

ALUFIX XL FIXTURING SYSTEM

ALUFIX XL is a patented system for building all kinds of fixtures.

It is economical, accurate and easy to combine with other systems.

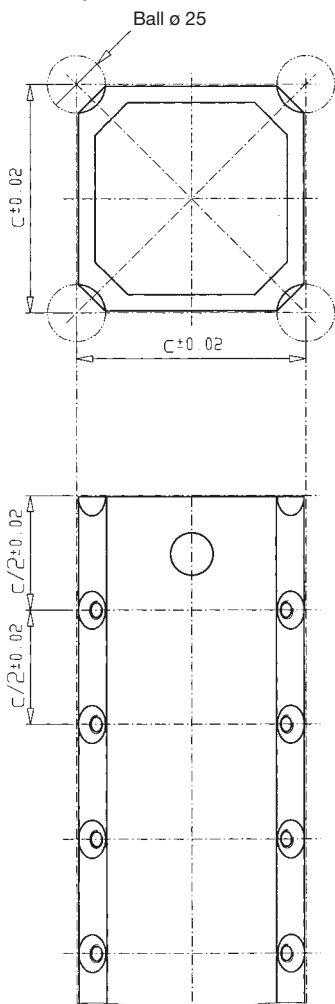
With bar lengths up to 10 metres long, two grid system sizes 100mm and 50mm and a large variety of connection possibilities, fast building of almost any kind of fixture is possible using ALUFIX XL elements.

The principle of modular fixturing guarantees repeatability and a high degree of flexibility also for adaptation on existing fixtures.

ALUFIXCOLOR

Alufix XL components are also available anodized black for applications using contact-free measuring equipment. To order simply add "-1" to the Witte item number (i.e. 22950-1).



Bar ALUFIX XL 100 / 50 :
profile cross-section

Spacing of ball seats
on bars
Example bar XL 100, Grid 50
ALUFIX XL Some particulars:

ECONOMICAL:

In contrast to **Alufix Classic** profiles which are machined on all sides, **Alufix XL** bars are only machined at system grid points. At these points ball seats are milled in preparation for contact with connection elements or top sections.

ACCURACY:

ALUFIX XL elements are only in contact with their environment or neighbouring elements through milled ball seats and special couplings. This means the machining tolerances of the extruded basic material have no effect on true to size dimensions of fixture. Solid couplings self centre over hollow surface area in cups and are screwed in there.

Complimenting our other systems **ALUFIX XL** additionally offers spacing variability along the length of the bars, making rebuilding fixtures very easy.

STABILITY:

Material of the **ALUFIX XL** bars is distributed evenly throughout the circumference of the profiles and therefore provides high resistance with regard to torsion and bending in spite of being lightweight.

COMPATIBILITY:

Using special connectors a crossover to our **ALUFIX Classic** range is possible from almost any point on the system. Adaptation to other products is also possible.

TECHNICAL DATA
ON ALUFIX XL 50
AND XL 100 BARS
Extruded profile

Composition	AlZn4,5Mg1 F35
Material number	3.4335.71

Mechanical values

Weight XL100	8,3 kg/m
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Tolerances/profile

Length straightness	1mm/m
Outer dimensions	XL50: 49,3±0,6mm XL100: 99,3±0,6mm
Evenness	±0,4mm

Tolerances/sphere

Diameter of circumference through theoretical sphere centre	
XL50	70,710
Grid(c)	50±0,02mm
XL100	141,414
Grid(c)	50/100±0,02mm

ALUFIX XL ball and seat connections:

Portrayal of two bars connected using connecting cups. High accuracy is ensured, because ball centres geometrically define.



Connection shown using XL-connectors guarantees high rigidity with a simple assembly method. Please note that connectors are available in two versions (left and right).



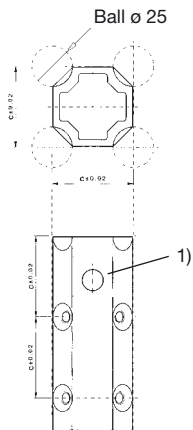
ALUFIX XL is easy to combine with other Witte products using adapter plates. Here you can see two different types of connection to **ALUFIX-Light** bars. The solid coupling plate on the left picture shows a particularly strong connection.


ALUFIX XL
Connection using block couplings:

The modular block coupling, comprising of 1 basic cube and up to 6 blocks, pulls bars face down towards coupling using four levers (axial). 4 centering screws are tightened at each bar end through ball seats to guarantee accurate radial position. Screws (tightened alternately) center the bar exactly onto coupling.



Bar XL50 Grid 50



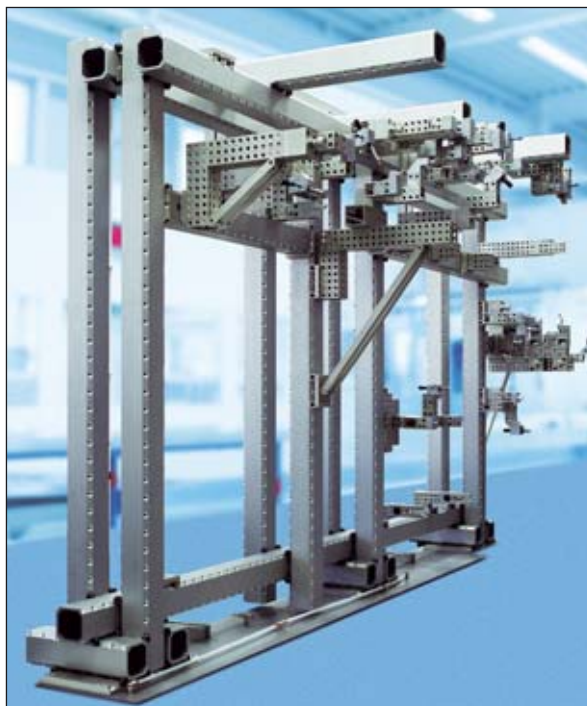
Length mm	with ball seats	with ball seats and bore M8	with ball seats, bore M8 and 2 cross bores ¹⁾
	No.	No.	No.
200	32763	32776	51105
400	32905	32777	52185
500	32765	32778	51104
600	32766	32779	52186
800	32767	32780	52187
1000	32768	32781	51103
1500	32769	32782	52188
2000	32770	32783	52189
2200	32771	32784	52190
2500	32772	32785	52191
3000	32773	32786	52192
3500	32774	32787	52193
4000	32775	32788	52194

Ends milled (to JS8) and drilled for coupling unit against surcharge¹⁾

Length tolerance JS15 (sawn) / Threaded bore M8

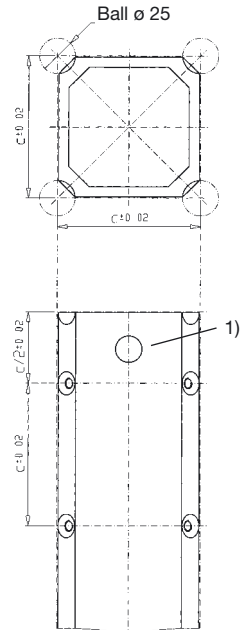
Other lengths on request.

