

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.

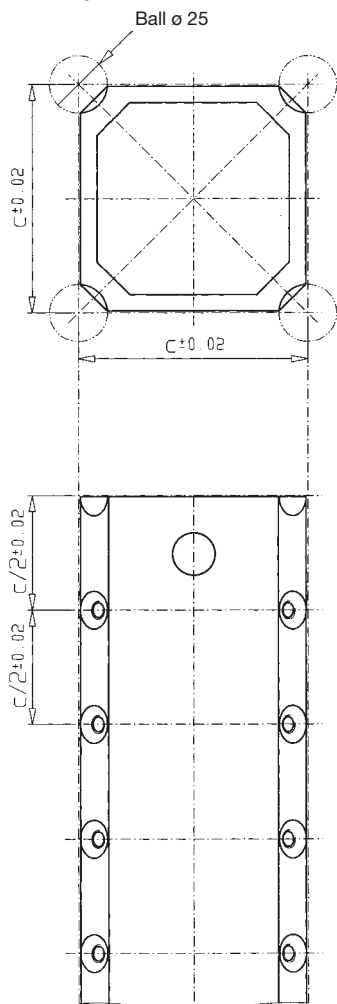
With bar lengths up to 10 metres long, two grid system sizes 100mm and 50mm and a large variety of connection possibilities, fast building of almost any kind of fixture is possible using ALUFIX XL elements.

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 |
|--------------|----------|

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).



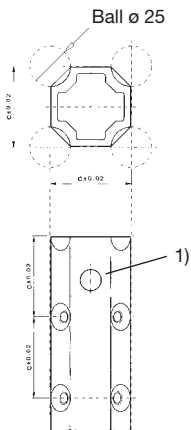
ALUFIX XL is easy to combine with other Witte products using adapter plates. Here you can see two different types of connection to **ALUFIX-Light** bars. The solid coupling plate on the left picture shows a particularly strong connection.


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



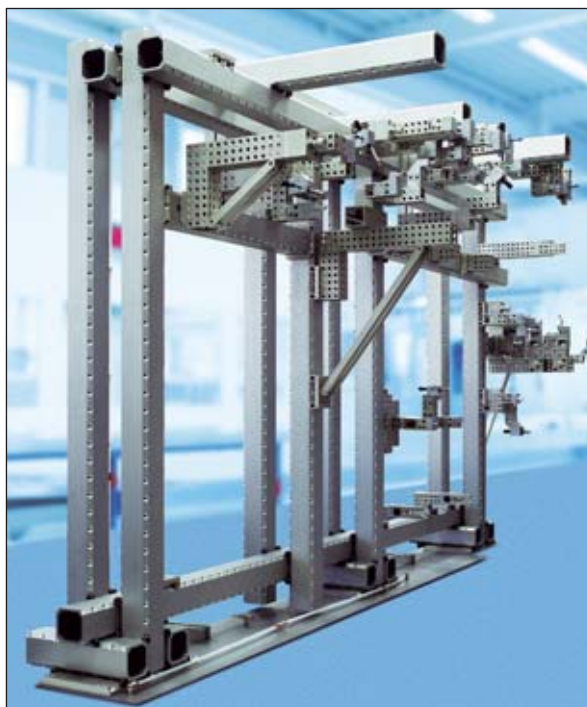
| Length mm | with ball seats | with ball seats and bore M8 | with ball seats, bore M8 and 2 cross bores ¹⁾ |
|--------------|--------------------|-----------------------------------|--|
| | No. | No. | No. |
| 200 | 32763 | 32776 | 51105 |
| 400 | 32905 | 32777 | 52185 |
| 500 | 32765 | 32778 | 51104 |
| 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

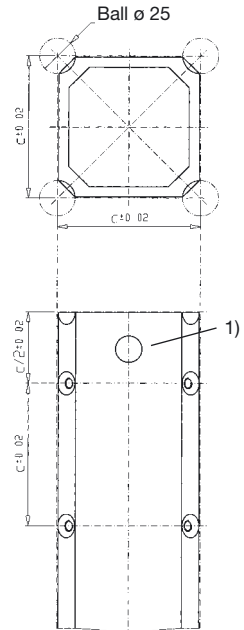
Other lengths on request.

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

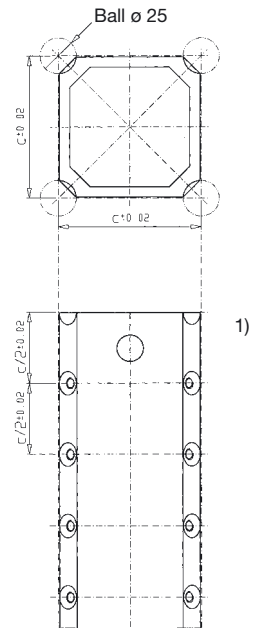


Bar XL100 Grid 100

| 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 |

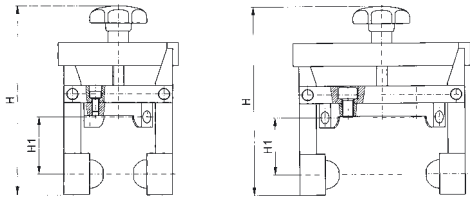


Ends milled (to JS8) and drilled for coupling unit against surcharge¹⁾

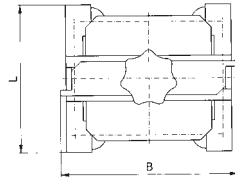
Length tolerance JS15 (sawn) / Threaded bore M8

Other lengths on request.





#92996

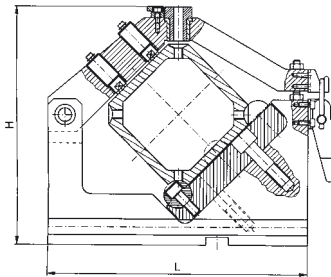
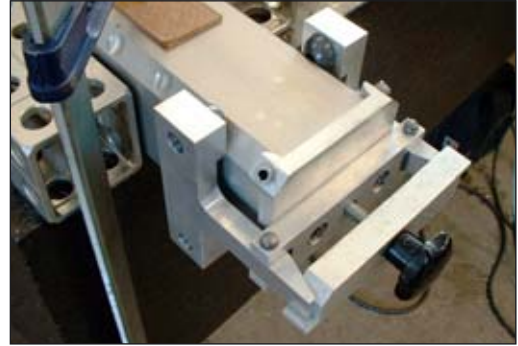


