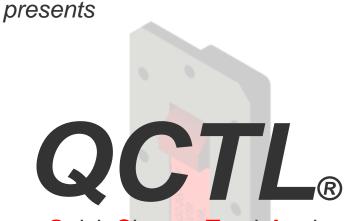


VERBINDUNGS-TECHNIKEN-RÜTHER

www.VTR-Ruether.de



Quick Change Track Lock

the efficient track fastener handled without tools !

Patented by Walter Michler (Aviation Nautic Michler)



Content

•	For which tracks	3-3
•	Overview Track Line Orientation	4-11
•	Parallel Parts	12-18
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Suitability of QCTL for which tracks

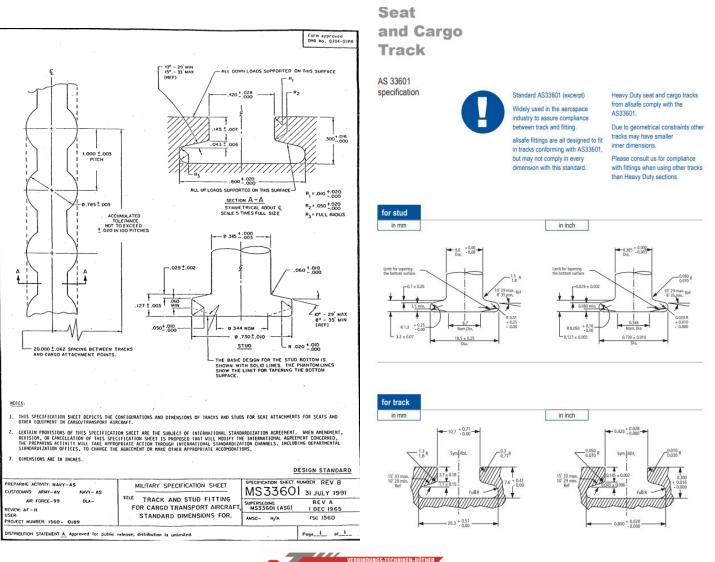
All types of QCTL in this catalog are designed for tracks according the standards MS33601 or AS33601.

If other rail dimensions and loads are desired or required, please contact us to clarify variations (info@vtr-ruether.de)



Seat Track conforms to AS33601 or ISO 7166

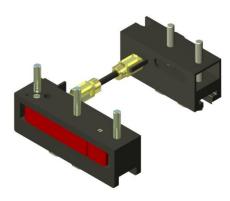
Ultimate load: vertical 26.67 kN/6000 lbf with Single Stud fitting, 44.45 kN/10000 lbf with double stud fitting*

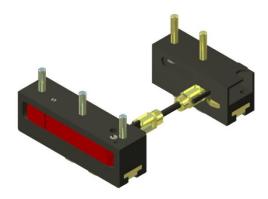


20/07/23

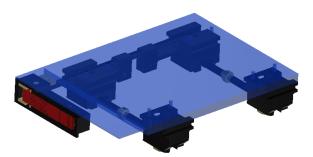


Doghouse Systems





Typ: 1PHB-105-501/502/505/506 Page: 19



Typ: IN-252 Page: 20

General description:

- latch actuating, safety lock
- Recognizable by open lever off stand from housing at unlock position
- Using standard tracks as medium, heavy duty or single cargo fittings
- no shifting at installation
- incorporated anti rattle







Typ: 1-P-H-F-105 Page: 14



Typ: 1-P-H-F-104 Page: 13



Typ: 1-P-H-F-103 Page: 12



Typ: LH-252-200P Page: 15





Typ: AL-252-500 Page: 16

Typ: AL-252-100P Page: 17



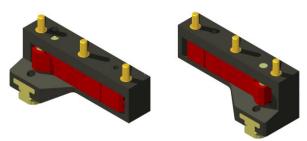


Cross Parts





Typ: CHF-106LH-501/502 Page: 22



Typ: CHB-107LS / RS Page: 23



Typ: CHB-107LD / RD -A-505

Page: 24



Typ:CHF-107RD / LD Page: 26



Typ: CHF-107LS / RS Page: 25



Typ: QC-200-CVF Page: 27





Cross Parts



Typ: QC-100-CV-501/503 Page: 28



Typ: QC-200-CV-501/503 Page: 29

Flexible Track Parts

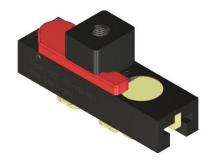


Typ: QCT-252-30D

Page: 31



Typ: QCT-252-30S Page: 33



Typ: QCT-252-31D Page: 32









Typ: BP-103LH Page: 35



Typ: BP-104-80S-501 Page: 36



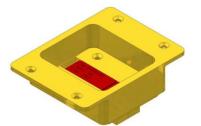
Typ: BP-104-80D-501 Page: 37







Typ: BP-104-80D-505 Page: 39 Typ: AF-BP104-501 Page: 40 Typ: AF-BP104-507 Page: 42



Typ: AF-BP104-503 Page: 41



Typ: AF-BP104-509 Page: 43



Typ: BP110-501 Page: 45







Typ: SP108-501/503 Page: 46



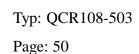
Typ: BP108-501 Page: 47



Typ: BP108-503 Page: 48









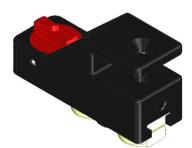
Typ: QC-HP-110 Page: 44



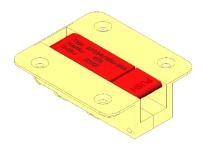
Typ: QCR108-501

Page: 49

Typ: QCR109-501/503 Page: 51



Typ: QCR110-501 Page: 52



Typ: BP-104-80D-503 Page: 38







Typ: BP108L-501 Page: 53



Typ: BP108L-503 Page: 54



Typ: BP108L-505 Page: 55



Typ: QCV-252-40-501

Page: 56





Seat Systems

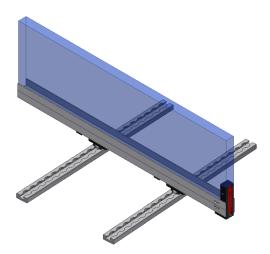


Typ: W-202-252 Page: 59



Typ: OHB-252-100 Page: 60

Wall Divider Systems



Typ: BH-252 Page: 62

Hole Application



Typ: QCH-500 Page: 64

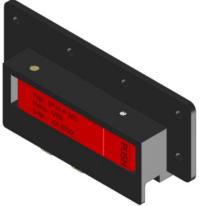


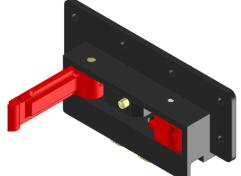
Parallel Parts



20/07/23

1-P-H-F-103

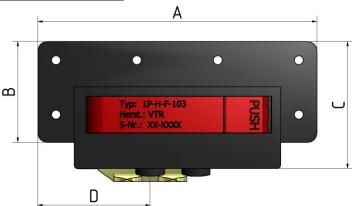




Close

Open

Main Dimensions:





Technical Details:

Dimension:*

- **D**: 62 mm **A**: 154 mm
- **B**: 55,5 mm **E**: 30 mm
- **C**: 70 mm **F**: 4 mm

Weight: approx. 420 Gramm approx. 0,925 Lbs

Load Capacity:** X< 2.600 daN (6.000 lbs) Y< 1.300 daN (3.000 lbs) Z< 2.200 daN (5.000 lbs)

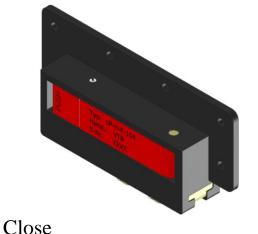
* FOR DETAILS USE DRAWING ****LOADS ARE CONSIDERED WITHOUT MOMENTS**

Fitting application (double stud) or walls or structure members running parallel to track. Attachment to interior item is established via flange. Should the fitting be integrated into a honey comb structure it is recommended to use a load distribution plate.



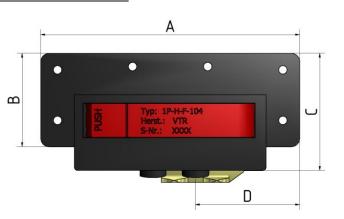


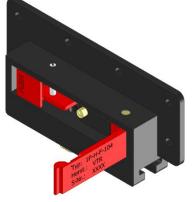
1-P-H-F-104



Open

Main Dimensions:







Technical Details:

Dimension:*

A: 154 mm **D**: 62 mm

B: 55,5 mm **E**: 30 mm

C: 70 mm **F**: 4 mm

Weight:

approx. 450 Gramm approx. 0,992 Lbs Load Capacity:** X< 2.600 daN (6.000 lbs) Y< 1.300 daN (3.000 lbs) Z< 2.200 daN (5.000 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) or walls or structure members running parallel to track. Attachment to interior item is established via flange. Should the fitting be integrated into a honey comb structure it is recommended to use a load distribution plate.

