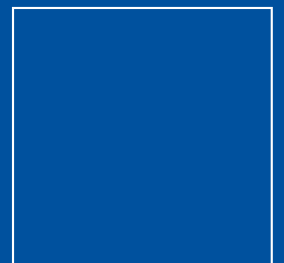
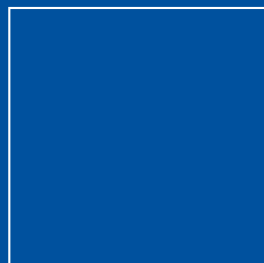
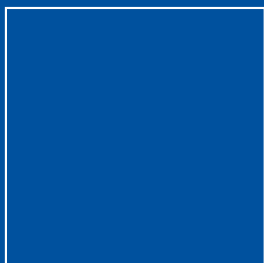
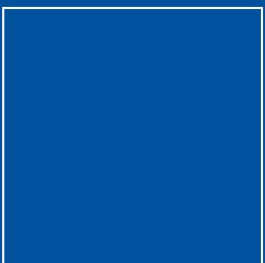
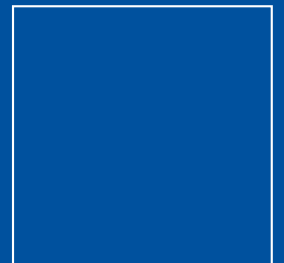
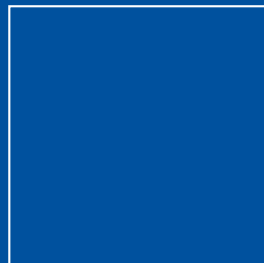
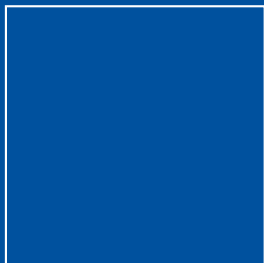
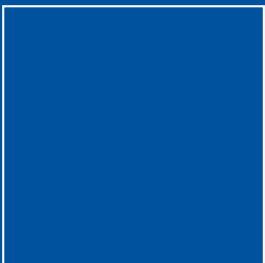


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**AEROSPACE**

**Sicherheit Made in Germany**



**allsafe** **3**

**1.0 Tracks** **6**

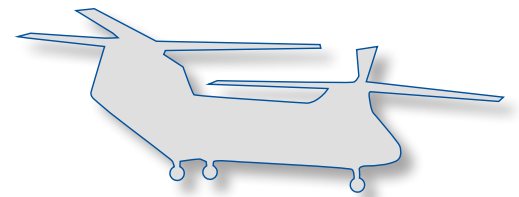
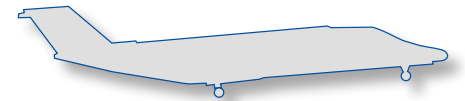
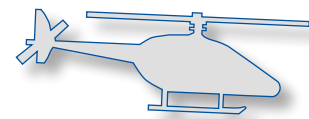
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# Success is a matter of values

*Your satisfaction is important to us  
– we work on that every day.*

*From customer service to personal  
assistance on site.*

*From individual responsibility to  
Total Quality Management, straight  
through the entire organisation.*

Detlef Lohmann,  
Managing Director

Customer focus, innovation, fairness and individual responsibility are the basic values on which we base our actions.

Cost-effectiveness, sustainability and safety guide our thinking, because we believe in these values.

We have made radical changes to many things, but mostly to ourselves. We forge new paths with enthusiasm in order to give our customers the best.

We combine knowledge and experience. Our recipe for success is an active network of select customers and select suppliers.

And with our "Made in Germany" promise, we guarantee brand-name products of the highest quality and utmost safety.

Every day we are driven by our passion for innovation and improvement.

allsafe – company from a different perspective.

# What you get for your money ...



## Safety

- 100 % guaranteed quality assurance according to 6 $\sigma$ -standards
- 100 % reliable delivery from selected German and European suppliers

## Made in Germany

- 25 selected engineers provide first-class design & development skills
- Customized and flexible one-piece flow
- Production of more than 2.500.000 meters of tracks annually on 17 CNC-machines
- 3-time award winner "Top Job 100 best employers" in Germany with more than 260 employees

## Brand-name-product

- 0-error-quota, meaning no liability for you
- Our production facility produces well over 250.000 shoring elements and 1.000.000 Fittings yearly

## Flexibility

- Individualized products with your own part number and logo
- Production of over 10.000 different variations from 30 different base products in a production facility in Engen which covers more than 11.200 square meters
- Track, Belt & Net Configurator



# ... at allsafe



*With over 50 years of expertise in the development and production of load restraint solutions allsafe today enjoys the confidence of its world class customers – from Mercedes-Benz to Airbus.*

*Our aerospace team is specialized on seat and cargo tracks as well as straps an nets and all the related fastening elements – from single stud fittings to complete restraint nets.*

*If the catalogue products do not fulfill your requirements, allsafe is prepared to support you with a customized solution – from the early design phase and first prototypes on to a serial product.*

*Partnership with our international customers means also that you can consult us in the most common languages used in the aerospace industry: English, French, German, Italian and Spanish – we will take care of your request!*

We can do it all, however extra-ordinary  
**allsafe custom made**





# 1.0

## Tracks

### Products custom made

#### Seat and Cargo Tracks

high strength aluminium

page 10-13



#### Airline Tracks

for mock-ups

page 14-16



#### Anchor Plates

high strength aluminium

page 18-19



# Your customized track. Compose it yourself:



## ▶ Total length

Compose your ready-to-install Airline track. We manufacture the tracks to any length required.

## ▶ Mounting holes and starting point



Design the tracks with the appropriate mounting holes and the pitch required.

## ▶ Shape of the ends



Design the end of the track to fit the interior.

## ▶ Customization

allsafe is specialized in the design and production of cabin and cargo seat tracks. A state of the art machinery allows us to offer you a broad range of customized tracks.

Seat and cargo tracks which can be supplied in lengths up to 6.000 mm. Our tracks can be surface treated upon request. Material used is aluminium 7075T6511, 7075T73510 or 7075T73511.

Compose your ready-to-install track. We manufacture the tracks to any length required. Design the tracks with the appropriate mounting holes and individual ends required.

According to your needs we can offer various kind of machining as well as surface treatments (e.g. anodizing according to MIL-A-8625 or primer coating).





#### Tracks according to your specification?

- With our inhouse development and manufacturing we can develop individual tracks according to your specification needs. Just ask us!

#### You need assemblies of seat tracks with special fittings for the duplication of a cabin or cargo floor, e.g. for ballistic protection, VIP equipment or EMS flooring?

- allsafe has developed a range of high strength products allowing quick and easy installation and removal of such elements and can supply complete assemblies, including all necessary surface treatments.

#### You need seat tracks for mock-ups, assembly stations or transport purposes?


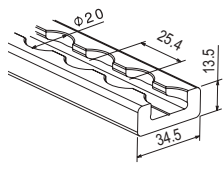

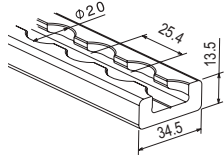

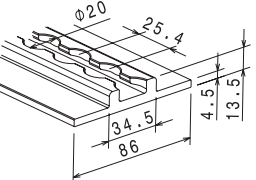

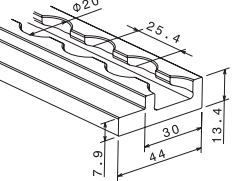

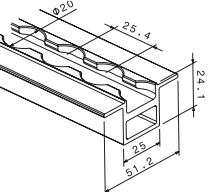
- Please take a look at our pages 14 to 16. We can offer you a wide range of economical aluminium tracks for these purposes.

# Seat and Cargo Tracks

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\*

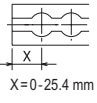
## ► Profile and length

1 - Profile / Length	2 - Starting dimension	3 - Mounting holes	4 - Ends		
		Info	Material	Weight	Order code
	<b>Seat track, rectangular</b> 	For new designs	Aluminium 7075T73511, finish natural, surface treatment available upon request	890 grs/m	120237 rectangular Length mm xxxx (100 -6 000 mm)
	<b>Seat track, rectangular classic</b> 		Aluminium 7075T6511, finish natural, surface treatment available upon request	890 grs/m	71009 rectangular classic Length mm xxxx (100 -6 000 mm)
	<b>Seat track, flange</b> 		Aluminium 7075T73511, finish natural, surface treatment available upon request	1534 grs/m	120416 flange Length mm xxxx (100 -3 400 mm)
	<b>Seat track, one flange</b> 		Aluminium 7075T79511, finish natural, surface treatment available upon request	1010 grs/m	120414 one flange Length mm xxxx (100 -1 700 mm)
	<b>Seat track, hollow</b> 		Aluminium 7075T73511, finish natural, surface treatment available upon request	880 grs/m	120247 hollow Length mm xxxx (100 -3 000 mm)

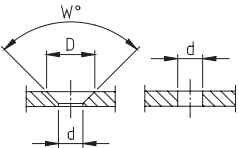
\* fitting according to AS33601 and when track is installed with 10/32 flush screws every 25.4 mm on hole centers, otherwise track load capacity is depending on type and spacing of fasteners used.

**If you need seat tracks for mock-ups, assembly stations or transport purposes please have a look at pages 14 to 16**

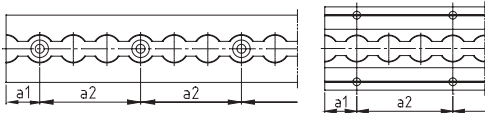
## ▶ Starting point

✓	2 - Starting dimension	3 - Mounting holes	4 - Ends	Order code
				
If not indicated otherwise, the starting point X = 0 mm				

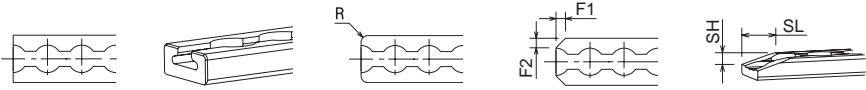
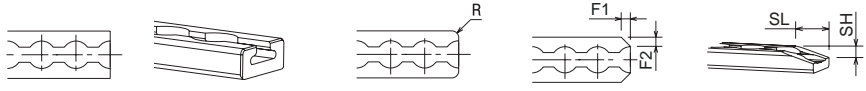
## ▶ Mounting holes

✓	✓	3 - Mounting holes	4 - Ends	Order code					
									
		AS 5	AS 6	D 5.5	D 6.6	D 8.5	N 5	individual	
	W	100°	100°				120°	90° / 100°	
	D	10.7	13.0				12.0	10.0 - 20.0	
	d	5.1	6.6	5.5	6.6	8.5	5.05	5.0 - 9.0	
Please select the type of mounting holes (AS = Countersunk hole, D = Cylindric hole, N = Countersunk hole)									e.g.: AS 6

## ▶ Pitch of mounting holes

✓	✓	3 - Mounting holes	4 - Ends	Order code
				
Ultimate load with fitting according to AS33601 and when track is installed with 10/32 flush screws every 25.4 mm on hole centers, otherwise track load capacity is depending on type and spacing of fasteners used.				
Please specify the pitch of the mounting holes a1 and a2				a1-xx / a2-xx

## ▶ Shape of ends

✓	✓	✓	4 - Ends	Order code
				A – straight A – burred A – R-xx A – F1-xx F2-xx A – SH-xx SL-xx
Please select the shape of the beginning of the track (max. radius or max. F2 = half of track width in mm)				
				E – straight E – burred E – R-xx E – F1-xx F2-xx E – SH-xx SL-xx
Please select the shape of the end of the track (max. radius or max. F2 = half of track width in mm)				

## ▶ Sample order code

Seat track flange - 1497 - AS6 - a1-25.4/a2-50.8 - A-straight - E-straight


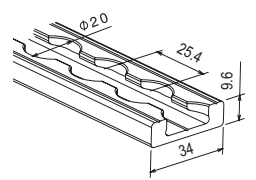

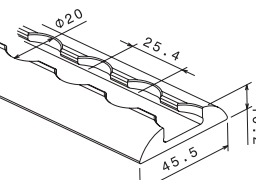
# Seat and Cargo Tracks Medium Duty

Please note:

**Medium Duty Seat Track not entirely conforming with AS33601 or ISO 7166**


Ultimate load:\* vertical 17.78 kN / 4000 lbf horizontal 8.89 kN / 2000 lbf – For compatibility studs please ask!

## ► Profile and length (100 to 6000 mm)

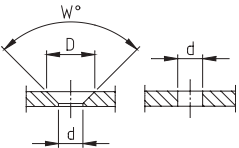
1 - Profile / Length	2 - Starting dimension	3 - Mounting holes	4 - Ends		
		Info	Material	Weight	Order code
					71202
	<b>Seat track MD, rectangular</b>		Aluminium 7075T6511 or T73511, finish natural, surface treatment available upon request	590 grs/m	MD rectangular Length mm xxxx
					71201
	<b>Seat track MD, semicircular</b>		Aluminium 7075T6511 or T73511, finish natural, surface treatment available upon request	800 grs/m	MD semicircular Length mm xxxx

\* when track is installed with 10/32 flush screws every 25.4 mm on hole centers, otherwise track load capacity is depending on type and spacing of fasteners used.

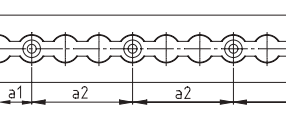
## ▶ Starting point

✓	2 - Starting dimension	3 - Mounting holes	4 - Ends	Order code
				
If not indicated otherwise, the starting point X = 0 mm				

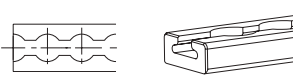
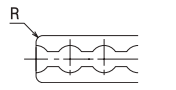
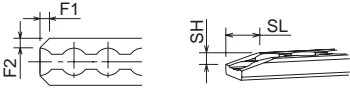
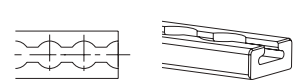
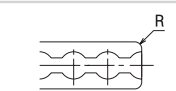
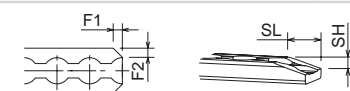
## ▶ Mounting holes

✓	✓	3 - Mounting holes	4 - Ends	Order code																																
		<table border="1"> <thead> <tr> <th></th> <th>AS 5</th> <th>AS 6</th> <th>D 5.5</th> <th>D 6.6</th> <th>D 8.5</th> <th>N 5</th> <th>individual</th> </tr> </thead> <tbody> <tr> <td>W</td> <td>100°</td> <td>100°</td> <td></td> <td></td> <td></td> <td>120°</td> <td>90° / 100°</td> </tr> <tr> <td>D</td> <td>10.7</td> <td>13.0</td> <td></td> <td></td> <td></td> <td>12.0</td> <td>10.0 - 20.0</td> </tr> <tr> <td>d</td> <td>5.1</td> <td>6.6</td> <td>5.5</td> <td>6.6</td> <td>8.5</td> <td>5.05</td> <td>5.0 - 9.0</td> </tr> </tbody> </table>		AS 5	AS 6	D 5.5	D 6.6	D 8.5	N 5	individual	W	100°	100°				120°	90° / 100°	D	10.7	13.0				12.0	10.0 - 20.0	d	5.1	6.6	5.5	6.6	8.5	5.05	5.0 - 9.0		
	AS 5	AS 6	D 5.5	D 6.6	D 8.5	N 5	individual																													
W	100°	100°				120°	90° / 100°																													
D	10.7	13.0				12.0	10.0 - 20.0																													
d	5.1	6.6	5.5	6.6	8.5	5.05	5.0 - 9.0																													
Please select the type of mounting holes (AS = Countersunk hole, D = Cylindric hole, N = Countersunk hole)				e.g.: AS 5																																

## ▶ Pitch of mounting holes

✓	✓	3 - Mounting holes	4 - Ends	Order code
				
<p>Ultimate load with fitting according to AS33601 and when track is installed with 10/32 flush screws every 25.4 mm on hole centers, otherwise track load capacity is depending on type and spacing of fasteners used.</p>				
Please specify the pitch of the mounting holes a1 and a2				a1-xx / a2-xx

## ▶ Shape of ends

✓	✓	✓	4 - Ends	Order code
				A – straight A – burred A – R-xx A – F1-xx F2-xx A – SH-xx SL-xx
Please select the shape of the beginning of the track (max. radius or max. F2 = half of track width in mm)				
				E – straight E – burred E – R-xx E – F1-xx F2-xx E – SH-xx SL-xx
Please select the shape of the end of the track (max. radius or max. F2 = half of track width in mm)				

## ▶ Sample order code

Seat track MD rectangular - 1497 - AS5 - a1-25.4/a2-50.8 - A-straight - E-straight


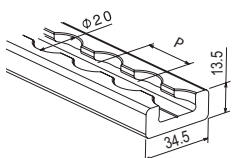

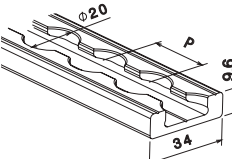

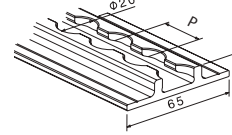

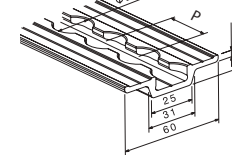

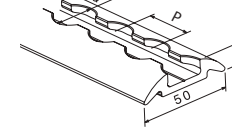

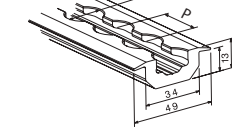

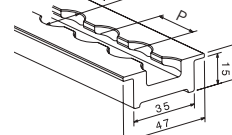


# ■ ■ ■ Airline Tracks for mock-ups

Economical alternative to heavy and medium duty tracks for use in mock-ups, assembly stations or for transport purposes.