Mobile stand
for mounting
measuring arms,
can be dis-
assembled for
transport

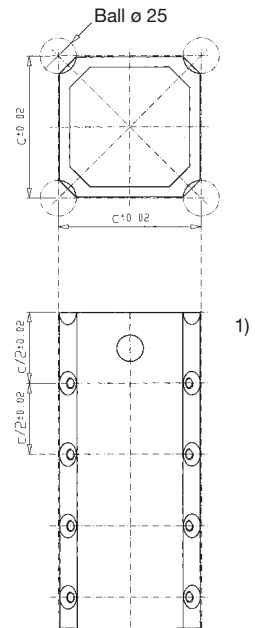


Bar XL100 Grid 100

Length	with ball seats	with ball seats and bore M8	with ball seats, bore M8 and 2 cross bores ¹⁾
mm	No.	No.	No.
200	29820	29839	30391
400	29821	29840	30392
500	29822	29841	30393
600	29823	29842	30394
800	29824	29843	30395
1000	29825	29844	30396
1500	29826	29845	30397
2000	29827	29846	30398
2200	29828	29847	32560
2500	29829	29848	30399
3000	29830	29849	30400
3500	29831	29850	30401
4000	29833	29852	30402
4500	29834	29853	30403
5000	29835	29854	30404
6000	29836	29855	30405
8000	29837	29856	30406
10000	29838	29857	30407


Bar XL100 Grid 100

Length	with ball seats	with ball seats and bore M8	with ball seats, bore M8 and 2 cross bores ¹⁾
mm	No.	No.	No.
200	29858	29877	30323
400	29859	29878	30206
500	29860	29879	30324
600	29861	29880	30325
800	29862	29881	30326
1000	29863	29882	30327
1500	29864	29883	30205
2000	29865	29884	30328
2200	29866	29885	33105
2500	29867	29886	30329
3000	29868	29887	31787
3500	29869	29888	30331
4000	29871	29890	30332
4500	29872	29891	30333
5000	29873	29892	30334
6000	29874	29893	30335
8000	29875	29894	30336
10000	29876	29895	30337

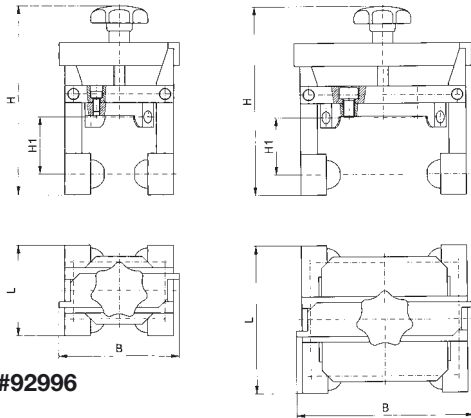


Ends milled (to JS8) and drilled for coupling unit against surcharge¹⁾

Length tolerance JS15 (sawn) / Threaded bore M8

Other lengths on request.





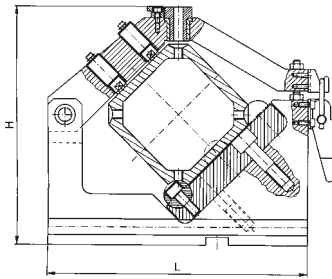
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#93029

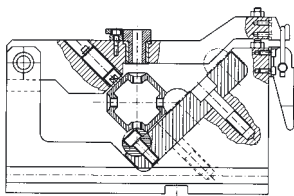
Drill template, face drilling

For drilling and cutting M6 threads into face edges of XL 50 and XL 100 bars

XL	No.	H	H 1	B	L	g
50	92996	165	50	105	80	1100
100	93029	165	50	155	130	1650



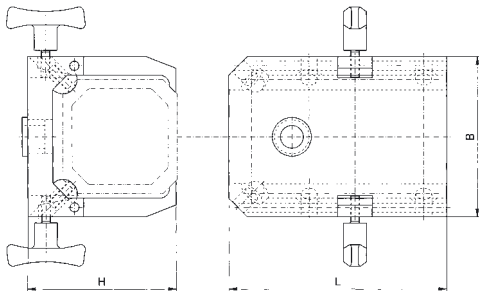
#92997



Drill template, side drilling

For drilling and cutting M8 threads along the bevelled corners of bars of XL 50 and XL 100 bars

XL	No.	H	B	g
50/100	92997	211	230	4400



#84504

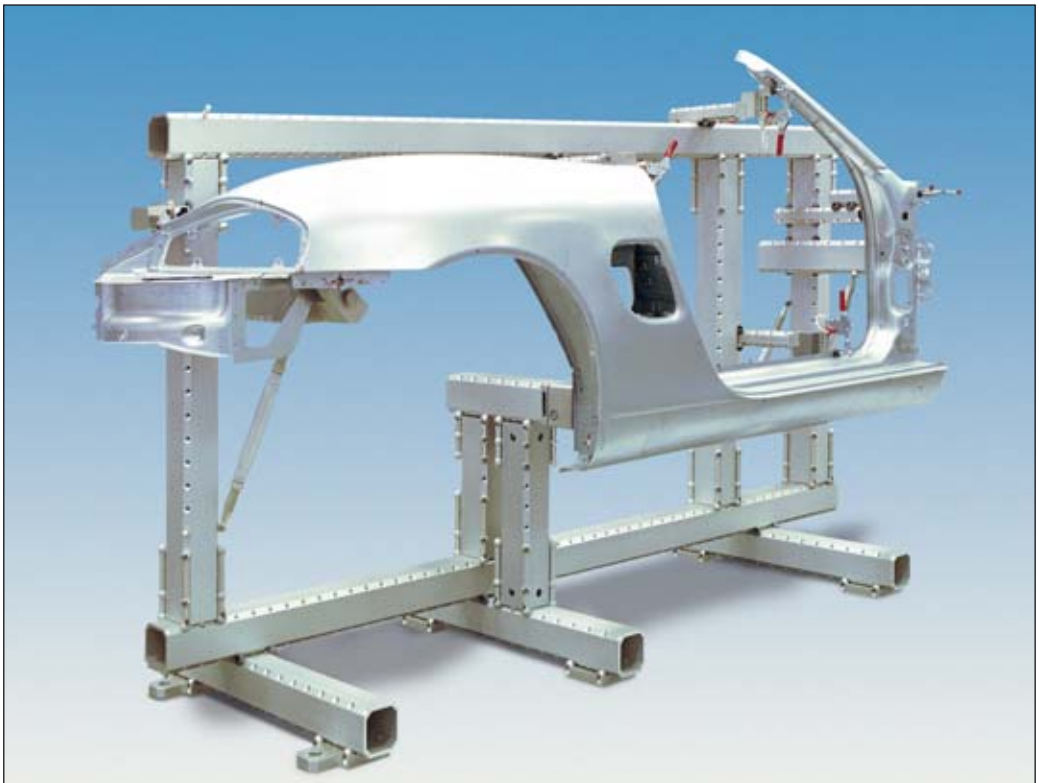
Drill template

For drilling crossbores on bars and for drilling on fixtures already assembled

XL	No.	H	L	B
50	87206	80	190	90
100	84504	130	190	140



ALUFIX XL 100 fixture holding a side panel, XL is ideal as a base frame





ALUFIX XL Basic cube

XL	No.	L 1	L 2
50	32789	50	50
100	29932	100	100



ALUFIX XL Coupling unit

XL	No.
50	87247
100	84185



ALUFIX XL Coupling unit,

with simple coupling plate

XL	No.
50	87207
100	84180

Version with ball feet

for especially rigid connection:

XL	No.
50	87449
100	87448

ALUFIX XL Corner block,

90°, double

XL	No.
50	87443
100	84177


ALUFIX XL Corner block,

3 D

XL	No.
50	87444
100	84178


Screw for block coupling

Hex socket head screw

XL	No.	Dim
50	10140	M8x30
100	12266	M10x60





ALUFIX XL Coupling plate,

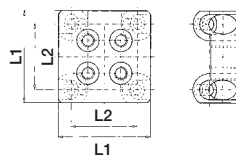
simple for ball connection

XL	No.	L 1	L 2
50	32790	70	50
100	29938	120	100

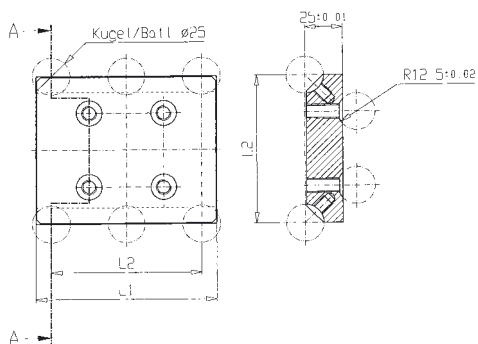
Version with ball feet

for especially rigid connection:

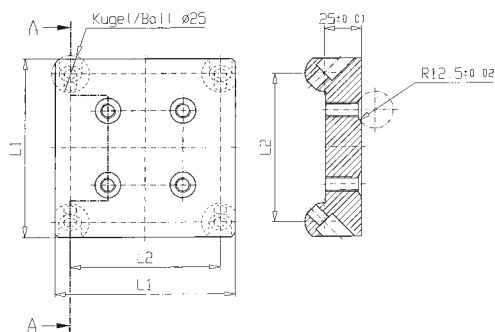
XL	No.	L 1	L 2
50	32829	70	50
100	32811	120	100



No. 32829

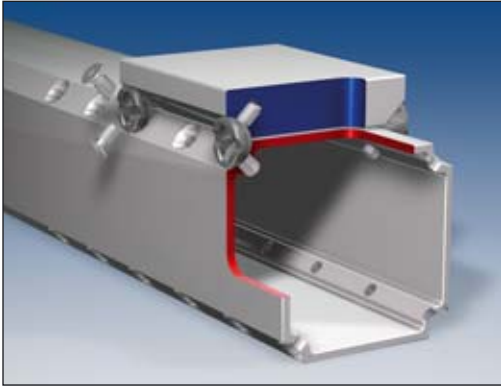


No. 29938



No. 32811



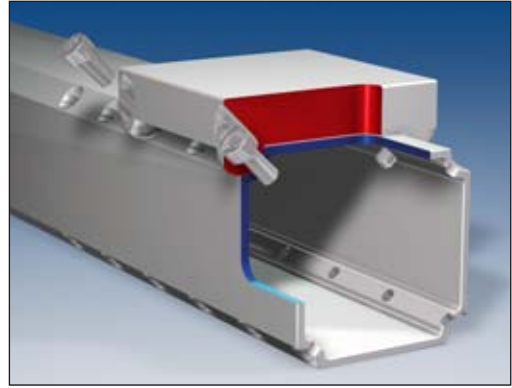
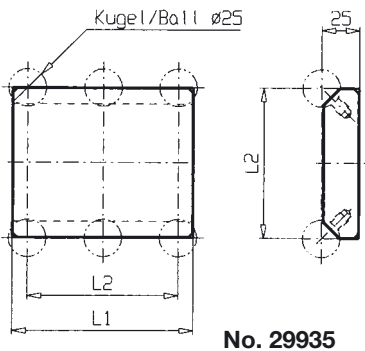
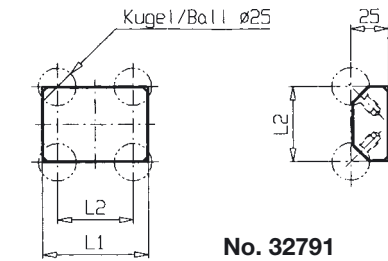


**Connection of XL bar with coupling
Version for ball connection**

ALUFIX XL Coupling plate,

simple for ball connection

XL	No.	L 1	L 2
50	32791	70	50
100	29935	120	100

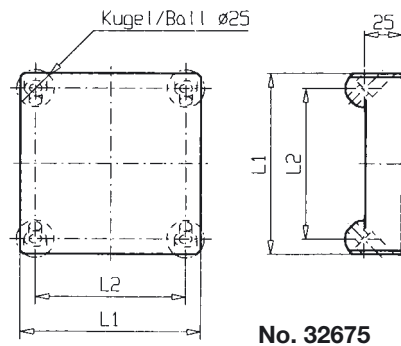
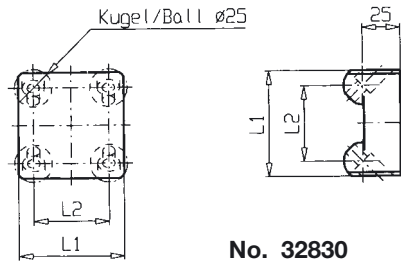


**Connection of XL bar with coupling
Version with ball feet
for especially rigid connection**

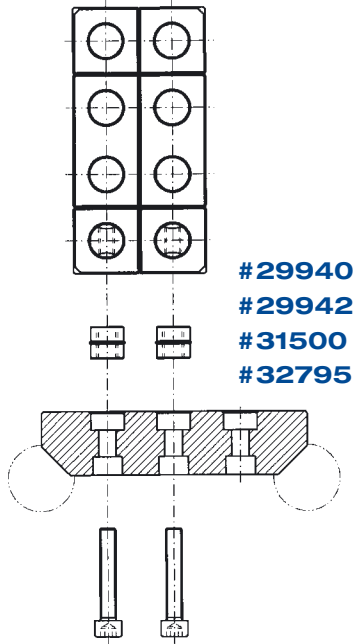
Version with ball feet

for especially rigid connection:

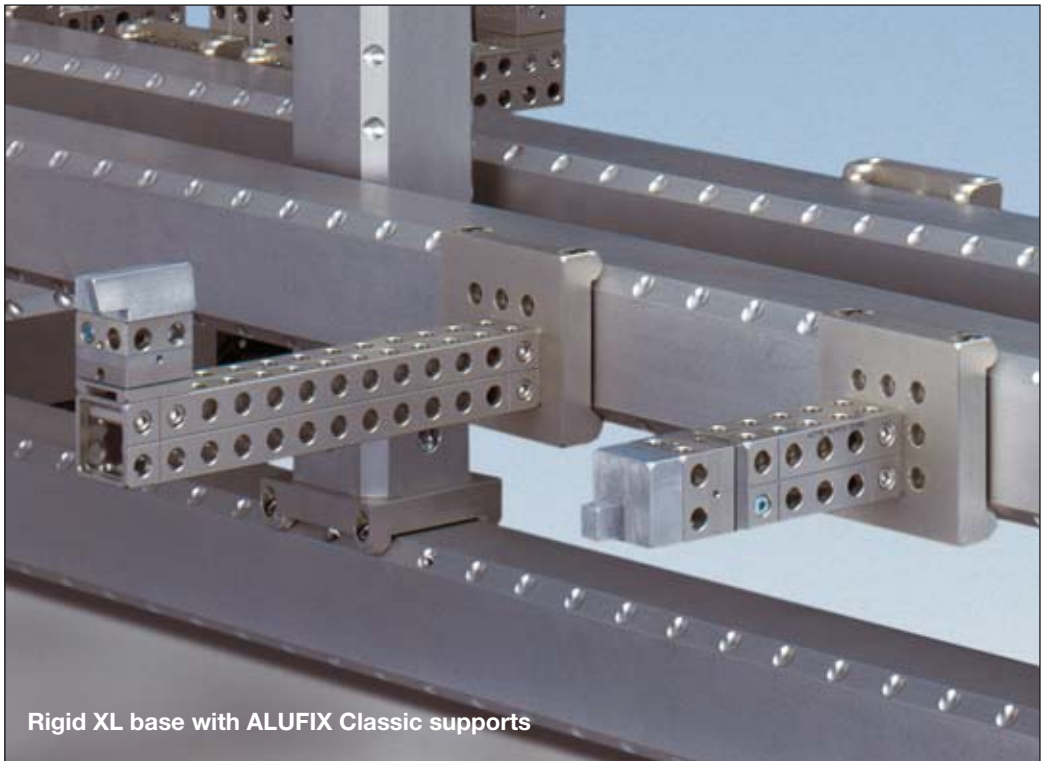
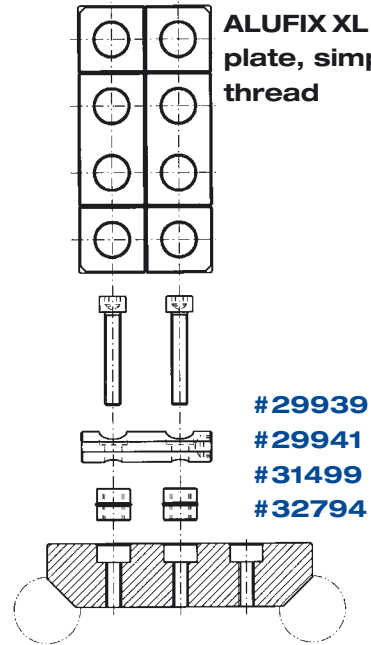
XL	No.	L 1	L 2
50	32830	70	50
100	32675	120	100



ALUFIX XL Coupling plate, simple w/o thread



ALUFIX XL Coupling plate, simple with thread



Rigid XL base with ALUFIX Classic supports

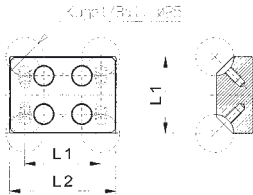
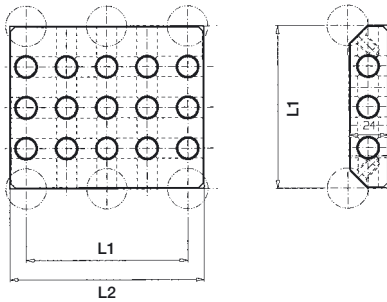


ALUFIX XL Coupling plate,

simple for ball connection

as AF 25 base plate

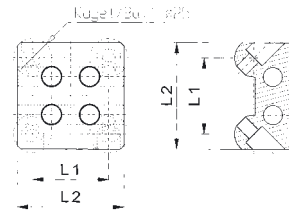
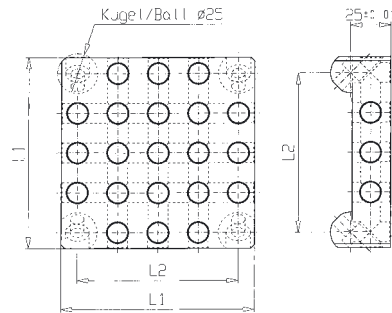
XL	No.	L 1	L 2
50	32796	50	70
100	29943	120	100


No. 32796

No. 29943
ALUFIX XL Coupling plate

version with ball feet

for especially rigid connection

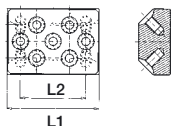
XL	No.	L 1	L 2
50	32835	50	70
100	32818	120	100


No. 32835

No. 32818

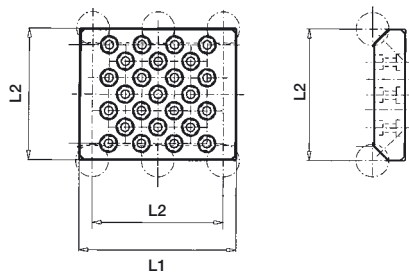

ALUFIX XL Coupling plate,

simple for ball connection
without thread

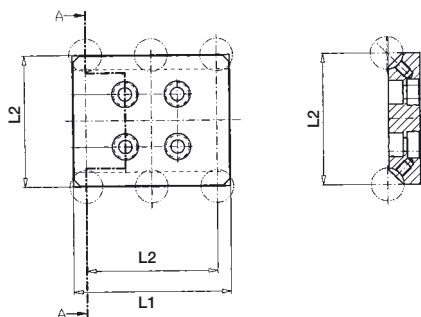
XL	AF	No.	L 1	L 2
50	25	32795	70	50
100	25	29940	120	100
100	40	29942	120	100
100	50	31500	120	100



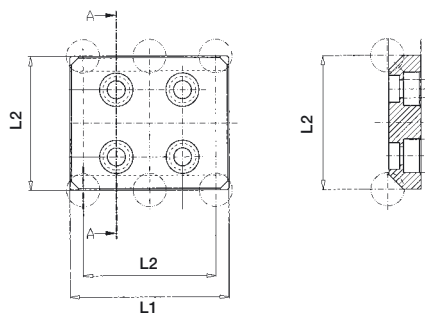
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No. 29940



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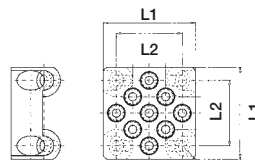


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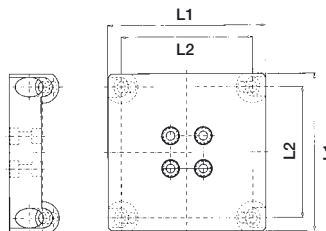
ALUFIX XL Coupling plate

version with ball feet
for especially rigid connection

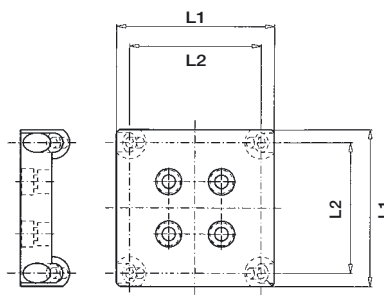
XL	AF	No.	L 1	L 2
50	25	32834	70	50
100	25	32817	120	100
100	40	32820	120	100



No. 32834



No. 32817



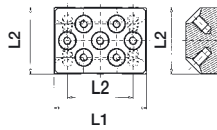
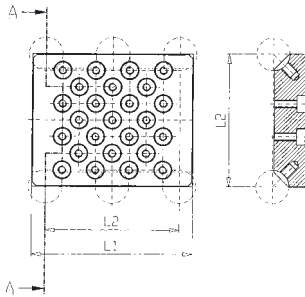
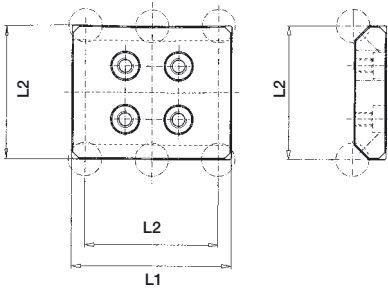
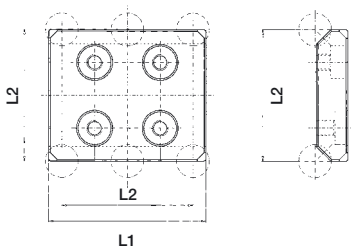
No. 32820