20/07/23





1-P-H-F-105

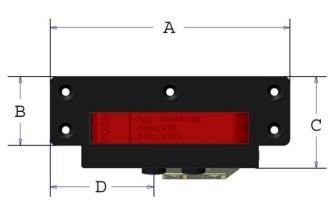




Close

Open

Main Dimensions:







Technical Details:

Dimension:*

A: 154 mm **D**: 66,6 mm

B: 44,5 mm **E**: 30 mm

C: 59 mm **F**: 4 mm

Weight:

approx. 400 Gramm approx. 0,90 Lbs Load Capacity:** X< 2.600 daN (6.000 lbs) Y< 1.300 daN (3.000 lbs) Z< 2.200 daN (5.000 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) or walls or structure members running parallel to track. Attachment to interior item is established via flange. Should the fitting be integrated into a honey comb structure it is recommended to use a load distribution plate.





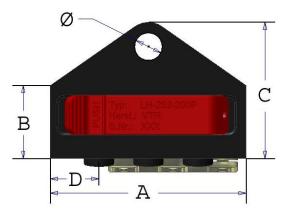
LH-252-200P



Open

Main Dimensions:

Close



Technical Details:

Dimension:*

A: 100,6 mm **D**: 25 mm

B: 37,6 mm **E**: 30 mm

C: 70,1 mm Ø: 14,2 mm

Weight: approx. 425 Gramm approx. 0,94 Lbs Load Capacity:** X< 3.500 daN (7.800 lbs) Y< 2.000 daN (4.400 lbs) Z< 3.500 daN (7.800 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (triple stud) on racks or frame structure. Attachment to interior items is established vie single bolt or tube dia 14 mm. No moment is transferred in xz – plane.





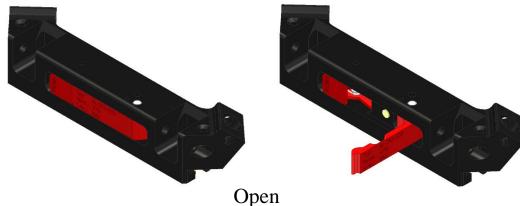




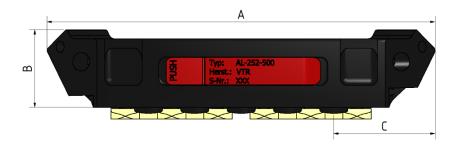


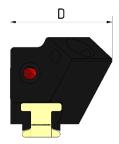


AL-252-500



Close Main Dimensions:





Technical Details:

Dimension:*

A: 213 mm **D**: 50 mm

B: 43 mm

C: 56 mm

Weight: approx. tbd

approx. tbd

Load Capacity:** X< 3.000 daN (6.700 lbs) Y< 1.500 daN (3.300 lbs) Z< 3.000 daN (6.700 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

This is an example for a technical realisation of an individual customer request. Sample shows side facing floor attachment of a parachute jumper seat.





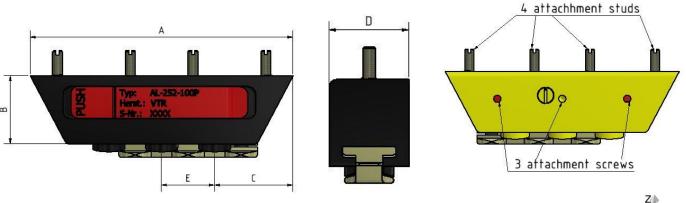
AL-252-100P (-501)



Open

Main Dimensions:

Close



Technical Details:

Dimension:*

A: 126 mm **D**: 30 mm

B: 32,6 mm **E**: 24,4 mm

C: 37,6 mm

<u>Weight:</u> approx. 400 Gramm approx. 0,9 Lbs Load Capacity:** X< 3.600 daN (8.000 lbs) Y< 2.200 daN (5.000 lbs) Z< 3.600 daN (8.000 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

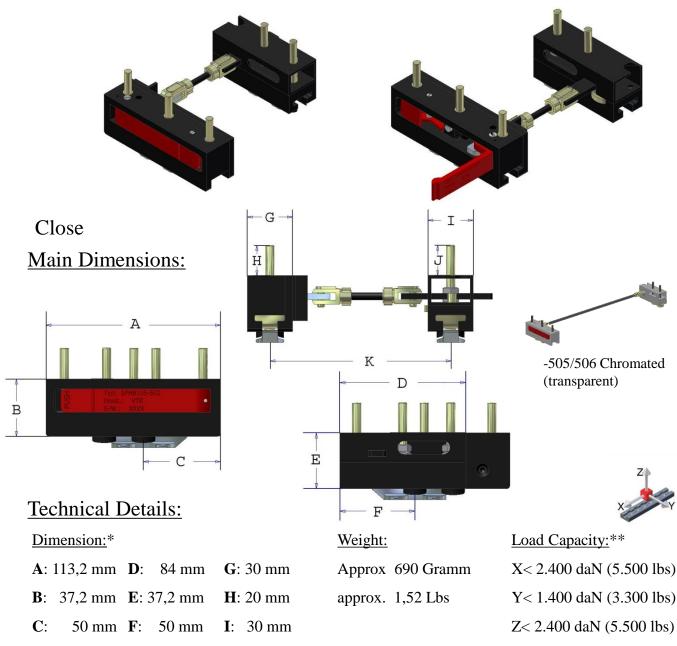
Fitting application (triple stud) on all interior structures as wall or rectangular tube Structrures and as all well flat panel integration (for example bottom panels or cabinets) Attachment to interior item is solved by stand off bolts.



Doghouse Systems



1PHB-105-501/2/5/6



J: 20 mm K: min. 110 mm / max. Variabel

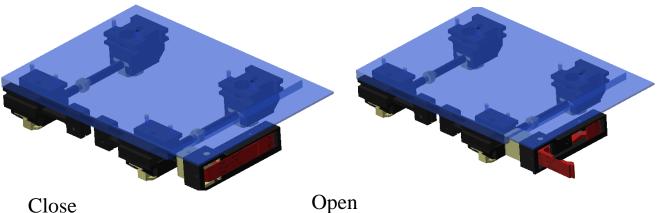
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for pallet systems where only on one side locking access is available. A left and right system is offered with an inboard and outboard locker. Attachment to interior item (pallet or other bottom panel or bottom structure) is solved by stand off bolts.



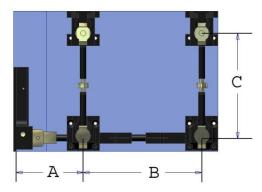


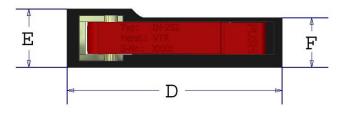
IN-252



Open

Main Dimensions:







Dimension:*	Weig	<u>tht:</u>	Load Capacity:**
A : min. 100 mm/max. Variabel D : 1	02,6 mm appro	ox. 1150 Gramm	X<1.500 daN (3.300 lbs)
B : min. 145 mm/max. Variabel E :	27,9 mm appro	ox. 2,53 Lbs	Y<1.000 daN (2.200 lbs)
C: min. 102,5 mm/max. Variabel F:	23,7 mm		Z<1.500 daN (3.300 lbs)

* FOR DETAILS USE DRAWING ****LOADS ARE CONSIDERED WITHOUT MOMENTS**

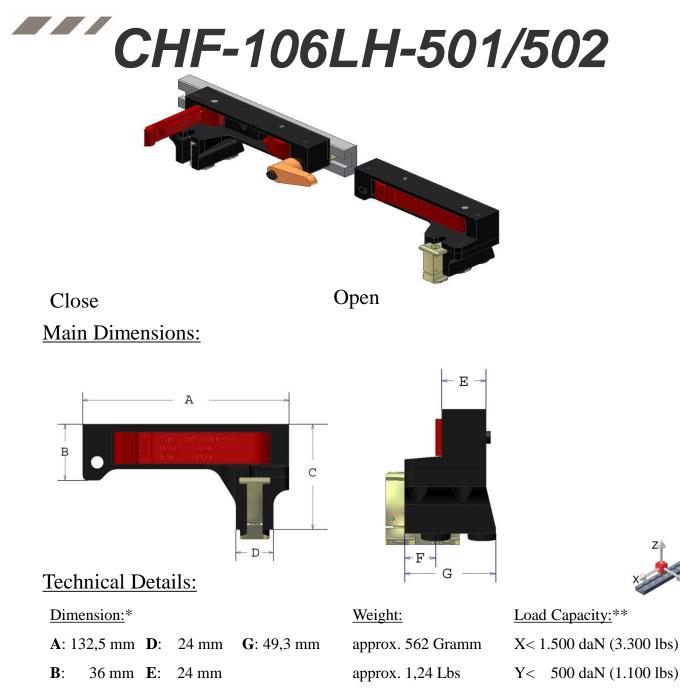
Fitting application (single stud per locker) designed for doghouse fixations where a single actuator operates 4 or 6 locker. The dimensios A,B,C can be chosen by the customer. Since the locker unit runs in an extrusion profile the dimension C(C`) can be adapted to different seat track y- distances. This design detail allows an integration of the interior item into different aircrafts without changing the part.



x

Cross Parts





Z< 1.800 daN (4.400 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

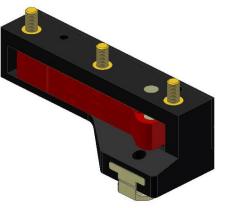
Fitting application (double stud) designed for medical care stations or other cross track items. The L/H fitting is mounted on a Y-profile and is adjustable in a certain range (+/- 5"). This design figure allows the usage of the care station in different aircraft due to the flexible adjustable fitting. The dimension C (height above track) allows the usage with high floor carpets.