Airline Tracks for mock-ups are produced from commercial aluminium alloys and can be used with most fittings corresponding to AS33601 or ISO7166. Machining and surface treatment to your requirements can be offered.

## ► Profile and length (100 to 6000 mm)

1 - Profile / Length	2 - Starting dimension	3 - Mounting holes	4 - Ends	5 - Track cover / End caps		
			Description	Material	Weight	Order code
	<b>Airline track, rectangular</b>			Aluminium	900 grs/m	520829 rectangular Length mm xxxx
						
	<b>Airline track light, rectangular</b>			Aluminium	550 grs/m	520830 light rectangular Length mm xxxx
						
	<b>Airline track, flange</b>			Aluminium	800 grs/m	520856 flange Length mm xxxx
						
	<b>Airline track, with wing</b>			Aluminium	700 grs/m	520923 with wing Length mm xxxx
						
	<b>Airline track, semicircular</b>			Aluminium	710 grs/m	520873 semicircular Length mm xxxx
						
	<b>Airline track, recessed</b>			Aluminium	980 grs/m	520886 recessed Length mm xxxx
						
	<b>Airline tracks, floor track</b>			Aluminium	1160 grs/m	521695 floor track Length mm xxxx
						



## ▶ Starting point

✓	2 - Starting dimension	3 - Mounting holes	4 - Ends	5 - Track cover / End caps	Order code
e.g.: X = 0 mm	e.g.: X = 25.4 mm	e.g.: P = 25.4 mm			
If not indicated otherwise, the starting dimension is X = 0 mm, pitch P = 25.4 mm.					P-25.4

## ▶ Mounting holes

✓	✓	3 - Mounting holes	4 - Ends	5 - Track cover / End caps	Order code						
		AS 5	AS 6	S 5	S 6	D 5.5	D 6.6	D 8.5	N 5	individual	
		W	100°	100°	90°	90°				120°	90° / 100°
		D	10.7	13.0	11.0	13.0				12.0	10.0-20.0
		d	5.1	6.6	5.5	6.6	5.5	6.6	8.5	5.05	5.0-9.0
Please select the type of mounting holes (AS = Countersunk hole, D = Cylindric hole, N = Countersunk hole)					e.g.: AS 5						

## ▶ Pitch of mounting holes

✓	✓	3 - Mounting holes	4 - Ends	5 - Track cover / End caps	Order code
Please specify the pitch of the mounting holes a1 and a2					a1-xx / a2-xx

## ▶ Shape of ends

✓	✓	✓	4 - Ends	5 - Track cover / End caps	Order code
					A – straight A – burred A – R-xx A – F1-xx F2-xx A – SH-xx SL-xx
Please select the shape of the beginning of the track (max. radius or max. F2 = half of track width in mm)					
					E – straight E – burred E – R-xx E – F1-xx F2-xx E – SH-xx SL-xx
Please select the shape of the end of the track (max. radius or max. F2 = half of track width in mm)					

## ▶ Track cover / End caps

✓	✓	✓	✓	5 - Track cover / End caps	Order code
Track cover (not compatible with 71209 and 71224)					Track cover
Plastic end caps. Only in combination with straight ended caps (not compatible with 71207 and 320646)					End caps

## ▶ Sample order code

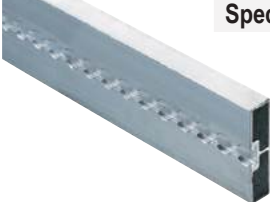
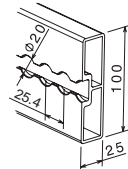

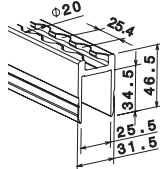

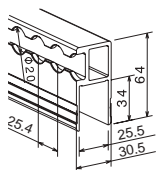

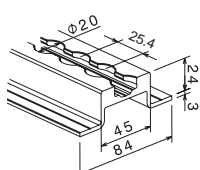
Airline track flange - 997 - P-25.4 - AS5 - a1-25.4/a2-50.8 - A-straight - E-straight - End caps

# Special Airline Tracks for mock-ups

Economical alternative to heavy and medium duty tracks for use in mock-ups, assembly stations or for transport purposes.

Special Airline Tracks for mock-ups are produced from commercial aluminium alloys and can be used with most fittings corresponding to AS33601 or ISO7166. Machining and surface treatment to your requirements can be offered.

## ► Profile and length

1 - Profile / Length		Description	Material	Weight	Order code
		Special Airline track, lashing profile	Aluminium	2100 grs/m	120235 lashing profile Length mm xxxx (220 - 7 200 mm)
		Special Airline track, side board top	Aluminium	1100 grs/m	521523 side board top Length mm xxxx (220 - 6 000 mm)
		Special Airline track, side board side	Aluminium	1300 grs/m	521524 side board side Length mm xxxx (220 - 6 000 mm)
		Special Airline track, 24 mm floor	Aluminium	1670 grs/m	521525 24 mm floor Länge mm xxxx (220 - 7 000 mm)

## ► Sample order code

Airline lashing profile - 1278 

## ■ ■ ■ Customized Airline track



If you do not find  
it in the catalogue –  
ask us!


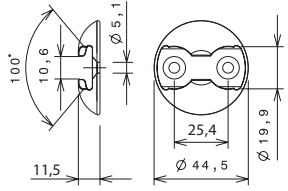
*We design the Airline track you require,  
customized to your specifications.*

# Anchor Plate for Panel and Stanchion Fittings



Ultimate load:  $F_y, F_z$  17,78 kN / 4000 lbf,  $F_x$  8,89 kN (with allsafe single stud 3/8" 40 351-xx)

## Anchor Plate


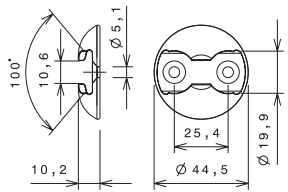

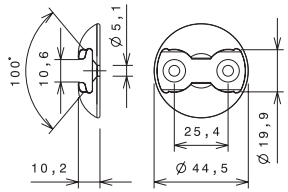

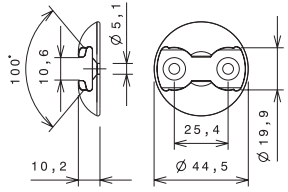

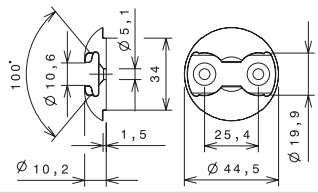
	Description	Material	Weight	Order code
 	<b>Anchor Plate black</b>	Aluminium 7055, anodized, black	24 grs.	122163

# Anchor Plates for Tiedown Single Stud Fittings



Ultimate load: vertical 17,78 kN / 4000 lbf, horizontal 8,89 kN / 2000 lbf (with allsafe tiedown single stud fitting)

## Anchor Plates

	Description	Material	Weight	Order code
 	<b>Anchor Plate grey</b>	Aluminium 7055, anodized, grey	21 grs.	122019 DAN152-1
 	<b>Anchor Plate clear</b>	Aluminium 7055, anodized, clear	21 grs.	122020
 	<b>Anchor Plate red</b>	Aluminium 7055, anodized, red	21 grs.	122021
 	<b>Anchor Plate</b>	Aluminium 7055, anodized, grey	20 grs.	D255-72062-218-00

## Sample order code


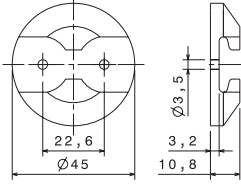

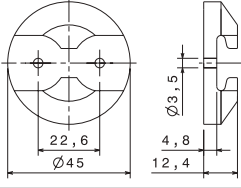

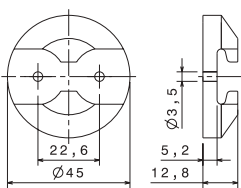

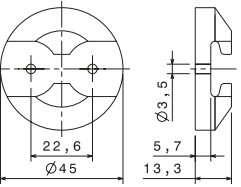

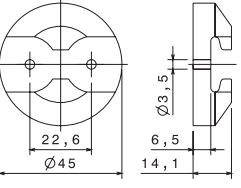

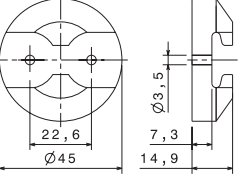
122020



# Anchor Plates for Tiedown Single Stud Fittings

Ultimate load: vertical 17,78 kN / 4000 lbf, horizontal 8,89 kN / 2000 lbf (with fitting according to AS33601)

## ▶ Anchor Plates

	Description	Material	Weight	Order code
 	<b>Anchor Plate DAN152-2</b>	Aluminium 7055, anodized, grey	25 grs.	DAN152-2
 	<b>Anchor Plate DAN152-3</b>	Aluminium 7055, anodized, grey	32 grs.	DAN152-3
 	<b>Anchor Plate DAN152-4</b>	Aluminium 7055, anodized, grey	35 grs.	DAN152-4
 	<b>Anchor Plate DAN152-5</b>	Aluminium 7055, anodized, grey	36 grs.	DAN152-5
 	<b>Anchor Plate DAN152-6</b>	Aluminium 7055, anodized, grey	40 grs.	DAN152-6
 	<b>Anchor Plate DAN152-7</b>	Aluminium 7055, anodized, grey	43 grs.	DAN152-7

## ▶ Sample order code

DAN152-5





# 2.0

## Seat Track Fittings

### PAX Seat Fittings

Quick Change (QC)  
Standard Seat Belt Shackles  
page 22-27



### Flush Fittings

Inch Thread  
Metric Thread  
page 28-31



### Panel and Stanchion Fittings

Quick Change (QC)  
Inch Thread  
Metric Thread  
page 32-43



### Restraint Fittings

page 44-49



# PAX Seat Fittings

Quick Change (QC)

Standard

Seat Belt Shackles







In close collaboration with air-frame and seat manufacturers allsafe has developed in the past years an excellent expertise for the **design and production of passenger seat fittings**.

These fittings bring significant improvement in handling time to our customers, combined with high reliability, excellent performance / weight ratio and economical production processes.

Today we are already working on solutions that are scheduled to enter into service in the next decade, responding to the requirements for reduced installation time as well in the Final Assembly Line as for reconfiguration. These products will feature integrated fastening solutions, adapted to the specific seat design.

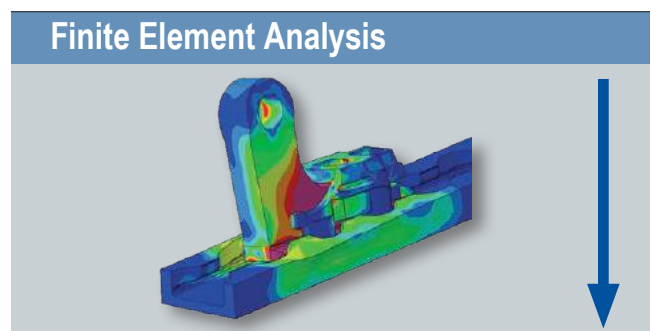
If you would like to benefit from our know-how we would be pleased to discuss your projects with you – allsafe is committed to support you from the early design phase with first prototypes until full qualification of serial products.



## Customer demand



## Design



## Finite Element Analysis



## Testing



## Series production & Packaging

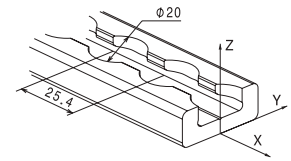


## Delivery

Seat Track Fittings


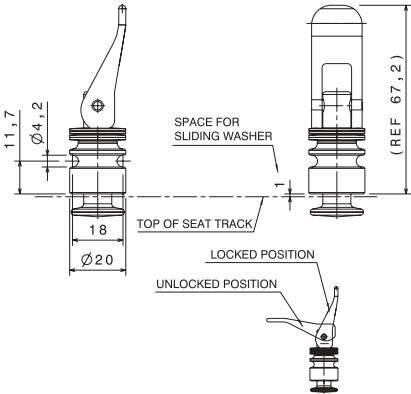

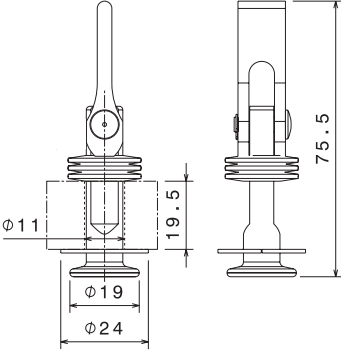


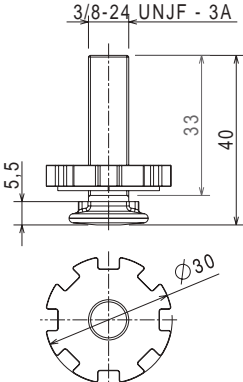
# PAX Seat Fittings

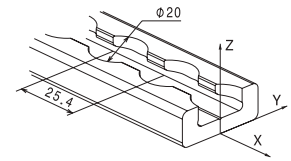
Integrated function combined with an interesting strength-weight-ratio.




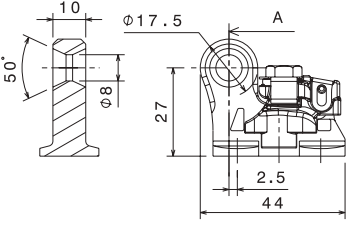

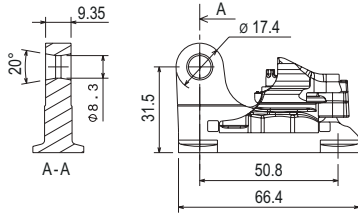

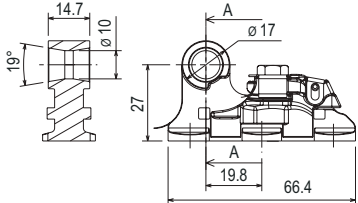

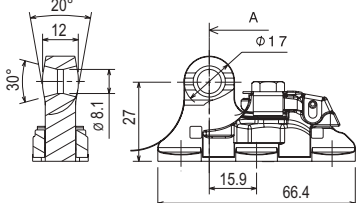

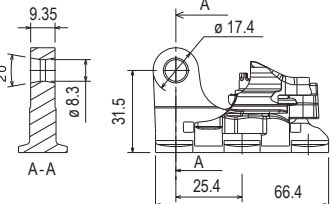

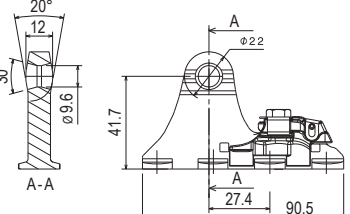
## ▶ Front Leg Seat Fittings



	Description	Material	Weight	Order code
<p><b>Front Leg QC Fitting</b></p>  	<p>To be incorporated into the front seat leg</p> <p>Geometry can be adapted to customers requirements</p>	<p>Stud: CRES, passivated</p> <p>Body and lever: aluminium, anodized</p>	51 grs.	110089-10
<p><b>Front Leg QC Fitting (loose item kit)</b></p>   	<p>To be incorporated into the front seat leg</p> <p>tested according to Airbus seat load spectra requirements for: A 320, A 330, A 350, A 380</p> <p>special lengths or different lever-design available upon request</p>	<p>Stud: zinc-nickel plated</p> <p>Lever: aluminium, anodized</p>	45 grs.	114211-10
<p><b>Front Leg Fitting</b></p>  	<p>To be incorporated into the front seat leg</p>	<p>Stud: zinc plated</p> <p>Nut: aluminium, anodized</p>	32 grs.	110937-10



