not supplied)

Cilindro ISO 6431 Ø32 (non fornito)
ISO 6431 cylinder Ø32 (not supplied)

Corsa Stroke	2x130 mm
Forza totale a 6 bar Total force at 6 bar	800 N

Esempio: Attuatore pneumatico (alesaggio 25mm, corsa 500mm) a trascinamento magnetico, con deceleratori idraulici e kit sensori

Example: Pneumatic actuator (piston bore: 25mm, stroke: 500mm) magnetically coupled, with hydraulic shock-absorbers and sensor brackets



Avvertenza
La pressione massima di utilizzo è 5bar

Caution
Maximum working pressure is 5bar

Sensori

Il rilevamento della posizione di lavoro è affidato a uno o più sensori magnetici di prossimità (opzionali), che rilevano la posizione attraverso un magnete. Quindi, per un corretto funzionamento, è da evitare l'impiego in presenza di forti campi magnetici od in prossimità di grosse masse di materiale ferromagnetico.

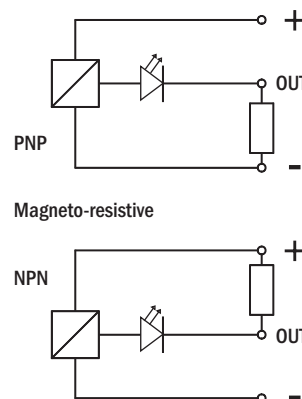
I sensori utilizzabili sono:



Sensors

The operating position can be checked by one or more magnetic sensors (optional), that detect the position by a magnet. Therefore a near big mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.

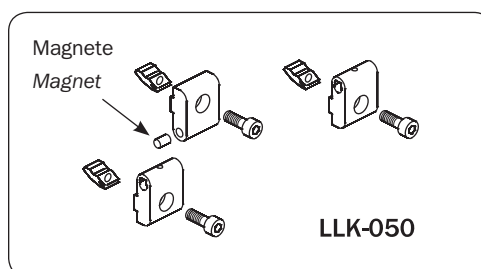
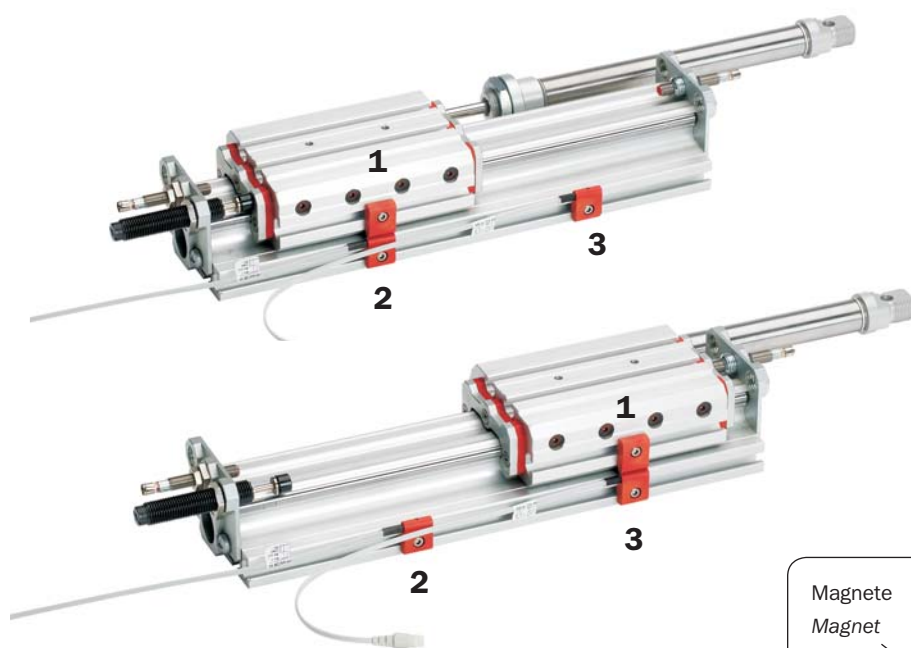
Use sensors:



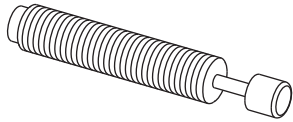
			LL...
SS4N225-G	PNP	2.5m cable	<input checked="" type="checkbox"/>
SS4M225-G	NPN	2.5m cable	<input checked="" type="checkbox"/>
SS3N203-G	PNP	M8 connector	<input checked="" type="checkbox"/>
SS3M203-G	NPN	M8 connector	<input checked="" type="checkbox"/>

Per montare 2 sensori è necessario il kit LLK-050.

One kit LLK-050 is necessary to mount two sensors.