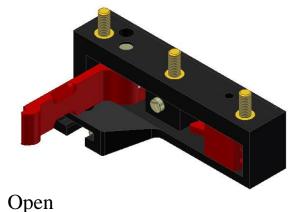
C: 67,5 mm **F**: 16,8 mm



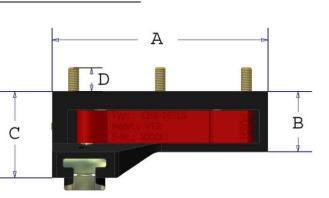


CHB-107LS/RS





Close Main Dimensions:







Technical Details:

Dimension:*

A: 100 mm **D**: 14 mm **G**: 34 mm

B: 28 mm **E**: 20,4 mm

C: 40 mm **F**: 13 mm

<u>Weight:</u> approx. 260 Gramm approx. 0,57 Lbs Load Capacity:** X< 900 daN (2.000 lbs) Y< 600 daN (1.500lbs) Z< 900 daN (2.000 lbs)

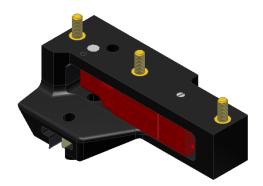
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (single stud) designed for cross to x-direktion walls/stuctures where lower loads shall be transferred. A left and right type is available. Attachment to interior Item is solved by stand off bolts.

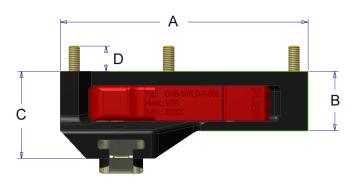


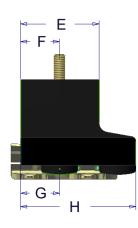
CHB-107RD/LD-A-505

Open



Close Main Dimensions:







Technical Details:

Dimension:*

- A: 107 mm D: 14 mm G: 17 mm
- **B**: 25,5 mm **E**: 34,4 mm **H**: 50,5 mm
- **C**: 37,5 mm **F**: 17 mm

Weight: approx. 360 Gramm approx. 0,8 Lbs

Load Capacity:**
X< 2.500 daN (5.500 lbs)
Y< 1.500 daN (3.300 lbs)
Z< 2.500 daN (5.500 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for cross walls or other structures as well bottom panels. A left and right type is available. Attachment to interior item is solved by stand off bolts.

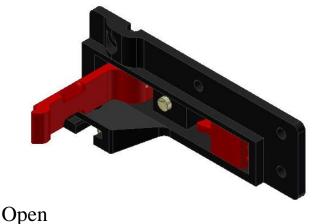




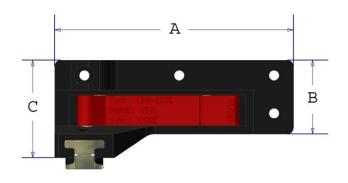


CHF-107RS/LS





Close Main Dimensions:







Technical Details:

Dimension:*

A: 120 mm **D**: 20,4 mm **G**: 34 mm

B: 37 mm **E**: 4 mm

C: 49 mm F: 13 mm

Weight: approx. 190 Gramm

approx. 0,42 Lbs

Load Capacity:** X< 900 daN (2.000 lbs) Y< 500 daN (1.100 lbs) Z< 900 daN (2.000 lbs)

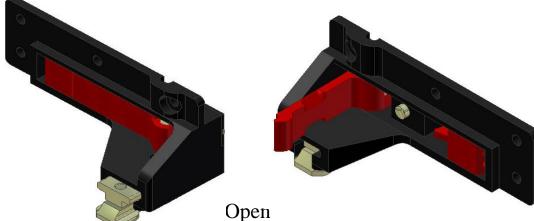
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (single stud) designed for cross to x-direction walls/structures where lower loads shall be transferred. A left and right type is available. Attachment to interior item is solved via flange with #10 holes (dia 5 mm). The fitting shape is tailored where the dimension "C" is limited.

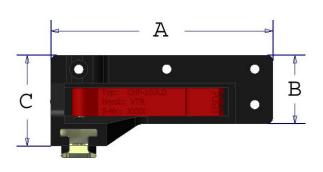


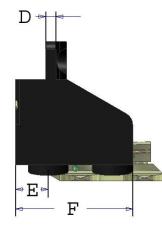


CHF-107RD/LD



Close Main Dimensions:







Technical Details:

Dimension:*

- **A**: 120 mm **D**: 4 mm
- **B**: 37 mm **E**: 13 mm
- **C**: 49 mm **F**: 46,5 mm

Weight: approx. 320 Gramm approx. 0,7 Lbs Load Capacity:** X< 2.400 daN (5.400 lbs) Y< 1.500 daN (3.300 lbs) Z< 2.400 daN (5.400 lbs)

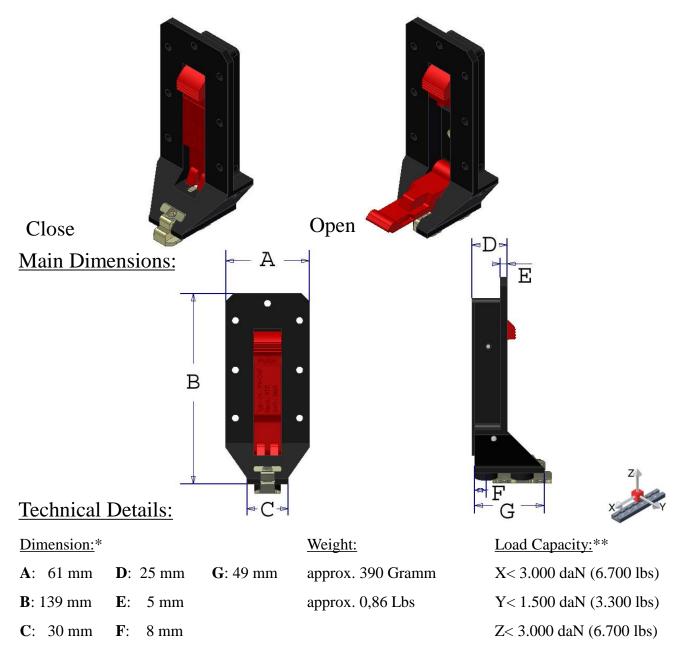
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for cross walls or other structure running in Y direction of the A/C. A left and right type is available. Attachment to the interior items Is solved via flange and screw holes (dia 5 mm).





QC-200-CVF

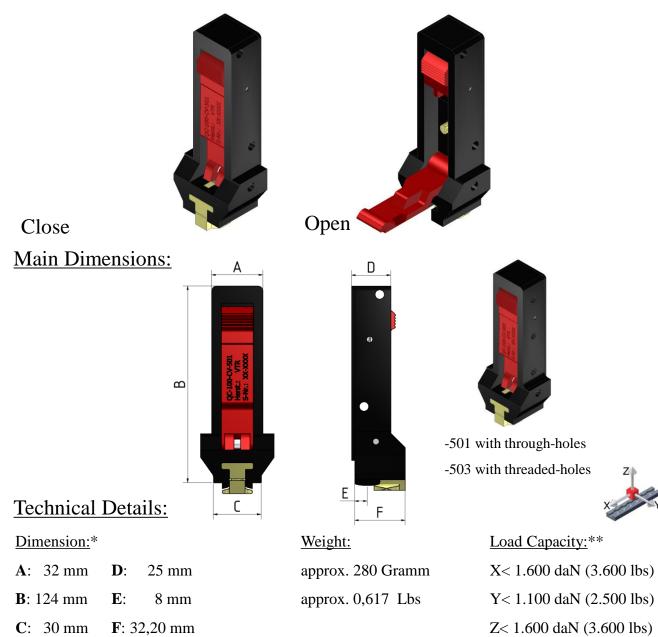


* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for cross walls or other structure running in Y direction or the aircraft. The surrounding attachment flange with 7 attachment holes provides a perfect integration into a honey comb structure. The fitting shape is tailored Where the dimension "A" is limited.