#93029

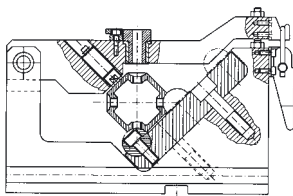
Drill template, face drilling

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 |



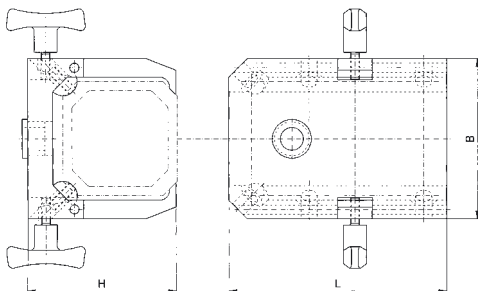
#92997



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

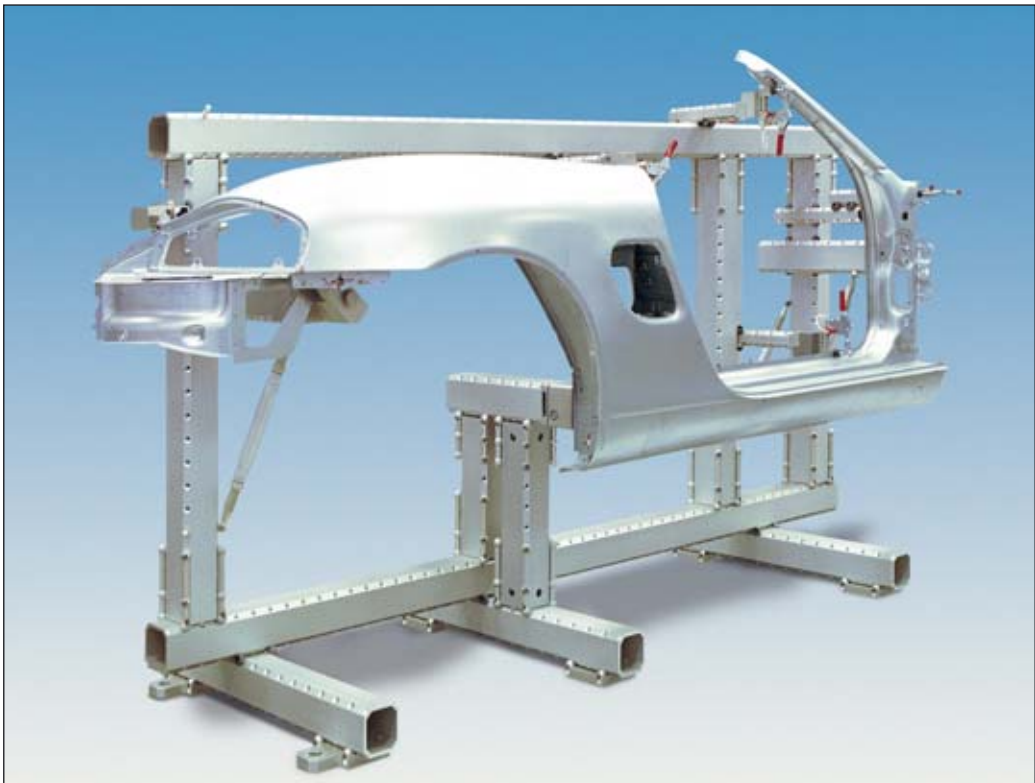
Drill template

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,

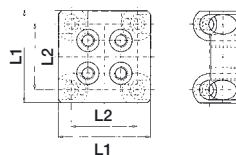
simple for ball connection

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

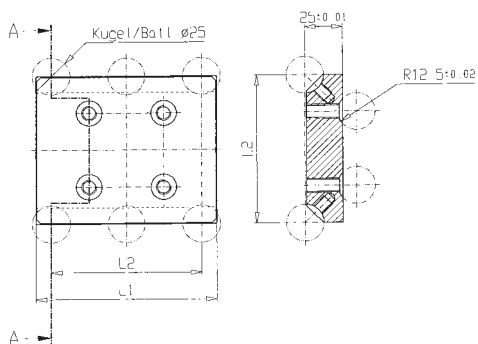
Version with ball feet

for especially rigid connection:

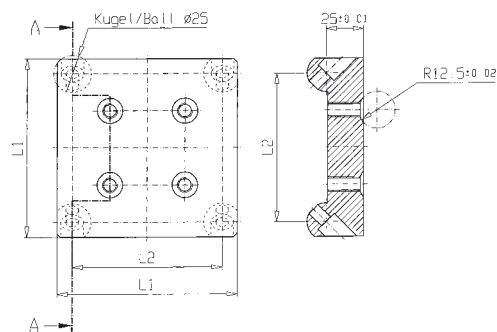
| XL | No. | L 1 | L 2 |
|-----|-------|-----|-----|
| 50 | 32829 | 70 | 50 |
| 100 | 32811 | 120 | 100 |



No. 32829

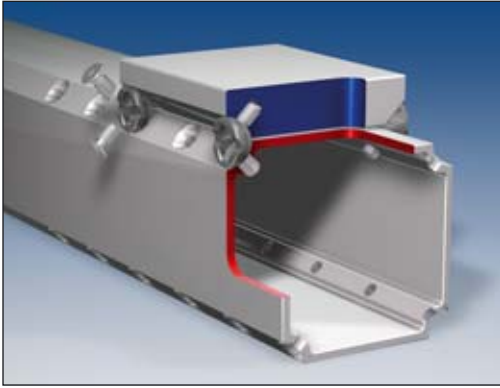


No. 29938



No. 32811

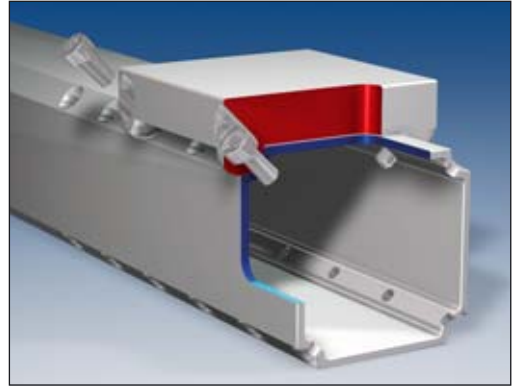
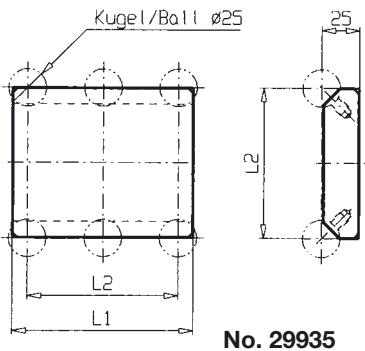
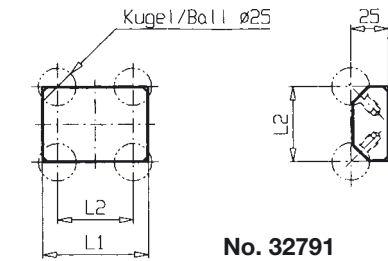




