



Operating and display enclosures, suspension systems

Operating and display enclosures

The application range of the operating and display enclosure:

- Mechanical and plant engineering
- Automation technology
- Packaging technology
- MCR technology
- All areas where ergonomically operating units are to be used



Range



Commander systems



Suspension systems
Height adjustment
systems



Mobile Console
systems

Operating and display enclosures

Aluminium profile systems



SL 4000



SL 3000



SL 2000



ComTronic

Advantages

- Individual adaptation to customer's demands
- possible fitting of all command units, displays and panel systems
- fitting of external accessories on all sides
- individual painting and machining of single parts

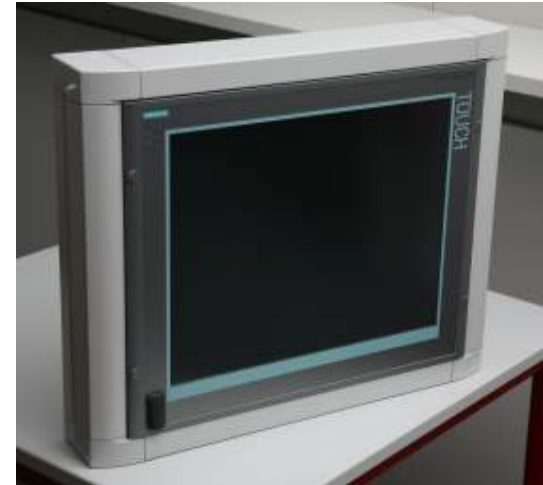
SL 4000

Design Aluminium profile commander with integrated handle system

- 3 profile depths (90, 140, 200 mm)
- 2 new profiles (55 mm, 85,5mm)
- variable in length and width by profile system technic
- max. size 1000 x 1500 x 270 mm
- simply front panel mounting from the inner side
- rating: IP 65
- rear wall fitting variants:
 - door version (2 profile construction)
 - screwed rear wall
 - rear panel hinged

Application:

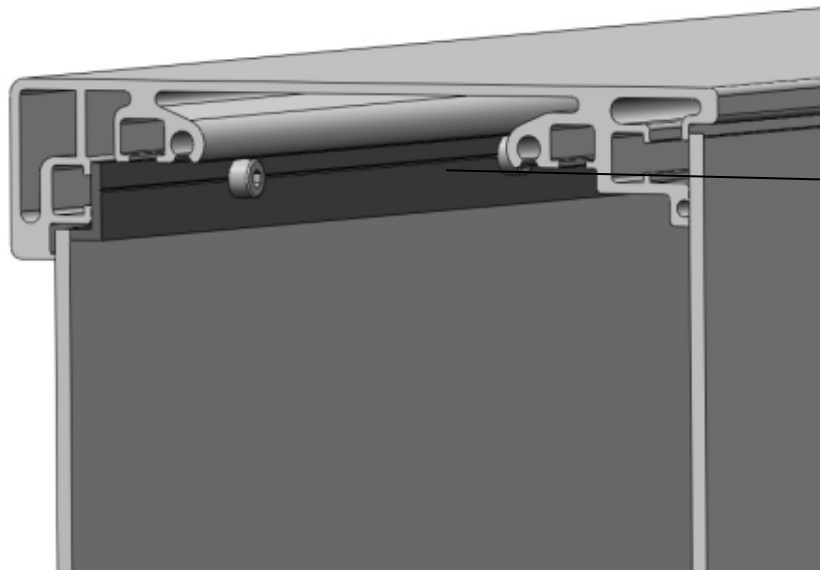
Industrial command system units, industrial PC's



SL 4000

Front panel mounting

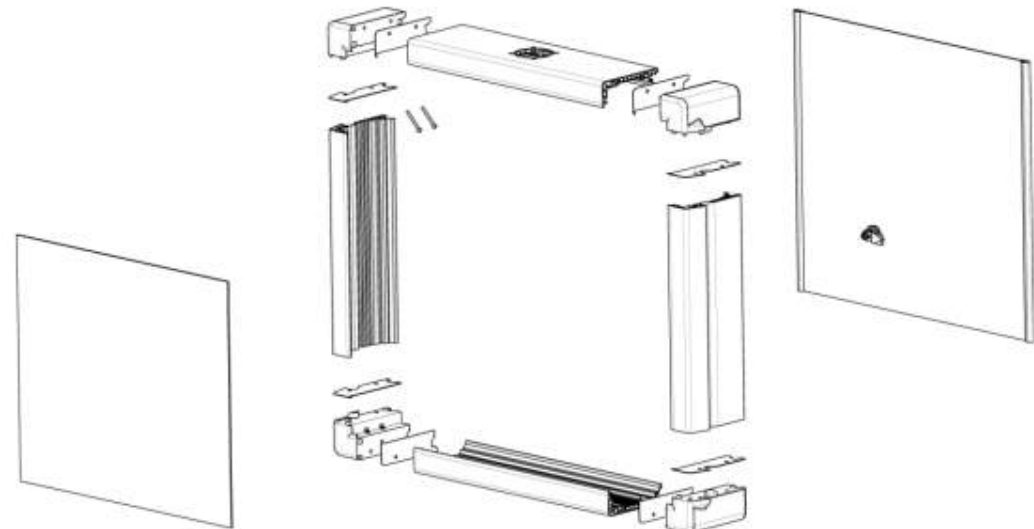
Front panel mounting from the inner side:
quick and simple mounting by fixing profiles.



SL 4000

Construction:

- 2 different types of aluminium profiles (side A/B and side C/D) (RAL 7035 or anodized)
- Front panel (aluminium anodized), front panel fixing bars with fixing set (spring nuts and screws)
- Corner base systems and caps
- Corner sealing systems
- Screws
- Sash lock system



Application SL 4000



Product- / Project description

Command system for production lines of automobile technique

Technique:

SL 4000 profile 1+ 4 with keyboard drawer and screen painting on front panel (BMW standard)

Application SL 4000



Product- / Project description

Command system for production lines of automobile technique

Technique:

SL 4000 profile 3 with Murr interfaces on side D

Application SL 4000



Product- / Project description

Command unit at VW production line

Technique:

SL 4000 profile 3 in special colour with Murr interfaces

Application SL 4000



Product- / Project description

Large screen display unit (63" and 80" version) in production lines

Technique:

SL 4000 profile 3 with reinforcement plate and service flap on rear side (IP 65)

Application SL 4000



Product- / Project description

Technique:



Press control unit

SL 4000 profile combination P1 + P4 with suspension system GTK 80

SL 3000

Aluminium profile commander with diecast corner elements for control equipment (OP's, Touch panel)

- 4 profile depths (70, 125, 170, 220 mm)
length and width variability by profiles
max. mounting dimensions 1500 x 1500 x 600 mm
individual depth by combinations of profiles
- 2 enclosure versions:
 - enclosure with front panel mounting
 - enclosure with special profiles for direct mounting
- Protection classification: IP 65
- Adaption possibility to suspension systems
- Application areas:
Industrial control units and PC's




SL 3000

Types of profiles 1. Front panel mounting

Profile 1: swivel frame profile 90 

Profile 2: intermediate frame 

Profile 3: body profile 170 

Profile 4: body profile 220 

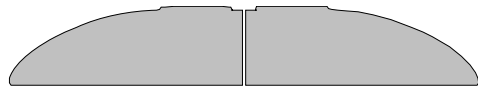
Types of profiles 2. Direct mounting

Profile 3: body profile 170 

Profile 4: body profile 220 

SL 3000

Profile Combinations



Two swivel frames back to back



Combinations of swivel frame and intermediate frame



Combination of profile 3 and profile 4

SL 3000

Front panel mounting

Front panel mounting

Front panel with stud bolts
Front panel flush up to the Profile,
cover profile not necessary

- Front panel screwed
head of screws are hidid by
cover profile (like SL 2000)
- Front panel gripped from inside
profile corner are hidid by cover profile (like SL 2000)



Application SL 3000



Product- / Project description

Technique:



Command panel for Extruder system

SL 3000 with handle, individual fixing at machinery

Application SL 3000



Product- / Project description

Tooling machine for heavy work pieces

Technique:

SL 3000 with 2 command panels for heavy weights with handles and profile combination
Commander dimension: 485 x 1200 x 500 mm

Application SL 3000



Product- / Project description

Input unit at assembly line of book binding machines

Technique:

SL 3000 profile 1 + profile 1 with handles fixed at Moterm

Application SL 3000



Product- / Project description

Special machine for lasering operating elements for automobile industry

Technique:

SL 3000 profile combination P1 + P2 with small rubber element on frontside

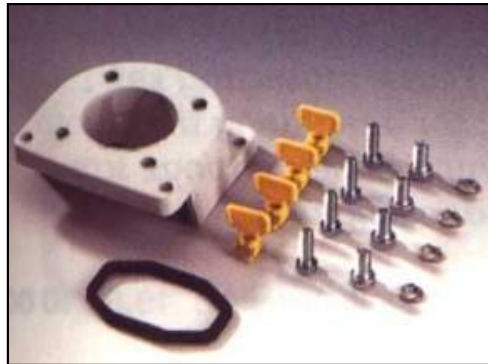
SL 2000

Aluminium profile commander with diecast corner elements for control equipment
(OP's, Touch panel)

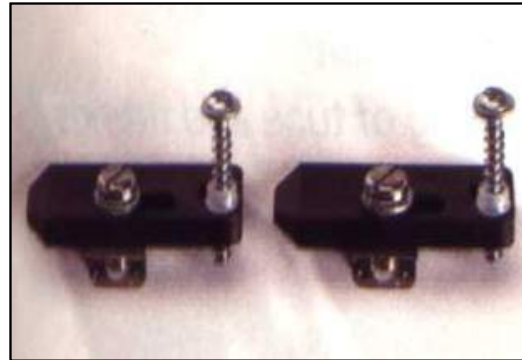
- 3 profile depths (90, 120, 195 mm)
length and width variability by profiles
max. mounting dimensions 1500 x 1500 x 195 mm
- Protection classification: IP 65
- Adaption possibility to suspension systems
- Application areas:
Industrial control units and PC's



SL 2000 Accessories



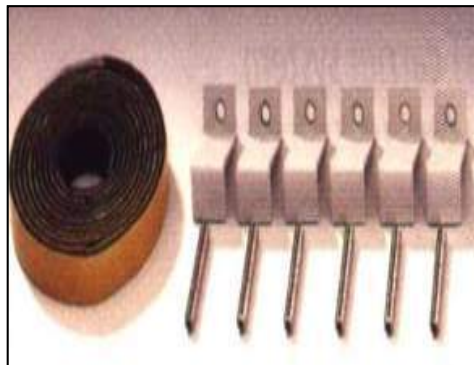
Coupling flange



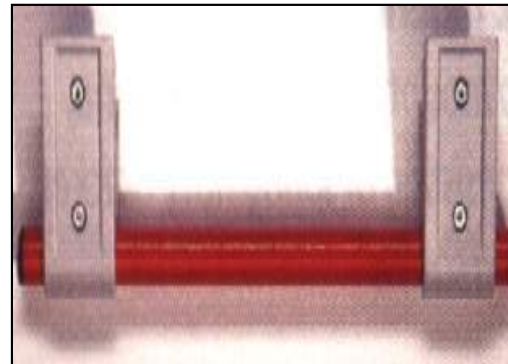
Mounting set



Keyboard holder



Panel mounting set



Handle set



Linking bar

Application SL 2000



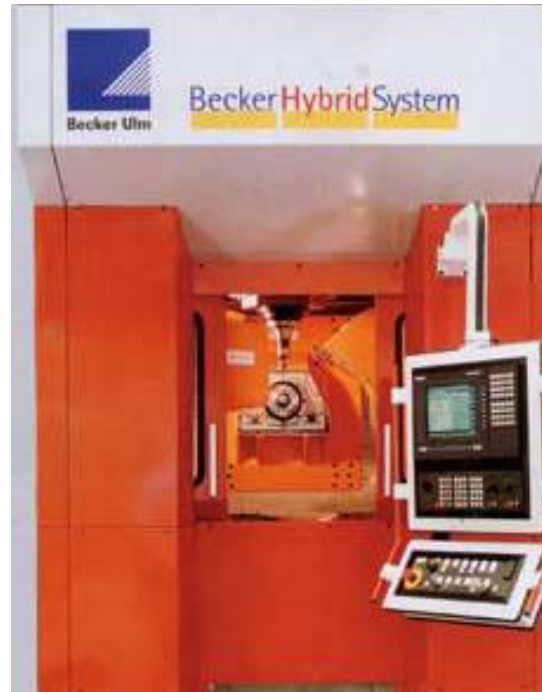
Product- / Project description

Tooling machining center

Technique:

SL 2000 with integrated Siematic control panel and keyboard holder, suspension system GT 48/2

Application SL 2000



Product- / Project description

Machining center for special machine construction

Technique:

SL 2000 destop execution based on two SL 2000 enclosures fix connected at special angle 60°, suspension system GTKe

Comtronic

Aluminium profile commander with diecast covers for control equipment (switches, OP's, Touch panel)

- 2 different sizes in depth and width (CT 110 / CT 145)
length variability by profiles
- Protection classification: IP 65
- Adaption possibility to suspension systems
CT 110: GTK electronic/ GT 48 / GTS
CT 145: GTN II
- Application areas:
Industrial control units and PC's
- low cost command system

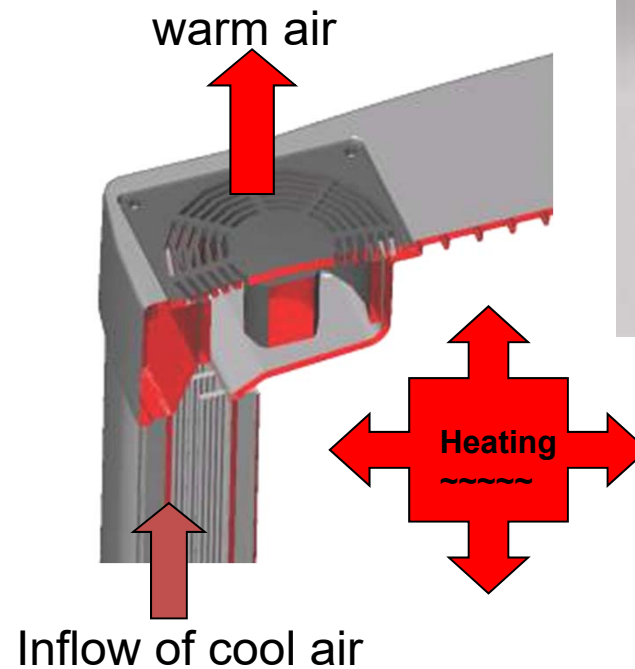


Comtronic

Design:

- Aluminium-Profile enclosure with fix head and foot lids (diecast)
- front panel
- rearside door

USP:
„chimney effect“



Application



Product- / Project description

Command panel for machine tool industry

Technique:

IP 65
Integrated cooling system

Operating and display enclosures

Aluminium diecast - systems



Commander 1



Commander 1F

Advantages

- robust aluminium diecast enclosure body for rough environmental application
- short delivery times (unmachined types from stock)
- available in 18 dimensions
- rating IP 65

Application



Product- / Project description

Control panel for special purpose machine (pick- and – place machine)

Technique:

Rating: IP 65 enclosure with handles

Application



Product- / Project description

Control panel for small packaging machinery

Technique:

Rating: IP 65
C1 with machined front panel

Operating and display enclosures

Stainless Steel - systems



KSSC



C 420



C 410

Advantages

- Materials 1.4301 and 1.4404
- For food, beverage and hygienic applications
- IP65, IP 66 and IP 69K (C 420)
- Special sizes possible

Suspension systems

1. Steel suspension systems



GT 48



GT 50/60/80



GTK 80



Mobile trolleys

2. Aluminium profile suspension systems



GTS/ GTN/ GTL *New*



New

Height adjustment system GTV

GT 48- Steel tube suspension system

⇒ Possible applications :

Industrial applications (machine control systems)
as stand version, wall or top mounted system

⇒ Product highlights and features:

Round tubing system Ø48mm (steel)
System components made from cast aluminium
Protection class: IP54
Length of tubes can be freely selected
Free cable passage 40mm



GT 48- Steel tube suspension system

⇒ System components:

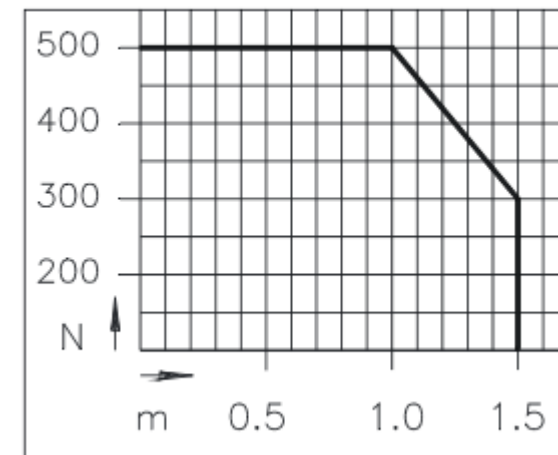
- Top mounted joint
- Foot, rigid or rotatable
- Wall hinge W (horizontal) or S (vertical)
- Elbow
- Coupling or flange coupling
- Elbow coupling or elbow flange coupling
- Console flange or adapter flange
- Inclining adapter
- Adaptater to SIMATIC PRO systems

⇒ Connecting tube:

- Standard lengths (0.5m, 1.0m, 2m, 3m)
- Individual lengths



Load diagram



GT 50 / 60 / 80- Steel tube suspension system

⇒ Possible applications:

Industrial applications (machine control systems)
Stand version, wall or top mounted system

⇒ Product highlights and features:

Square steel system 50mm, 60mm or 80mm
System components made from cast aluminium
Protection class: IP65
Standard lengths 0,5m/1,0m/2,0m
individual lengths
Free cable passage 40mm, 50mm, 70mm



GT 50 / 60 / 80 – Steel tube suspension system



System components:

- Top mounted joint
- Foot stand (rigid)
- Wall hinge (horizontal)
- Intermediate joint
- Elbow
- Coupling or flange coupling
- Elbow coupling or elbow flange coupling
- Console coupling DN (swivelling and inclining)
- Console adapter
- Adapter flange
- Signal fitting
- Adaptation to SIMATIC PRO

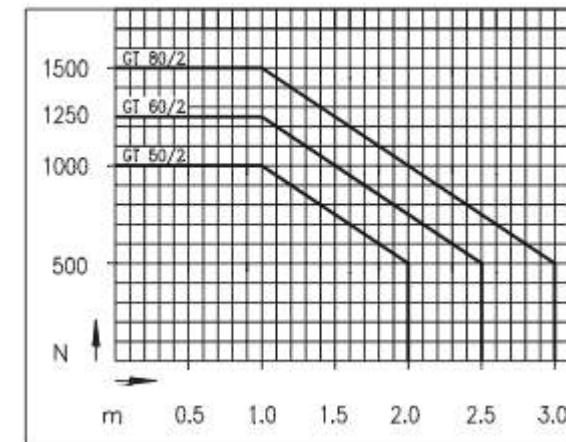


Connecting tube:

- Standard lengths (0.5m, 1.0m, 2m, 3m)
- individual lengths



Load diagram

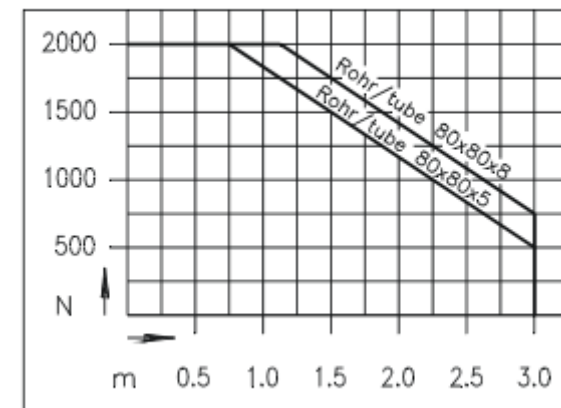


GTK 80- Steel tube suspension system

- ⇒ Possible applications:
Industrial applications(machine control systems)
Stand version, wall or top mounted
system for large weights
- ⇒ Product highlights and features:
Square steel system 80x5mm or 80x8mm
System components made from cast aluminium
Protection class: IP65
Length of tubes can be freely selected
Open cable duct
Free passage through the components 57mm

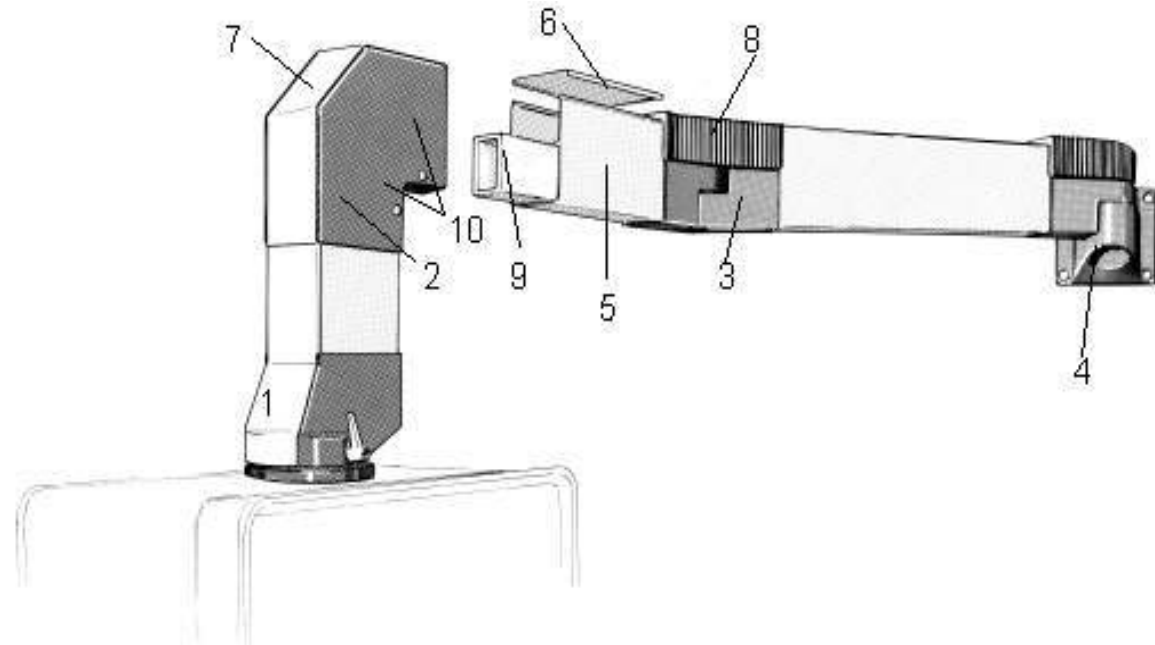


Load diagram



GTK 80

1. enclosure coupling
2. elbow FH
3. linking joint
4. wall hinge
5. cable duct
6. lid for cable duct
7. cover plate
8. textile bellows
9. steel tube
10. safety screw



GTS – Aluminium profile suspension system

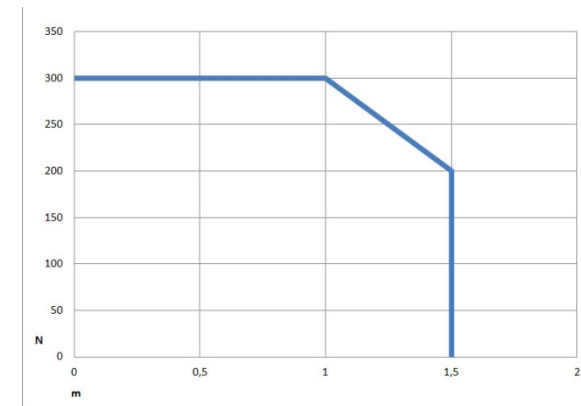
⇒ Possible applications:

Industrial applications (machine control systems)
Control devices in fieldbus systems
Stand version, wall or top mounted system
for low loads (up to 30 Kg)

⇒ Product highlights and features:

Aluminium profile system
System components made from cast aluminium
Protection class: IP54
Free cable passage 54x17mm

⇒ Load diagram:



GTS – Aluminium profile suspension system

- System components:
 - Top mounted joint
 - Foot stand (fix / turnable)
 - Wall hinge W (horizontal)
 - Elbow, Elbow GTN II / GTS
 - Coupling or Flange coupling
 - Elbow coupling
 - Inclining adapter
 - Aluminium profile length = 2m



GTN II- Aluminium profile suspension system

⇒ Possible applications:

Industrial applications (machine control systems)
Control devices in fieldbus systems
Stand version, wall or top mounted system for
loads up to 80 Kg

⇒ Product highlights and features:

Aluminium profile system

- two versions:

- with open cable channel or
- closed oval aluminium tube

System components made from cast aluminium

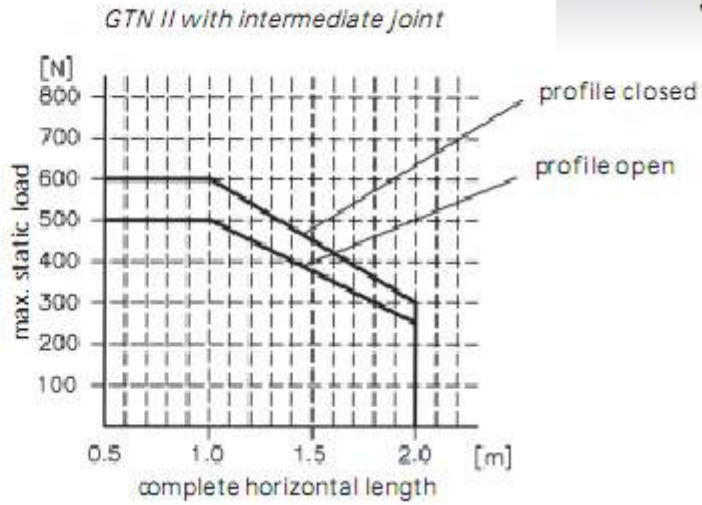
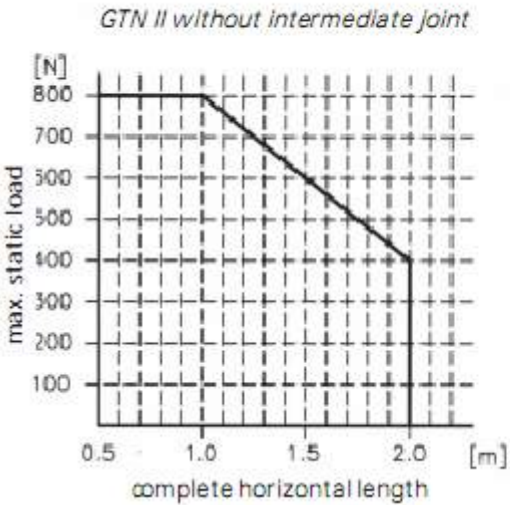
Protection class: IP54



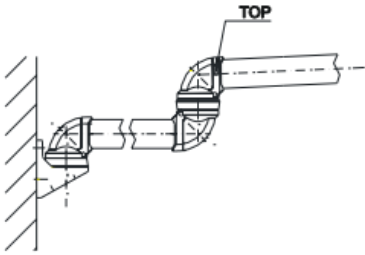
GTN II- Aluminium profile suspension system



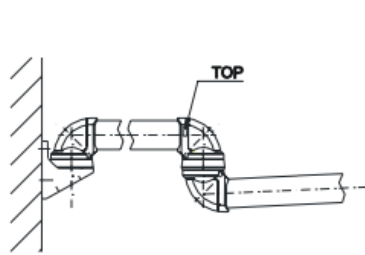
Load diagram



Intermediate joint S



Intermediate joint Z



GTN II- Aluminium profile suspension system



Available system components:

- Top mounted joint
- Foot stand (rigid)
- Wall hinge W (horizontal)
- Elbow , Elbow GTN II/GTk, Elbow GTN II/GTS
- Coupling or flange coupling
- Elbow coupling or elbow flange coupling
- Console flange 15°
- Adapter flange
- Inclining adapter
- Cover profile 2m
- Adaptation to SIMATIC PRO systems



Connecting tube:

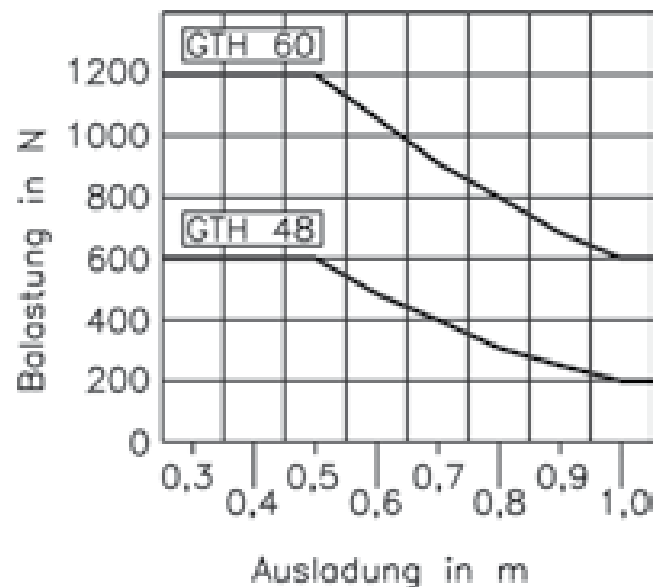
- closed version
- version with open cable channel
- Standard lengths (0.5m, 1m, 2m)
- Individual lengths



GTH 48 / 60 – Stainless Steel suspension system

⇒ Available system components:

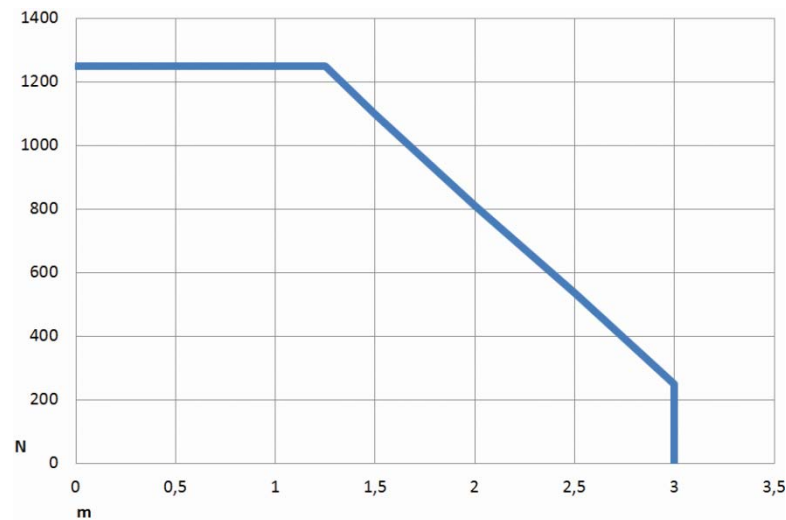
Coupling
Top mounted joint
Foot stand
Console adapter
Wall console



Product description GTV

- Suspension system for heavy loads
 - Extruded aluminium sheath
 - stated load (at 1m length): 125kg
- - Replacement of steel systems GT60/2 and GT80/2