QC-100-CV-501/503

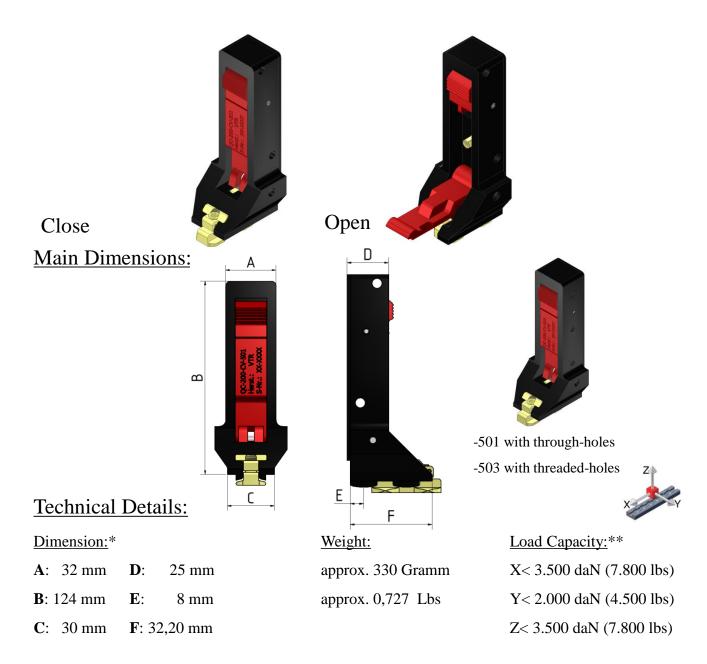


* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (single stud) designed for cross walls or hollow profiles running in Y direction of aircraft. Available with 3 threaded-holes each side for fixation with 6 screws, or 2 through-holes for fixation with 2 bolts/nuts.



QC-200-CV-501/503



* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for cross walls or hollow profiles running in Y direction of aircraft. Available with 3 threaded-holes each side for fixation with 6 screws, or 2 through-holes for fixation with 2 bolts/nuts.



Flexible Panel Parts

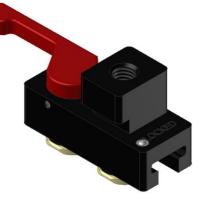




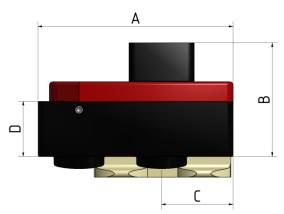
QCT-252-30D

Open





Close Main Dimensions:





Technical Details:

Dimension:*

C: 22 mm

A: 60 mm **D**: 17 mm

B: 35 mm **E**: 25 mm

Weight: approx. 140 Gramm approx. 0,308 Lbs Load Capacity:**

X< 1.600 daN (3.500 lbs) Y< 1.500 daN (3.300 lbs)

Z< 3.000 daN (6.700 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

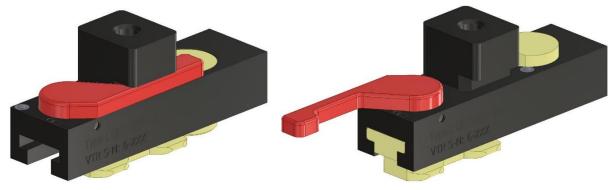
Fitting application (double stud) designed for walls or interior without fixed track direction. The thread on top (size maybe determined) allows fixation even of round structure (showers etc.)



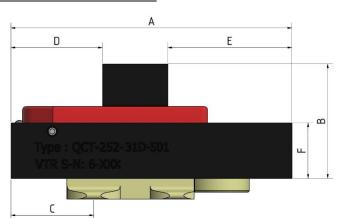


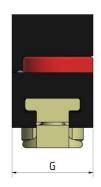


QCT-252-31D-501



Close Main Dimensions: Open







Technical Details:

 Dimension:*
 Weight:
 Load Capacity:**

 A: 86 mm
 D: 28 mm
 G: 25 mm
 approx. tbd
 X< 2000 daN</td>

 B: 35 mm
 E: 38 mm
 approx. tbd
 Y< 1500 daN</td>

 C: 25.30 mm
 F: 17 mm
 Z< 2500 daN</td>

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for walls or interior without fixed track direction. The thread on top (size maybe determined) allows fixation even of round structure (showers etc.). Quick access and relocatability (shifting in track direction) without any tools.



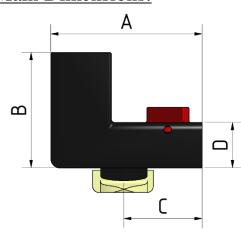
QCT-252-30S

Open

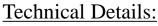




Close Main Dimensions:







Dimension:*

C: 26 mm

A: 50 mm **D**: 15 mm **B**: 38 mm **E**: 25 mm

Weight: approx. tbd approx. tbd Load Capacity:** X< tbd Y< tbd Z< tbd

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (single stud) designed for walls or interior without fixed track direction. The thread on top (size maybe determined) allows fixation even of round structure (showers etc.)

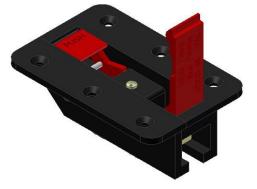






BP-103LH

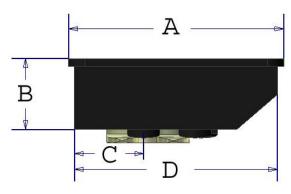


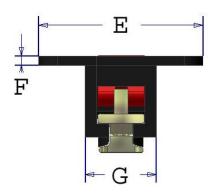


Close

Open

Main Dimensions:





Technical Details:

Dimension:**

- **A**: 106 mm **D**: 100 mm **G**: 30,5 mm
- **B**: 35 mm **E**: 70,5 mm
- **C**: 37 mm **F**: 4 mm

Weight: approx. 336 Gramm approx. 0,74 Lbs Load Capacity:* X< 2.000 daN (4.400 lbs) Y< 1.500 daN (3.300 lbs) Z< 2.000 daN (4.400 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for use on thick bottom panels (~1"). Means integration in all interior items based on a structural bottom panel consisting of honey comb or aluminum or glass reinforced plastics as:

Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where access is provided from inside of the cabinet.

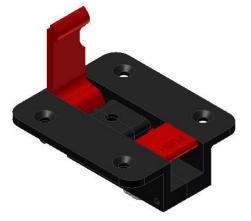




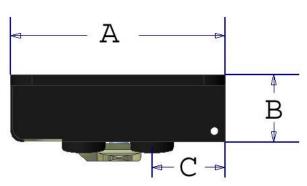
BP-104/80S-501

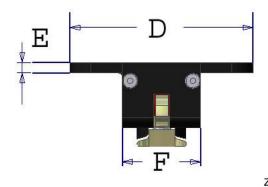
Open





Close Main Dimensions:





Technical Details:

Dimension:*						
A:	80 mm	D :	70 mm			
B :	25 mm	E:	4 mm			

F: 30 mm

C: 27,3 mm

<u>Weight:</u> approx. 205 Gramm approx. 0,45 Lbs Load Capacity:** X< 1.500 daN (3.300 lbs) Y< 1.500 daN (3.300 lbs) Z< 1.500 daN (3.300 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (single stud) designed for use on bottom panels (~ ½" to ¾") with the load to transferable of a single stud. Integration in all interior items based on a structural bottom panel consisting of honey comb or aluminum or glass reinforced plastics as:

Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where access is provided from inside of the cabinet.

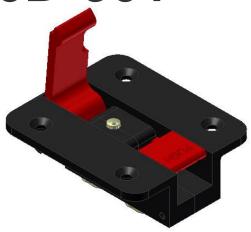




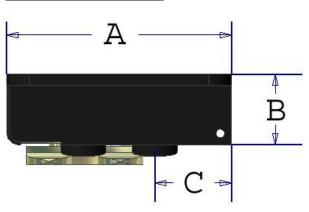
BP-104/80D-501

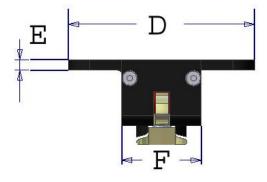
Open





Close Main Dimensions:





Technical Details:

Dimension:*

- **A**: 80 mm **D**: 70 mm
- **B**: 25 mm **E**: 4 mm
- **C**: 27.3 mm **F**: 30 mm

<u>Weight:</u> approx. 310 Gramm approx. 0,68 Lbs Load Capacity:** X< 2.000 daN (4.400 lbs) Y< 1.500 daN (3.300 lbs) Z< 2.000 daN (4.400 lbs)

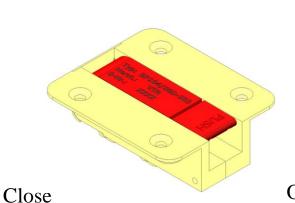
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

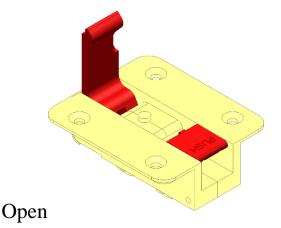
Fitting application (double stud) designed for use on bottom panels (~ ½" to ¾").
 Integration in all interior items based on a structural bottom panel consisting of honey comb or aluminum or glass reinforced plastics as:
 Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where access is provided from inside of the cabinet.