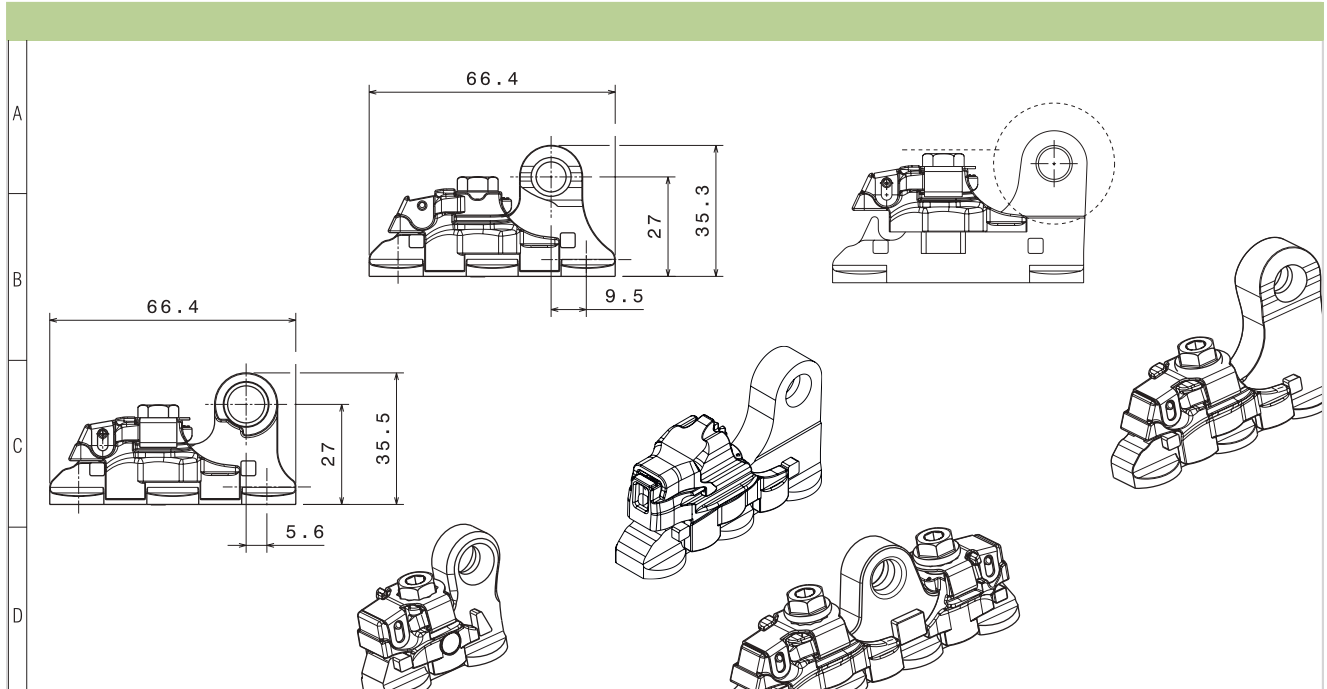
## ► Rear Leg Seat Fittings

	Description	Material	Weight	Order code
 	<b>Rear Leg Double Stud Fitting</b> For high load 16 g applications Ultimate load: * $F_{XZ45^\circ} > 45.0 \text{ kN} / 10100 \text{ lbf}$ interchangeable with 160035-10	Body and plunger: steel, zinc-nickel plated	98 grs.	112002-10
 	<b>Rear Leg Double Stud Fitting – Easy installation</b> For high load 16 g applications Individual load tests available upon request	Body and plunger: steel, zinc-nickel plated	165 grs.	112002-41
 	<b>Rear Leg Triple Stud Fitting</b> For high load 16 g applications Ultimate load: * $F_{XZ45^\circ} > 50.0 \text{ kN} / 11250 \text{ lbf}$ interchangeable with 160036-20	Body and plunger: steel, zinc-nickel plated	149 grs.	112003-10
 	<b>Rear Leg Triple Stud Fitting</b> For high load 16 g applications Ultimate load: * $F_{XZ45^\circ} > 50.0 \text{ kN} / 11250 \text{ lbf}$	Body and plunger: steel, zinc-nickel plated	146 grs.	112003-20
 	<b>Rear Leg Triple Stud Fitting – Easy installation</b> For high load 16 g applications Ultimate load: * $F_{XZ45^\circ} > 50.0 \text{ kN} / 11250 \text{ lbf}$	Body and plunger: steel, zinc-nickel plated	173 grs.	112003-41
 	<b>Rear Leg Quattro Stud Fitting</b> For high load 16 g applications Ultimate load: * $F_{XZ45^\circ} > 50.0 \text{ kN} / 11250 \text{ lbf}$	Body and plunger: steel, zinc-nickel plated	173 grs.	112004-10

**Other configurations:  
Available upon request,  
ask us!**

\* when installed in heavy duty track according to AS33601 with appropriate fasteners

► Other configurations: Available upon request, ask us!



► Spare parts


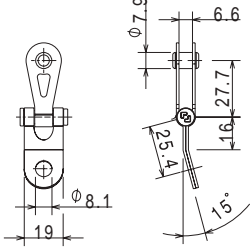
		Order code
	Rear Leg Double Stud Fitting	160035-10
	Rear Leg QC Triple Stud Fitting	160036-10
	Rear Leg QC Triple Stud Fitting	160036-20
	Rear Leg QC Quadruple Stud Fitting	160037-10

# Seat Belt Shackles



These Shackles are used to fix the passenger restraint belt to the seat structure. The Seat Belt Shackles are designed to incorporate high strength and low profile design with today's generation of lightweight seats.

## ▶ Seat Belt Shackles for PAX Seats

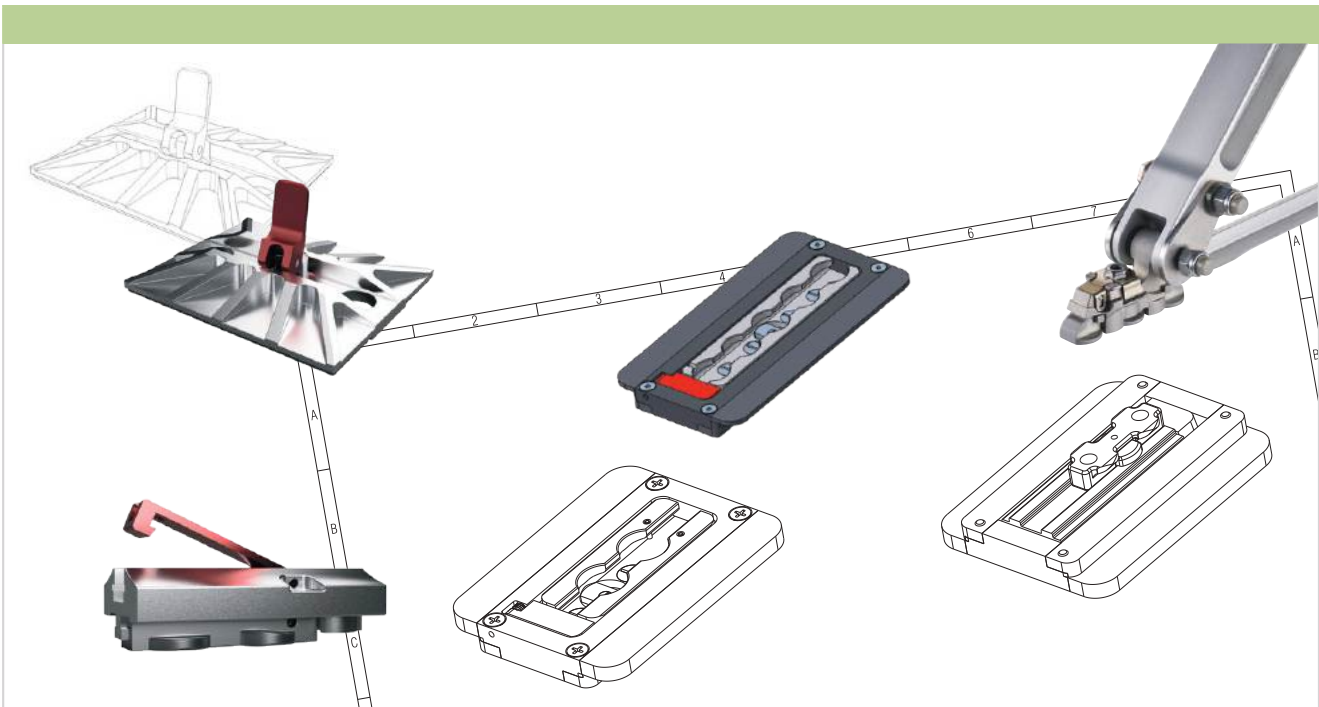
	Description	Material	Weight	Order code
 	<b>Seat Belt Shackle 15° Reinforced</b>  Supersedes P/N 41 713-31,  Ultimate load: > 16 kN / 3500 lbf	Stainless steel	30 grs.	110713-31
	<b>Seat Belt Shackle 15° Reinforced</b>  Supersedes P/N 41 713-32,  Ultimate load: > 16 kN / 3500 lbf			110713-32

Seat Track Fittings

# Special Fittings

Are you looking for a fitting solution for a special requirement? No problem! Our engineering department is specialized in development and testing of all types of fittings for aircraft seat tracks.

## ▶ Special requirements: Challenge us!

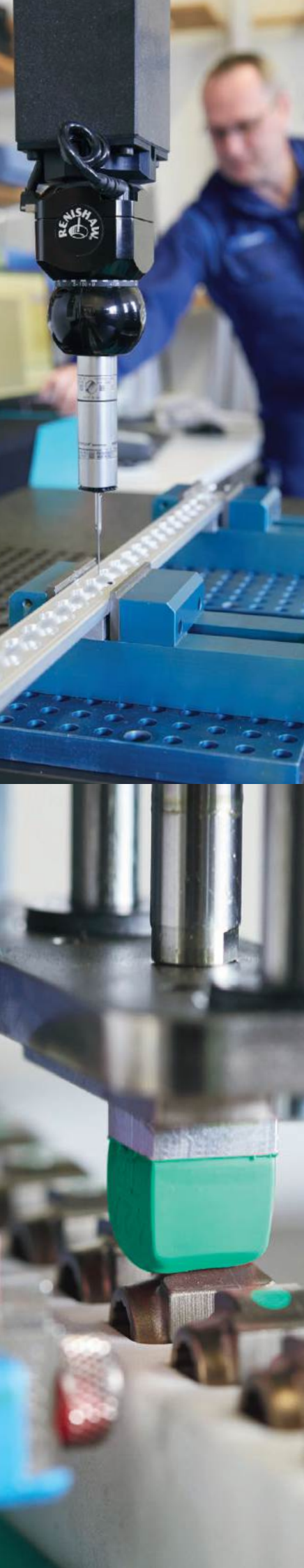


# Flush Fittings

Inch Thread

Metric Thread





For all applications with low and medium loads requiring fittings that do not protrude out of the seat track.

Available with inch and metric thread.

Metric thread is ideal for applications in A400M and NH90.

---

**Flush fitting, single stud**



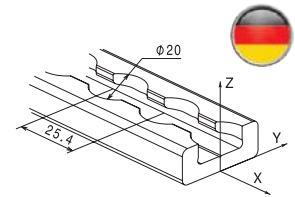
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**Flush fitting, double stud**


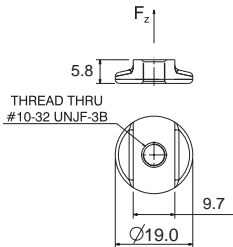

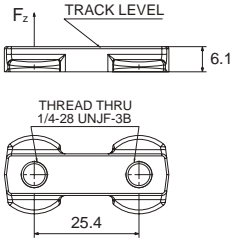

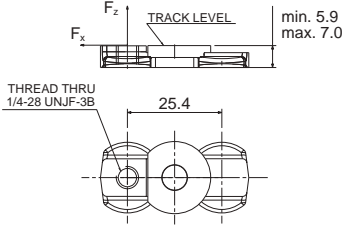

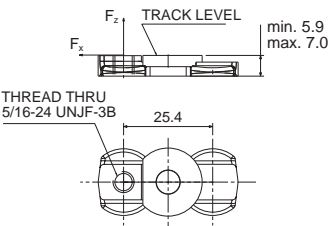

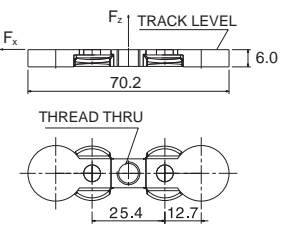


# Flush Fittings · Female Inch Thread

For all applications with low and medium loads requiring fittings that do not protrude out of the seat track.



## ► Flush Fittings

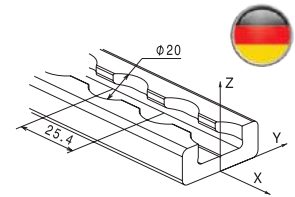
	Description	Material	Weight	Order code
	<p><b>Flush 10/32" F Fitting</b></p>  <p>Single stud  <b>-10 Thread</b>                      #10-32 UNJF-3B with thread lock  <b>-11 Thread</b>                      #10-32 UNJF-3B                      Ultimate load: *  <math>F_z &gt; 15.0 \text{ kN} / 3400 \text{ lbf}</math></p>	Alloy steel, heat-treated and zinc-plated	9 grs.	42 922-  -10  -11
	<p><b>Flush 2x 1/4" F Fitting</b></p>  <p>Double stud                      Thread                      1/4-28 UNJF-3B                      Ultimate load: *  <math>F_z &gt; 17.8 \text{ kN} / 4000 \text{ lbf}</math>                      per thread hole, total  <math>35.6 \text{ kN} / 8000 \text{ lbf}</math></p>	Forged steel 4140, heat-treated and zinc-plated	20 grs.	42 615-10
	<p><b>Flush 1/4" F Fitting</b></p>  <p>Double stud with retainer                      Thread                      1/4-28 UNJF-3B                      Ultimate load: *  <math>F_x &gt; 7.6 \text{ kN} / 1700 \text{ lbf}</math>  <math>F_y &gt; 7.6 \text{ kN} / 1700 \text{ lbf}</math>  <math>F_z &gt; 19.1 \text{ kN} / 4300 \text{ lbf}</math></p>	Body: forged steel 4140 Retainer: alloy steel, heat treated and zinc-plated	22 grs.	42 182 -10
	<p><b>Flush 5/16" F Fitting</b></p>  <p>Double stud with retainer                      Thread                      5/16-24 UNJF-3B                      Ultimate load: *  <math>F_x &gt; 19.8 \text{ kN} / 4450 \text{ lbf}</math>  <math>F_y &gt; 19.8 \text{ kN} / 4450 \text{ lbf}</math>  <math>F_z &gt; 20.9 \text{ kN} / 4700 \text{ lbf}</math></p>	Body: forged steel 4140 Retainer: alloy steel cad-plated	22 grs.	110413-10
	<p><b>Flush 1/4" F Center Fitting</b></p>  <p>Double stud centered thread hole, double retainer                      Thread                      1/4-28 UNJF-3B                      Ultimate load: *  <math>F_x &gt; 12.7 \text{ kN} / 2850 \text{ lbf}</math>  <math>F_y &gt; 11.2 \text{ kN} / 2500 \text{ lbf}</math>  <math>F_z &gt; 18.2 \text{ kN} / 4090 \text{ lbf}</math></p>	Body: forged steel 4140, heat-treated and zinc-plated Retainer: aluminium, anodized	26 grs.	110074-10

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually


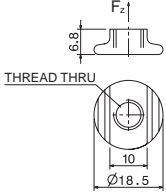

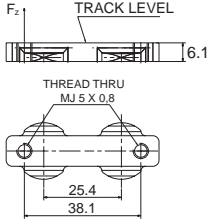

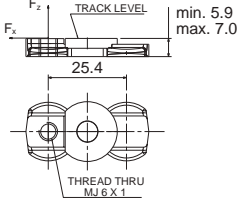

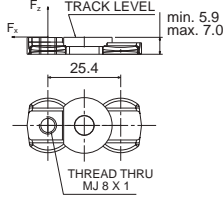

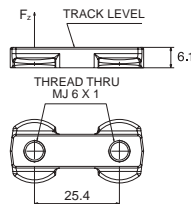

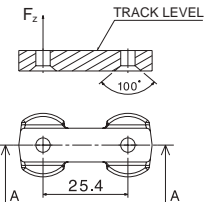


# Flush Fittings - Female Metric Thread

Ideal for applications in A400M and NH90.