ALUFIX XL Coupling plate,

 simple for ball connection
with thread

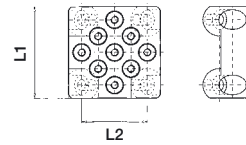
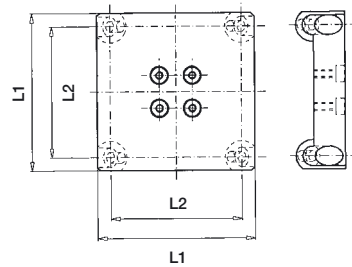
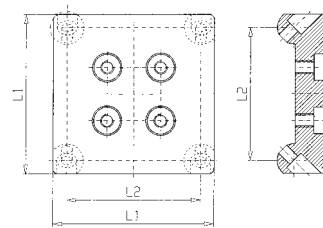
XL	AF	No.	L 1	L 2	M
50	25	32794	70	50	6
100	25	29939	120	100	6
100	40	29941	120	100	10
100	50	31499	120	100	12


No. 32794

No. 29939

No. 29941

Artikel Nr. 31499
ALUFIX XL Coupling plate

version with ball feet

for especially rigid connection

XL	AF	No.	L 1	L 2	M
50	25	32833	70	50	6
100	25	32816	120	100	6
100	40	32819	120	100	10

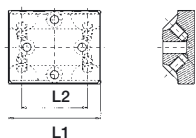

No. 32833

No. 32816

No. 32819


ALUFIX XL Coupling plate,

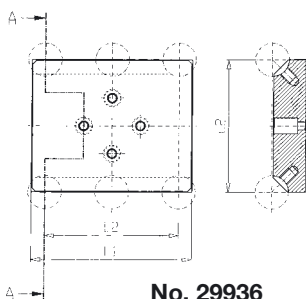
simple, ball connection

for Light SCC 53 x 53

XL	No.	L 1	L 2
50	32792	70	50
100	29936	120	100



No. 32792



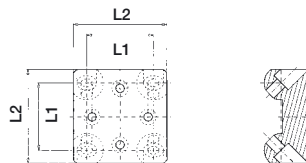
No. 29936

ALUFIX XL Coupling plate

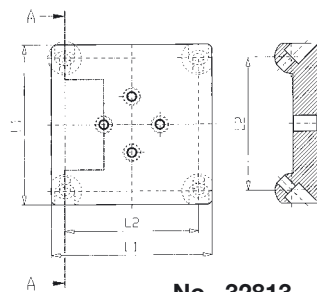
version with ball feet

for especially rigid connection

XL	No.	L 1	L 2
50	32831	90	70
100	32813	120	100



No. 32831



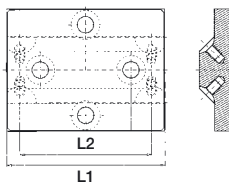
No. 32813

ALUFIX XL Coupling plate,

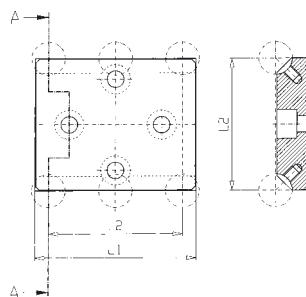
simple, ball connection

for Light SCC 84 x 84

XL	No.	L 1	L 2
50	32793	120	100
100	29937	120	100



No. 32793



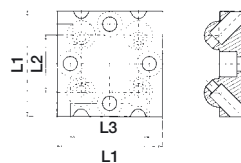
No. 29937

ALUFIX XL Coupling plate

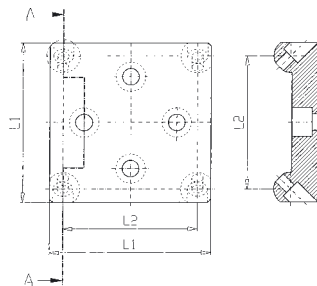
version with ball feet

for especially rigid connection

XL	No.	L 1	L 2	L 3
50	32832	92	50	69
100	32815	120	100	



No. 32832



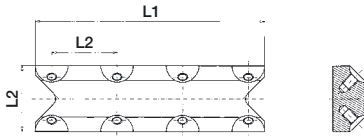
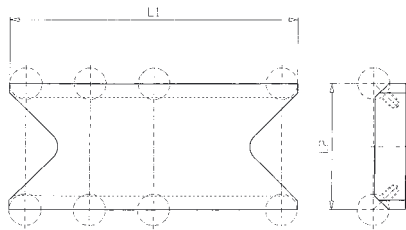
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ALUFIX XL Coupling plate,

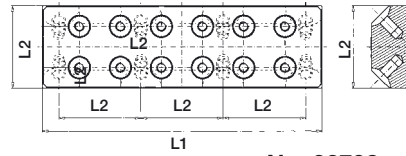
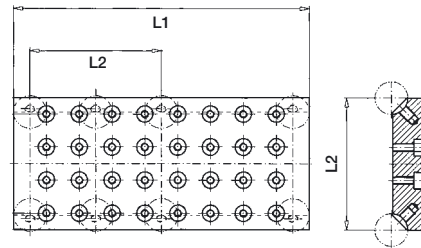
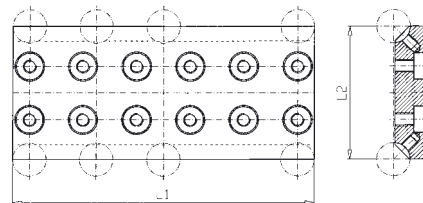
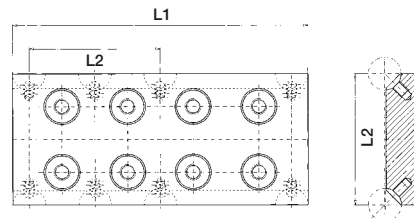
 double, for ball connection,
 blank

XL	No.	L 1	L 2
50	32797	125	50
100	30091	225	100


No. 32797

No. 30091
ALUFIX XL Coupling plate

 double, for ball connection,
 threaded

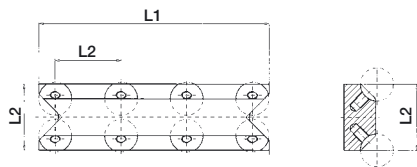
XL	AF	No.	L 1	L 2	M
50	25	32798	170	50	6
100	25	30089	225	100	6
100	40	31501	225	100	10
100	50	31502	225	100	12


No. 32798

No. 30089

No. 31501

No. 31502

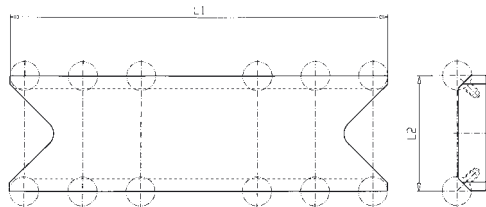

ALUFIX XL Coupling plate,

triple, for ball connection, blank

XL	No.	L 1	L 2
50	32799	175	50
100	30092	325	100



No. 32799

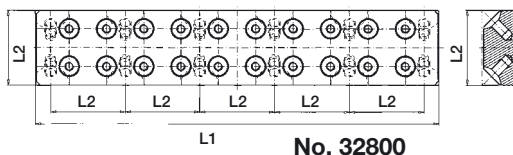


No. 30092

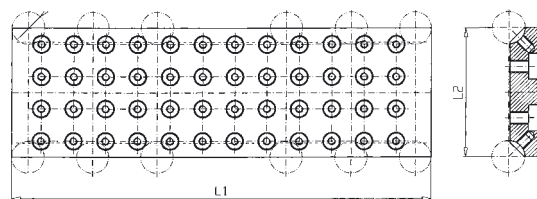
ALUFIX XL Coupling plate,

triple, for ball connection, threaded

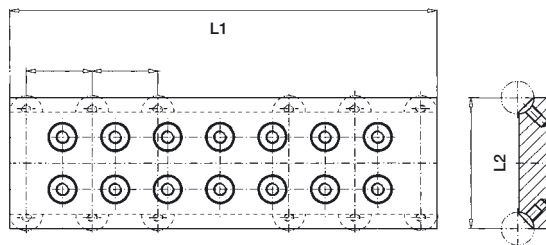
XL	AF	No.	L 1	L 2	M
50	25	32800	270	50	6
100	25	30090	325	100	6
100	40	31503	325	100	10
100	50	31504	325	100	12