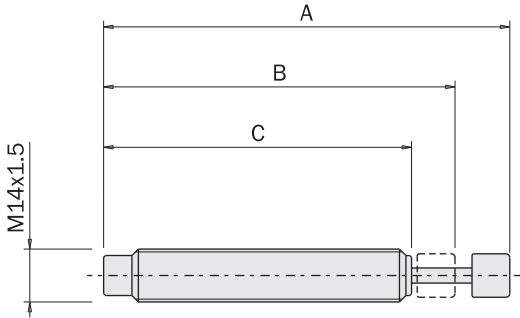


Deceleratori



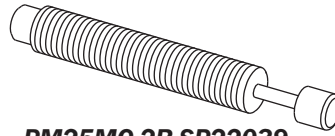
SPM25MC-1B-SP21365B

• Peso / Weight: 67 g



	A	B	C
SPM25MC-1B-SP21365B	92.5 mm	79 mm	70 mm
PM25MC-2B-SP22039	107.5 mm	91.5 mm	81.5 mm

Shock-absorbers



PM25MC-2B-SP22039

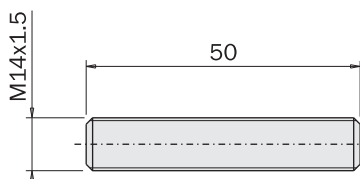
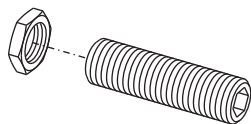
• Peso / Weight: 75 g



LLK-024

Fermo meccanico rigido M14x1.5x50

• Peso: 55 g



LLK-024

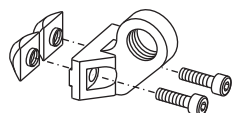
End stroke grub screw M14x1.5x50

• Weight: 55 g



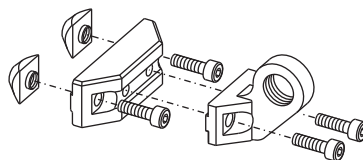
Staffe di fissaggio per deceleratori o fermi meccanici

Brackets for shock-absorbers or end stroke grub screws



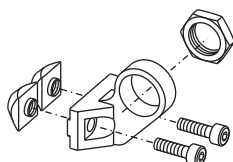
LLK-007

- Peso / Weight: 69 g



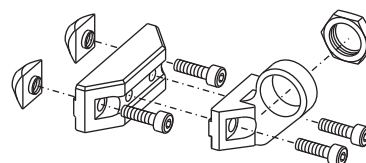
LLK-020

- Peso / Weight: 96 g



LLK-025

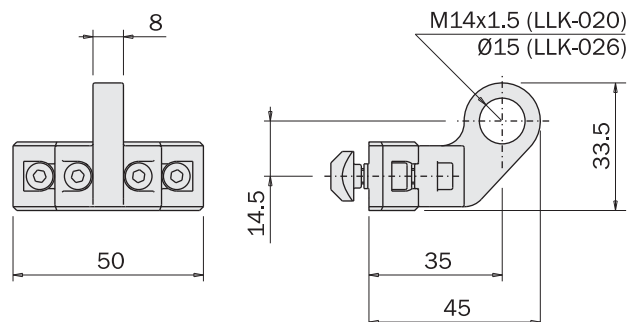
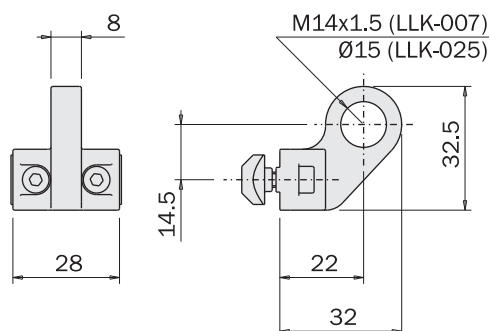
- Peso / Weight: 72 g



LLK-026

- Peso / Weight: 100 g

Dimensioni (mm) / Dimensions (mm)



Esempio di utilizzo / Application example

(C)

Avvertenza

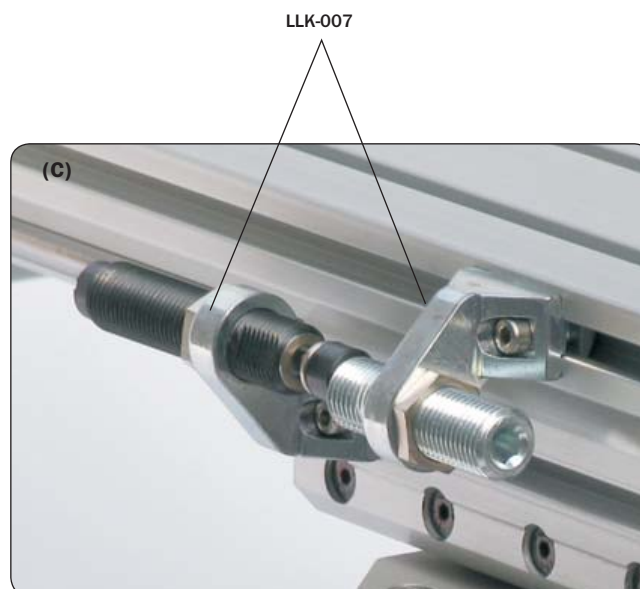
Quando si utilizzano le staffe filettate (LLK-007 o LLK-020) sul lato del carrello con le viti di regolazione, è possibile che si verifichi il disallineamento mostrato in figura.

Le staffe senza filetto (LLK-025 o LLK-026) consentono il recupero del disallineamento.

Caution

When the threaded brackets (LLK-007 or LLK-020) are used on the side of the carrier with the adjustment screws, the misalignment showed in the photo is possible.

The brackets without thread (LLK-025 or LLK-026) avoid this problem.