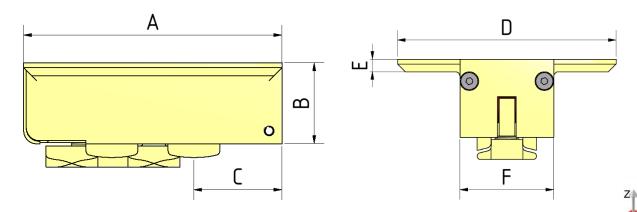


BP-104/80D-503





Main Dimensions:



Technical Details:

Dimer	isioi	<u>1</u> :*

- **A**: 80 mm **D**: 70 mm
- **B**: 25 mm **E**: 4 mm

C: 27,3 mm **F**: 30 mm

Weight:

approx. tbd approx. tbd

Load Capacity:** X< 4.000 daN (8.810 lbs) Y< 3.000 daN (6.607 lbs) Z< 4.000 daN (8.810 lbs)

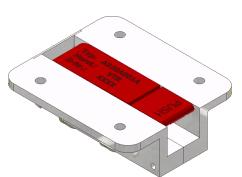
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

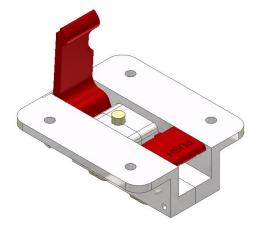
Fitting application (double stud) designed for use on bottom panels (~ ½" to ¾").
 Integration in all interior items based on a structural bottom panel consisting of honey comb or aluminum or glass reinforced plastics as:
 Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where access is provided from inside of the cabinet.





BP-104-80/D-505

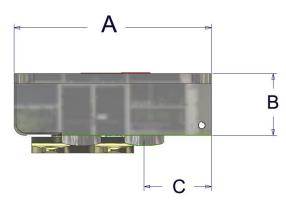


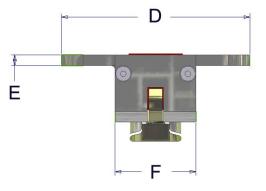


Close

Open

Main Dimensions:





Technical Details:

Dimension:*

- **A**: 80 mm **D**: 70 mm
- **B**: 25 mm **E**: 4 mm

C: 27,3 mm **F**: 30 mm

<u>Weight:</u> approx. 310 Gramm approx. 0,68 Lbs x

Load Capacity:** X< 2.000 daN (4.400 lbs) Y< 1.500 daN (3.300 lbs) Z< 2.000 daN (4.400 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for use on bottom panels (~ ½" to ¾") with a high load to transfer. The housing and all other high loaded members are made from high quality steel. Integration in all interior items based on a structural bottom panel Consisting of honey comb or aluminum or glass reinforced plastics as:
Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where access is provided from inside of the cabinet.





AF-BP104-501

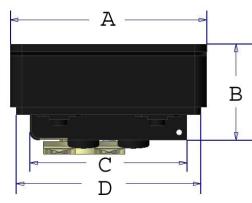


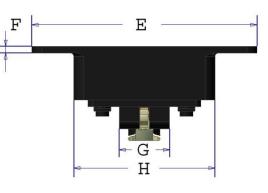


Close

Open

Main Dimensions:





Technical Details:

Dimension:*

C: 80 mm

A: 100 mm **D**: 94 mm **G**: 30 mm

F:

B: 49 mm **E**: 134 mm **H**: 84 mm

4 mm

Weight: approx. 610 Gramm

approx. 1,34 Lbs

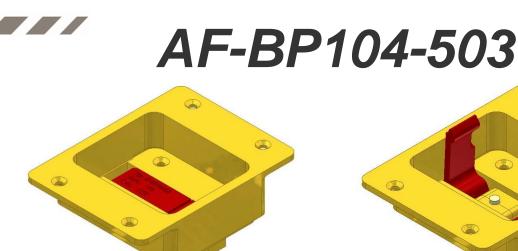
Load Capacity:** X< 1.800 daN (4.000 lbs) Y< 1.000 daN (2.200 lbs) Z< 1.800 daN (4.000 lbs)

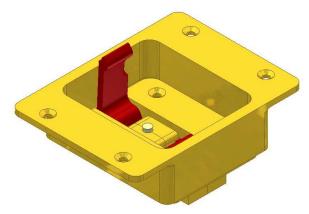
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

For a further necessity of adjustment the core fitting (BP-104) is mounted in a frame housing witch allows X-Y fine adjustment of at least ± 3mm. The frame is available in two height versions. Fitting application (double stud) designed for use on bottom Panels (~ 1/2 to 1"). Integration in all interior items based on a structural bottom Panel consisting of honey comb or aluminum or glass reinforced plastics as:
 Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where Access is provided from inside of the cabinet.





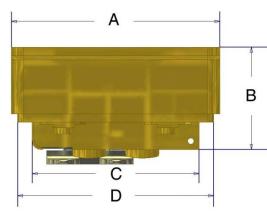


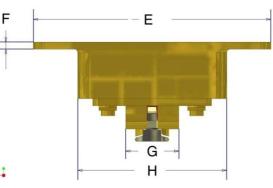


Close

Open

Main Dimensions:





Technical Details:

	Z	
		0
X	-	Y

Dimension:*			Weight:	Load Capacity:**
A : 100 mm	D : 94 mm	G : 30 mm	approx. 1680 Gramm	X< 4.000 daN (8.800 lbs)
B : 49 mm	E : 134 mm	H : 84 mm	approx. 3,7 Lbs	Y< 2.500 daN (5.500 lbs)
C : 80 mm	F : 4 mm			Z< 4.000 daN (8.800 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

For a further necessity of adjustment the core fitting (BP-104) is mounted in a frame housing witch allows X-Y fine adjustment of at least ± 3mm. The frame is available in two height versions. Fitting application (double stud) designed for use on bottom Panels (~ 1/2 to 1"). Integration in all interior items based on a structural bottom Panel consisting of honey comb or aluminum or glass reinforced plastics as: Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where Access is provided from inside of the cabinet.

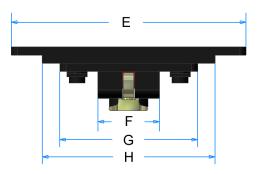








Close Main Dimensions: Open



Technical Details:

Dimension:*

C: 80 mm

- **A**: 100 mm **D**: 84 mm **G**: 67 mm
- **B**: 25 mm **E**: 114 mm **H**: 84 mm

F: 30 mm

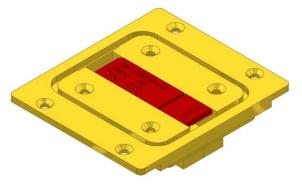
<u>Weight:</u> approx. 470 Gramm approx. 1,03Lbs Load Capacity:** X< 2.200 daN (5.000 lbs) Y< 1.100 daN (2.500 lbs) Z< 2.200 daN (5.000 lbs)

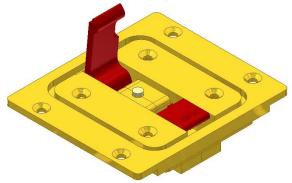
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

For a further necessity of adjustment the core fitting (BP-104) is mounted in a frame housing witch allows X-Y fine adjustment of at least ± 3mm. The frame is available in two height versions. Fitting application (double stud) designed for use on bottom Panels (~ 1/2 to 1"). Integration in all interior items based on a structural bottom Panel consisting of honey comb or aluminum or glass reinforced plastics as: Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where Access is provided from inside of the cabinet.