**Connection of XL bar with coupling
Version for ball connection**

ALUFIX XL Coupling plate,
simple for ball connection

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

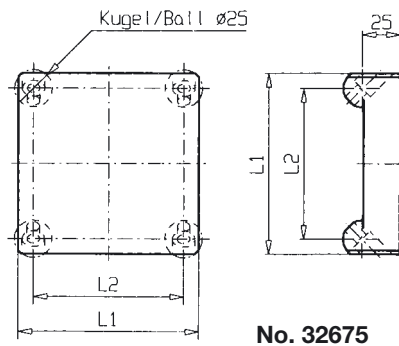
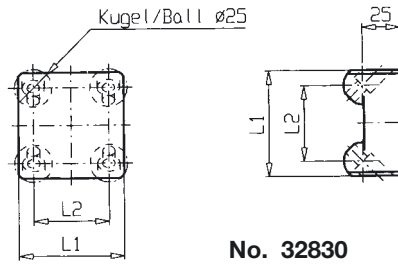


**Connection of XL bar with coupling
Version with ball feet
for especially rigid connection**

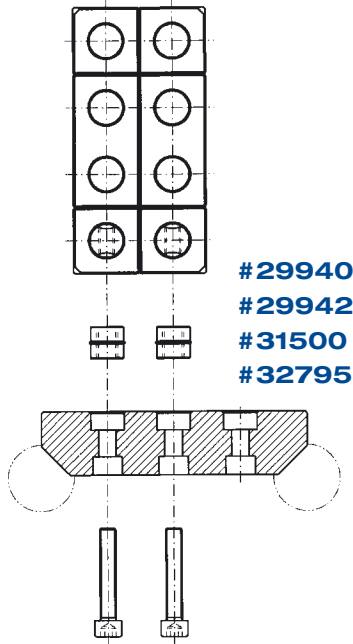
Version with ball feet

for especially rigid connection:

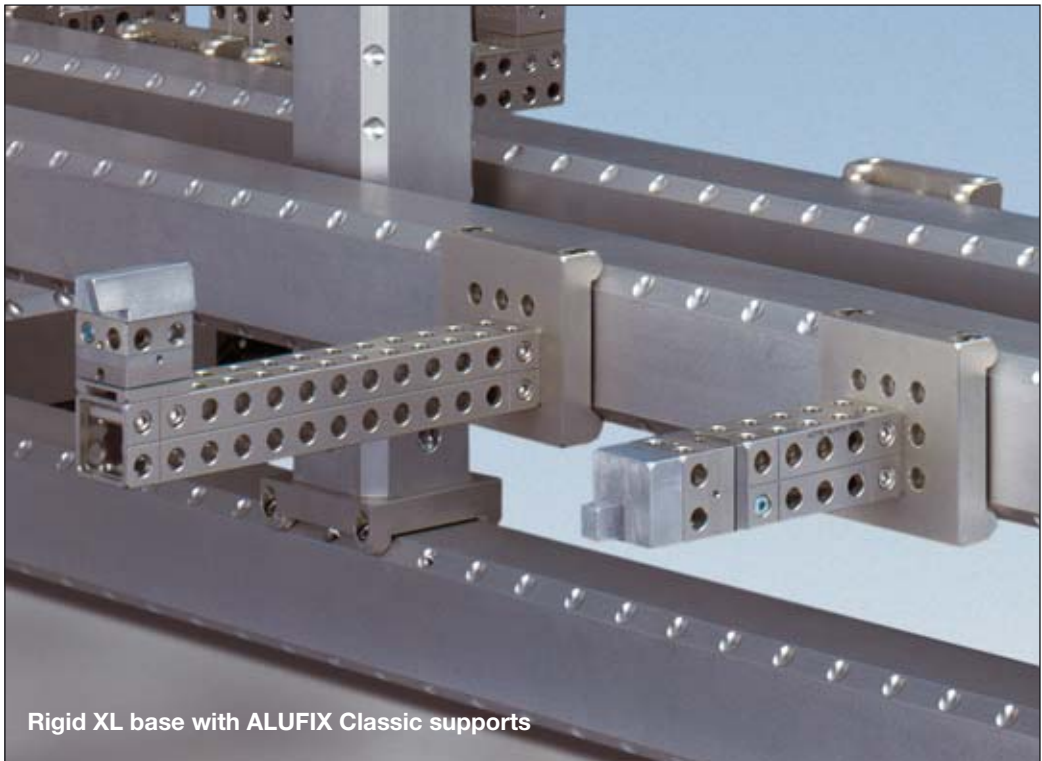
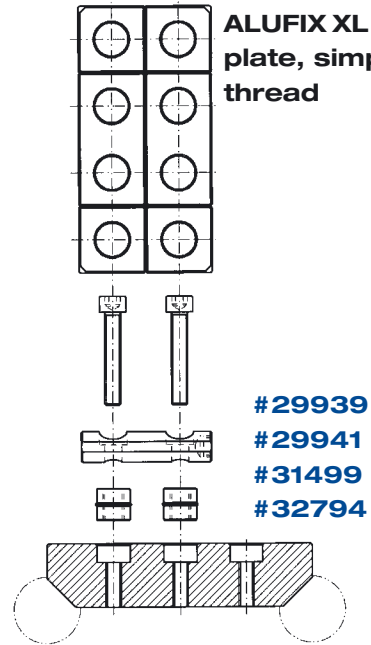
| XL | No. | L 1 | L 2 |
|-----|-------|-----|-----|
| 50 | 32830 | 70 | 50 |
| 100 | 32675 | 120 | 100 |



ALUFIX XL Coupling plate, simple w/o thread



ALUFIX XL Coupling plate, simple with thread

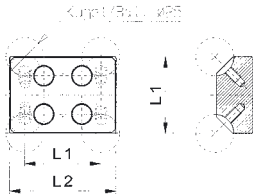
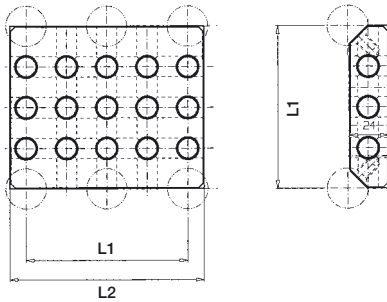