LLK-012

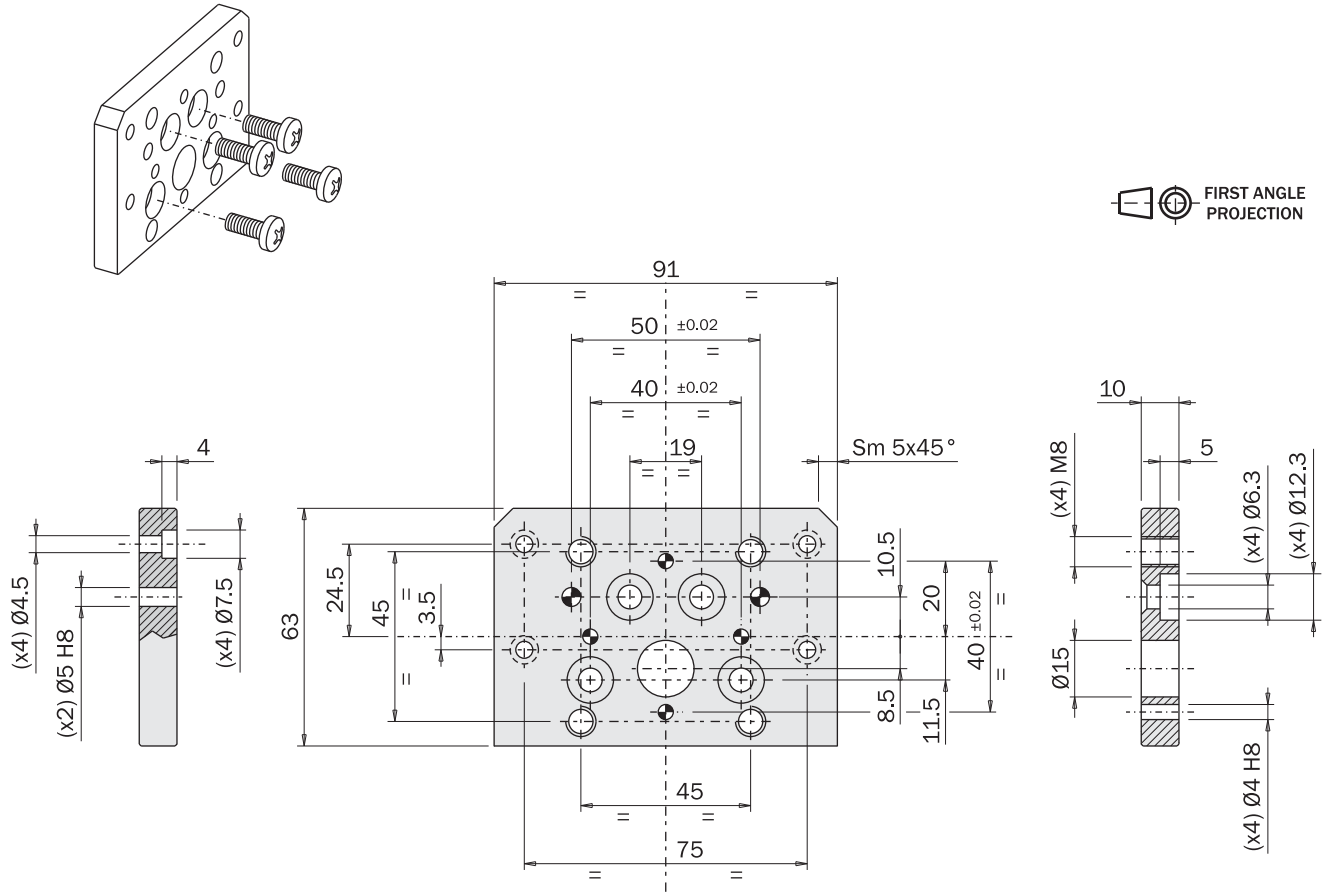
Testata di trascinamento

Va fissata all'estremità del profilo in alluminio, con le quattro viti autofilettanti fornite e serve per il montaggio diretto di un'altra guida LL, oppure di un attuatore rotante R32/3. Può essere utile anche per fissare altri componenti.
Peso: 137 g

LLK-012

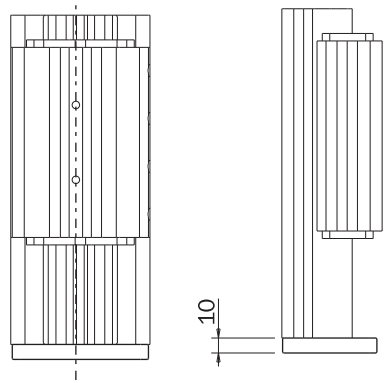
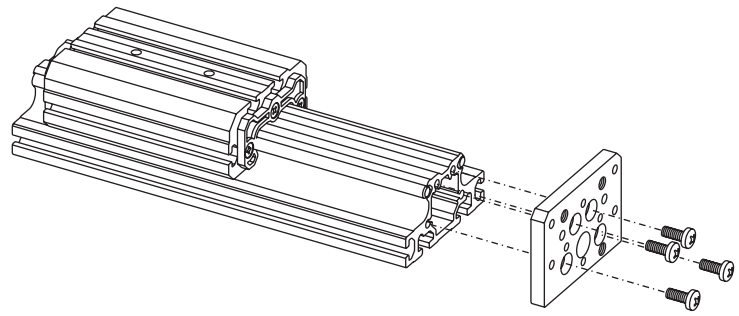
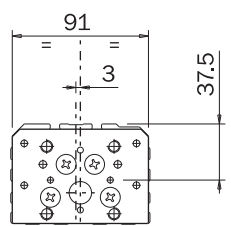
End interface plate