New



GTL- Product range

New

Wall hinge



Top mounted joint



Intermediate joint



Profile



Elbow



Elbow coupling



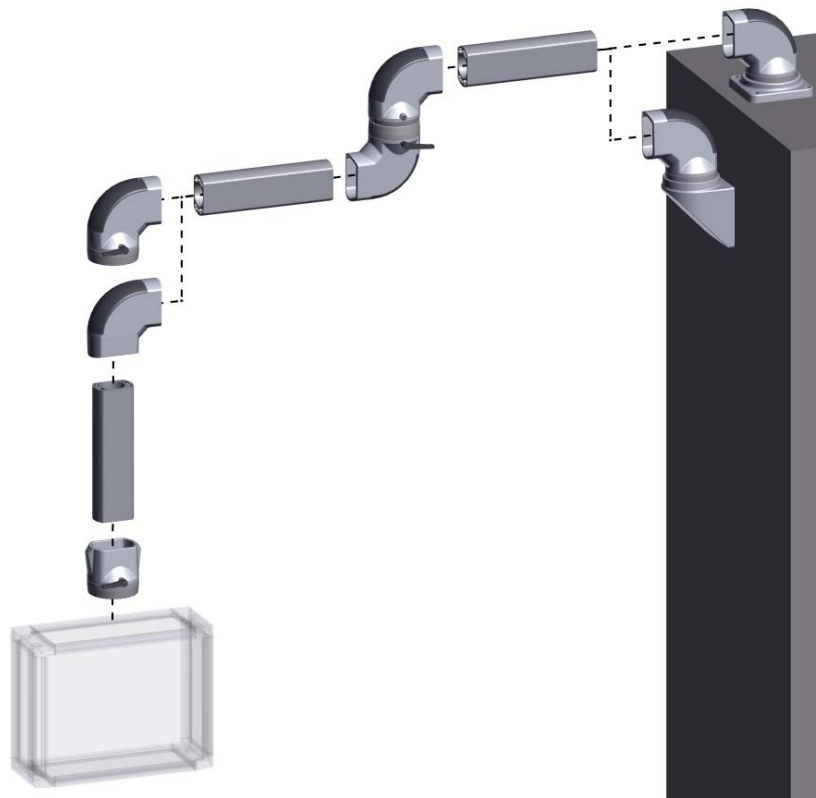
Coupling



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Aluminiumprofile System GTL

New



New



Height adjustment system GTV

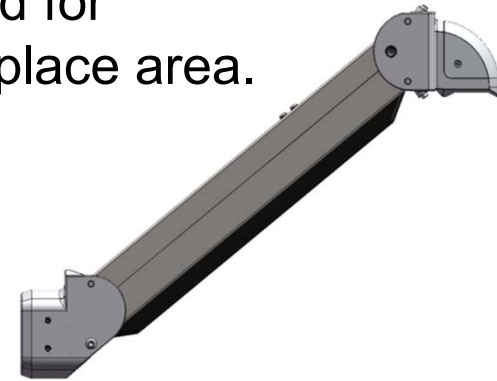


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GTV product description

New

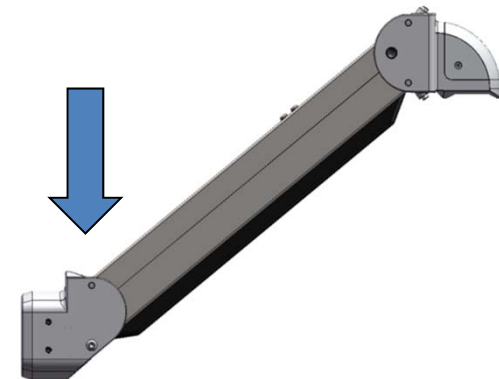
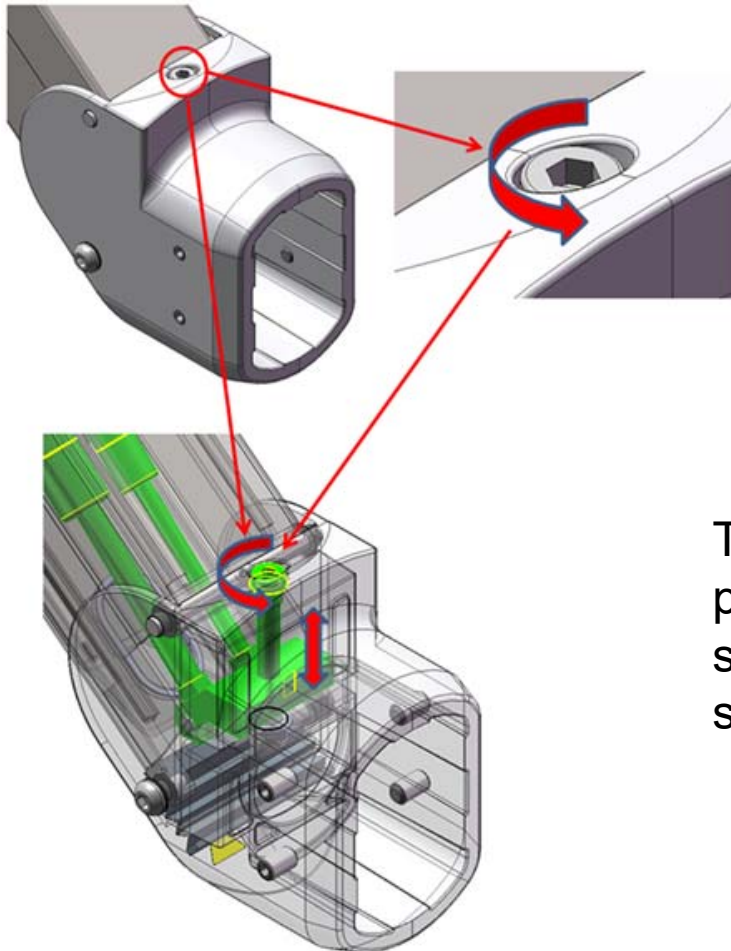
- Vertical height adjustment system for designing ergonomic human-machine interface workplaces and for swivelling the control enclosure away from the workplace area. For use in an industrial environment.
- The load range is from 20 – 60 kg; the maximum stroke is 944 mm, which can be limited to 400 mm by means of adjusting screws.
- The load range is divided into 5 separate weight sectors. Setting to the exact weight of the control enclosure is by means of a central adjustment screw



Load range	
Load range 1:	20 – 28 kg
Load range 2:	28 – 36 kg
Load range 3:	36 – 44 kg
Load range 4:	44 – 52 kg
Load range 5:	55 – 60 kg

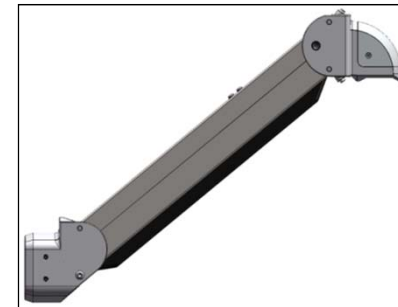
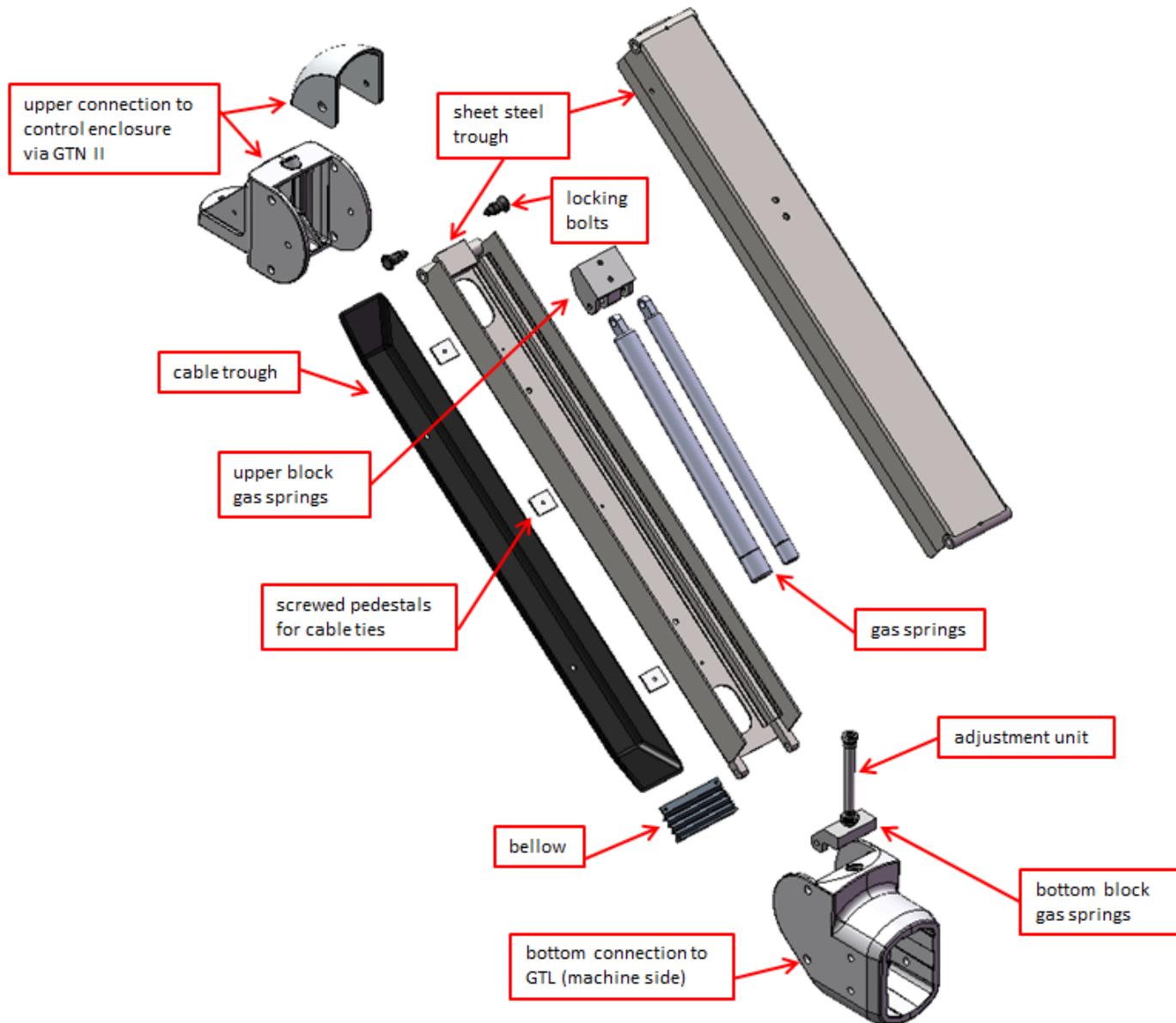
GTV- Fine setting