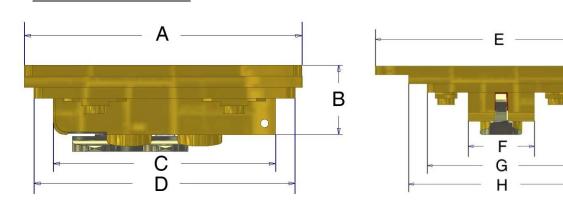








Close Main Dimensions: Open



Technical Details:

Dimension:

C: 80 mm

- **A**: 100 mm **D**: 84 mm **G**: 67 mm
- **B**: 25 mm **E**: 114 mm **H**: 84 mm

F: 30 mm

<u>Weight:</u> approx. 1300 Gramm

approx. 2,87 Lbs

Load Capacity:** X< 2.200 daN (5.000 lbs) Y< 1.100 daN (2.500 lbs) Z< 2.200 daN (5.000 lbs)

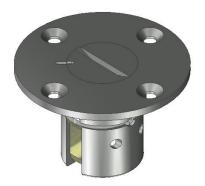
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

For a further necessity of adjustment the core fitting (BP-104) is mounted in a frame housing witch allows X-Y fine adjustment of at least ± 3mm. The frame is available in two height versions. Fitting application (double stud) designed for use on bottom Panels (~ 1/2 to 1"). Integration in all interior items based on a structural bottom Panel consisting of honey comb or aluminum or glass reinforced plastics as: Cabinets, stowage houses, galleys, credenza, toilets and also doghouses where Access is provided from inside of the cabinet.





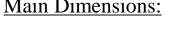
QC-HP-110

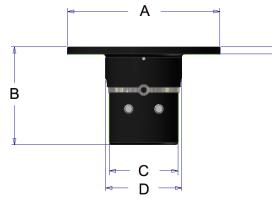


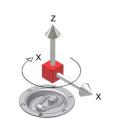


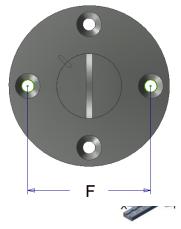
Close Main Dimensions: Open

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Technical Details:

Dimension: ³	*

- **A**: 64 mm **D**: 32 mm
- **B**: 41 mm **E**: 3 mm
- **C**: 30 mm **F**: 49 mm

Weight: approx. 110 Gramm approx. 0,25 Lbs Load Capacity:** X< 600 daN (1.300 lbs) Z< 600 daN (1.300 lbs) Y< 600 daN (1300 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Quick Change panel fitting for flat panel application on helicopters floors, equipped with Pan fitting (MS21234 / MS21235).



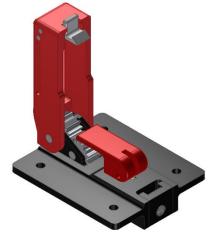




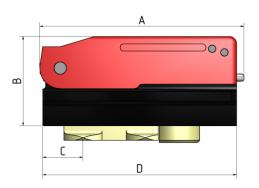
BP110-501

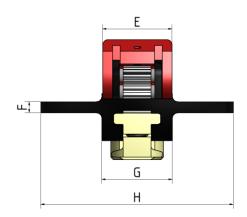
Open





Close Main Dimensions:







Technical Details:

Dimension:*

A: 84 mm **D**: 79 mm **G**: 25,4 mm

B: 36,40 mm **E**: 25 mm

C: 16,40 mm **F**: 4 mm

Weight: approx. 278 Gramm approx. 0,612 Lbs Load Capacity:** X< 2.000 daN (4.400 lbs) Y< 1.500 daN (3.300 lbs) Z< 2.000 daN (4.400 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) designed for use on bottom panels. Integration in all interior items based on a structural bottom panel (all materials) where quick access and relocatability (shifting in track direction) is needed without any tools.



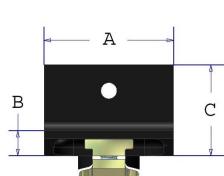


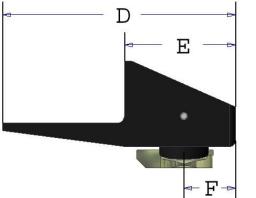
SP108-501/503





Close Main Dimensions: Open





501/503: different housing Dimension in C

Technical Details:

Dimension:*

- **A**: 40 mm **D**: 76,5 mm
- **B**: 7,7 mm **E**: 36,5 mm
- **F**: 17 mm **C-501**: 28 mm

Weight: approx. 150 Gramm

approx. 0,35 Lbs

Load Capacity:** X< 500 daN (1.100 lbs) Y< 500 daN (1.100 lbs) Z< 500 daN (1.100 lbs)

C-503: 30 mm

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (single stud) designed for lower loads in conjunction with a base plate where equipment or other low weight items shall be QC-fixed in an aircraft. Locking or unlocking is achieved means a coin turning the locker wheel 180°.



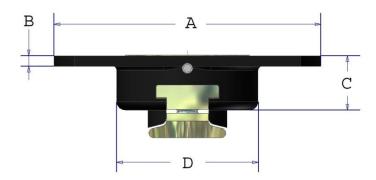


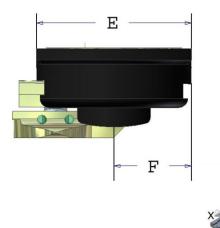
BP108-501





Close Main Dimensions: Open





Technical Details:

Dimension:	k

- **A**: 64 mm **D**: 34 mm
- **B**: 2,5 mm **E**: 34 mm
- **C**: 13 mm **F**: 17 mm

<u>Weight:</u> approx. 75 Gramm approx. 0,17 Lbs Load Capacity:** X< 1.000 daN (2.200 lbs) Y< 800 daN (1.800 lbs) Z< 800 daN (1.800 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS





BP108-503

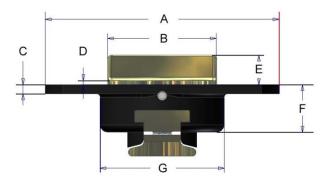




Close

Open



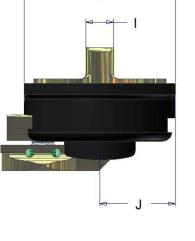


Technical Details:

Dimension:*

- 64 mm E: 8 mm **A**: **H:** 34 mm
- **B**: 29,80 mm **F**: 13 mm 6 mm I:
- C: 2.50 mm G: 34 mm **J**: 17 mm

<u>Weight:</u>
approx. 86 Gramm
approx. 0,19 Lbs



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Load Capacity:**				
X<1.000 daN (2.200 lbs)				
Y< 800 daN (1.800 lbs)				
Z< 800 daN (1.800 lbs)				

D: 1,30 mm

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS





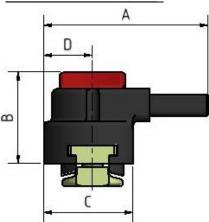
QCR108-501

Open





Close



Technical Details:

Dimension:*

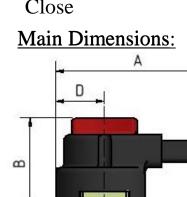
- **E**: 23,7 mm **A**: 50,4 mm
- **B**: 28 mm **F**: 47,4 mm
- **C**: 27.4 mm
- **D**: 14,9 mm

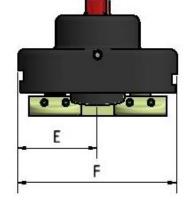
Weight: approx. 105 Gramm approx. 0,231 Lbs

Load Capacity:** X<1.500 daN (3.300 lbs) Y< 900 daN (2.000 lbs) Z< 1.500 daN (3.300 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) for medium loads in conjunction with support profiles (f.e. to carry medical equipment) fixed on tracks mounted to walls or ceilings of AC's or helicopters. Main usage with ambulance outfit.



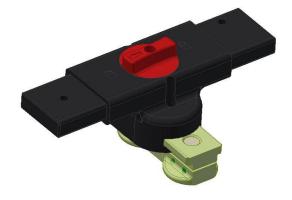


NNDUNGS-TECHNIKEN-RÜTHE

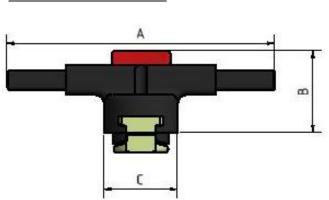


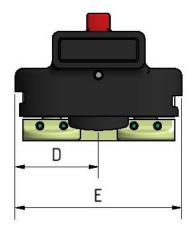
QCR108-503





Close Main Dimensions: Open





Technical Details:

Dimension:*

C: 25 mm

A: 91 mm **D**: 22,5 mm

B: 27,8 mm **E**: 45 mm

<u>Weight:</u> approx. 140 Gramm approx. 0,308 Lbs Load Capacity:** X< 1.500 daN (3.300 lbs) Y< 900 daN (2.000 lbs) Z< 1.500 daN (3.300 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application (double stud) for medium loads in conjunction with support profiles on both sides (f.e. to carry medical equipment) fixed on tracks mounted to walls or ceilings of AC's or helicopters. Main usage with ambulance outfit.