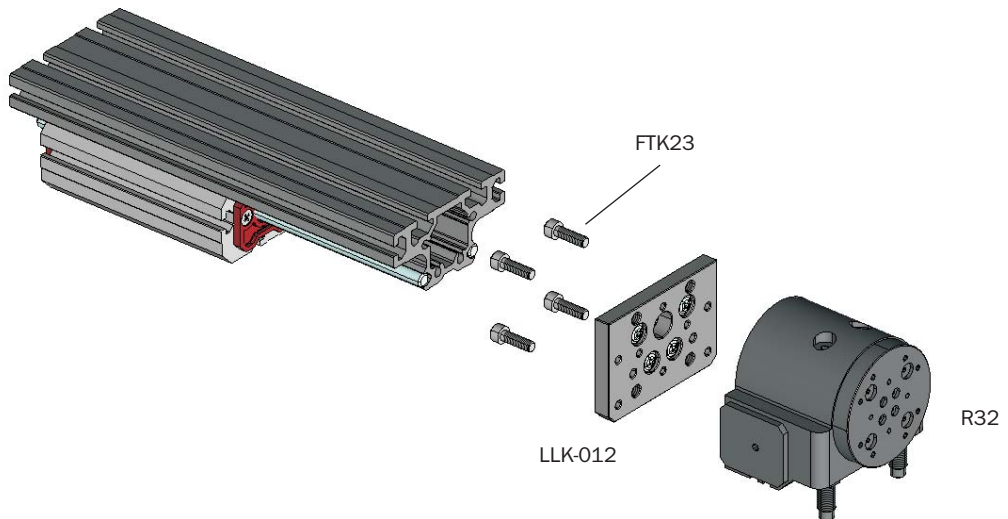
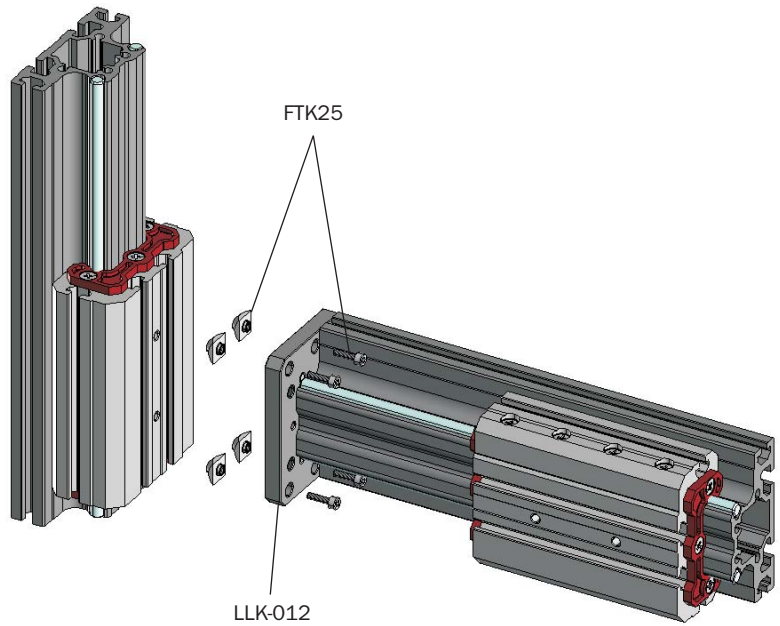
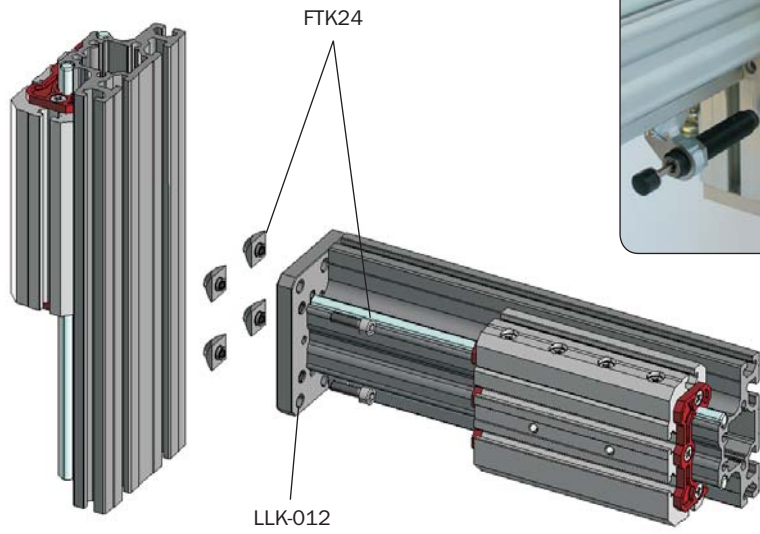
It must be fixed at the end side of the aluminium profile, by four screws (supplied) and it makes possible to mount directly a second LL guidance, or a R32/3 swiveling unit. It can be used also to mount other components.
Weight: 137 g