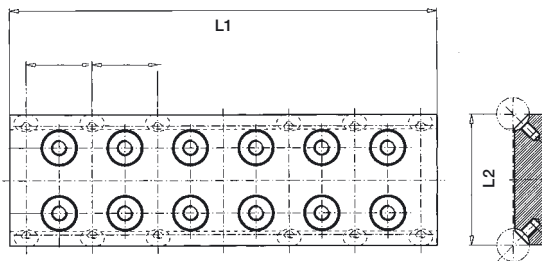
No. 32800



No. 30090

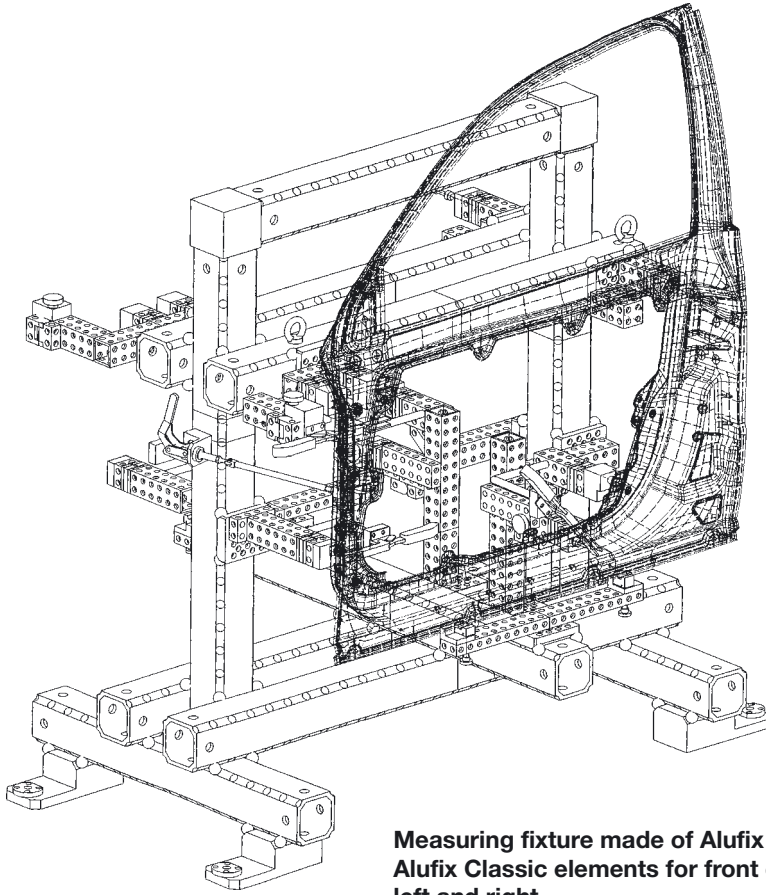


No. 31503

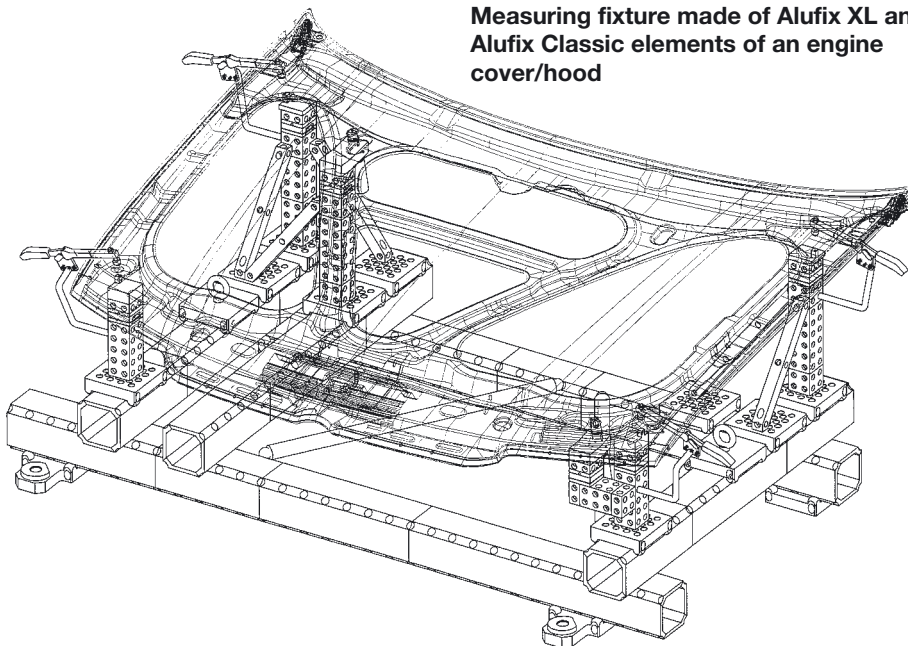


No. 31504



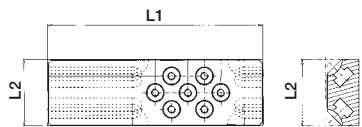


Measuring fixture made of Alufix XL and Alufix Classic elements for front car doors left and right

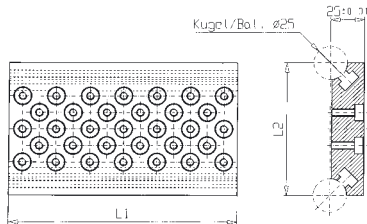


Measuring fixture made of Alufix XL and Alufix Classic elements of an engine cover/hood

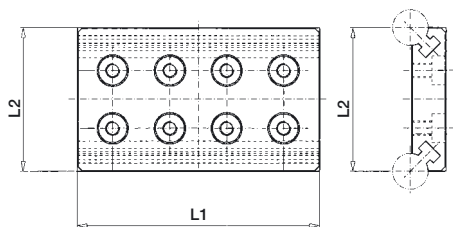




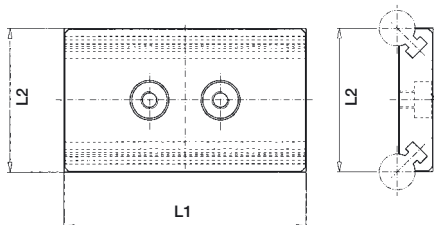
No. 32801



No. 31000



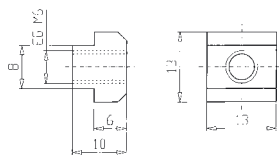
No. 31505



No. 31506

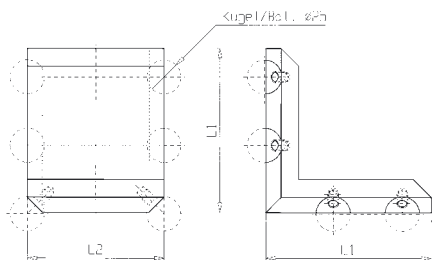
ALUFIX XL Coupling slide,
for ball connection, threaded