ALUFIX XL Coupling plate,

simple for ball connection

as AF 25 base plate

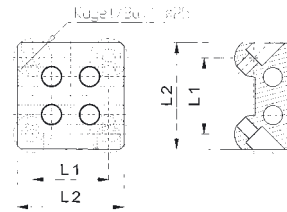
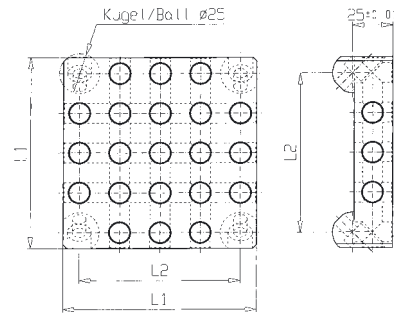
| XL | No. | L 1 | L 2 |
|-----|-------|-----|-----|
| 50 | 32796 | 50 | 70 |
| 100 | 29943 | 120 | 100 |


No. 32796

No. 29943
ALUFIX XL Coupling plate

version with ball feet

for especially rigid connection

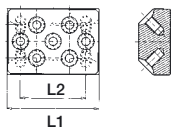
| XL | No. | L 1 | L 2 |
|-----|-------|-----|-----|
| 50 | 32835 | 50 | 70 |
| 100 | 32818 | 120 | 100 |


No. 32835

No. 32818

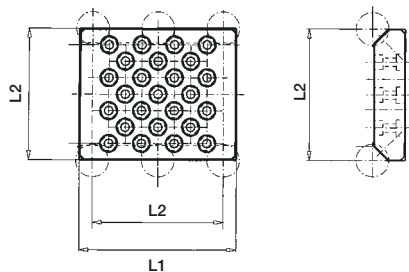

ALUFIX XL Coupling plate,

simple for ball connection
without thread

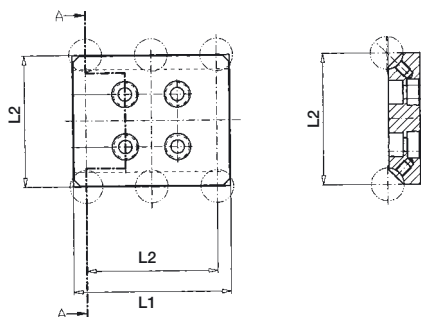
| XL | AF | No. | L 1 | L 2 |
|-----|----|-------|-----|-----|
| 50 | 25 | 32795 | 70 | 50 |
| 100 | 25 | 29940 | 120 | 100 |
| 100 | 40 | 29942 | 120 | 100 |
| 100 | 50 | 31500 | 120 | 100 |



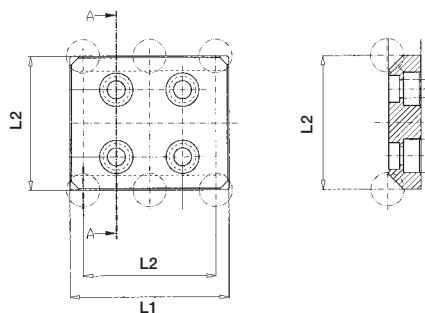
No. 32795



No. 29940



No. 29942

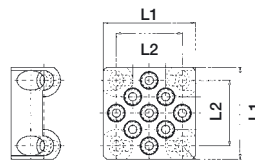


No. 31500

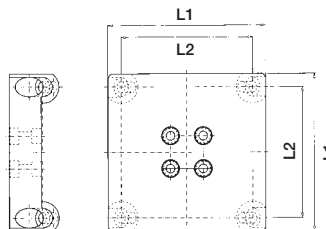
ALUFIX XL Coupling plate

version with ball feet
for especially rigid connection

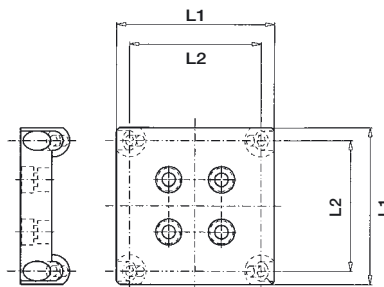
| XL | AF | No. | L 1 | L 2 |
|-----|----|-------|-----|-----|
| 50 | 25 | 32834 | 70 | 50 |
| 100 | 25 | 32817 | 120 | 100 |
| 100 | 40 | 32820 | 120 | 100 |



No. 32834



No. 32817



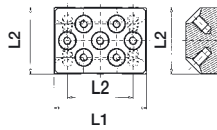
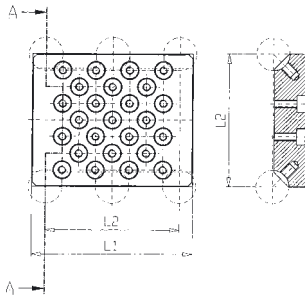
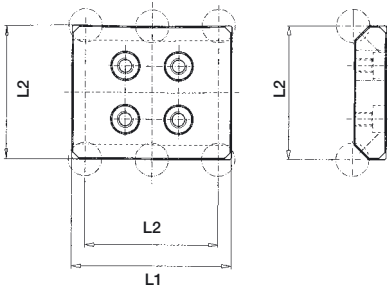
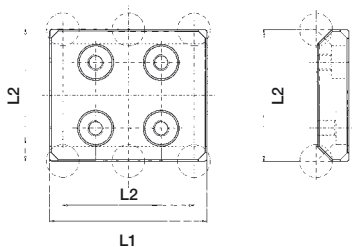
No. 32820



ALUFIX XL Coupling plate,

 simple for ball connection
with thread

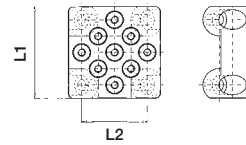
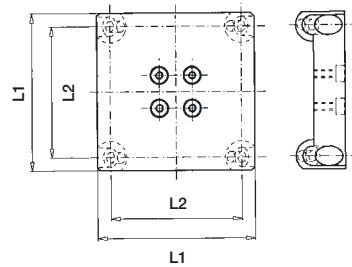
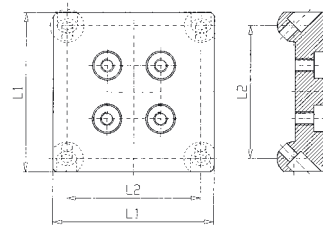
| XL | AF | No. | L 1 | L 2 | M |
|-----|----|-------|-----|-----|----|
| 50 | 25 | 32794 | 70 | 50 | 6 |
| 100 | 25 | 29939 | 120 | 100 | 6 |
| 100 | 40 | 29941 | 120 | 100 | 10 |
| 100 | 50 | 31499 | 120 | 100 | 12 |