New



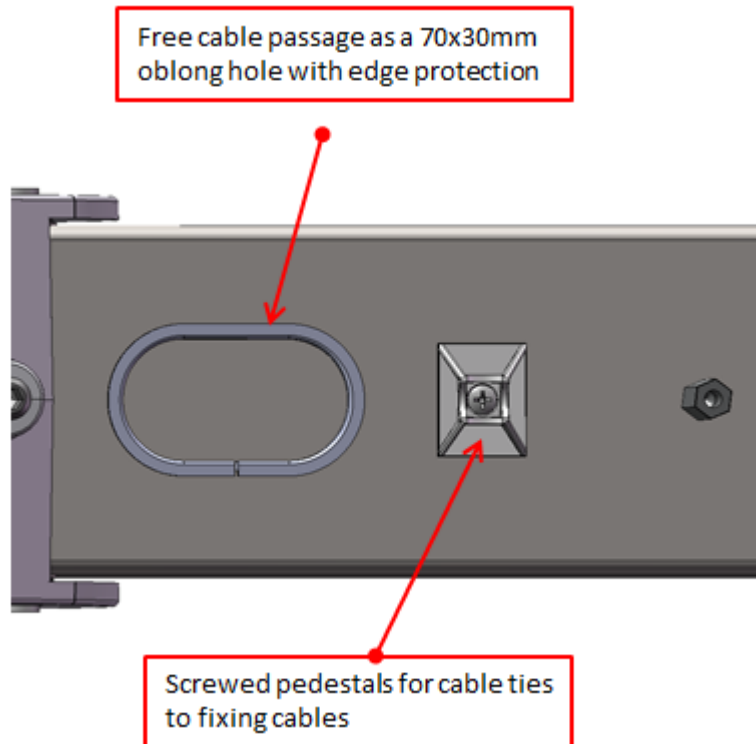
The fine setting onto load (Commander + GTN profile + GTN coupling) can be done by user on side by adjustment screw (located on GTV system towards GTL connection)

GTV – main components

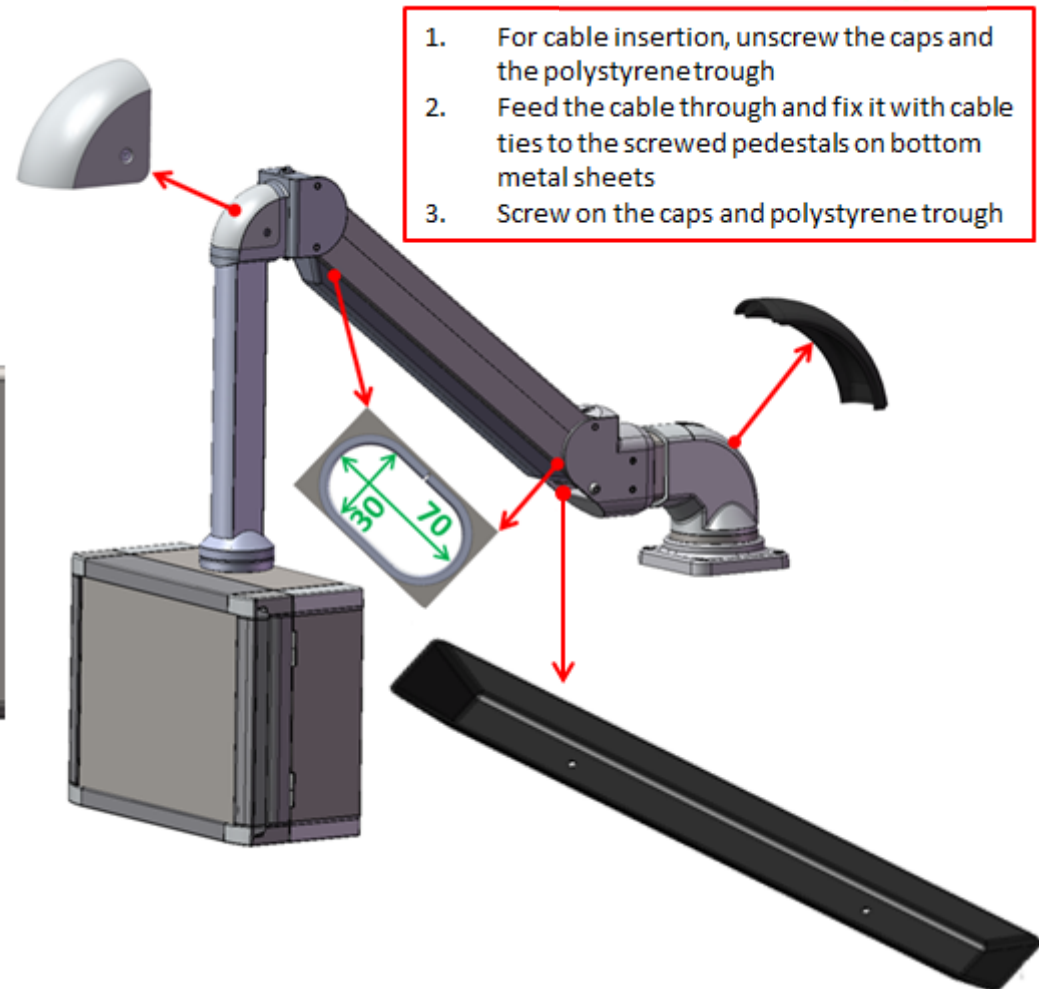


New

GTV- cable duct



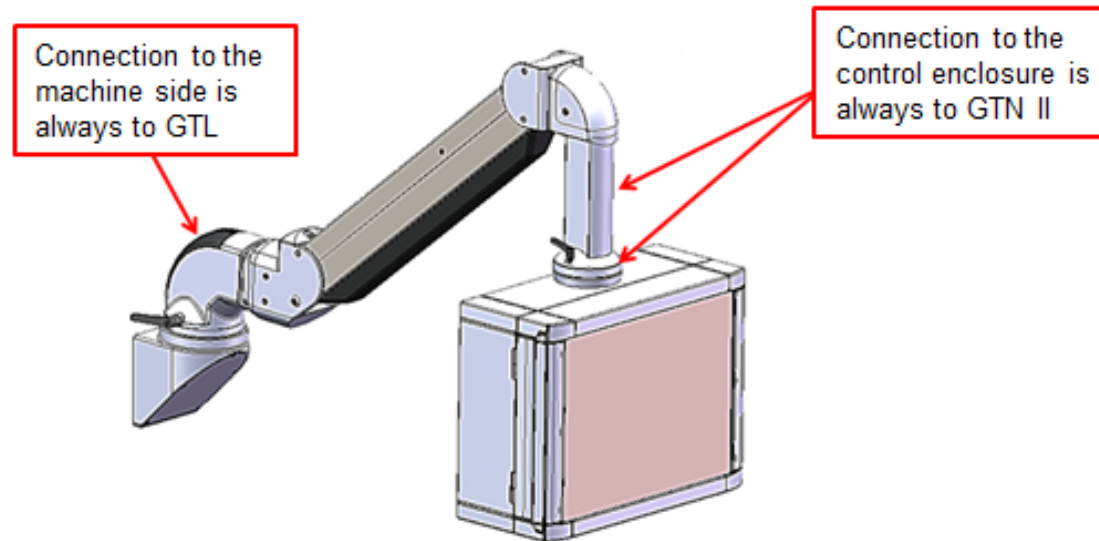
New



GTV- connection

- Machine-side connection is always by means of the new GTL suspension system. However, connection of the control enclosure is always by means of the GTN II suspension system.