## ► Flush Fittings

	Description	Material	Weight	Order code
	<b>Flush MJ6 / MJ8 F Fitting</b>  	Single stud Thread: -10 MJ6x1 -11 MJ8x1 MJ8x1 thread lock Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	CRES, passivated  11 grs.	120233- -10 -11  120284-51
	<b>Flush 2x MJ5 F Fitting</b>  	Double stud Thread: 2x MJ5x0.8 Ultimate load: * $F_z > 15.0 \text{ kN} / 3350 \text{ lbf}$	CRES, passivated  27 grs.	120236-10
	<b>Flush MJ6 F Fitting</b>  	Double stud Thread: MJ6x1 Ultimate load: * $F_x > 10.0 \text{ kN} / 2250 \text{ lbf}$ $F_y > 10.0 \text{ kN} / 2250 \text{ lbf}$ $F_z > 20.0 \text{ kN} / 4500 \text{ lbf}$	Forged steel 4140, heat-treated and zinc-plated  22 grs.	110185 -10
	<b>Flush MJ8 F Fitting</b>  	Double stud Thread: MJ8x1 Ultimate load: * $F_x > 20.0 \text{ kN} / 4500 \text{ lbf}$ $F_y > 20.0 \text{ kN} / 4500 \text{ lbf}$ $F_z > 30.0 \text{ kN} / 6750 \text{ lbf}$	Forged steel 4140, heat-treated and zinc-plated  22 grs.	110185-11
	<b>Flush 2x MJ6 F Fitting</b>  	Double stud Thread: 2 x MJ6x1 Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$ per thread hole	Forged steel 4140, heat-treated and zinc-plated  20 grs.	120615-40
	<b>Flush 2x5 / 2x6 F Fitting</b>  	Double stud 2 countersunk holes: -10 for MJ4 -11 for MJ5	Forged steel 4140, heat-treated and zinc-plated  21 grs.	120220  -10 -11

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

# Panel and Stanchion Fittings

Quick Change (QC)

Inch Thread

Metric Thread





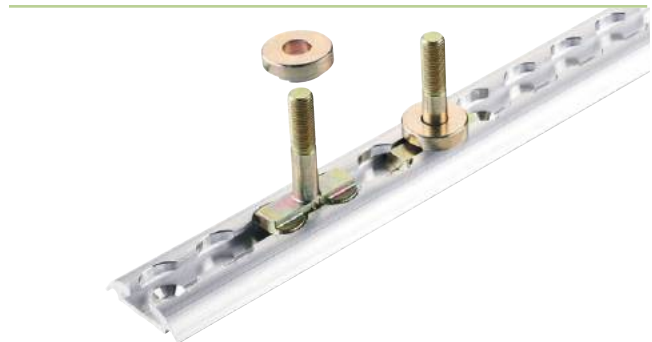
Panel and Stanchion fittings are used for all type of installations on seat and cargo tracks of fixed wing airplanes and helicopters, either for commercial or military use.

In addition to the wide range of standard seat track fittings allsafe is constantly expanding its portfolio with innovative solutions.

Future cabin interior will need more and more integration of the attachment functions. allsafe is listening to the customer's requirements and prepared to support you - **from the early design phase until full qualification of serial products.** Benefit from our expertise and consult us for your coming projects!



Installation of no-loose-parts fitting



Installation of stud fitting with retainer

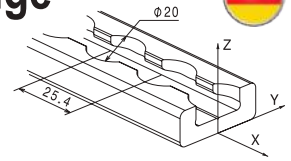


Installation of no-loose-parts fitting P/N 110057

# Panel and Stanchion Fittings - Quick Change



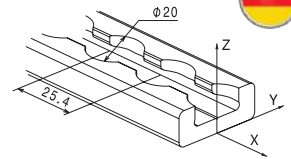
Gives you reliable and easy to lock and unlock connection for almost all applications.  
Please ask our staff for adaptations and load specifications.



## ► Tool-less operation

		Description	Material	Weight	Order code
		<p><b>Triple Stud QC Fitting - slidable</b></p> <p>Triple stud fitting For stretchers and similar applications, tool-less operation Ultimate load: * <math>F_x &gt; 5.0 \text{ kN} / 1100 \text{ lbf}</math> <math>F_y &gt; 2.0 \text{ kN} / 450 \text{ lbf}</math> <math>F_z &gt; 20.0 \text{ kN} / 4500 \text{ lbf}</math></p>	<p>CRES and aluminium</p>	<p>185 grs.</p>	<p>110095-10</p>
		<p><b>Single Stud QC Fitting</b></p> <p>Single stud fitting For lateral attachments, tool-less operation Ultimate load: * <math>F_x &gt; 10.0 \text{ kN} / 2250 \text{ lbf}</math> <math>F_y &gt; 2.5 \text{ kN} / 550 \text{ lbf}</math> to <math>10.0 \text{ kN} / 2250 \text{ lbf}</math> <math>F_z &gt; 10.0 \text{ kN} / 2250 \text{ lbf}</math> depending on stiffness of attachment</p>	<p>CRES and aluminium</p>	<p>86 grs.</p>	<p>110099-20</p>
		<p><b>Double Stud QC 3/8" F Fitting - slidable</b></p> <p>Tool-less operation not rattle free Ultimate load: * <math>F_x &gt; 25.0 \text{ kN} / 5600 \text{ lbf}</math> <math>F_y &gt; 15.0 \text{ kN} / 3350 \text{ lbf}</math> <math>F_z &gt; 10.0 \text{ kN} / 2250 \text{ lbf}</math></p>	<p>CRES, zinc-nickel plated and aluminium, anodized</p>	<p>122 grs.</p>	<p>110939-11</p>
		<p><b>Single Stud QC Fitting -10</b></p> <p>Fitting with bracket, tool-less operation</p>	<p>CRES and aluminium</p>	<p>87 grs.</p>	<p>-10</p>
				<p>87 grs.</p>	<p>-11</p>
					<p>-12</p>

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually



► Tool-less operation

		Description	Material	Weight	Order code
<b>Single Stud QC Fitting</b>					
	-20	Fitting with bracket, tool-less operation	CRES and aluminium	77 grs.	110088-
	-21				-20
	-22				-21
	-23				-22
	-23			75 grs.	-23
<b>QC Slide Fitting</b>					
		Fitting with bracket, tool-less operation, slidable $F_x > 6.0 \text{ kN} / 1350 \text{ lbf}$ $F_y > 31.5 \text{ kN} / 7100 \text{ lbf}$ $F_z > 20.5 \text{ kN} / 4600 \text{ lbf}$ $F_{xz} > 12.5 \text{ kN} / 2800 \text{ lbf}$	CRES and aluminium	211 grs.	114337-10 other configurations available upon request
<b>Adjustable QC Fitting</b>					
		QC Fitting for special applications adjustable	CRES passivated and aluminium anodized	148 grs.	110090-10
<b>Single Stud QC Flange Fitting</b>					
		Single stud flange fitting Quick connect / disconnect function (tool-less), plunger spring-loaded Ultimate load: * $F_x > 5.0 \text{ kN}$ $F_y > 5.0 \text{ kN}$ $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Body and stud: CRES passivated Retainer: aluminium, anodized	130 grs.	110059-10
<b>Single Stud QC Tube Fitting</b>					
		Single stud tube fitting Quick connect / disconnect function (tool-less), plunger spring-loaded Ultimate load: * $F_x > 5.0 \text{ kN}$ $F_y > 5.0 \text{ kN}$ $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Body and stud: CRES passivated Retainer: aluminium, anodized	130 grs.	110065-10

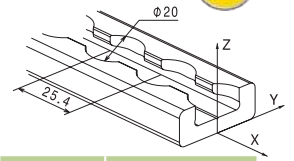
Seat Track Fittings

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually




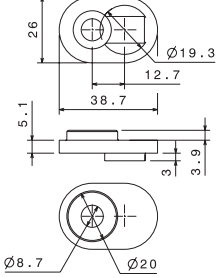
# Panel and Stanchion Fittings · Female Inch Thread



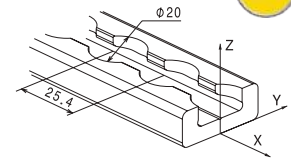
Compact and standardized design meets high load capacity and excellent corrosion resistance for all type of cabin installations.




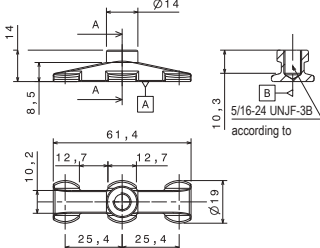
## ► Female Thread

		Description	Material	Weight	Order code
		Single stud no loose parts Thread: 1/4-28 UNJF-3B (blind hole), self-locking (re-usable), Ultimate loads: * $F_x > 16.0 \text{ kN} / 3500 \text{ lbf}$ $F_y > 16.0 \text{ kN} / 3500 \text{ lbf}$ $F_z > 16.0 \text{ kN} / 3500 \text{ lbf}$	Fitting and retainer: CRES, cad-plated	27 grs.	110057-10
 <p>zinc-plated</p>  <p>cad-plated + primer</p>	 <p>self-locking thread</p>	Double stud fitting Thread: 5/16-24 UNJF-3B (blind hole), self-locking (re-usable) Also available as no-loose-parts assembly Ultimate loads: * $F_x > 27.0 \text{ kN} / 6000 \text{ lbf}$ $F_y > 16.0 \text{ kN} / 3500 \text{ lbf}$ $F_z > 35.0 \text{ kN} / 8000 \text{ lbf}$	Fitting and retainer: CRES finish: see table		110120-
	<b>A</b>				
	9.0	thread-lock	cad-plated + primer	47 grs.	-20
	7.5	thread-lock	cad-plated + primer	41 grs.	-21
	9.0	thread-lock, no-loose-parts	zinc-plated	47 grs.	-32
	7.5	thread-lock, no-loose-parts	zinc-plated	41 grs.	-33
	9.0	thread-lock	zinc-plated	47 grs.	-50
7.5	thread-lock	zinc-plated	41 grs.	-51	
		Seat track fitting Thread: 5/16-24 UNJF-3B per ISO3161, self-locking Ultimate loads: * $F_x > 27.0 \text{ kN}$ , $F_y > 16.0 \text{ kN}$ $F_z > 30.0 \text{ kN}$ , $F_{zx} > 30.0 \text{ kN}$ $F_{yz} > 20.0 \text{ kN}$	Fitting and retainer: steel, zinc-nickel plated	28 grs.	121024-10
 		offset retainer Ultimate loads: * $F_x > 27.0 \text{ kN}$ $F_y > 16.0 \text{ kN}$ $F_z > 30.0 \text{ kN}$ $F_{zx} > 30.0 \text{ kN}$ $F_{yz} > 20.0 \text{ kN}$	Fitting and retainer: steel, zinc-nickel plated	32 grs.	121023-10


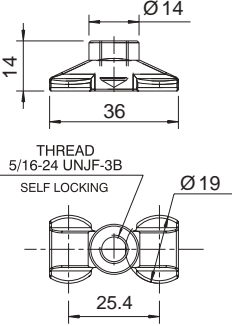

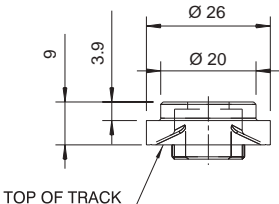

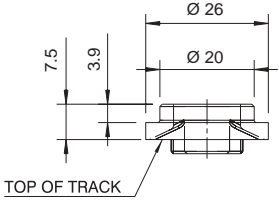

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually



## ► Female Thread

	Description	Material	Weight	Order code
 	<b>Triple Stud 5/16" F Fitting</b>  Triple stud fitting Thread: 5/16-24 UNJF-3B compatible with spacer PN 120121-32 (see dimensions ABS1262C020) and PN 120121-33 (see dimensions ABS1262C030)	zinc-plated	42 grs.	120120-22

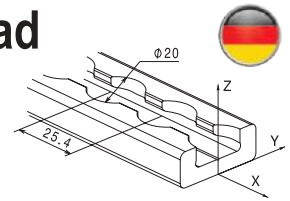
## ► according to AIRBUS standard

	Description	Material	Weight	Order code
 	<b>Double Stud 5/16" F Fitting</b>  Double stud fitting Thread: 5/16-24 UNJF-3B (blind hole), self-locking (re-usable)  Ultimate loads: * $F_x > 27.0 \text{ kN} / 6000 \text{ lbf}$ $F_y > 16.0 \text{ kN} / 3500 \text{ lbf}$ $F_z > 35.0 \text{ kN} / 8000 \text{ lbf}$ in conjunction with ABS1262C020 or C030	CRES, cad-plated + primer  especially for use in wet area (galley, lavatory)	29 grs.	ABS1262F010
 	<b>Spacer</b>  To be used with P/N ABS1262F010	CRES, cad-plated + primer	22 grs.	ABS1262C020
 	<b>Spacer</b>  To be used with P/N ABS1262F010	CRES, cad-plated + primer	17 grs.	ABS1262C030
	<b>Plastic Cap</b>  For thread 5/16 or M8 Protects thread from pollution and fixes retainer to fitting when placed in seat- track and before installation of the monument. Easy to install / remove.	Plastic, yellow	5 grs.	120166-10

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

# Panel and Stanchion Fittings · Inch Thread

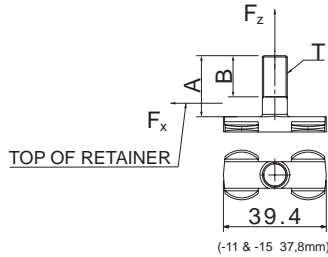
Standard fitting for medium and high loads for all type of cabin installations.



## ► Double Stud Fitting



### Double Stud Fitting



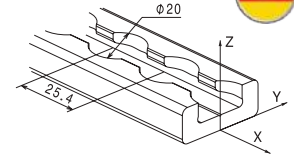
A	B	T	Description	Material	Weight	Order code
<b>Double Stud Fitting</b>						
Double stud fitting Thread: <b>5/16-24 UNJF-3A</b> Ultimate load: * $F_x > 24.0 \text{ kN} / 5400 \text{ lbf}$ $F_y > 24.0 \text{ kN} / 5400 \text{ lbf}$ $F_z > 28.9 \text{ kN} / 6500 \text{ lbf}$ (when installed with retainer P/N 41 475, load point top of retainer)						
50.8	19.1	5/16-24		Forged steel, heat-treated and zinc-plated	42 grs.	-10
22.9	20.8	5/16-24			30 grs.	-11
27.2	19.1	5/16-24			32 grs.	-12
33.3	19.1	5/16-24			35 grs.	-13
45.7	19.1	5/16-24			40 grs.	-14
19.1	16.9	5/16-24			28 grs.	-15
32.5	30.4	5/16-24			34 grs.	-23
27.7	5.6	5/16-24			27 grs.	-24
45.2	43.1	5/16-24			39 grs.	-25
23.9	11.2	5/16-24			31 grs.	-26
23.9	19.8	5/16-24			31 grs.	-27
31.8	12.7	5/16-24			34 grs.	-28
23.4	13.7	5/16-24			31 grs.	-38
50.8	48.7	5/16-24			42 grs.	-42
36.6	19.1	5/16-24			36 grs.	-58

Double stud fitting Thread: <b>3/8-24 UNJF-3A</b> Ultimate load: * $F_x > 28.9 \text{ kN} / 6500 \text{ lbf}$ $F_y > 28.9 \text{ kN} / 6500 \text{ lbf}$ $F_z > 28.9 \text{ kN} / 6500 \text{ lbf}$ (when installed with retainer P/N 43 356, load point top of retainer)						
28.4	16.5	3/8-24			38 grs.	-16
23.4	15.8	3/8-24			35 grs.	-17
44.2	15.8	3/8-24			47 grs.	-18
36.6	15.8	3/8-24			42 grs.	-19
30.5	15.8	3/8-24			39 grs.	-20
25.9	20.6	3/8-24			36 grs.	-21
45.2	43.1	3/8-24			47 grs.	-22
64.3	62.2	3/8-24			58 grs.	-33
30.5	28.5	3/8-24			39 grs.	-34
44.2	22.4	3/8-24			47 grs.	-35
19.3	17.2	3/8-24			33 grs.	-36
19.6	9.7	3/8-24			33 grs.	-37
17.5	11.2	3/8-24			32 grs.	-39
56.1	54.0	3/8-24			53 grs.	-40
54.0	16.5	3/8-24			52 grs.	-47
24.6	22.5	3/8-24			36 grs.	-51


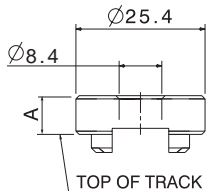

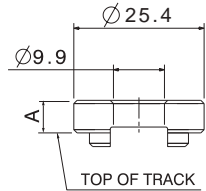
\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

other dimensions upon request


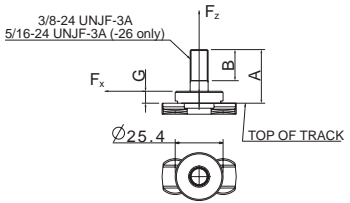




## ► Retainer for Double Stud Fitting

		Description	Material	Weight	Order code					
	<b>Retainer 5/16"</b> 		For locking in track direction, to be used with fittings type 40 361 with thread 5/16" Steel, zinc-plated		41 475-					
	<table border="1"> <thead> <tr> <th>A</th> </tr> </thead> <tbody> <tr> <td>7.6</td> </tr> <tr> <td>3.8</td> </tr> </tbody> </table>				A	7.6	3.8	27 grs.	-10	
	A									
	7.6									
3.8										
		13 grs.	-11							
	<b>Retainer 3/8"</b> 		For locking in track direction, to be used with fittings type 40 361 with thread 3/8" Steel, zinc-plated		43 356-					
	<table border="1"> <thead> <tr> <th>A</th> </tr> </thead> <tbody> <tr> <td>6.4</td> </tr> <tr> <td>3.8</td> </tr> <tr> <td>4.3</td> </tr> </tbody> </table>				A	6.4	3.8	4.3	20 grs.	-10
	A									
	6.4									
3.8										
4.3										
		12 grs.	-11							
		15 grs.	-16							