No. 32794

No. 29939

No. 29941

Artikel Nr. 31499
ALUFIX XL Coupling plate

version with ball feet

for especially rigid connection

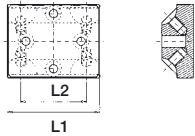
| XL | AF | No. | L 1 | L 2 | M |
|-----|----|-------|-----|-----|----|
| 50 | 25 | 32833 | 70 | 50 | 6 |
| 100 | 25 | 32816 | 120 | 100 | 6 |
| 100 | 40 | 32819 | 120 | 100 | 10 |


No. 32833

No. 32816

No. 32819

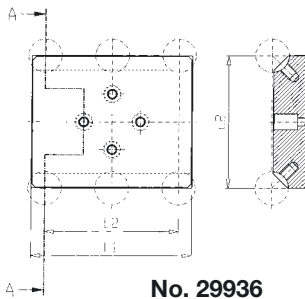

ALUFIX XL Coupling plate,

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

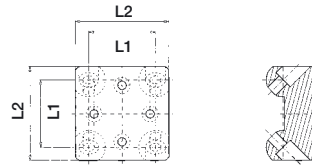


No. 29936

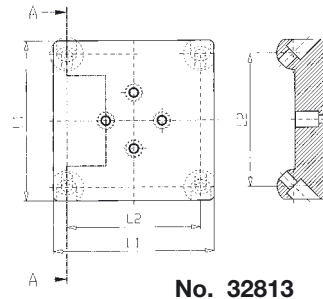
ALUFIX XL Coupling plate

version with ball feet
for especially rigid connection

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



No. 32831

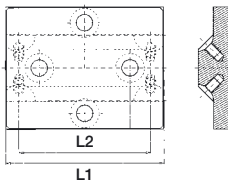


No. 32813

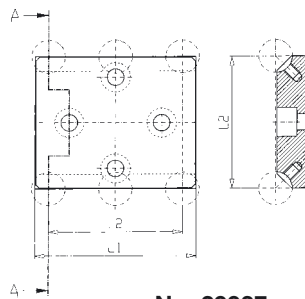
ALUFIX XL Coupling plate,

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

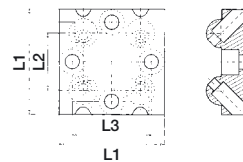


No. 29937

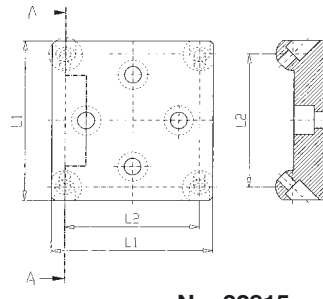
ALUFIX XL Coupling plate

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



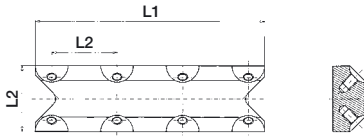
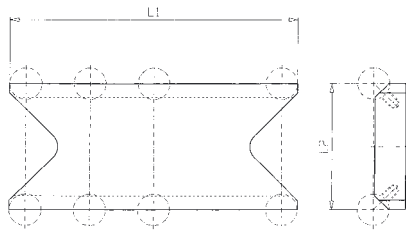
No. 32815



ALUFIX XL Coupling plate,

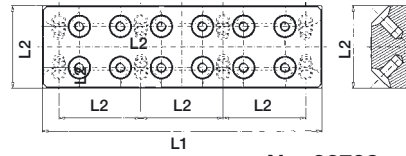
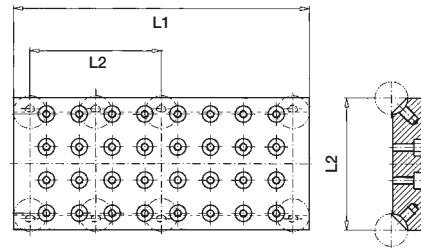
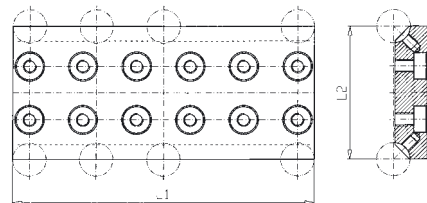
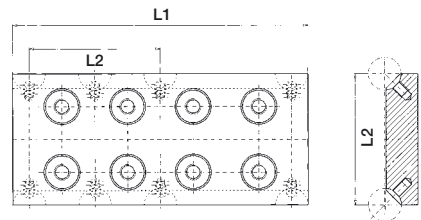
 double, for ball connection,
 blank

| 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

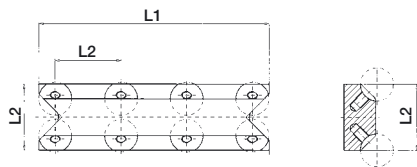
| XL | AF | No. | L 1 | L 2 | M |
|-----|----|-------|-----|-----|----|
| 50 | 25 | 32798 | 170 | 50 | 6 |
| 100 | 25 | 30089 | 225 | 100 | 6 |
| 100 | 40 | 31501 | 225 | 100 | 10 |
| 100 | 50 | 31502 | 225 | 100 | 12 |


No. 32798

No. 30089

No. 31501

No. 31502

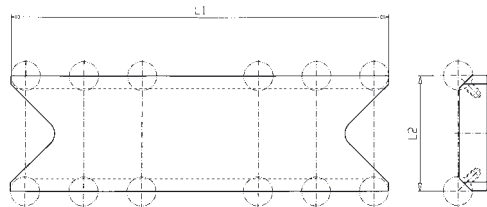

ALUFIX XL Coupling plate,

triple, for ball connection, blank

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



No. 32799

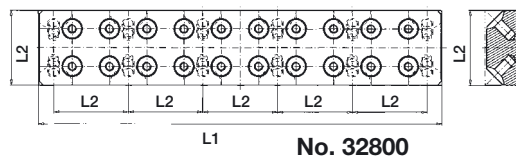


No. 30092

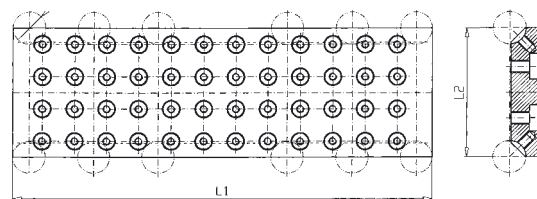
ALUFIX XL Coupling plate,

triple, for ball connection, threaded

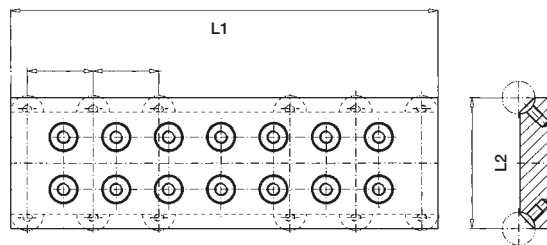
| XL | AF | No. | L 1 | L 2 | M |
|-----|----|-------|-----|-----|----|
| 50 | 25 | 32800 | 270 | 50 | 6 |
| 100 | 25 | 30090 | 325 | 100 | 6 |
| 100 | 40 | 31503 | 325 | 100 | 10 |
| 100 | 50 | 31504 | 325 | 100 | 12 |