XL	AF	No.	L 1	L 2
50	25	32801	170	50
100	25	31000	170	100
100	40	31505	170	100
100	50	31506	170	100



T-Slot nut,
for coupling slide

XL	No.	Dim
50/100	80053	8 x M6



ALUFIX XL Angle plate 90°

XL	No.	L 1	L 2
50	32802	70	50
100	30093	120	100

ALUFIX XL Connector 25,

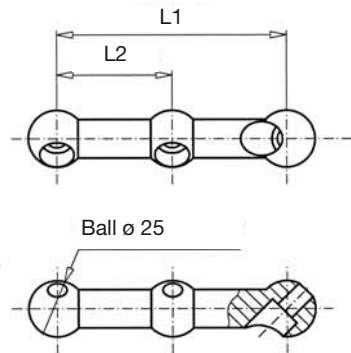
XL	No.	Type	length	L 1	-
50/100	53827	left	35	25	-
50/100	53828	right	35	25	-

ALUFIX XL Connector 50,

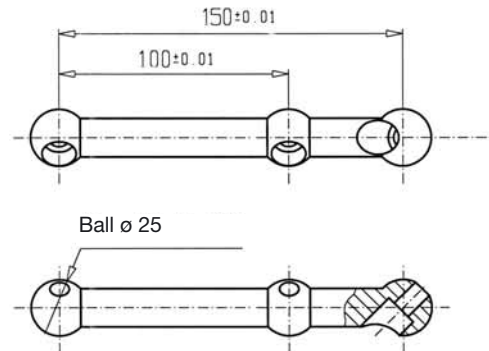
XL	No.	Type	length	L 1	L 2
50/100	53567	left	60	50	25
50/100	53568	right	60	50	25

ALUFIX XL Connector 100,

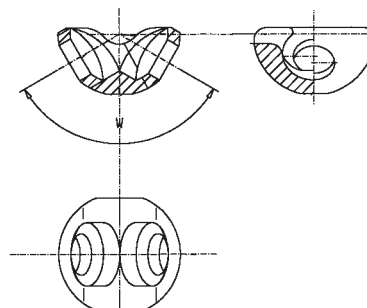
XL	No.	Type	length	L 1	L 2
50/100	30935	left	120	100	50
50/100	31152	right	120	100	50


ALUFIX XL Connector 150,

XL	No.	Type	length	L 1	L 2
50/100	29803	left	170	150	100
50/100	31209	right	170	150	100

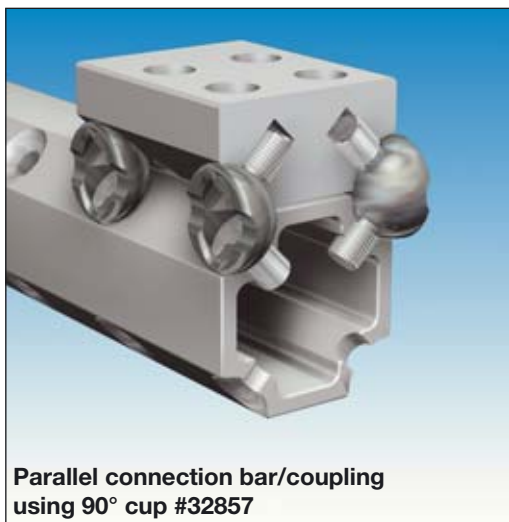

ALUFIX XL connector cup

XL	No.	Dim	w
50/100	32857	25	90°
50/100	32858	25	120°
50/100	32859	25	135°

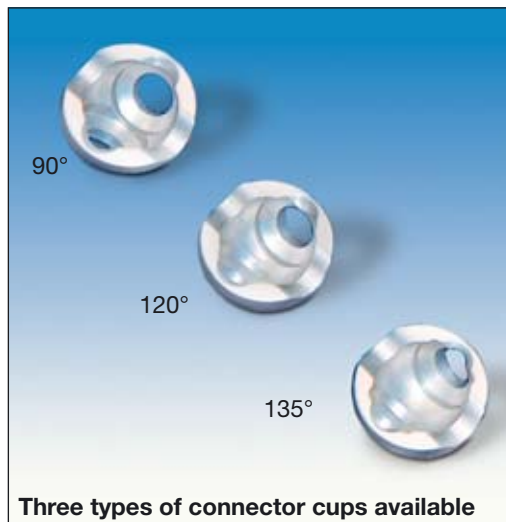


How to use connector cup
is shown on next page

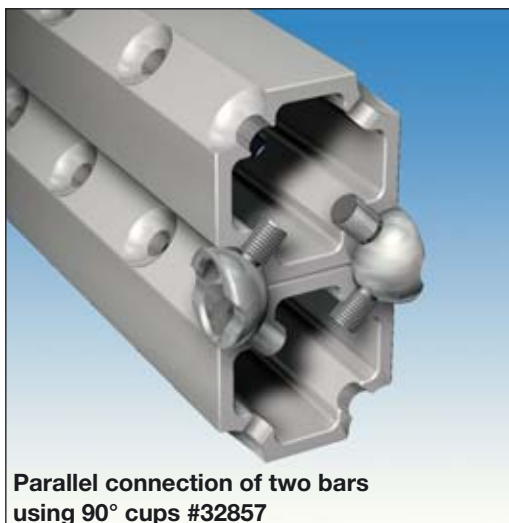




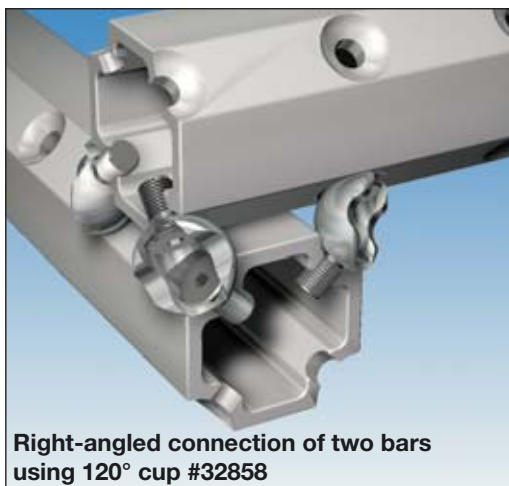
Parallel connection bar/coupling using 90° cup #32857