FIRST ANGLE PROJECTION

GUIDE LINEARI
LINEAR GUIDANCES





LLK-013

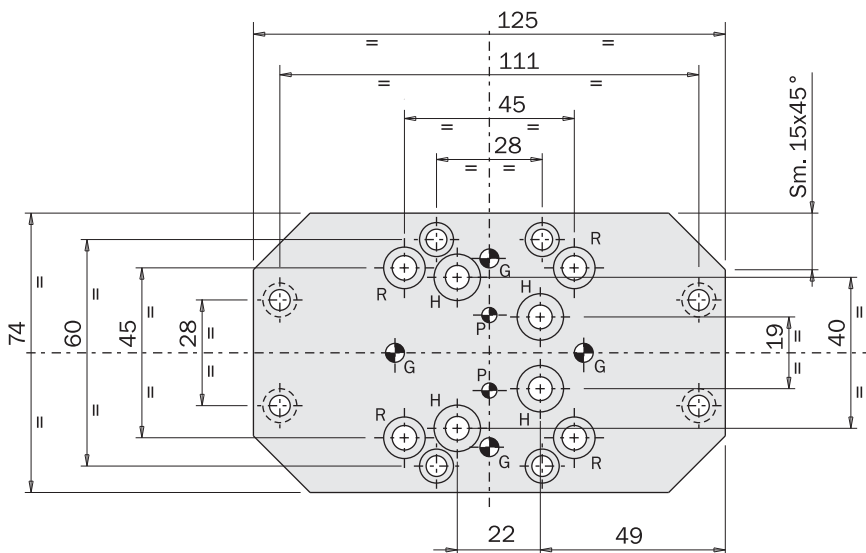
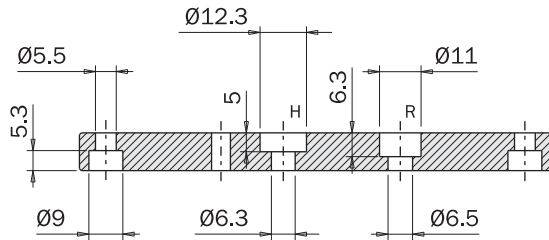
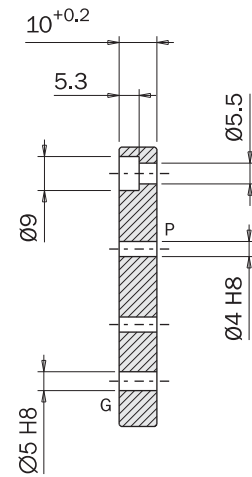
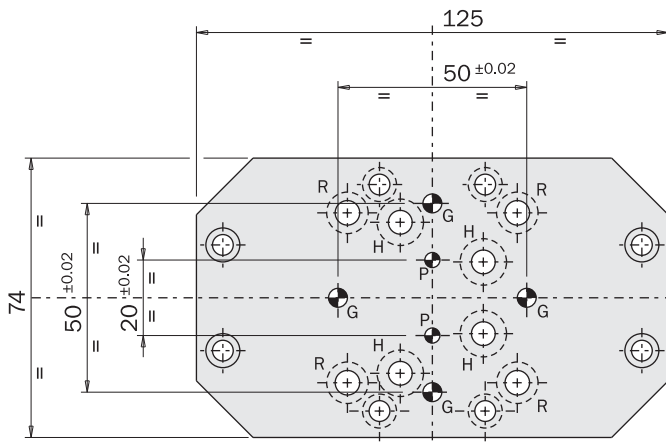
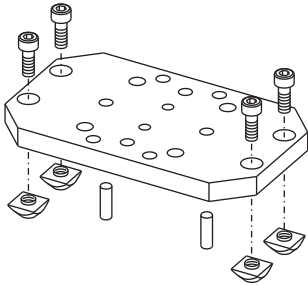
Interfaccia di montaggio