Close Main Dimensions: Open

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D



- 503 without slot in housing

Technical Details:

Dimension:*

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- **A**: 85 mm **D**: 30 mm
- **B**: 19 mm

C: 27,3 mm

Weight: 145 Gramm approx. tbd approx. tbd Load Capacity:** X< 1.000 daN (2.200 lbs) Y< 800 daN (1.800 lbs) Z< 1.000 daN (2.200 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

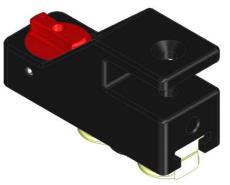
Fitting application for equipment racks provided with ambulance equipped planes or helicopters where vertical tracks are available on the wall. Fitting takes crossbar for the suspension of medical and other equipment.

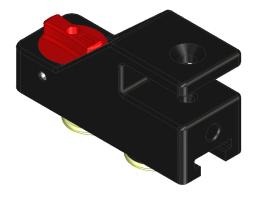






QCR110-501

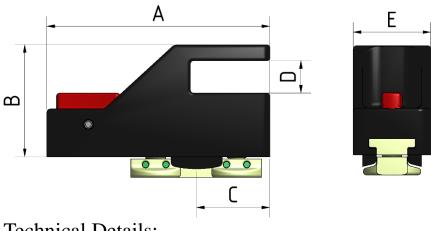




Close



Main Dimensions:



Technical Details:

Dimension:*

D: 10,2 mm **A**: 70 mm

B: 35,2 mm **E**: 25 mm Weight: approx. tbd approx. tbd Load Capacity:** X<1.500 daN (3.300 lbs) Y< 500 daN (1.100 lbs) Z< 1.500 daN (3.300 lbs)

C: 23 mm

> * FOR DETAILS USE DRAWING ****LOADS ARE CONSIDERED WITHOUT MOMENTS**

Fitting application for equipment racks provided with ambulance equipped planes or helicopters where vertical tracks are available on the wall. Fitting takes one (or with slight modification more) extrusion 10x25 for fixation of all kind of medical equipment. 180° turn locking knob





BP108L-501

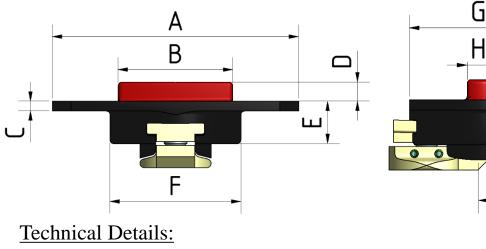




Close

Open

Main Dimensions:



I:

17 mm

D: 5 mm



B: 29,80 mm **F**: 34 mm

C: 2,50 mm **G**: 34 mm

Dimension:*

H: 5,5 mm **A**: 64 mm **E**: 11 mm

Weight: 53 g

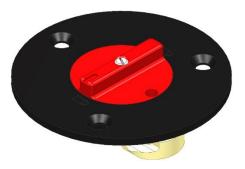
Load Capacity:** X< 500 daN Y< 500 daN Z< 500 daN

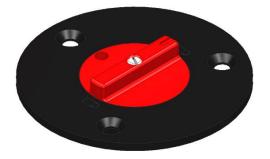
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS





BP108L-503





G

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Close Main Dimensions:



A B B F F F To obviou

Technical Details:

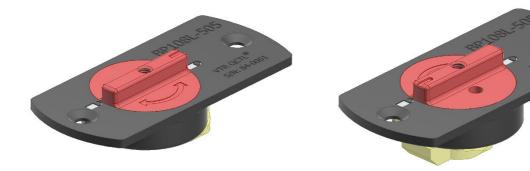
Dimension:*		Weight:	Load Capacity:**
A : 64 mm E : 11 mm	H: 5,5 mm	approx. tbd	X< 500 daN
B : 29,80 mm F : 34 mm	I : 17 mm	approx. tbd	Y< 500 daN
C: 2,50 mm G: 64 mm	D : 5 mm		Z< 500 daN

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS





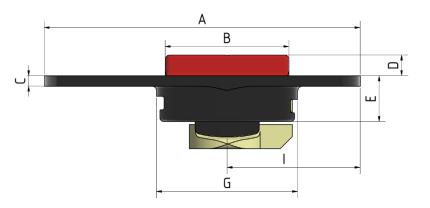
BP108L-505

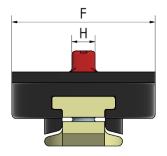


Open

Main Dimensions:

Close





Technical Details:

x

Dimension:*					Weight: 57 g	
A :	76 mm	E:	11 mm	H:	5,5 mm	
B : 29	,80 mm	F:	34 mm	I:	32 mm	
C : 2	.50 mm	G:	34 mm	D:	5 mm	

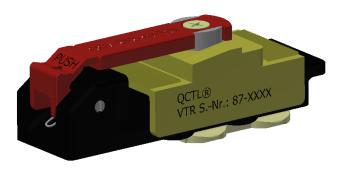
<u>Load Capacity:</u>** X< 500 daN Y< 500 daN Z< 500 daN

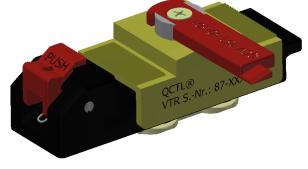
* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS





QCV-252-40-501

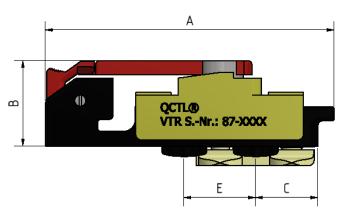




Close



Main Dimensions:



Technical Details:

Dimension:*

- **A:** 106,6 mm **D**: 36,2 mm
- **B**: 30,6 mm **E**: 25,4 mm
- **C**: 22,2 mm **F**: 68,1 mm

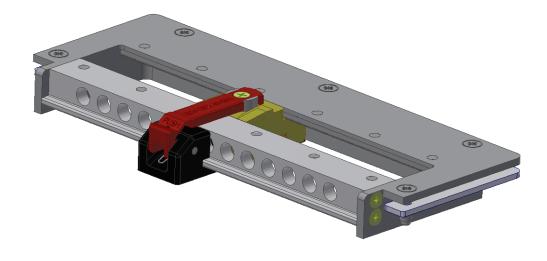
Weight: 317 g

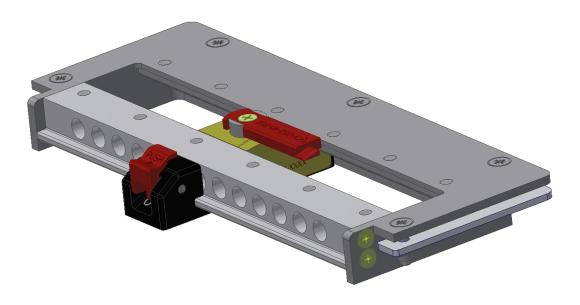
Load Capacity:** X< 1400 daN (3147 lbs) Y< 1400 daN (3147 lbs) Z< 1500 daN (3372 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS



QCV-252-40-501







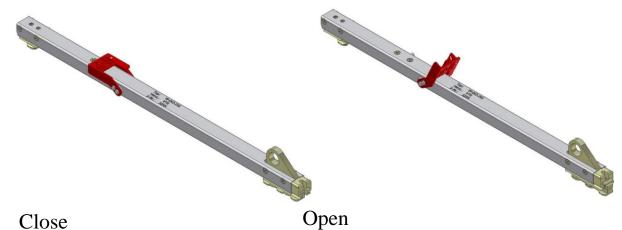


Seat Systems

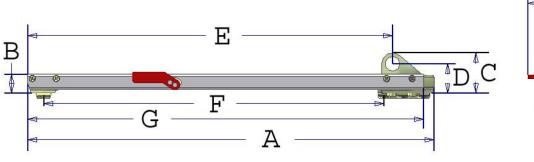


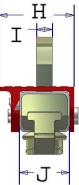


W-202-252



Main Dimensions:







Technical Details:

Dim	nension:*				
A : 5	525,65 mm	D :	37,5 mm	G : 5	12 mm
B :	24 mm	E :	471,9 mm	H : 3'	7,5 mm
C :	51,6 mm	F :	18 mm	I:	8 mm

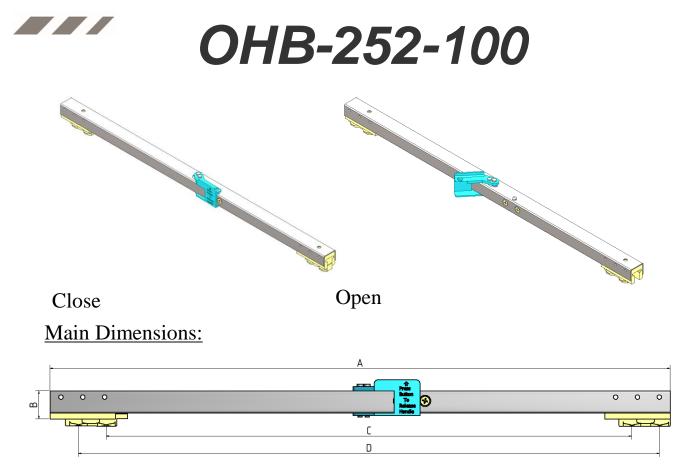
Weight: approx. 880 Gramm approx. 1,94 Lbs Load Capacity:** Depending on Customer Seat Leg Design

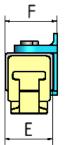
J: 25 mm

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application designed for typical seat legs (forward and aft) attachment. The fitting design connects forward and aft stud assy with a brace which incorporates the locking lever. The customer may also choose a hidden locking system depending on their seat leg design structure. Aft stud assy comprises a triple stud in combination with a ball bearing. Forward stud assy (single) allows screw attachment. Length could be customized.