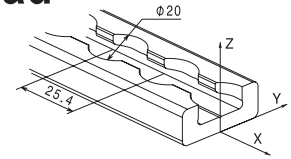
## ► Double Stud Fitting Assembly

		Description	Material	Weight	Order code																																																													
	<b>Double Stud Assy</b> 		Double stud assembly Thread: <b>3/8-24 UNJF-3A</b> Ultimate load: * $F_x > 28.9 \text{ kN} / 6500 \text{ lbf}$ $F_y > 28.9 \text{ kN} / 6500 \text{ lbf}$ $F_z > 28.9 \text{ kN} / 6500 \text{ lbf}$		40 191-																																																													
	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>G</th> </tr> </thead> <tbody> <tr><td>23.4</td><td>15.7</td><td>6.4</td></tr> <tr><td>44.2</td><td>15.7</td><td>6.4</td></tr> <tr><td>36.6</td><td>15.7</td><td>6.4</td></tr> <tr><td>30.5</td><td>15.7</td><td>6.4</td></tr> <tr><td>25.9</td><td>20.6</td><td>3.8</td></tr> <tr><td>36.6</td><td>15.7</td><td>3.8</td></tr> <tr><td>44.2</td><td>15.7</td><td>3.8</td></tr> <tr><td>45.2</td><td>43.2</td><td>6.4</td></tr> <tr><td>64.3</td><td>62.0</td><td>6.4</td></tr> <tr><td>44.2</td><td>22.4</td><td>6.4</td></tr> <tr><td>19.6</td><td>9.7</td><td>3.8</td></tr> <tr><td>56.1</td><td>54.1</td><td>3.8</td></tr> <tr><td>30.5</td><td>28.4</td><td>3.8</td></tr> <tr><td>23.4</td><td>15.7</td><td>3.8</td></tr> <tr><td>30.5</td><td>15.7</td><td>3.8</td></tr> <tr><td>45.2</td><td>43.2</td><td>3.8</td></tr> <tr><td>44.2</td><td>22.4</td><td>3.8</td></tr> <tr><td>19.3</td><td>17.0</td><td>3.8</td></tr> <tr><td>19.0</td><td>17.0</td><td>3.8</td></tr> </tbody> </table>				A	B	G	23.4	15.7	6.4	44.2	15.7	6.4	36.6	15.7	6.4	30.5	15.7	6.4	25.9	20.6	3.8	36.6	15.7	3.8	44.2	15.7	3.8	45.2	43.2	6.4	64.3	62.0	6.4	44.2	22.4	6.4	19.6	9.7	3.8	56.1	54.1	3.8	30.5	28.4	3.8	23.4	15.7	3.8	30.5	15.7	3.8	45.2	43.2	3.8	44.2	22.4	3.8	19.3	17.0	3.8	19.0	17.0	3.8		
	A	B			G																																																													
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		Thread: <b>5/16-24 UNJF-3A</b> Ultimate load: * $F_x > 24.0 \text{ kN} / 5400 \text{ lbf}$ $F_y > 24.0 \text{ kN} / 5400 \text{ lbf}$ $F_z > 28.9 \text{ kN} / 6500 \text{ lbf}$																																																																


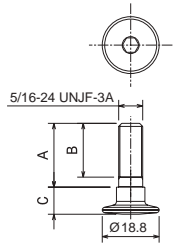

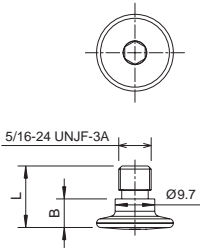

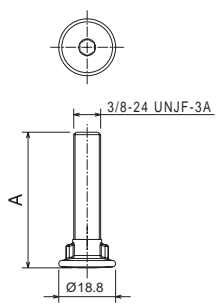
Seat Track Fittings

# Panel and Stanchion Fittings · Inch Thread

Choose corrosion protected Single Stud Fittings to have lightweight and standardized design for small and medium size cabin installations.



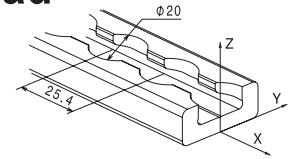
## ► Single Stud Fitting

		Description	Material	Weight	Order code	
		Single stud fitting Thread: 5/16-24 UNJF-3A Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Steel, heat treated and zinc-plated		40 110 -	
		<b>A</b>	<b>B</b>	<b>C</b>		
		21.1	17.8	8.4	15 grs.	- 11
		28.5	22.4	8.4	18 grs.	- 12
		17.5	14.2	6.3	14 grs.	- 16
39.9	38.1	8.4	23 grs.	- 18		
		Single stud fitting Thread: 5/16-24 UNJF-3A Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Steel, heat-treated Finish: zinc-plated		40 214 -	
		<b>B</b>	<b>L</b>			
		7.4	15.5	11 grs.	- 10	
		7.4	29.5	16 grs.	- 12	
		7.4	21.2	13 grs.	- 13	
7.2	24.2	14 grs.	- 16			
		Single stud anti-rotating fitting Thread: 3/8-24 UNJF-3A Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Steel, heat-treated Finish: zinc-plated		40 350 -	
		<b>A</b>				
		26.2	19 grs.	- 10		
		29.7	21 grs.	- 11		
		41.9	28 grs.	- 12		
		34.5	24 grs.	- 15		
		23.8	18 grs.	- 18		
		27.0	20 grs.	- 20		
30.2	21 grs.	- 22				


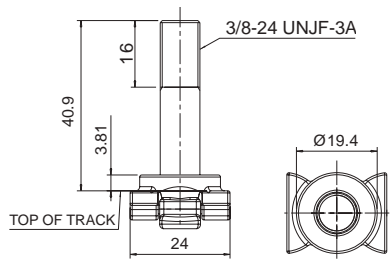

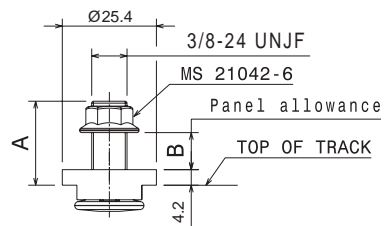

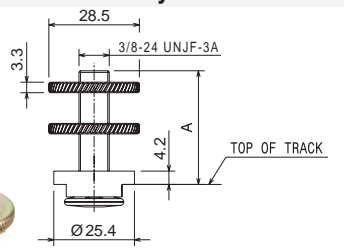


\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

# Panel and Stanchion Fittings · Inch Thread

Single Stud Assys for almost all applications – including corrosion protected surface.



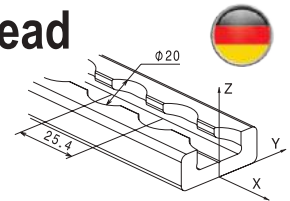
## ► Single Stud Fitting Assembly

	Description	Material	Weight	Order code										
 	<b>Single Stud 3/8" Assy NLP</b> 3/8-24 UNJF-3A Single stud assembly no loose parts Thread: 3/8-24 UNJF-3A Ultimate loads: * $F_x > 16.0 \text{ kN} / 3500 \text{ lbf}$ $F_y > 16.0 \text{ kN} / 3500 \text{ lbf}$ $F_z > 16.0 \text{ kN} / 3500 \text{ lbf}$	Fitting and retainer: CRES, cad-plated	46 grs.	110067-10										
 	<b>Single Stud 3/8" Assy with Nut</b> 3/8-24 UNJF MS 21042-6 Panel allowance TOP OF TRACK Single stud assembly anti-rotating Thread: 3/8-24 UNJF-3A Ultimate loads: * $F_x > 17.8 \text{ kN} / 4000 \text{ lbf}$ $F_y > 17.8 \text{ kN} / 4000 \text{ lbf}$ $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Stud and retainer: steel, heat-treated Finish: zinc-plated		40 351 -										
	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>19.3</td> <td>6.0</td> </tr> <tr> <td>22.9</td> <td>10.0</td> </tr> <tr> <td>34.3</td> <td>21.0</td> </tr> <tr> <td>38.1</td> <td>25.0</td> </tr> </tbody> </table>	A	B	19.3	6.0	22.9	10.0	34.3	21.0	38.1	25.0		69 grs.	- 10
A	B													
19.3	6.0													
22.9	10.0													
34.3	21.0													
38.1	25.0													
			71 grs.	- 11										
			78 grs.	- 12										
			80 grs.	- 13										
 	<b>Single Stud 3/8" Assy with Knurled Nut</b> 3/8-24 UNJF-3A Single stud assembly anti-rotating, supplied with knurled nut Thread: 3/8-24 UNJF-3A Ultimate loads: * $F_x > 17.8 \text{ kN} / 4000 \text{ lbf}$ $F_y > 17.8 \text{ kN} / 4000 \text{ lbf}$ $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$	Stud and retainer: steel, heat-treated Finish: zinc-plated	46 grs.	40 073 -										
	<table border="1"> <thead> <tr> <th>A</th> <th></th> </tr> </thead> <tbody> <tr> <td>16.9</td> <td>with 1 knurled nut</td> </tr> <tr> <td>24.2</td> <td>with 1 knurled nut</td> </tr> <tr> <td>26.3</td> <td>with 1 knurled nut</td> </tr> <tr> <td>36.0</td> <td>with 2 knurled nut</td> </tr> </tbody> </table>	A		16.9	with 1 knurled nut	24.2	with 1 knurled nut	26.3	with 1 knurled nut	36.0	with 2 knurled nut		51 grs.	- 10
A														
16.9	with 1 knurled nut													
24.2	with 1 knurled nut													
26.3	with 1 knurled nut													
36.0	with 2 knurled nut													
			55 grs.	- 11										
			57 grs.	- 31										
			81 grs.	- 13										
	<b>Self Locking Nut 5/16"</b> acc. MS 21042-5		4 grs.	MS 21042-5										
	<b>Self Locking Nut 3/8"</b> acc. MS 21042-6		5 grs.	MS 21042-6										


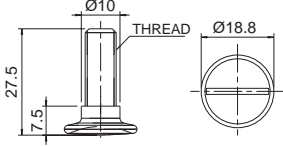

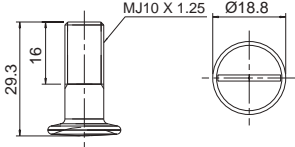

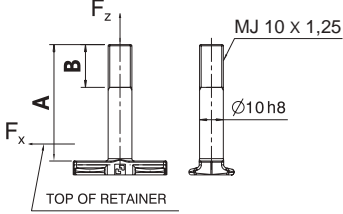

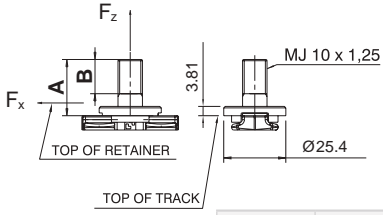

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

# Panel and Stanchion Fittings · Metric Thread

Combining intelligent surface with metric thread – ideal for A400M and NH90.



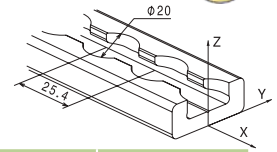
## ► Single- and Double Stud Fittings

	Description	Material	Weight	Order code														
	<b>Single Stud MJ8x1 / MJ8x1.25 Fitting</b> 	CRES, passivated	17 grs.	120107 -														
	Single stud fitting Thread: -10: MJ8x1.25 -11: MJ8x1 Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$			-10 -11														
	<b>Single Stud MJ10 Fitting</b> 	CRES, passivated	22 grs.	120108 -10														
	Single stud fitting Thread: MJ10x1.25 Ultimate load: * $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$																	
	<b>Double Stud MJ10 Fitting</b> 	Stud steel forging, heat-treated and zinc-plated		120160 -														
	Double stud fitting Thread: MJ10x1.25 Ultimate load: * $F_x > 29.5 \text{ kN} / 6640 \text{ lbf}$ $F_y > 29.5 \text{ kN} / 6640 \text{ lbf}$ $F_z > 29.5 \text{ kN} / 6640 \text{ lbf}$ (when installed with retainer P/N 120161-10, load point top of retainer)																	
	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>23.0</td> <td>14.0</td> </tr> <tr> <td>29.0</td> <td>13.0</td> </tr> <tr> <td>29.0</td> <td>27.0</td> </tr> <tr> <td>49.0</td> <td>18.0</td> </tr> <tr> <td>36.0</td> <td>14.0</td> </tr> <tr> <td>27.0</td> <td>13.0</td> </tr> </tbody> </table>			A	B	23.0	14.0	29.0	13.0	29.0	27.0	49.0	18.0	36.0	14.0	27.0	13.0	
	A			B														
	23.0			14.0														
	29.0			13.0														
	29.0			27.0														
	49.0			18.0														
36.0	14.0																	
27.0	13.0																	
		37 grs.	-10															
		40 grs.	-11															
		40 grs.	-12															
		53 grs.	-13															
		45 grs.	-14															
		39 grs.	-15															
	<b>Double Stud MJ10 Assy</b> 	Stud steel forging, heat treated and zinc plated, retainer alloy steel, zinc plated		110066 -														
	Double stud assembly Thread: MJ10x1.25 Ultimate load: * $F_x > 29.5 \text{ kN} / 6640 \text{ lbf}$ $F_y > 29.5 \text{ kN} / 6640 \text{ lbf}$ $F_z > 29.5 \text{ kN} / 6640 \text{ lbf}$ (load point top of retainer)																	
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	A			B														
	23.0			14.0														
	29.0			13.0														
	29.0			27.0														
	49.0			18.0														
36.0	14.0																	
		50 grs.	-10															
		53 grs.	-11															
		53 grs.	-12															
		66 grs.	-13															
		58 grs.	-14															
	<b>Nut Hexagon MJ10</b>		6 grs.	EN3536 -100														
	Self-locking nut to be used with thread MJ10x1.25																	


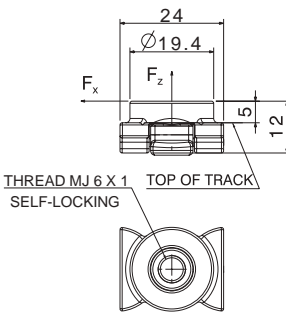

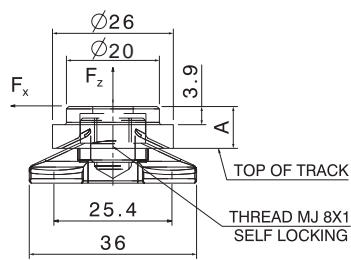
\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

# Panel and Stanchion Fittings · Female Metric Thread

Compact and standardized design meets high load capacity and excellent corrosion resistance for all cabin installations.



## ► Single- and Double Stud Assemblies

	Description	Material	Weight	Order code																									
 	<p><b>Single Stud MJ6 F NLP Assy</b></p> <p>Single stud assembly Thread: MJ6x1 (blind hole), self-locking (re-usable), no loose parts</p> <p>Ultimate loads: *  <math>F_x &gt; 10.0 \text{ kN} / 2250 \text{ lbf}</math>  <math>F_y &gt; 10.0 \text{ kN} / 2250 \text{ lbf}</math>  <math>F_z &gt; 16.0 \text{ kN} / 3500 \text{ lbf}</math></p>	Fitting and retainer: CRES, zinc-plated	27 grs.	110188-10																									
 	<p><b>Double Stud MJ8 F TL Assy</b></p> <p>Double stud assembly Thread: MJ8x1 (blind hole), self-locking (re-usable)</p> <p>Ultimate loads: *  <math>F_x &gt; 27.0 \text{ kN} / 6000 \text{ lbf}</math>  <math>F_y &gt; 16.0 \text{ kN} / 3500 \text{ lbf}</math>  <math>F_z &gt; 35.0 \text{ kN} / 8000 \text{ lbf}</math></p>	Body and retainer: CRES finish: see table	13 grs.	110189-																									
	<table border="1"> <thead> <tr> <th>A</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>9.0</td> <td>thread-lock, no-loose-parts</td> <td>zinc-plated</td> <td>47 grs.</td> <td>-32</td> </tr> <tr> <td>7.5</td> <td>thread-lock, no-loose-parts</td> <td>zinc-plated</td> <td>41 grs.</td> <td>-33</td> </tr> <tr> <td>9.0</td> <td>thread-lock</td> <td>zinc-plated</td> <td>47 grs.</td> <td>-50</td> </tr> <tr> <td>7.5</td> <td>thread-lock</td> <td>zinc-plated</td> <td>41 grs.</td> <td>-51</td> </tr> </tbody> </table>	A					9.0	thread-lock, no-loose-parts	zinc-plated	47 grs.	-32	7.5	thread-lock, no-loose-parts	zinc-plated	41 grs.	-33	9.0	thread-lock	zinc-plated	47 grs.	-50	7.5	thread-lock	zinc-plated	41 grs.	-51			
A																													
9.0	thread-lock, no-loose-parts	zinc-plated	47 grs.	-32																									
7.5	thread-lock, no-loose-parts	zinc-plated	41 grs.	-33																									
9.0	thread-lock	zinc-plated	47 grs.	-50																									
7.5	thread-lock	zinc-plated	41 grs.	-51																									

\* when installed in heavy duty track according to AS33601 with appropriate fasteners, loads applied individually

Seat Track Fittings

# Restraint Fittings





Best in class – allsafe provides only high quality fittings Made in Germany.