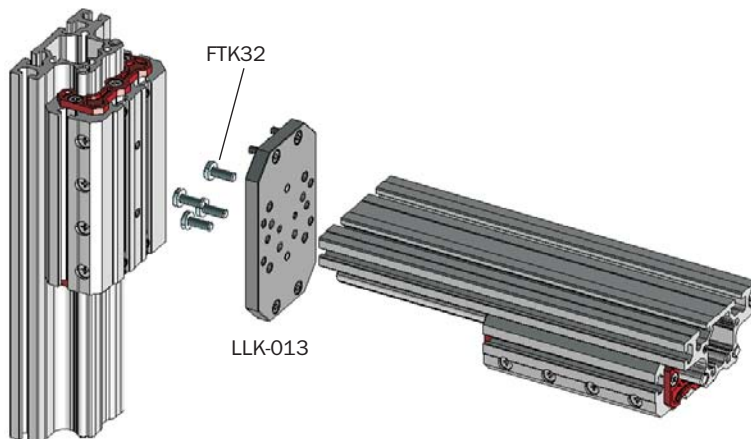
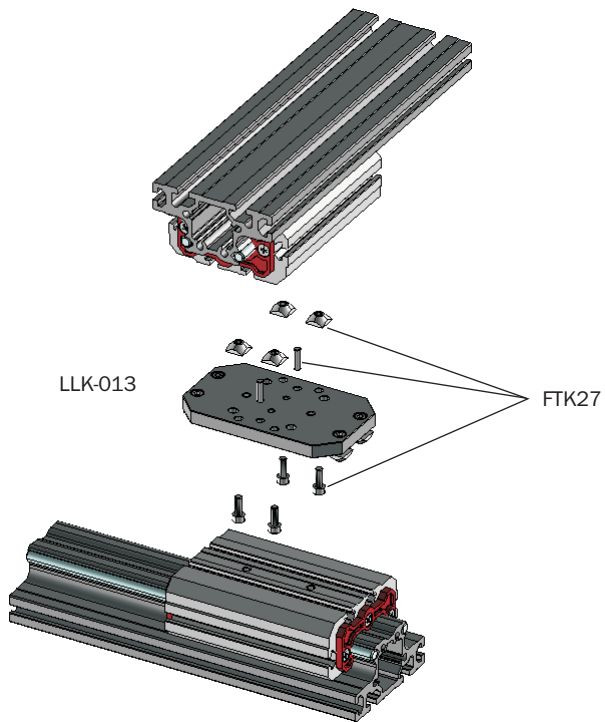
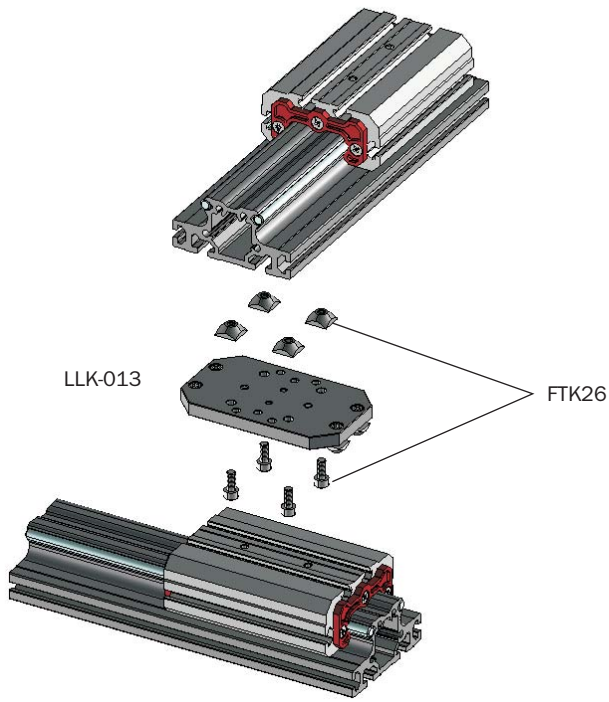
Va fissata all'estremità del profilo in alluminio, o al carrello, e serve per il montaggio diretto di un'altra guida LL, oppure di un attuatore rotante R32/3, o attuatore lineare M25. Può essere utile anche per fissare altri componenti.
Peso: 262 g

LLK-013

Mounting interface plate

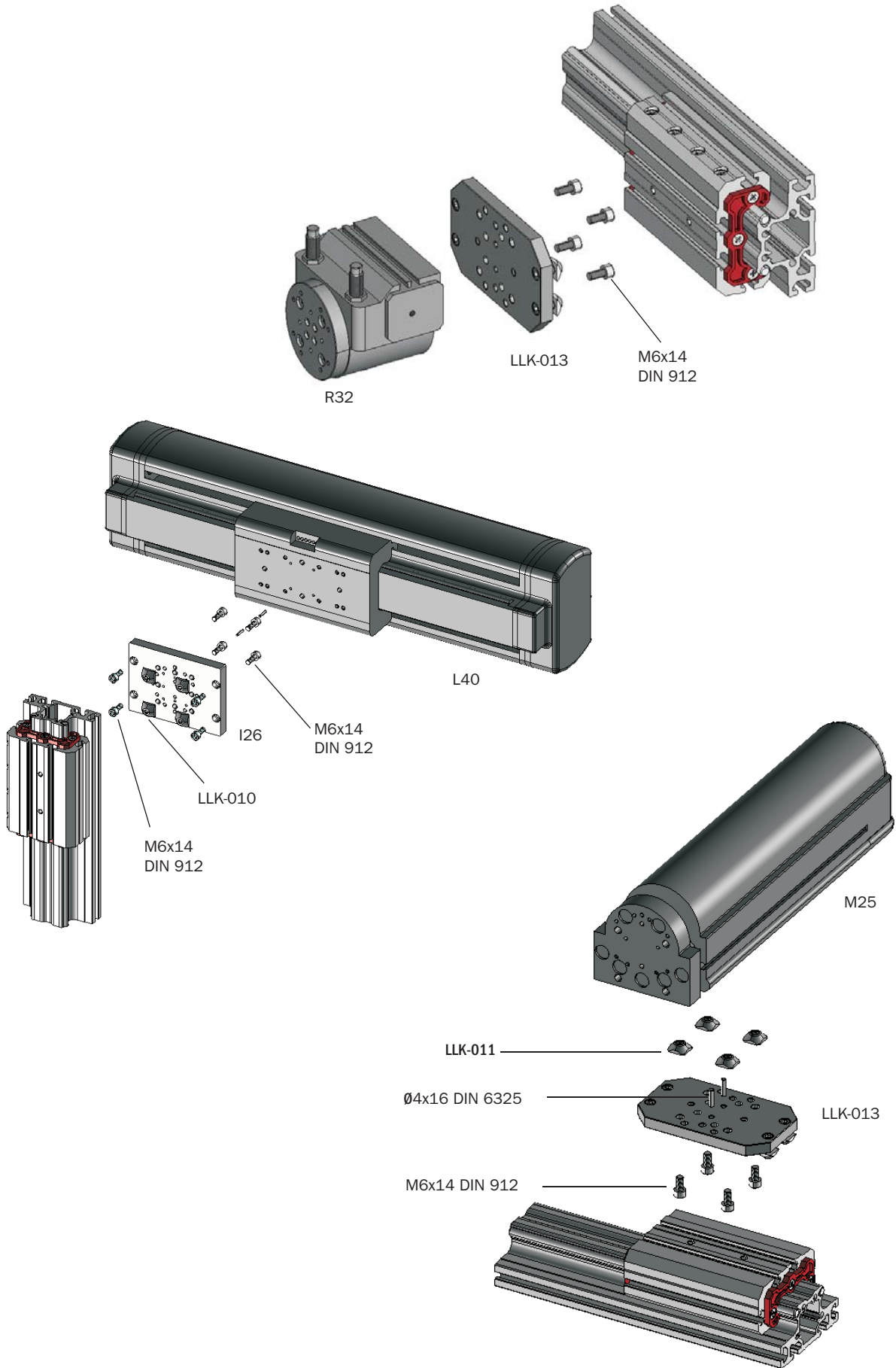
It must be fixed at the end side of the aluminium profile, or on the carrier and it makes possible to mount directly a second LL guidance, or a R32/3 swiveling unit, or a linear actuator M25. It can be used also to mount other components.
Weight: 262 g