Technical Details:

Dimension:*

A: 568 mm **D**: 532,2 mm

B: 25,4 mm **E**: 25 mm

C: 481,4 mm **F**: 27,2 mm

Weight: approx. tbd approx. tbd X

Load Capacity:** X< 3.000 daN (6.700 lbs) Y< 2.000 daN (4.500 lbs) Z< 3.000 daN (6.700 lbs)

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application for installing multi shape devices on standard seat tracks on floor or wall. Providing double stud on each side up to 2000 daN per side. Dimensions A / B / C are variable acc custumer request.

Single side latch operation for locking

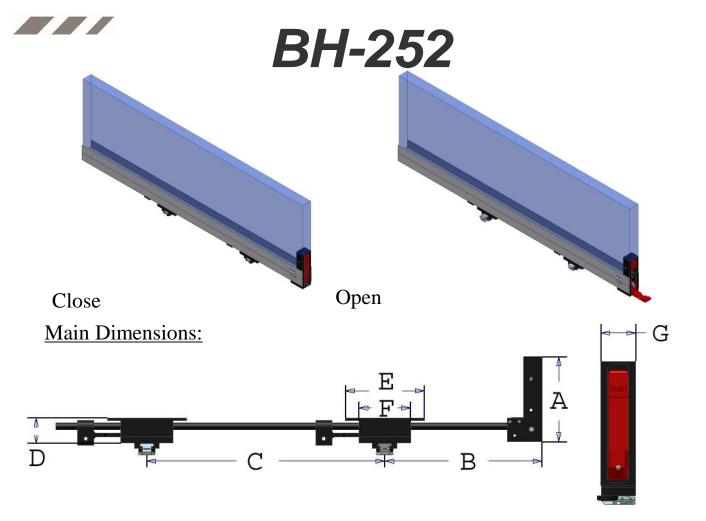
A min = 200 mm





Wall Divider Systems







Technical Details:

Dimension:*

A: 93 mm

87 mm

Approx 600 Gramm E: F: 57 mm approx. 1,32 Lbs

Weight:

Load Capacity:** X<1.500 daN (3.300 lbs) Y< 1.000 daN (2.200 lbs) Z< 1.500 daN (3.300 lbs)

C: min. 162 mm/max. Variabel G: 25,8 mm

B: min. 101,5 mm /max. Variabel

D: 27,5 mm

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Conventional Track Attachment Designed for Bulkhead QC-Application.

Consists of:

- Inboard Actuating Unit

- Connecting Rod (L=TBD)

- Locker (1 Per Track) Sustaining 2000 lbs - Built in Anti Rattle
- The QCTL_® System is Flexibel to different Lateral Track Locations

- No 1/2 inch Shifting

On the Lower Edge of the Bulkhead a small Channel Provides Space to fit the System

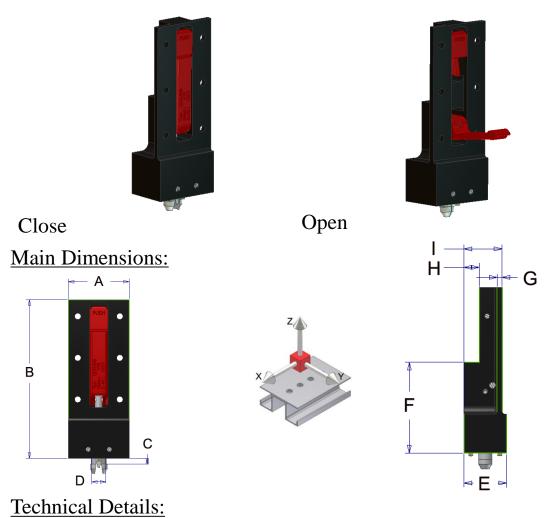


Hole Application





QCH-500



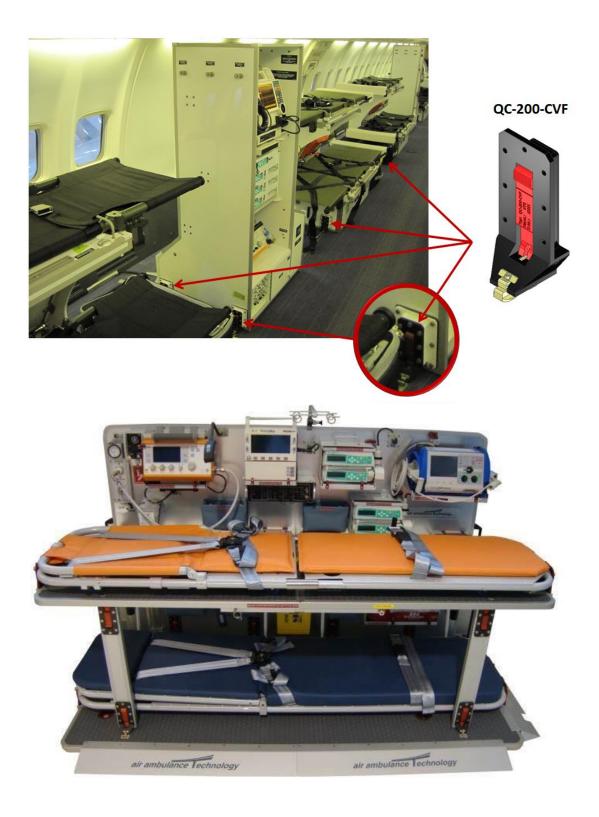
Dimension:*		Weight:	Load Capacity:**
A : 51 mm E : 34,15 mm	D : 10,60 mm	Approx 320 Gramm	X< 2000 daN
B : 134 mm F : 73,30 mm	I : 30,65 mm	approx. 0,7 Lbs	Y< 1500 daN
C : 4,80 mm G : 4 mm	H: 12,45 mm		Z< 2500 daN

* FOR DETAILS USE DRAWING **LOADS ARE CONSIDERED WITHOUT MOMENTS

Fitting application designed for all interior items to be fixed in all directions on the new titanium tracks with holes of 0.4375" (11,1mm) diameter and 1" (25,4mm) spacing.



Exampels & References





Exampels & References



QC-200-CVF











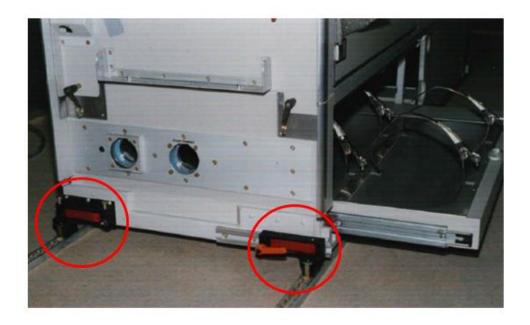


CHF-106LH-501



CHF-106LH-502



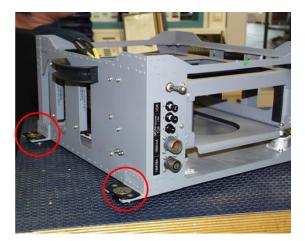






BP108-503





IN-252

















QCTL_® Anwendung im ISS Columbus Labor

z.B. die Fußbodenbefestigung des Trainingsgerätes FLYWHEEL EXERCISE DEVICE für die Astronauten (wurde am 11.02.2008 mit Columbus an die ISS angedockt).

Chefkonstrukteur Peter Schneider bei der Einweisung des Gerätes

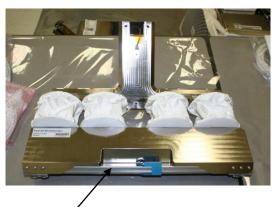


Astronautin Marsha Sue Ivins beim Test des Trainingsgerätes für die Raumstation ISS









 $\text{QCTL}_{\scriptscriptstyle {\scriptsize \! \mathbb{B}}}$ Type OHB-252-100 im ISS Columbus Labor



Fotos: mit freundlicher Genehmigung von OHB-System AG, Bremen und ESA





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