Our in-house production especially of various Tiedown Fitting products with single parts coming from certified sub suppliers in Germany makes the difference:

- highest safety level with computer controlled assembly process
- highest quality level with best corrosion protection because of e.g. high-grade stainless steel or ZnNi surface treatment; free of CrVI, REACH compliant
- 100% airworthiness and full traceability with batch tracking
- product know how and documentation state of the art; datasheet drawings and CAD models available
- short lead times, all parts made to order



**Tiedown Single Stud Fitting**



**Tiedown Triple Stud Fitting**

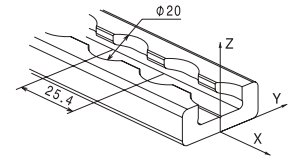


**Tiedown Double Stud Fitting with Ring**

# Restraint Fittings

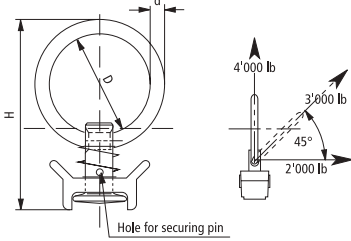

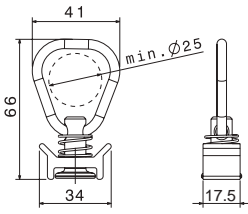

Best in class: Sicherheit Made in Germany with computer controlled assembly and fulltrace ability. Different options make them custom-fit.

packaging units with 100 pcs.  
and 250 pcs. available



## Tiedown Single Stud Fitting



Description		Material	Weight	Order code		
<b>Tiedown Single Stud</b> 		Stud: ZnNi-plated Retainer: aluminium anodized Ring: stainless steel				
	Tiedown single stud Ultimate load: see table					
						
D	d	H	Ultimate load: *	Remark	Weight	Order code
20	4	49.5	$F_x > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_y > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_{xz45^\circ} > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_{yz45^\circ} > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_z > 8.9 \text{ kN} / 2000 \text{ lbf}$		36 grs.	110500-10
				With hole for securing pin (SP)	35 grs.	110500-20
29,5	5	61			41 grs.	110501-10
				With hole for securing pin (SP)	40 grs.	110501-20
35	5	66,5	$F_x > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_y > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_{xz45^\circ} > 13.3 \text{ kN} / 3000 \text{ lbf}$ $F_{yz45^\circ} > 13.3 \text{ kN} / 3000 \text{ lbf}$ $F_z > 17.8 \text{ kN} / 4000 \text{ lbf}$		45 grs.	110502-10
				With hole for securing pin (SP)	44 grs.	110502-20
45	5	76,5			53 grs.	110503-10
				With hole for securing pin (SP)	52 grs.	110503-20
<b>Tiedown Single Stud allsafe</b> 		Stud: ZnNi-plated Retainer: aluminium anodized Ring: stainless steel		110218-		
	Tiedown single stud allsafe Ultimate load: *					
						
	$F_x > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_y > 8.9 \text{ kN} / 2000 \text{ lbf}$ $F_{xz45^\circ} > 10.0 \text{ kN} / 2250 \text{ lbf}$ $F_{yz45^\circ} > 10.0 \text{ kN} / 2250 \text{ lbf}$ $F_z > 12.5 \text{ kN} / 2800 \text{ lbf}$					
					46 grs.	-10
					45 grs.	-20
						With hole for securing pin (SP)

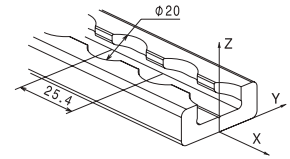
\* when installed in heavy duty track according to AS33601, loads applied individually




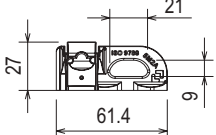

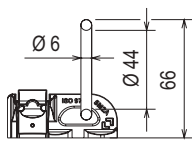

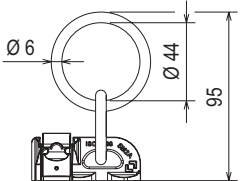

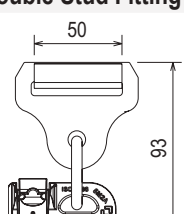

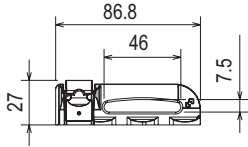


packaging units with  
100 pcs. available

# Restraint Fittings

High ultimate load meets various attachment opportunities. International standard gives you confidence in choosing the right basic design for your application. High quality with fulltrace ability.



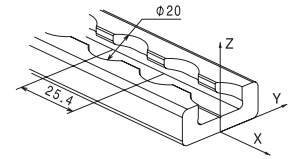
## ► Tiedown Double and Triple Stud Fitting

		Description	Material	Weight	Order code
		Tiedown double stud fitting ISO 9788 with hole for securing pin (SP) Ultimate load: * > 22.2 kN / 5000 lbf any direction	Steel, ZnNi-plated	102 grs.	110600-10
		Tiedown double stud fitting with ring d = 44/6 with hole for securing pin (SP) Ultimate load: * > 22.2 kN / 5000 lbf any direction	Steel, ZnNi-plated Ring: stainless steel	137 grs.	110601-10
		Tiedown double stud fitting with link and ring with hole for securing pin (SP) Ultimate load: * > 22.2 kN / 5000 lbf any direction	Steel, ZnNi-plated Rings: stainless steel	164 grs.	110602-10
		Tiedown double stud fitting with chain link and plate with hole for securing pin (SP) Ultimate load: * > 22.2 kN / 5000 lbf any direction	Steel, ZnNi-plated Ring: stainless steel	196 grs.	110603-10
		Tiedown triple stud fitting with hole for securing pin (SP) Ultimate load: * $F_x > 25 \text{ kN} / 5600 \text{ lbf}$ $F_y > 25 \text{ kN} / 5600 \text{ lbf}$ $F_{xz} 45^\circ > 25 \text{ kN} / 5600 \text{ lbf}$ $F_{yz} 45^\circ > 35 \text{ kN} / 7850 \text{ lbf}$ $F_z > 35 \text{ kN} / 7850 \text{ lbf}$	Steel, ZnNi-plated	139 grs.	110650-10
		<b>Splint for use as securing pin (SP)</b>  To lock retainer of single and double stud fittings ISO 1234	Stainless steel	2 grs.	160149-10
		<b>R-clip for use as securing pin (SP)</b>  To lock retainer of single and double stud fittings DIN 11024	Stainless steel	7 grs.	160150-10


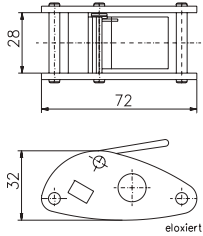

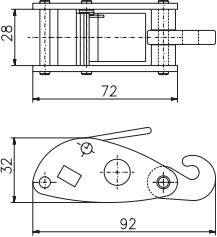

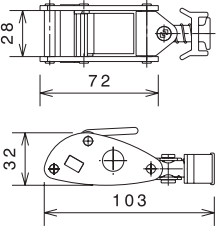
\* when installed in heavy duty track according to AS33601

# Restraint Fittings


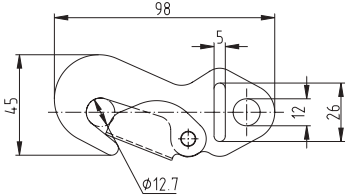
To be sewed on a strap or directly fitted into airline track – available for all applications, strong, lightweight and easy to use.



## Cam Buckles

		Description	Material	Weight	Order code
		Cam buckle anodized Ultimate load: * > 8.9 kN / 2000 lbf	Body and lever: aluminium, anodized	80 grs.	75003
	<b>Cam Buckle with Hook</b>				
		Cam buckle with hook Ultimate load: * > 6.7 kN / 1500 lbf	Body, lever and hook: aluminium, anodized	92 grs.	75004
	<b>Cam Buckle with Single Stud</b>				
		Cam buckle with single stud Ultimate load: * > 7.25 kN / 1600 lbf	Frame: aluminium, anodized Stud: galv. steel Retainer: aluminium	123 grs.	75005

## Aluminium Hook

		Description	Material	Weight	Order code
		Snap hook Ultimate load: * > 11.5 kN / 2584 lbf	Aluminium, mill finish	43 grs.	75008
	<p>* when used with appropriate webbing</p>				

## ■ ■ ■ Restraint Fitting application



*We design for the application you require,  
customized to your specifications.*



# 3.0

## Straps and Nets



### Configurated Straps

Cargo safety for all applications

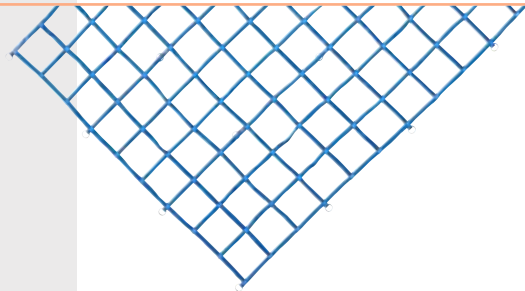
page 52-55



### allsafe System Net

Mission possible

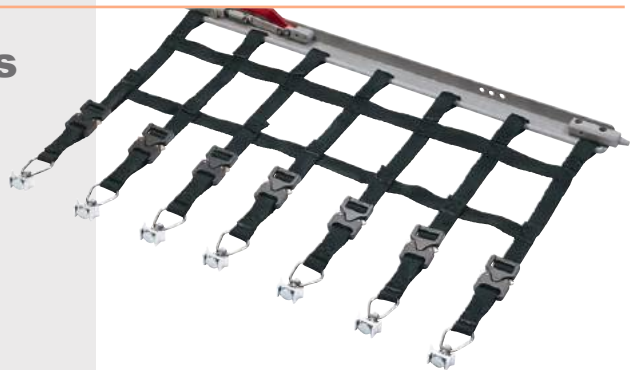
page 56-59



### Customized Textile Solutions

Impossible is nothing

page 60-61



## Your customized standard strap. Configure it yourself:

### ▶ End fittings



Compose your end fittings to suit your needs. No matter if you use seat and cargo tracks or lashing points we have solutions for all load capacities. Always with a corrosion resistant surface.

### ▶ Buckle



Choose a buckle from our large product range to suit your load, lashing needs, required pretensioning force and load capacity. If it's not available, it doesn't exist.

### ▶ Webbing appearance & technology



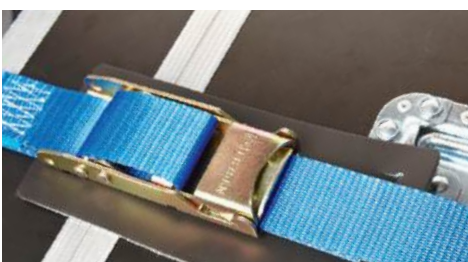
We supply polyester (PES) webbings with flame retardant characteristics complying with FAR/CS 25.853 (a) Part I Appendix F (iv). In addition, webbings tested for smoke and toxicity according to Airbus Standard are available. Choose from a wide variety of colours.

### ▶ Printed webbing



You have a choice here, too: no printing at all, "Hands off!", your company name or your logo. We print what you want, even if you only order one strap.

### ▶ Extras



Protection pads for the buckle protect load with sensitive surface, a fold-back prevents the loose end from falling off the buckle. Label protectors reduce wear of heavily used webbings. You select it, we make it.

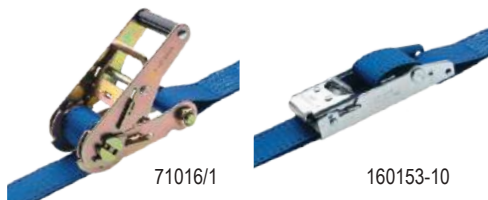
# Your individual ETSO cargo restraint strap assembly, according to ETSO C172a EASA.210.10070947:

## ▶ End fittings



Compose your end fittings suitable for your needs. No matter if you use seat and cargo tracks or lashing points, we have solutions for all load capacities. Always with a corrosion resistant surface.

## ▶ Buckle



Choose a tensioning device suitable for your lashing needs, required pretension force and load capacity.

## ▶ Webbing appearance & technology



- 84514 olive
- 84520 blue
- 84506 orange

We provide high strength polyester (PES) webbings with flame retardant characteristics complying with FAR/CS 25.853 (a) Part I Appendix F (iv). Choose from a wide variety of colours. Additional colours are available upon request.

## ▶ Printed webbing



Personalize your webbing and add your company name, logo or any message – even if you only order one strap.

## ▶ Quality Inspection App



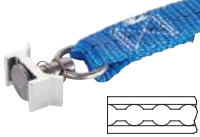


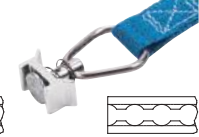
















and direkt link to Inspection App.

**Lifelimit 3 years**  
Automatical reminder when the life time is expired

# 20 - 25 mm Straps

Ideal for use in all kinds of aircrafts.

## ► End fitting

1 - End fitting	2 - Buckle	3 - Colour / length	4 - Printed webbing	5 - Extras	Order code
					
Anodized retainer (Ø 20) standard: 110500-10 w/pin hole: 110500-20	Anodized retainer (Ø 29,5) standard: 110501-10 w/pin hole: 110501-20	Anodized retainer (Ø 35) standard: 110502-10 w/pin hole: 110502-20	Anodized retainer (Ø 45) standard: 110503-10 w/pin hole: 110503-20		
					
110600-10	110601-10	110602-10	110603-10	110650-10	
					
75 008	For use with 122022-10 122055	110941-10	For use with bushing 75 012 (anodized, Ø 14,2) 75 045 (black coated, Ø 15,5)	Bushing 75570 sold separately 75 014 (steel, zinc-plated, Ø 8,4)	
					
122022-10	121006-10 (Ø 20x4)	121007-10 (Ø 29,5x5)	121008-10 (Ø 35x5)		
					
121009-10 (Ø 45x5)	121010-10 (Ø 30x6)	121011-10 (Ø 44x6)	121012-10 (L45xW40x4,5)		110935 + Art- No.

Straps come with same fittings on both ends. Special configurations see page 60.  
For details and technical specification and advantages of the fittings see pages 46-49.  
For more available end-fittings call our staff or check our cargo catalogue.








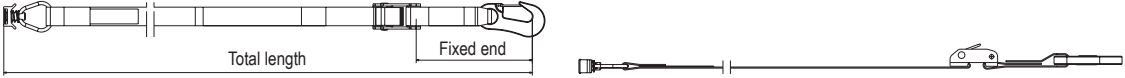
## ► Buckles

✓	2 - Buckle	3 - Colour / length	4 - Printed webbing	5 - Extras	Order code
					
UL <sub>z</sub> = 8,9 kN*	UL <sub>z</sub> = 2,2 kN*	UL <sub>z</sub> = 2,2 kN*	UL <sub>z</sub> = 2,2 kN*		
75 003 (25 mm anodized)	71 057 (25 mm blank) 71 863 (25 mm black)	512132-20 (25 mm black) 512132-10 (25 mm blank)	71052 B (zinc-plated 20 mm)		Item no.

\* UL<sub>z</sub> means the ultimate load in z-direction.




## ► Colour & length

✓	✓	3 - Colour / length	4 - Printed webbing	5 - Extras	Order code	
						
Blue	Grey	Black*	Olive	Dark blue*	Silver*	Red*
						Colour
Total length in mm						Total length
Min. fixed end length 300 mm; smaller length available on request						Fixed end length




All webbing material is polyester (PES) and shows flame retardant characteristics complying with FAR/CS 25.853 (a) Part I Appendix (iv).