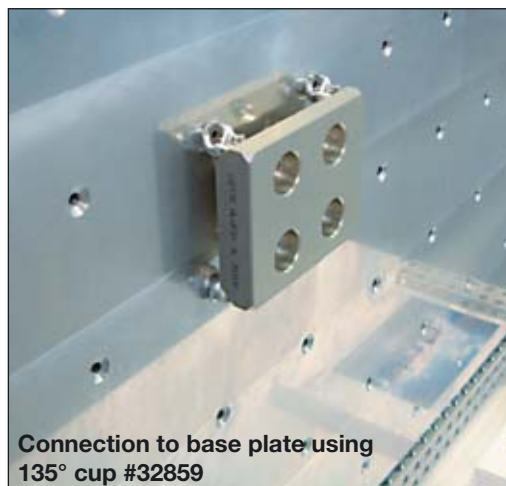
Three types of connector cups available



Parallel connection of two bars using 90° cups #32857



Right-angled connection of two bars using 120° cup #32858

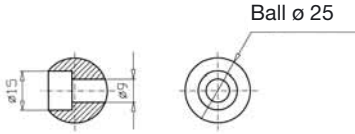


Connection to base plate using 135° cup #32859



ALUFIX XL Foot sphere,

universal



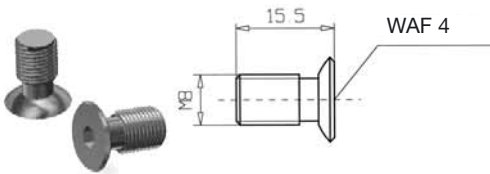
XL	No.	Dim
50/100	30603	25

ALUFIX XL Screw,

DIN 912 V2A



XL	No.	Dim
50/100	10283	M8x25

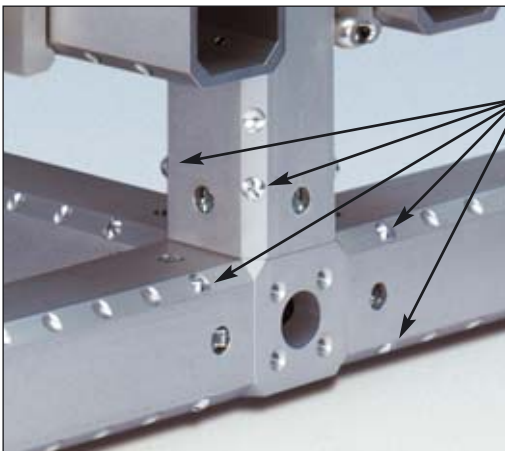

ALUFIX XL Screw,

for cup

XL	No.	Dim
50/100	30593	M8 x 15,5


**ALUFIX XL Special head
socket hex key / WAF4**

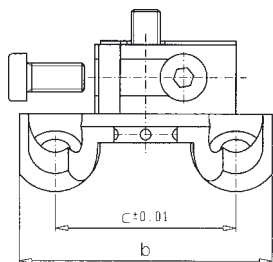
XL	No.	Dim
50/100	31777	25x142


ALUFIX XL Centering screw

for block coupling

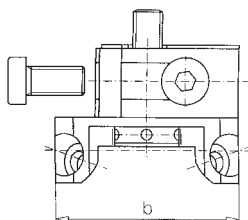
XL	No.	Dim
50/100	29944	M8





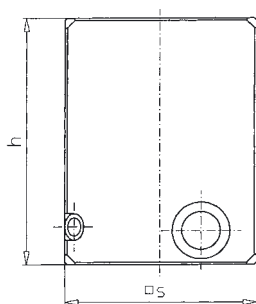
3D Adjustment block base, complete Alufix XL - Side mounting

No.	c(AF)	c	b	g
92232	XL50/AF25	50	70	---
92233	XL100/AF25	100	120	---
92234	XL100/AF40	100	120	---
92235	XL100/AF50	100	120	---



3D Adjustment block base, complete Alufix XL - Face mounting

No.	c(AF)	b	g
92236	XL50/AF25	50	---
92237	XL100/AF25	100	---
92238	XL100/AF40	100	---
92239	XL100/AF50	100	---



Contour block for 3D Adjustment block

No.	c(AF)	h	s	g
34768	25	65	50	---
34769	25	90	50	---
34770	25	65	75	---
34771	40	104	80	---
34772	40	144	80	---
34773	40	104	120	---
34774	50	130	100	---
34775	50	180	100	---
34776	50	130	150	---

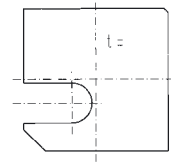
Other dimensions on request

Shim foil

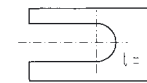
for aligning adjustment blocks

No.	c(AF)	Type	Thickness	g
34446	25	1	1,5	---
34447	25	2	1,5	---
34448	40	1	1,5	---
34449	40	2	1,5	---
34450	50	1	2,5	---
34451	50	2	2,5	---
33013	25	1	1,0	--
33014	25	2	1,0	--
33261	40	1	1,0	--
33260	40	2	1,0	--
33632	50	1	2,0	--
33633	50	2	2,0	--

Type 1

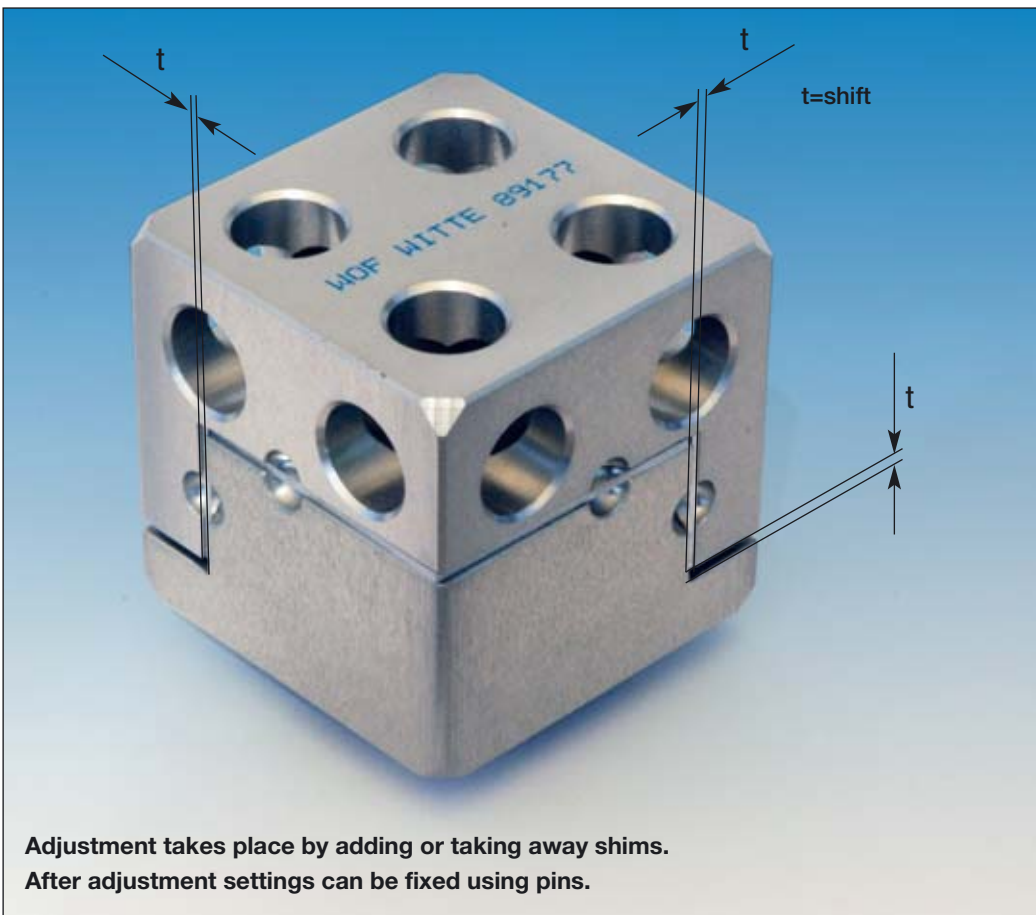


Type 2



Type 1: x

Type 2: y+z



Adjustment takes place by adding or taking away shims.
After adjustment settings can be fixed using pins.



Application examples for ALUFIX XL columns on a Witte Sandwich plate version 2. More information regarding sandwich plates can be found on pages 398-410.