New



GTV - Executions

New

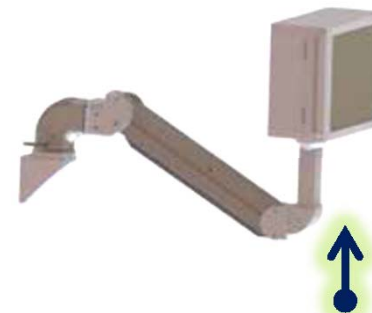
- GTV is available in four different base units:

1. GT connection from the top or bottom

1.1 Connection from the top:



1.2 Connection from the bottom:



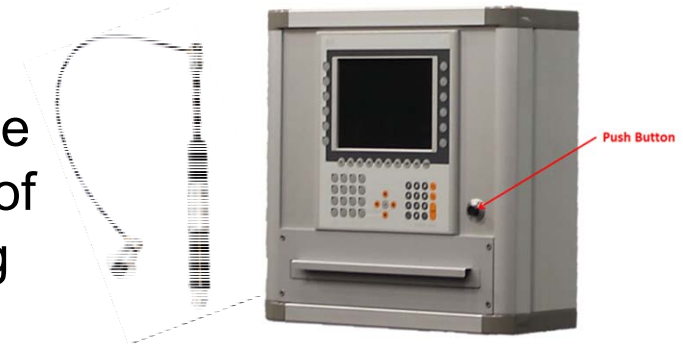
GTV - executions

New

2. Execution with or without blocking

2.1 Execution with blocking :

Activation of a push button which is fitted in the front panel or the side profiles for adjustment of the system. A bowden cable releases blocking of the gas pressure spring.



2.2 Version without locking function:

Adjusting the GTV without activating a push button.

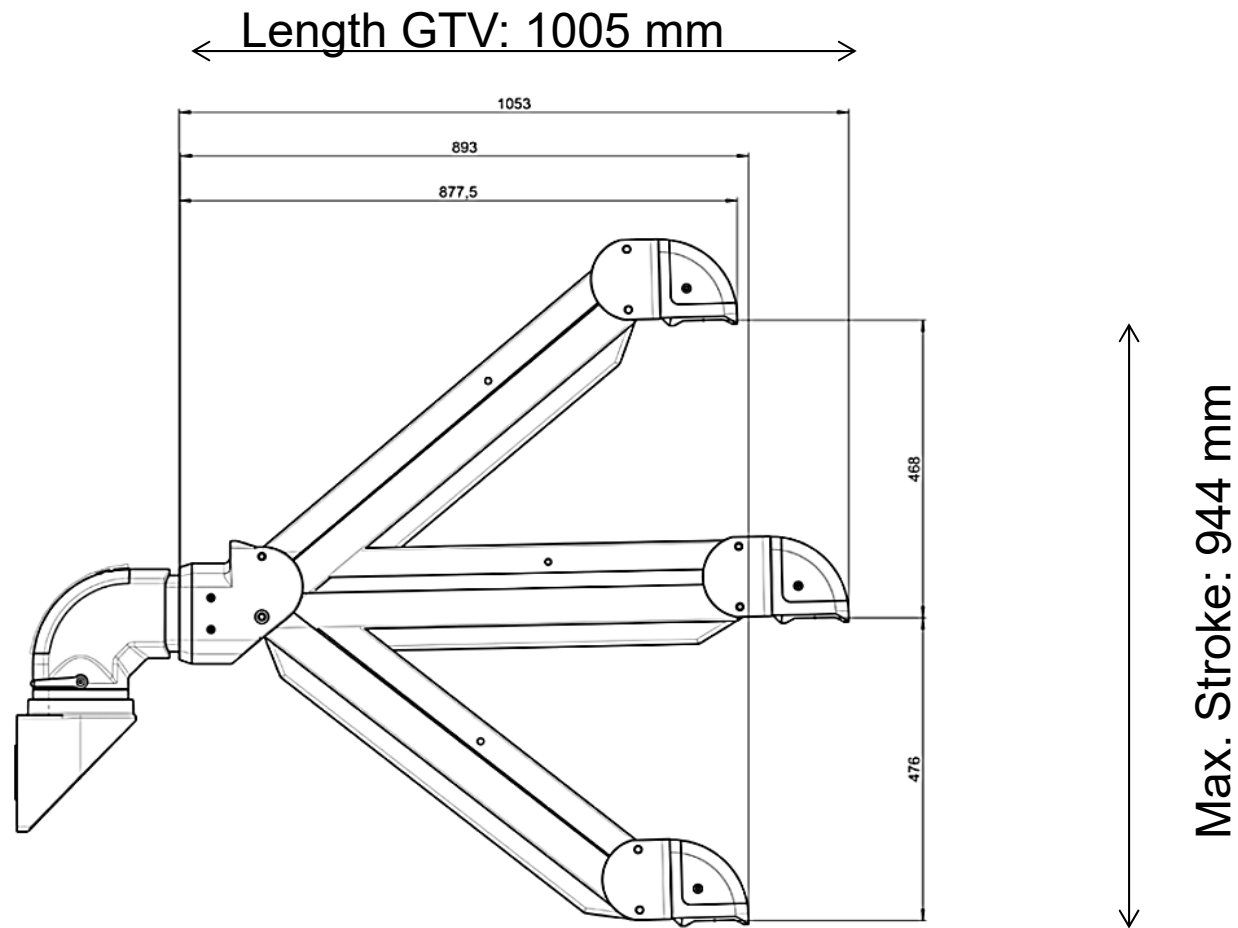
In this case slight resistance must be overcome in order to access the adjustment movement.

The reason for this resistance is an adjustable gas pressure spring.

The gas is fed via taper bores (closed by means of spring-loaded balls) through the surface of the piston.

GTV Dimensions

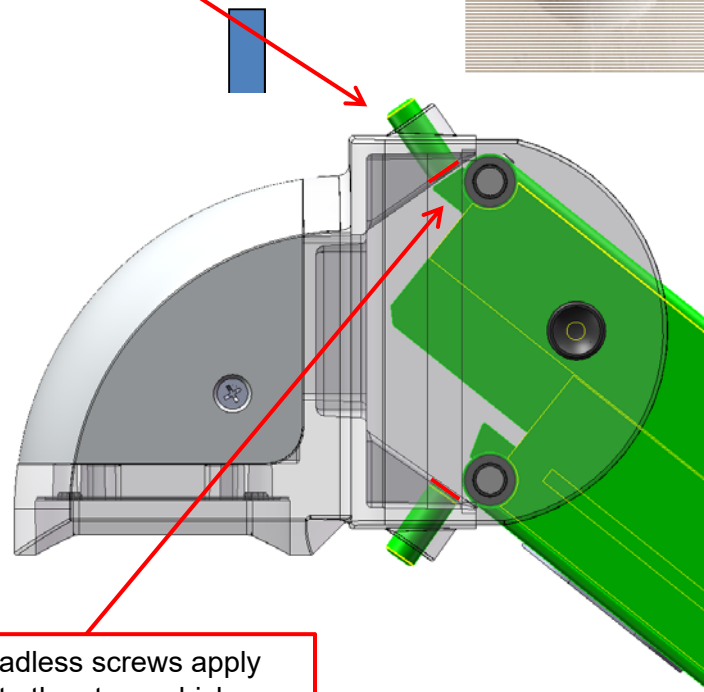
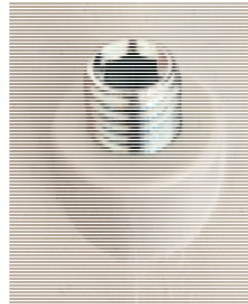
New



GTV- End stopping position

New

By using 2 headless screws as adjustable end stops, the GTV's stroke can be reduced from 944 mm to 400 mm.