\* also tested for Smoke & Toxicity

## ► Printed webbing

✓	✓	✓	4 - Printed webbing	5 - Extras	Order code
					
<i>Example images of customized webbing prints</i>					
Customized black printed webbing on loose end.			Please make sure the text is not too long, so it can be printed completely.		Customer print
allsafe print					allsafe print
no print					no print

## ► Extras

✓	✓	✓	✓	5 - Extras	Order code
					
Protective buckle pad	Label protector (min. fixed end length: 400 mm)	Fold-back (avoids unthreading)			

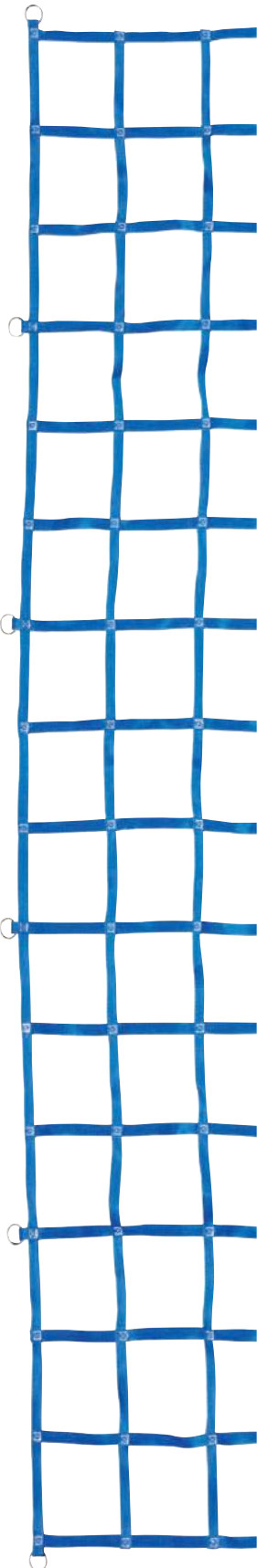
## ► Sample order code

110935	-	75049	-	71057	-	Blue	-	3800	-	400	-	Customer	-	Label protector + Fold-back
25 mm belt		End fitting		Buckle		Colour		Total length		Fixed end length		Printed webbing		Extras

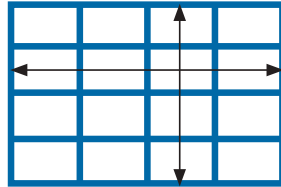
Take the ultimate load of the buckles to get the ultimate load of your belt.

If you do not find it in the catalogue – ask us!

# Your customized net. Compose yourself:



## ▶ Net size



No matter, what size the aircraft has and what size of net you require for your application – just let us know, and we will design the net for you.

To determine the optimal size, you need to know the size of your load space and the height of your load. A perfectly fitted net covers your load on the sides, front and back.

## ▶ Mesh width



Small boxes or large crates? Select your mesh width so that it is smaller than your smallest load to ensure that nothing will slip through. 150 to 200 mm in width and height are the most popular sizes, we can realize about everything bigger than 100 x 100 mm.

## ▶ Webbing

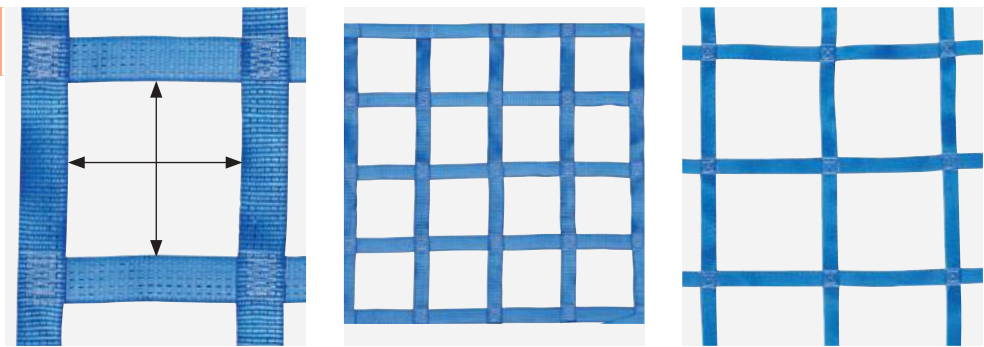
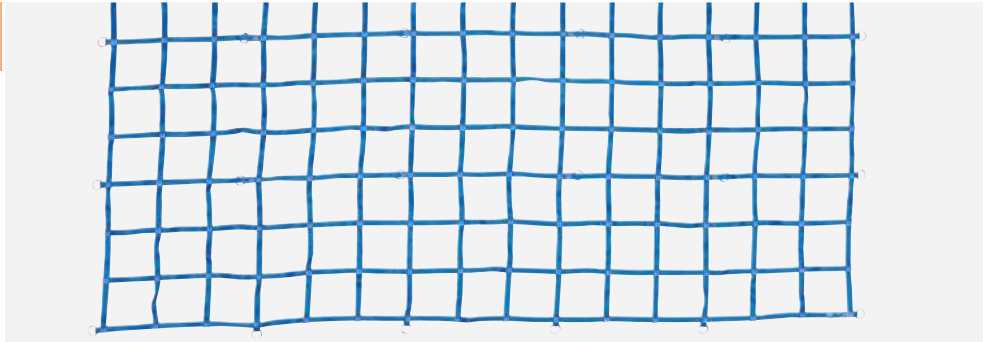


We supply polyester (PES) webbings with flame retardant characteristics complying with FAR/CS 25.853 (a) Part I Appendix F (iv). In addition, webbings tested for smoke and toxicity according to Airbus Standard are available. A wide variety of colours is available.

## ▶ End fitting



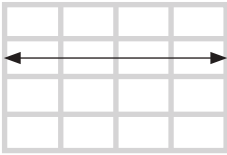
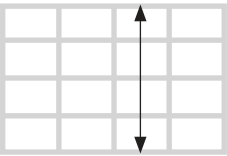
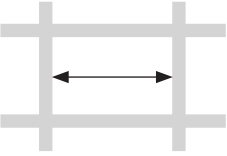
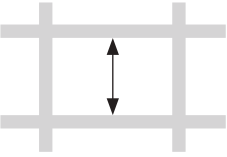
Allsafe system net comes with universal steel rings on all corners and optional rings on the edges and the inside of the net body. You can combine this type of net with our straps to perfectly adapt it to your application.



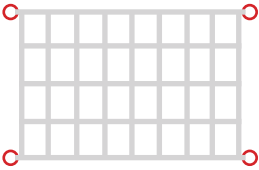
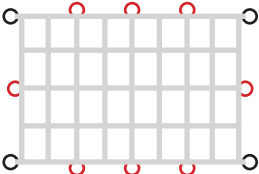
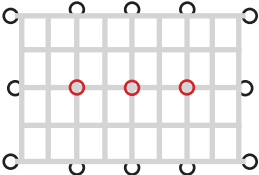

# allsafe System Net

The classic. Flexible configuration, versatile and practical, built from 25 mm webbing.

## ► Dimensions

1 - Dimensions	2 - Attachment	3 - Colour & technology	Order code
	<b>Long side in mm</b> Please note: depending on the mesh size selected, it may not be possible to achieve exact drawing dimensions.		110936 + Long side dimensions xxxx
	<b>Short side in mm</b> Please note: depending on the mesh size selected, it may not be possible to achieve exact drawing dimensions.		Short side dimensions xxxx
	<b>Mesh size on long side in mm</b> A mesh size of 150-200 mm is most common, min. 100 mm is however possible.		Mesh size long side dimensions xxxx
	<b>Mesh size on short side in mm</b> A mesh size of 150-200 mm is most common, min. 100 mm is however possible.		Mesh size short side dimensions xxxx

## ► Attachment

✓	2 - Attachment	3 - Colour & technology	Order code
	<b>Steel rings in all four corners</b>		Included
	<b>Additional steel rings on the sides</b> In every 2nd, 3rd or 4th position. Counted from the outside, applies to long and short sides.		Steel ring every x. position
	<b>Additional steel rings within the net</b> The rings will be sewed to the net with the same pattern as the rings on the sides (see above).		yes / no

## ► Colour & technology

3 - Colour & technology							Order code
							Colour
Blue	Grey	Black*	Olive	Dark blue*	Silver*	Red*	


All webbing material is polyester (PES) and shows flame retardant characteristics complying with FAR/CS 25.853 (a) Part I Appendix (iv).  
\* also tested for Smoke & Toxicity

## ► Sample order code

110936	-	4600	-	2500	-	175	-	170	-	4	-	yes	-	Red
allsafe System Net		long side		short side		Mesh size long side		Mesh size short side		Steel ring every 4. position		extra steel rings		Colour

The load capacity of the net is 500 daN with a flat load, higher loads available upon request.


## Accessories



Cam buckle with single stud and belt:  
795003/028/105-1500-0400 (order 4x)

### ► Sample order code

511263	-	71137	-	71057	-	Blue	-	3800	-	400	-	Customer	-	Label protector + Fold-back
25 mm belt		End fitting		Buckle		Colour		Total length		Fixed end length		Printed webbing		Extras

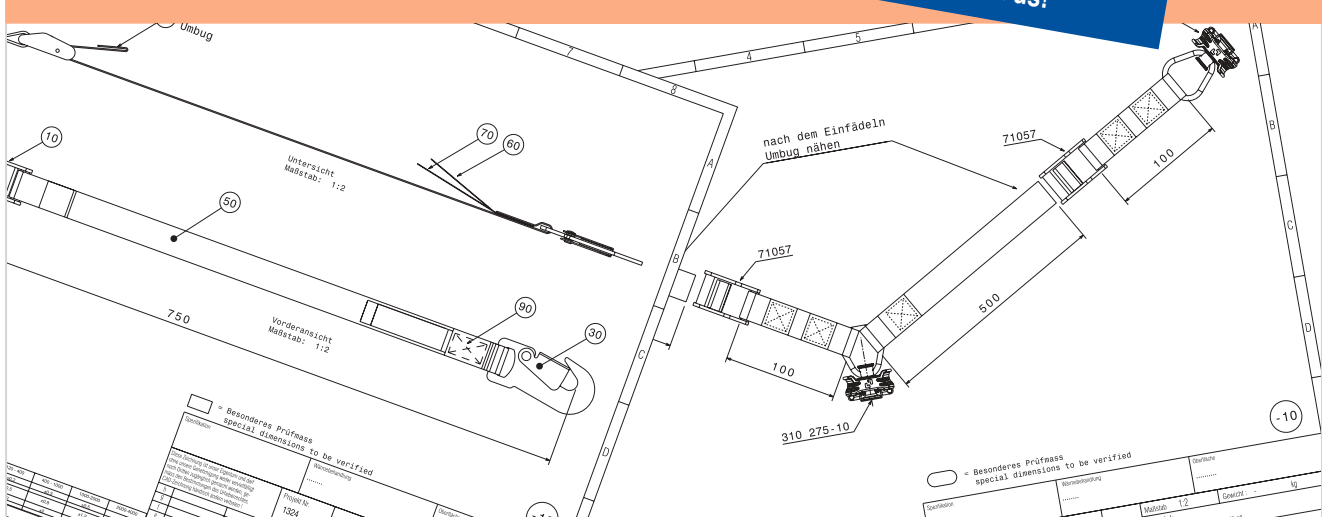


Your personal adapter strap, see page 52/53 (25 mm belt)

## Customized nets

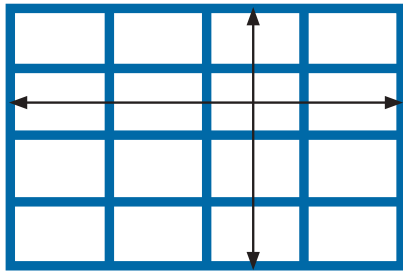
### ► Special requirements: Challenge us!

If you do not find it in the catalogue – ask us!



# Special Straps and Nets

## Customer demand



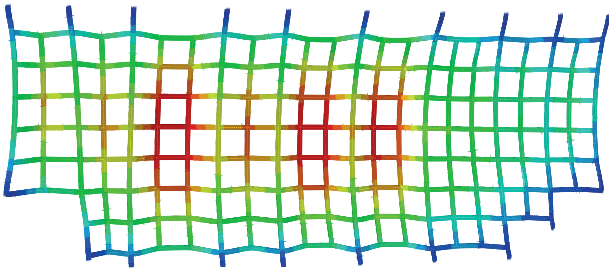
Your textile restraint system

## Design



We design your textile restraint system and set up prototypes

## Finite Element Analysis



FE analysis to optimize design and weight performance

## Testing



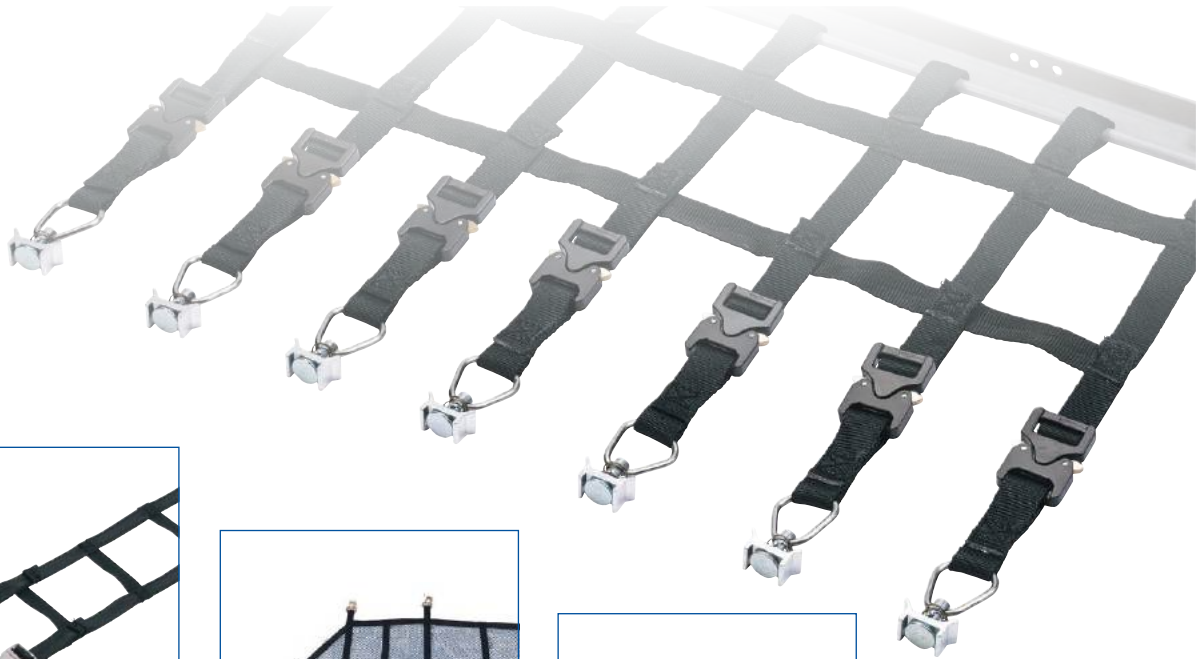
Prototype testing according to customer needs (static)

## Series production & Packaging



## Delivery

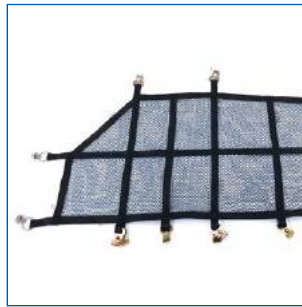
► Need other solutions for specific requirements?



**Restraint System**  
with snap buckle

- Attachment to structure via footmans loops
- Spun-dyed black polyester webbing

Easy in handling



**Restraint System**  
with semitransparent mesh fabric

- Easy attachment to structure for multiple use
- Flame retardant according to CS 25.853 (a) Part I Appendix (iv)

Variable geometries possible



**Cargo security strap**  
with no loose parts

- Fixed in-cabin installation for multiple use
- Guaranteed breaking strength

Universal solution



**Portable radio device**  
quick securing system

- Specific fixation of appliances in aircrafts
- Adaptable to other sizes

Quick and safe fixation



**Bulk net**

- Easy installation
- Various geometries possible

Complete system with fittings and anchor plates



**Repair solutions**

- allsafe certified according EASA Part 145
- Online order system

Fast and reliable textile repair

*Talk to us – we want to understand your needs in order to make it happen!*

# General Terms and Conditions of Sale and Supply (GTCSS) for Contracts outside the Webshop

## 1. General

- 1.1 These General Terms and Conditions of Sale and Supply are binding provided it is stated in a quote or in the order confirmation that they apply. Other terms and conditions of the customer shall not apply unless the supplier has expressly acknowledged them in writing.
- 1.2 No agreements and legally relevant declarations of the contractual partners shall be valid unless they have been made in writing.

## 2. Quotes and award of contract

- 2.1 The order signed by the customer is a binding offer. The contract is deemed to be concluded as soon as the supplier confirms acceptance in writing of an order after receipt of it.
- 2.2 The supplier's quotes are never binding.
- 2.3 Documents associated with the quote such as illustrations, drawings, weights and measurements are subject to change unless they are expressly described as binding. The supplier reserves retention of title to the documents which must not be disclosed to third parties.