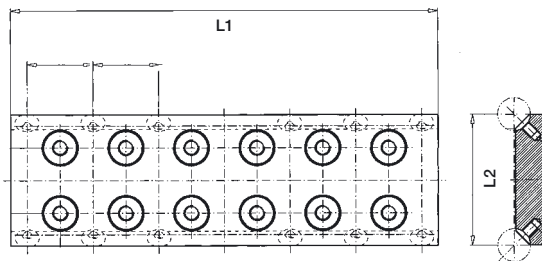
No. 32800



No. 30090

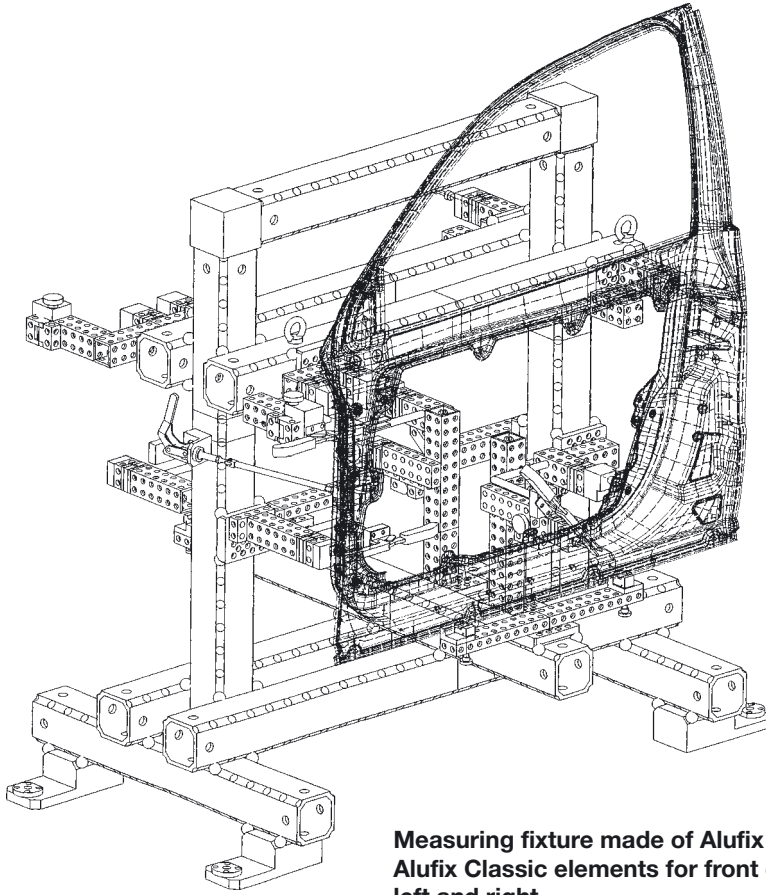


No. 31503

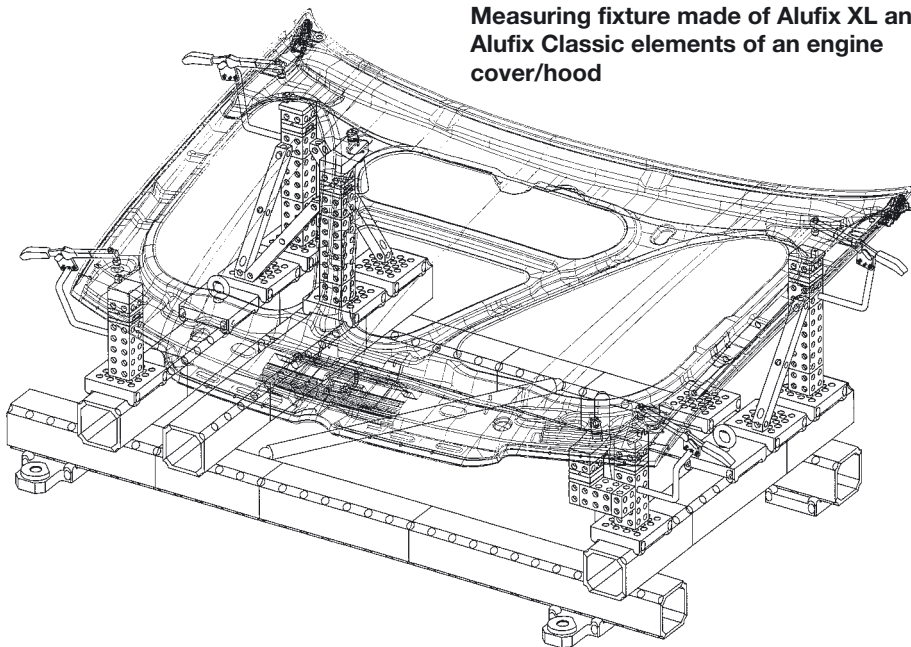


No. 31504



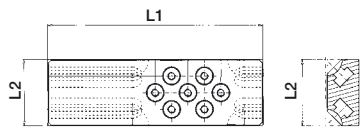


Measuring fixture made of Alufix XL and Alufix Classic elements for front car doors left and right

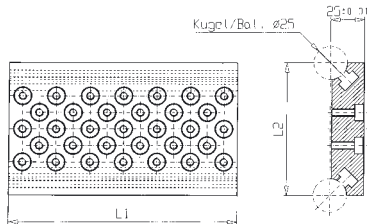


Measuring fixture made of Alufix XL and Alufix Classic elements of an engine cover/hood