Assemblaggio con altri componenti Gimatic

Matching other Gimatic components

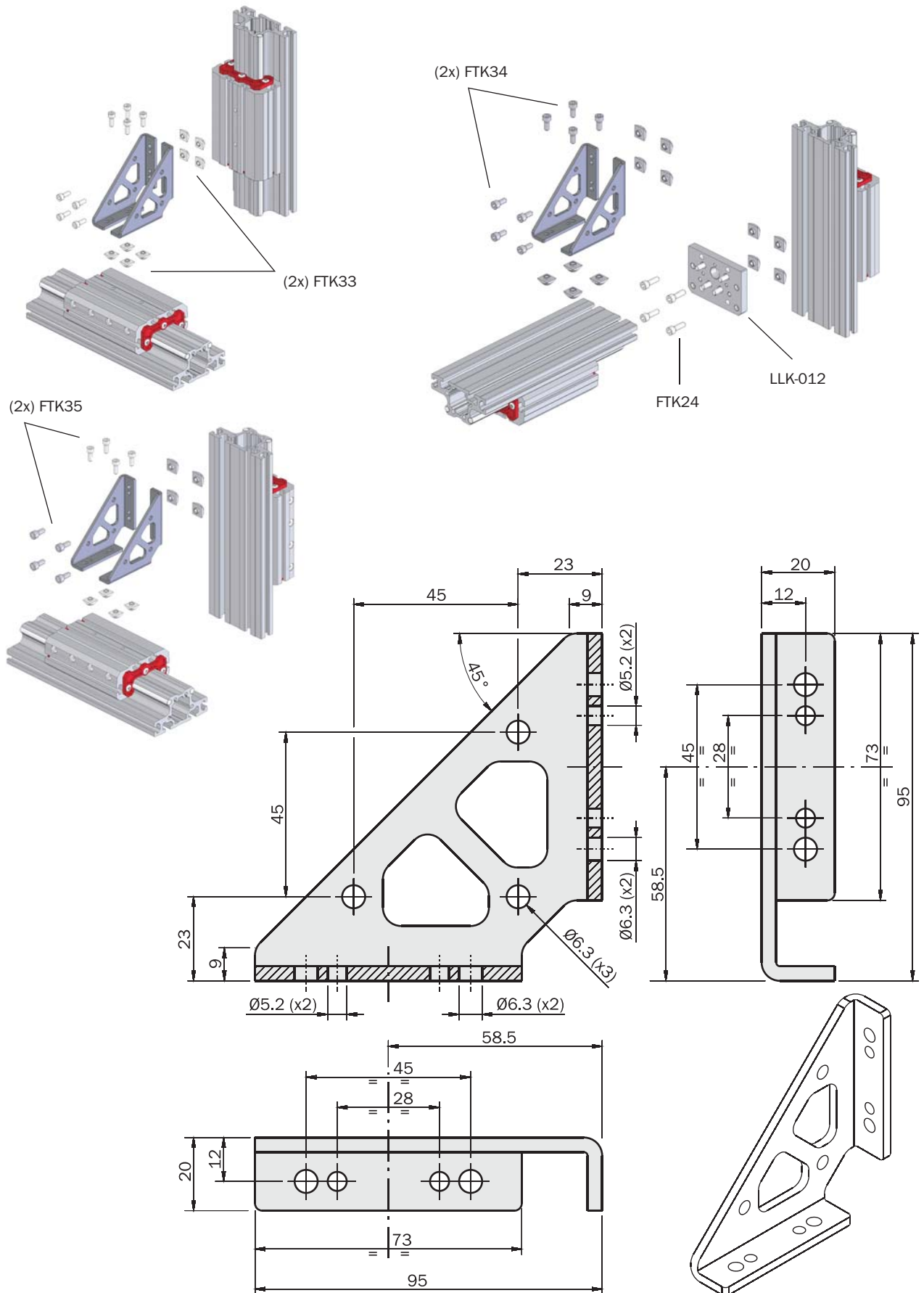


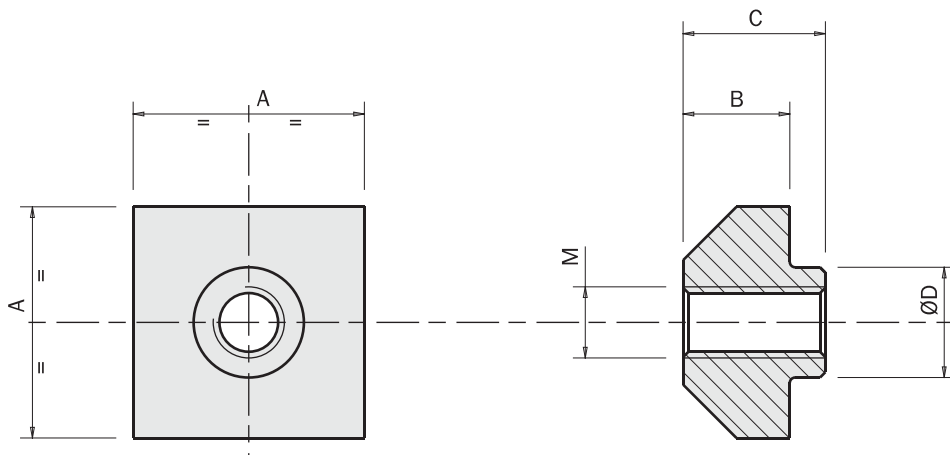
LLK-021
Squadra di fissaggio

Viti e dadi forniti a parte: codici FTK...
Peso: 170 g

LLK-021
90° mounting bracket

Nuts and screws are supplied apart: codes FTK...
Weight: 170 g



Dadi di fissaggio**Nuts for fastening**

	A	B	C	ØD	M	Cava / Slot	Peso / Weight
LL25-09	13	6	8	Ø6.2	M4	6	5 g
LL25-10	16	7.3	9.8	Ø8	M6	8	9 g
VITE-243	16	6.3	8.3	Ø8	M6	8	7 g
LL25-23	13	6	8	Ø6.2	M5	6	5 g

LLK-031**Fine corsa d'emergenza**

La piastrina LLK-031 serve come fine corsa d'emergenza, per evitare la fuoriuscita del carrello.

La si può anche utilizzare per fissare un ammortizzatore di gomma (LLK-046).

Nelle unità dotate di serie della piastrina LLK-031, le barre in acciaio non sono cianfrinate nel profilo in alluminio.

Quindi, se la piastrina viene rimossa, si deve sempre montare una delle piastre (LLK-008 o LLK-012) che fanno da contenimento per le barre in acciaio.

Peso: 30 g

LLK-031**Emergency stop plate**

The end plate LLK-031 is an emergency stopper, to avoid the carrier going out of the rail.