## 3. Scope of supply, assembly

- 3.1 The confirmation of order shall define the scope and delivery of goods and performance of services. An additional charge shall be made for materials or services not contained therein.
- 3.2 The supplier shall be entitled to make part deliveries unless this represents an unreasonable inconvenience for the customer.

## 4. Prices and assembly costs

- 4.1 Unless otherwise agreed, the supplier's prices are net ex works, and exclusive of packaging, transport, insurance, assembly, installation and commissioning.
- 4.2 Installation costs shall be charged separately. The customer shall provide free of charge whatever resources and ancillary staff are necessary to assist the supplier's fitters. If a cost estimate is made, the supplier assumes no liability for the cost calculations on which the estimate is based.

## 5. Payment conditions

- 5.1 The supplier's invoices are immediately payable net.
- 5.2 The customer shall make payments without deducting expenses, taxes and charges of whatsoever type to the supplier's registered address.
- 5.3 In the event of payment arrears on the part of the customer, the supplier reserves the right, in addition to any statutory rights, to suspend scheduled deliveries immediately and to change the payment conditions.
- 5.4 The customer's right to offset its counterclaims against claims of the supplier is limited to those which are acknowledged in writing by the supplier or which came legally into force.

## 6. Retention of title

- 6.1 The supplier shall retain title to the object of supply until payment in full has been made. This retention of title covers all claims which the supplier acquires against the customer in connection with the supply, e.g. by virtue of repairs, assembly, delivery of spare parts or other services, including those made subsequently.
- 6.2 During the period in which retention of title applies, the customer shall take all necessary steps to protect the supplier's property and to inform the supplier promptly of any damage. Moreover, the customer shall eliminate any damage correctly and appropriately at its own expense.
- 6.3 The customer shall be authorised to sell the delivery item in the course of normal business. The customer herewith assigns to the supplier in advance the purchase price claim associated with this further sale limited to the amount of the final total on the supplier's invoice (including VAT).

- 6.4 For its part, the customer agrees to retain title to the object of sale if its customer does not pay in full at the latest by the time of hand-over of the delivery item.
- 6.5 In the event of the supplier's goods subject to retention of title being indisso- lably associated with other objects, the supplier shall have joint title to such associated objects in terms of the invoice final total relating to the goods subject to retention of title compared with the purchase price of the other associated objects as the values were at the time of the said association.
- 6.6 The assignment of claims to secure the claims according to section 6.3 also includes those claims which the customer acquires against a third party as a result of an association of the goods subject to retention of title with another object.
- 6.7 The retention of title shall also continue to apply to claims of the supplier arising from the business relationship until settlement of the claims associa- ted with the sale.  
At the request of the customer, the supplier shall waive the retention of title if the customer has incontestably settled all the claims associated with the object of sale and if an appropriate form of security is in place for the remain- ing claims arising from the ongoing business relationship.
- 6.8 At the request of the customer, the supplier shall release securities which it has provided to the supplier under this contract if they are no longer needed to secure the claims of the supplier arising from the ongoing business rela- tionship, especially if they exceed the value of all secured claims by more than 20%.
- 6.9 Assertion of the retention of title and any attachment of the delivery item by the supplier shall not constitute withdrawal from the contract.

## 7. Delivery period and storage costs

- 7.1 The delivery period begins with order acceptance by the supplier and after settlement in full of the technical issues. The delivery period is deemed to have been respected if by the time it ends the supply has left the works or the customer has been notified of its readiness for despatch.
- 7.2 The delivery period can be prolonged as appropriate:
  - if the details required for execution of the order are not furnished to the supplier in good time or if they have been subsequently altered by the customer;
  - if payment dates are not met;
  - if obstacles occur which the supplier cannot remove despite exercising the requisite care, irrespective of whether such obstacles occur with the sup- plier, the customer or a third party. Examples of such obstacles are in- stances of force majeure, for example epidemics, mobilisations, war, civil unrest, significant operational breakdowns, accidents, labour disputes, de- layed or faulty delivery of necessary raw materials or finished or semi-finish- ed products, scrapping of significant parts, actions or omissions of autho- rities, natural events.
- 7.3 If dispatch is delayed at the request of the customer, the supplier reserves the right to charge the customer for the storage costs incurred, to be not less than 0.5% of the invoice amount. The obligation to bear the storage costs shall begin one month from the date of notification of readiness to dispatch.

## 8. Delayed delivery

- 8.1 The customer shall be entitled to assert a claim for compensation for delayed delivery caused by circumstances not covered by section 7.2. The customer can claim compensation for delay if the delay in delivery is demonstrably the supplier's default and if the customer can prove it has suffered damage as a result of this delay. If the customer is given assistance through a replacement supply, the claim to compensation for delayed delivery shall lapse.
- 8.2 The compensation for delayed delivery shall not be more than 0.5% for each full week of delay and shall not exceed in total 5% of the contracted price for the part of the supply which is delayed. The first two weeks of delay do not create a claim to compensation for delayed delivery.
- 8.3 The customer's rights and claims in respect of delayed supplies or services shall be limited to those expressly specified in sections 8.1 and 8.2.



## 9. Delivery, assumption of risk, transport and insurance

- 9.1 Delivery shall be made from the registered address of the supplier, which is also the place of fulfilment. At the request and expense of the customer, the goods can be sent to a different destination (sale by dispatch). Provided nothing to the contrary has been agreed, the supplier shall be entitled to decide for itself the type of dispatch (particularly the carriers, dispatch route, packaging).
- 9.2 The supplier shall pack the products carefully. Packaging charges at cost price will be charged to the customer. Particular requests regarding dispatch and insurance must be communicated to the supplier in due time. The risk of the accidental destruction or accidental deterioration of the goods shall be transferred to the customer at the latest on hand-over. This applies also to part deliveries or where the supplier renders other services, e.g. has agreed to pay the dispatch costs, undertake the carriage or assembly of the goods. The risk of accidental destruction or accidental deterioration of the goods, as well as the risk of delay, is already transferred at the time when the goods are delivered to the forwarding agent, the carrier or any other person or institution appointed to carry out the dispatch. If dispatch is delayed for reasons for which the customer is accountable, the risk shall be transferred to the customer from the date of notification of readiness to dispatch. The customer shall, immediately upon receipt of the supply or freight documents, address complaints regarding the transport to the last freight carrier.
- 9.3 The customer shall be responsible for arranging insurance against losses of whatsoever type. Insurance, even where it is arranged by the supplier, shall be at the expense of the customer.

## 10. Inspection and acceptance of the supply

- 10.1 If the customer is an entrepreneur, he must inspect the supply promptly after receipt of the shipment. If a defect is detected, a specific complaint must be lodged promptly.
- 10.2 The complaints period is one week. The decisive date is the date of receipt of the written complaint (fax included) by the supplier. If the defect becomes apparent later, the written notification must be made promptly upon discovery. Should the customer fail to make a proper inspection and/or defect notification, the supplier shall have no liability in respect of the unnotified defect (section 11).
- 10.3 The warranty rights of a corporate customer shall lapse if it fails to meet its obligations under sections 10.1 and 10.2.
- 10.4 A corporate customer must return the goods complained of in the original or equivalent appropriate packaging free of carriage charges to the supplier.

## 11. Warranty and liability

- 11.1 The supplier warrants that products it supplies are free of manufacturing and material defects.
- 11.2 The basis for any liability for defects shall be principally the agreement concerning the nature or quality of the goods. The agreement on the nature or quality of the goods shall be the product descriptions expressly designated as such and which were disclosed to the customer before the order was made, or which likewise were included in this contract as are these GTCSS. Assured characteristics shall be those, and no other, which are expressly described as such in the order confirmation or directions for use. The assurance of such characteristics will not apply beyond expiry of the warranty period.
- 11.3 If material defects become apparent, the supplier shall be entitled at its discretion to eliminate the defects or to make a replacement delivery. The supplier shall be granted a reasonable period of at least 20 working days to repair the defects. The supplier shall be entitled to make several attempts to repair the defects to the extent that the customer can reasonably be expected to accept this.
- This applies also where the supplier has undertaken to the customer to carry out work within the meaning of § 631 et seq German Civil Code [BGB].
- 11.4 If a defect as specified in section 11.3 is not eliminated in due time, the customer can demand reduction of the purchase price, cancellation of the contract or compensation subject to the following provisions (11.5 and 11.6). However, the customer shall have no right of withdrawal for only minor defects.
- 11.5 Compensation is limited to the foreseeable and direct average loss typical of this kind of contract related to the nature of the goods.
- This limitation does not apply to claims arising from injuries to life, limb or health or other losses for which the supplier is accountable due to gross negligence or wilful damage on the part of the supplier.

- 11.6 If the customer chooses to withdraw from the contract because of a defect and failure to effect subsequent fulfilment, it shall not be entitled to claim compensation for the defect. § 325 German Civil Code [BGB] is waived in this respect.
- 11.7 The warranty shall expire prematurely if the customer or third parties make in appropriate modifications or repairs, if the customer does not follow the supplier's operation or servicing instructions or, where a defect has become apparent, does not immediately take all suitable action to minimise damage and fails to give the supplier the opportunity to correct the fault.

- 11.8 The warranty period is two years from delivery of the object.
- All cases of breach of contract and their legal consequences and all claims of the customer, irrespective of the legal grounds on which they are based, are governed conclusively in these terms and conditions. In particular, all claims to compensation, price reduction, contract cancellation or withdrawal from the contract not explicitly named herein shall be excluded. Liability for consequential losses is not accepted unless mandatory statutory product liability provisions stipulate otherwise.

## 12. Applicable law

This contract is subject to German law.

The provisions of the UN Convention on the International Sale of Goods (CISG) shall not apply.

## 13. Place of jurisdiction

The place of jurisdiction is the registered address of the supplier.

The supplier may at its discretion also take legal action at the place of jurisdiction of the customer.

## 14. Severability clause

Should any of the above GTCSS be or prove to be invalid, the remaining provisions shall remain in force. In such a case, the parties shall make lawful agreements concerning the void provisions which on the one hand satisfy the statutory regulations and on the other come as close as possible to the purpose originally intended.

*General Terms and Conditions of Sale and Supply (GTCSS)  
dated 1 August 2011*

*allsafe GmbH & Co. KG  
Gerwigstraße 31  
D-78234 Engen*

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# Quality Management

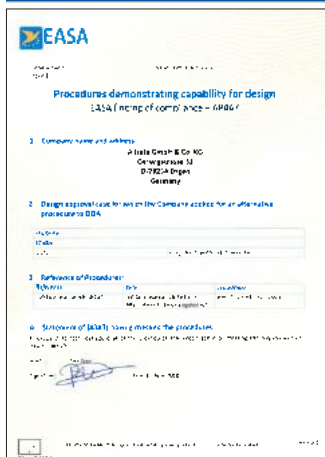
## Approvals and Certificates

allsafe is committed to Quality. Our certifications are the proof of this commitment. You can download copies of the valid certificates and approvals from our homepage [www.allsafe-group.com](http://www.allsafe-group.com)

We are qualified supplier for most Aerospace OEMs as well as for their supply base.



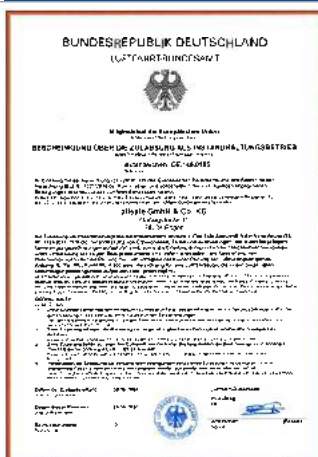
### Part 21 Section A Subpart O and ETSO C172a



### Part 21 Section A Subpart G



### Part 145 C6



# Seat and Cargo Track

AS 33601 specification



Standard AS33601 (excerpt)

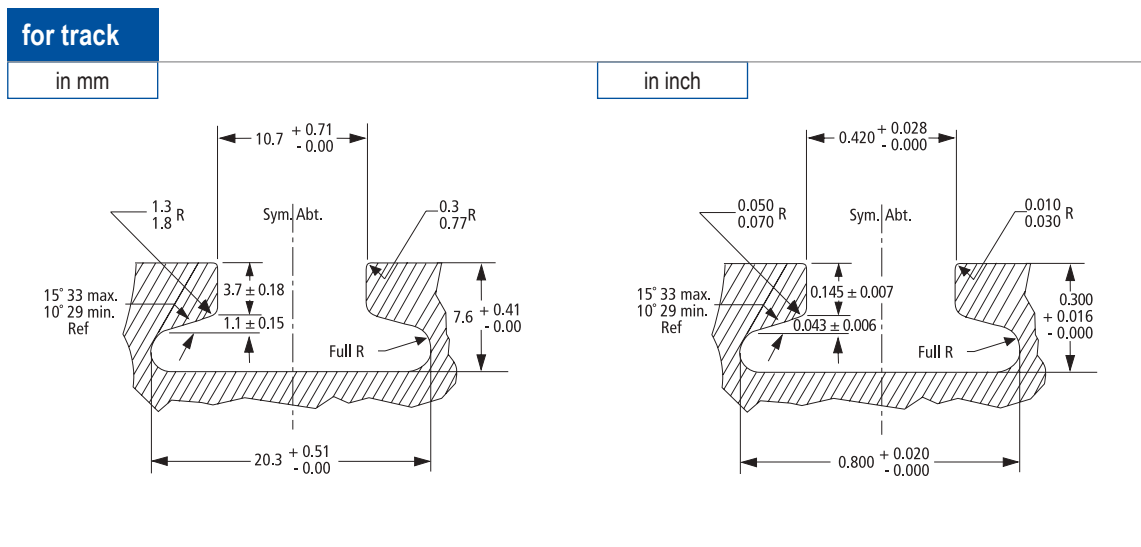
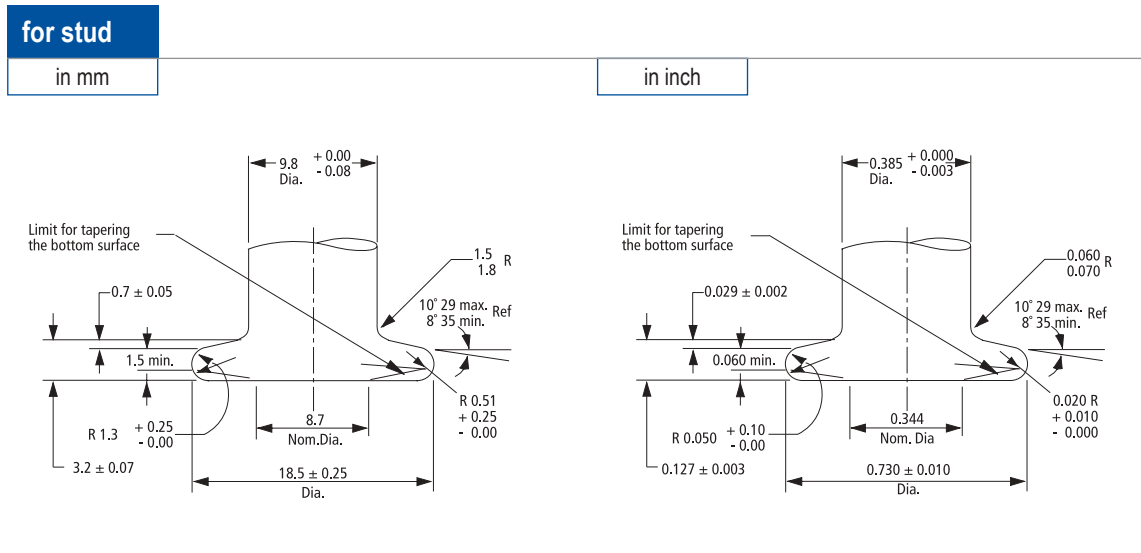
Widely used in the aerospace industry to assure compliance between track and fitting.

allsafe fittings are all designed to fit in tracks conforming with AS33601, but may not comply in every dimension with this standard.

Heavy Duty seat and cargo tracks from allsafe comply with the AS33601.

Due to geometrical constraints other tracks may have smaller inner dimensions.

Please consult us for compliance with fittings when using other tracks than Heavy Duty sections.



Lined page for notes.

NOTES

## What the icons and abbreviations mean



Made in Germany



New

- QC = Quick Change
- TL = Thread Lock
- NLP = No Loose Parts  
(retainer attached to fitting)
- AR = Anti Rotating
- UL<sub>z</sub> = Ultimate Load straight
- F = Female thread

### **Dimensions**

Dimensions are in mm, unless otherwise specified

### **Ultimate Load Capacity**

Working load requirements should be evaluated by the user before selecting appropriate hardware

### **Weight**

General tolerances for weight:  $\pm 5\%$ .

### **Availability**

Please consult us for availability as not all items shown in the catalogue are available from stock.

### **Part numbers**

See cross reference list for alternative P/Ns (Brüggemann+Brand / Ancra Intl. LLC). Parts are not necessarily identical, but interchangeable with allsafe P/Ns.

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