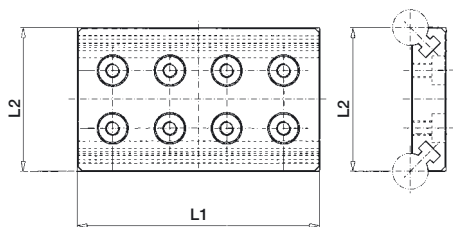




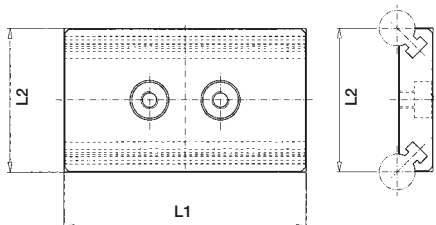
No. 32801



No. 31000



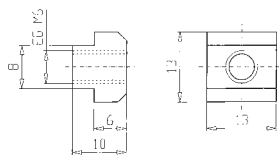
No. 31505



No. 31506

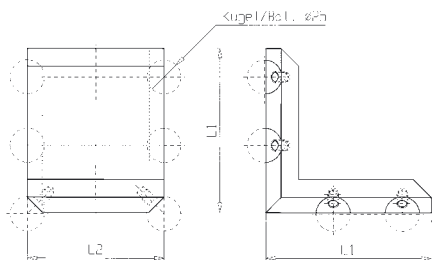
ALUFIX XL Coupling slide,
for ball connection, threaded

| 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,

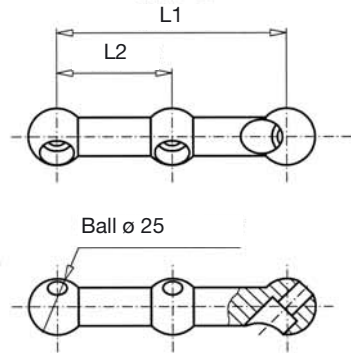
| XL | No. | Type | length | L 1 | - |
|--------|-------|-------|--------|-----|---|
| 50/100 | 53827 | left | 35 | 25 | - |
| 50/100 | 53828 | right | 35 | 25 | - |

ALUFIX XL Connector 50,

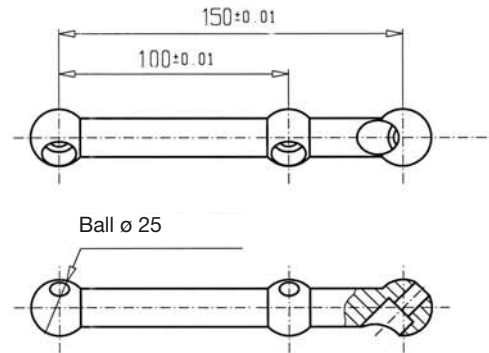
| XL | No. | Type | length | L 1 | L 2 |
|--------|-------|-------|--------|-----|-----|
| 50/100 | 53567 | left | 60 | 50 | 25 |
| 50/100 | 53568 | right | 60 | 50 | 25 |

ALUFIX XL Connector 100,

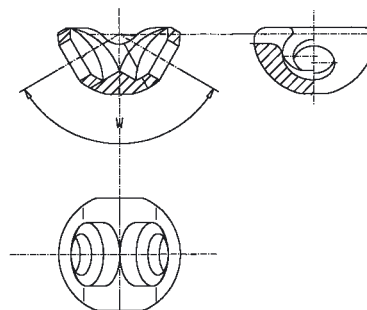
| XL | No. | Type | length | L 1 | L 2 |
|--------|-------|-------|--------|-----|-----|
| 50/100 | 30935 | left | 120 | 100 | 50 |
| 50/100 | 31152 | right | 120 | 100 | 50 |


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 |

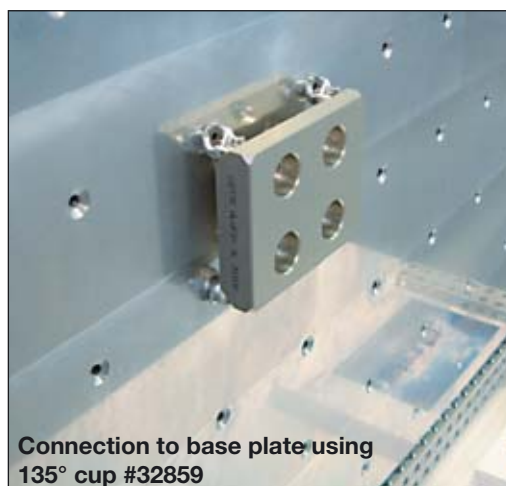
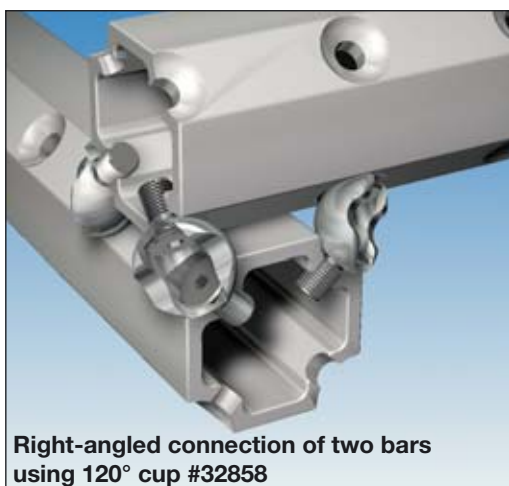
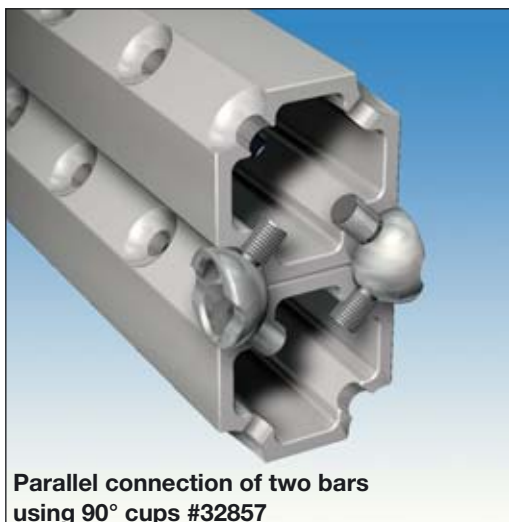
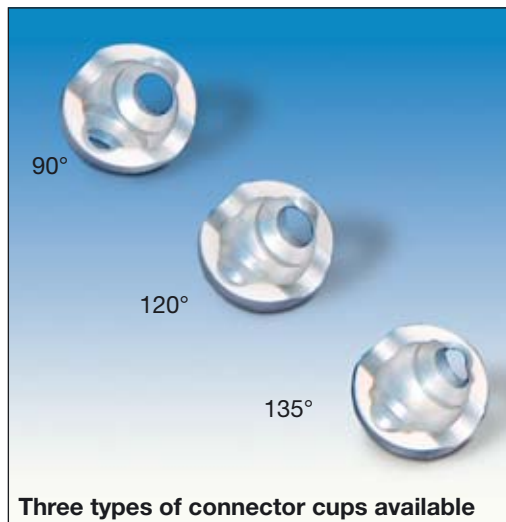
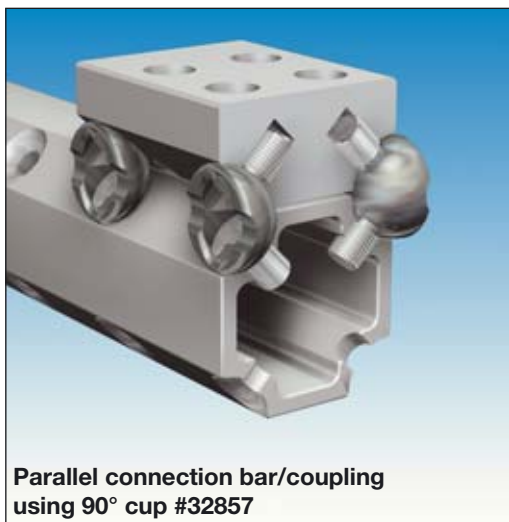