It can be used also to mount a rubber damper (LLK-046).

In the units assembled in factory with the end plate LLK-031, the steel bars are not caulked in the aluminium profile.

Therefore, if the end plate is removed, one of the plates LLK-008 or LLK-012 must be mounted, to hold the steel bars in their housing.

Weight: 30 g

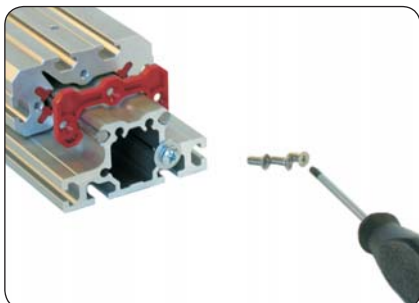


Lubrificazione

Controllare periodicamente le colonne di guida e lubrificarle quando sono secche.
L'apposito grasso è disponibile in tubetti da 90 grammi.
Codice di ordinazione: GLP500-90.

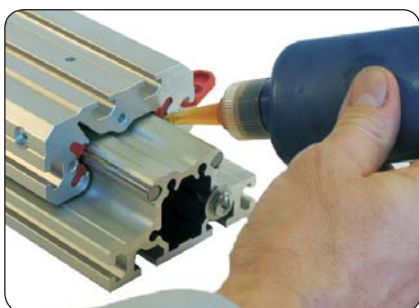
Lubrication

Periodically check the steel bars and lubricate when dry.
The suitable grease is available in 90 grams tubes.
Ordering code: GLP500-90.



Rimuovere la protezione rossa (tre viti)

Remove the three screws and then the red plastic plate



Applicare il lubrificante sulle colonne di guida in acciaio

Lubricate the steel bars



Muovere il carrello per distribuire il lubrificante nelle cartucce

Move the carrier to distribute the lubricant in the ball bearings