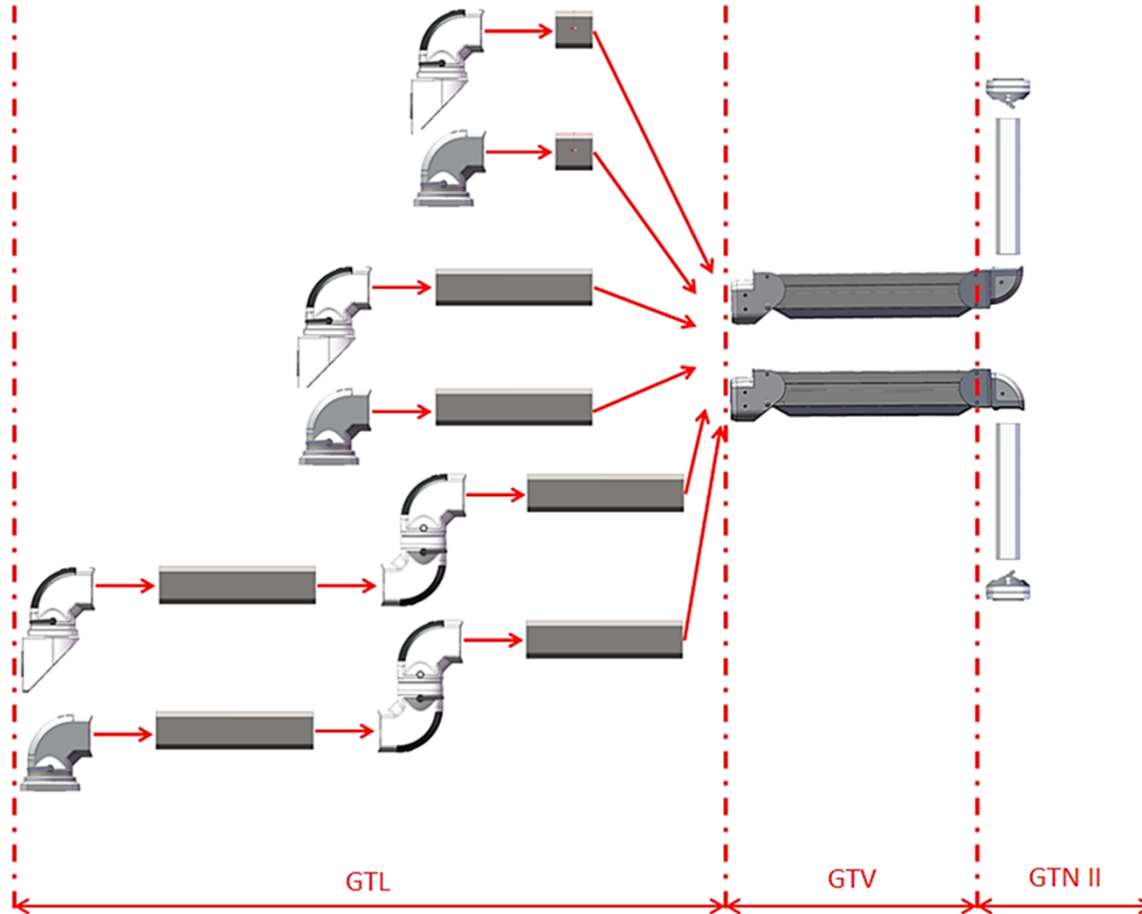
These headless screws apply pressure to the stops which are welded into the metal sheets of the GTV.



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GTV- structure

New



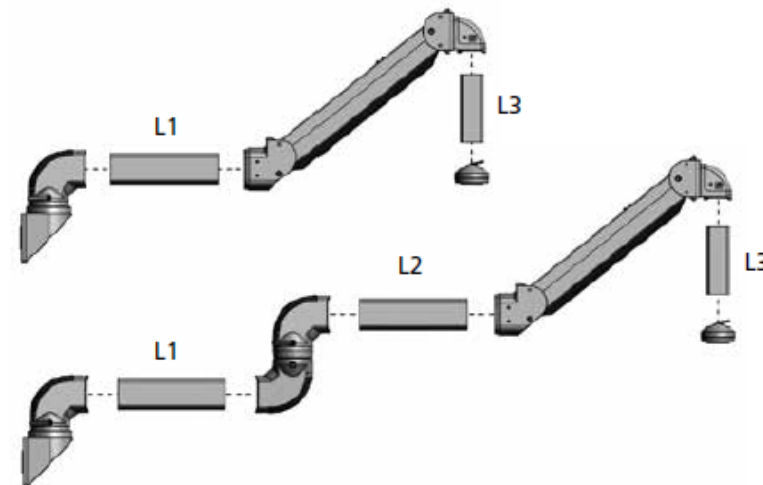
GTV- structure

- Maximum profile length

New

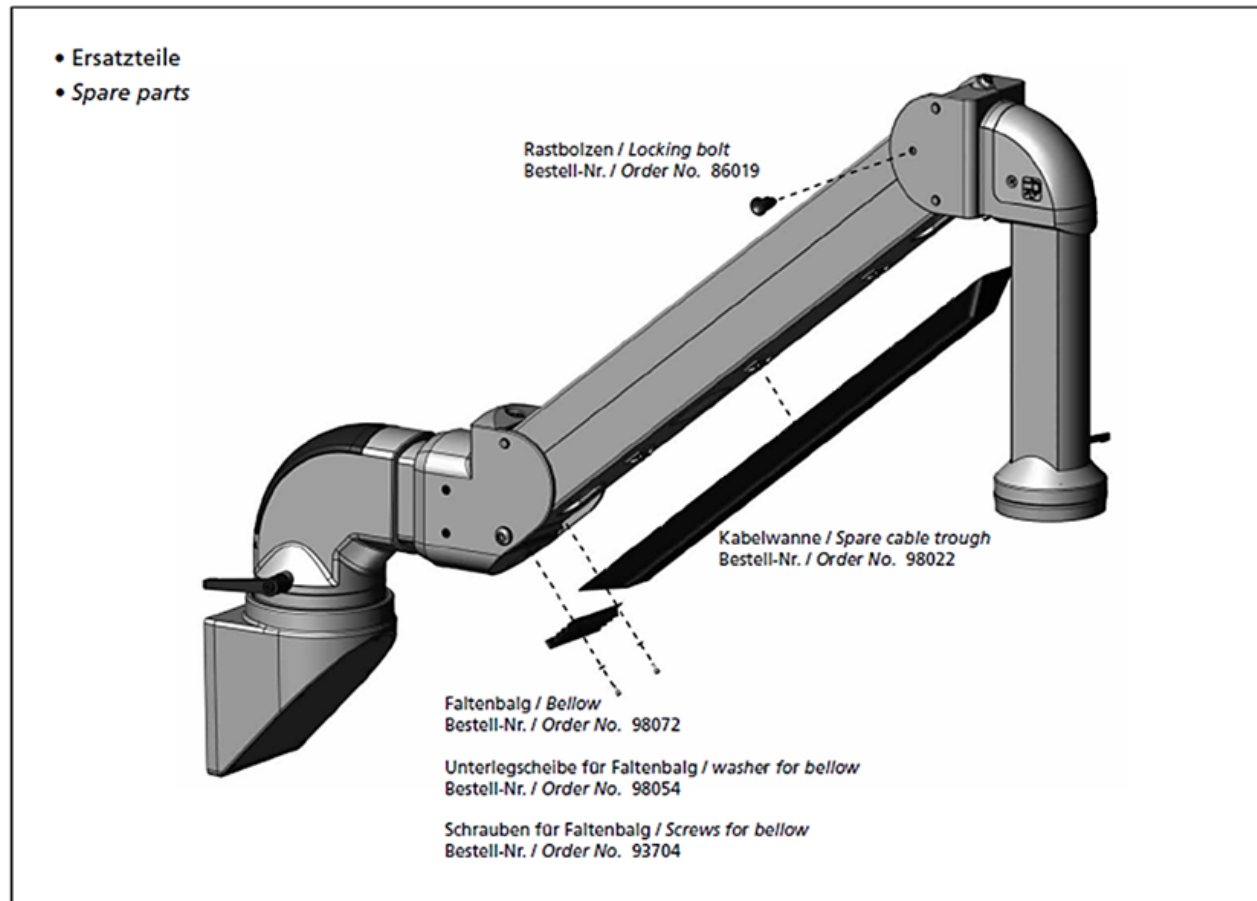
Belastungsdaten / Load data

Lastbereich GTV Load range GTV	max. Profillänge GTL max. profile length GTL	max. Profillänge GTL mit Zwischengelenk max. profile length GTL with Intermediate joint	max. Profillänge GTN II (vertikal) max. profile length GTN II (vertical)
	L1	L1 + L2	L3
1	1400 mm	2 x 400 mm	250 mm*
2	1100 mm	2 x 300 mm	250 mm*
3	800 mm	nur auf Anfrage! only on request!	250 mm*
4	600 mm	nur auf Anfrage! only on request!	250 mm*
5	500 mm	nur auf Anfrage! only on request!	250 mm*



GTV- spare parts

New



Moterm

Moterm - Mobile trollys



Possible applications:

Machine control systems and IPC`s
Laboratory and medicine technology



Product highlights and features:

Mobile trolley with four rolls
Adaption to ROSE Commander systems
Portable weight 37kg



Versions

- fixed height with rolls (1028mm)
- manual height adjustment with rolls (728mm to 1028mm)
- fixed height (without rolls)
- manual height adjustment without rolls





Thank you for your kind attention



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