ALUFIX XL connector cup

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



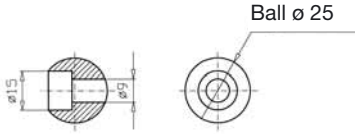
How to use connector cup
is shown on next page





ALUFIX XL Foot sphere,

universal



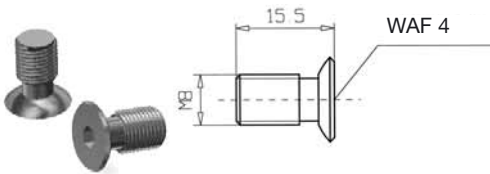
| XL | No. | Dim |
|--------|-------|-----|
| 50/100 | 30603 | 25 |

ALUFIX XL Screw,

DIN 912 V2A



| XL | No. | Dim |
|--------|-------|-------|
| 50/100 | 10283 | M8x25 |

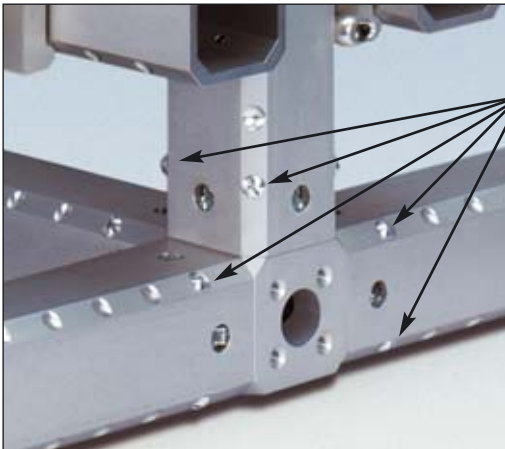

ALUFIX XL Screw,

for cup

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


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

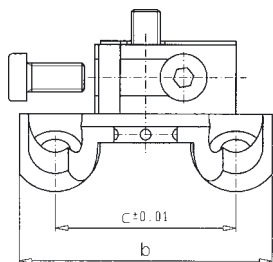
| XL | No. | Dim |
|--------|-------|--------|
| 50/100 | 31777 | 25x142 |


ALUFIX XL Centering screw

for block coupling

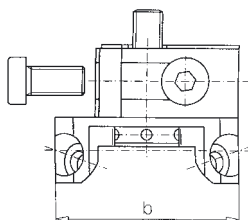
| XL | No. | Dim |
|--------|-------|-----|
| 50/100 | 29944 | M8 |





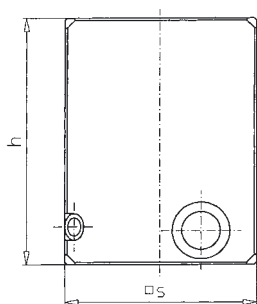
3D Adjustment block base, complete Alufix XL - Side mounting

| 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 | --- |

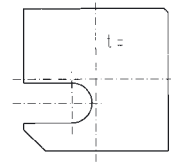
Other dimensions on request

Shim foil

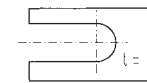
for aligning adjustment blocks

| 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

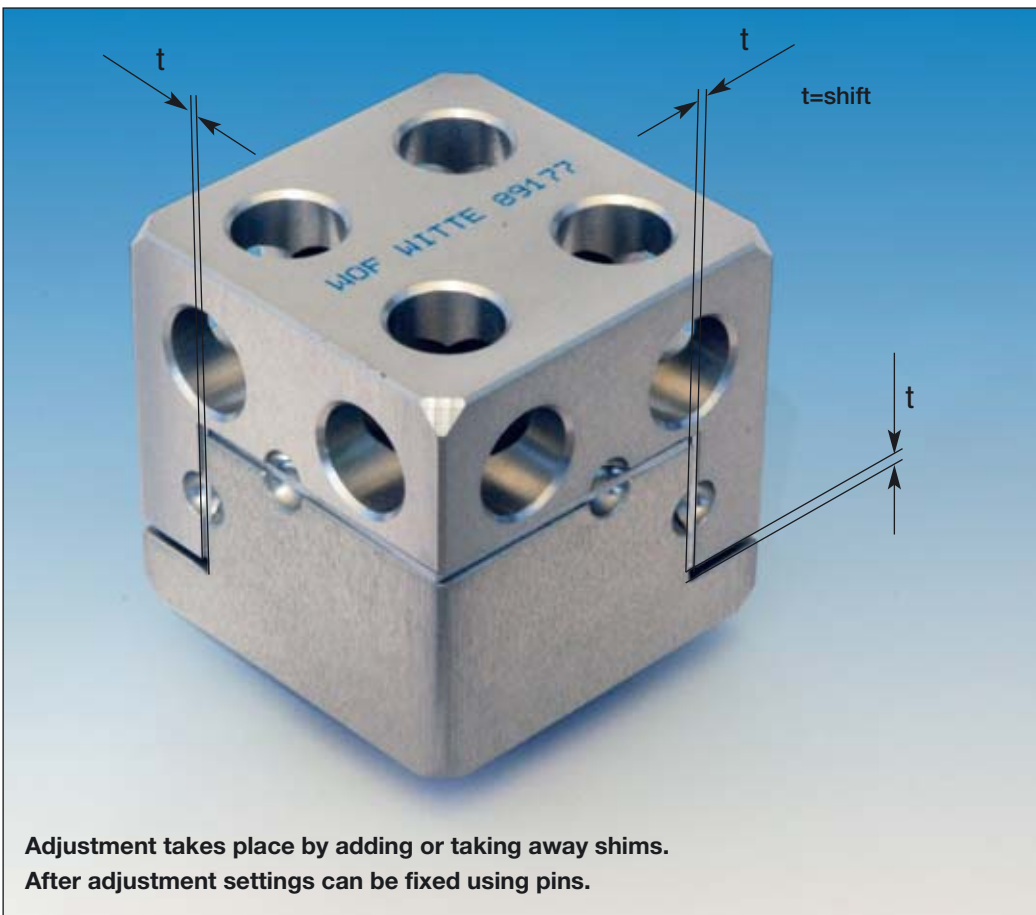


Type 2



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.

