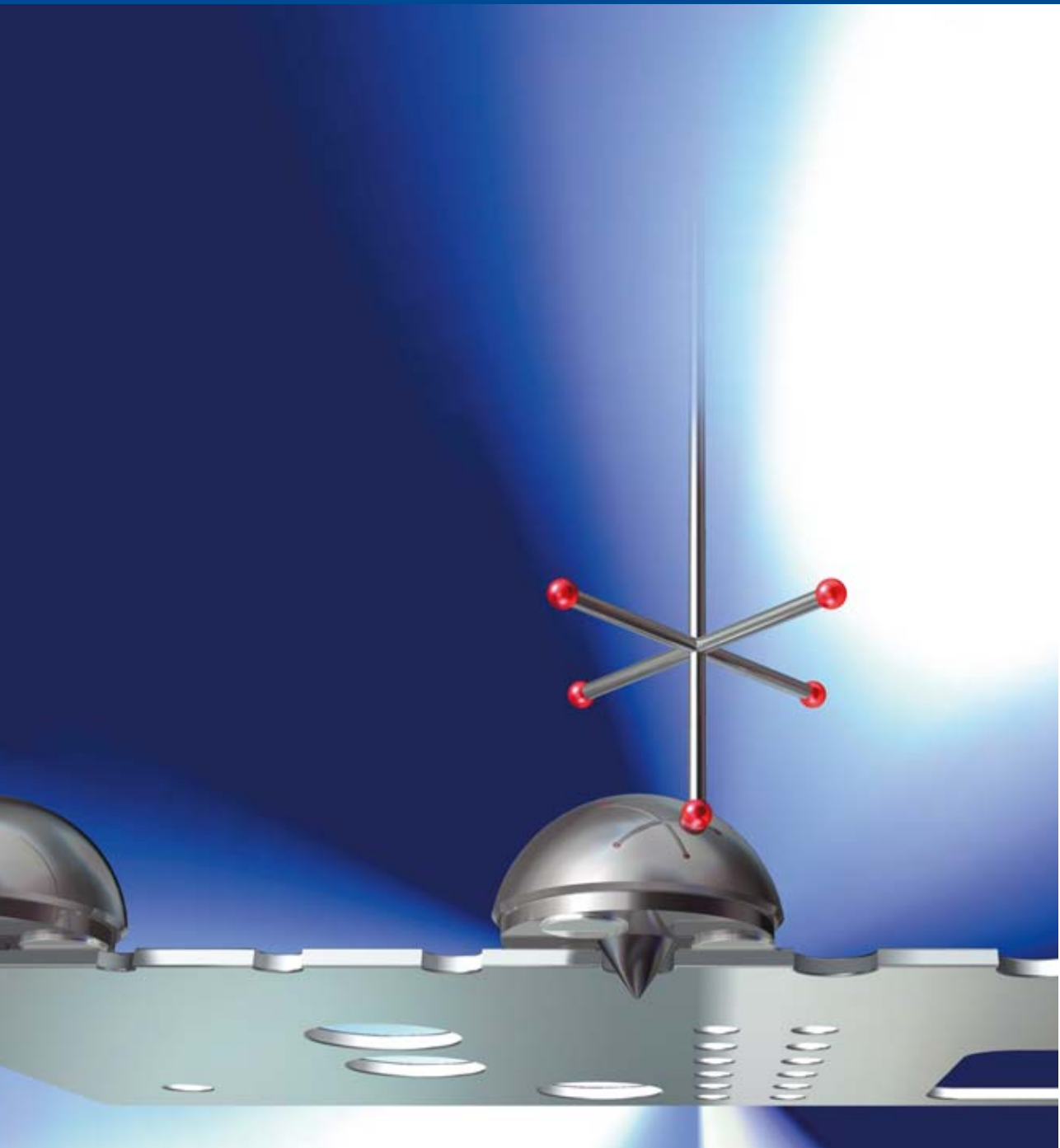


FIXINSPECT



Measuring Accessory

Catalogue 2011^{E09}





High tech in aluminium

Founded in 1969 as a manufacturing partner für highly accurate parts for aerospace Witte is now one of the leading developers and manufacturers of modular fixturing systems and measuring accessories as well as gauges. Almost all notable companies in automotive and aircraft industries place their trust in Witte products and 40 years of experience.



FIXINSPECT®

Fixinspect measuring accessories simplify and considerably speed up tactile and non-contact measuring processes. All Fixinspect accessories are mounted on workpiece features, where dimensional data is required. It is easier and

faster to measure the accessories than the features themselves. Defined contact surfaces and high-precision manufacturing of the accessories mean measuring results can be calculated back to the workpiece feature location.



FIXINSPECT
Measuring accessory
for tactile measuring



FIXINSPECT LT
Measuring accessory
for Lasertracker



FIXINSPECT PG
Measuring accessory
for photogrammetry systems



FIXINSPECT FT
- Feature Target
Measuring accessory
for photogrammetry systems,
for mounting retro-reflective
tapes

FIXINSPECT®

FIXINSPECT®

FX Adapter for bores,
self-centering for different
diameters

FIXINSPECT®

FX Adapter with
exchangeable fixing studs
for bores

FIXINSPECT®

FX Adapter with fixing
sleeve for bolts

FIXINSPECT®

FX Adapter with inner thread
for bolts in
non-magnetic workpieces

FIXINSPECT®

FX Adapter with
inner thread for bores
in non-magnetic
workpieces for
application with
fixing screw

The measuring accessory
FIXINSPECT® comprises of accurately
machined hemispheres (FX Adapters)
fixed centrally in bores or on studs.
By touching the hemisphere's surface
the position of the bore or stud on the
workpiece can be defined precisely,
and much faster than with conventio-
nal methods.

The FIXINSPECT® hemispheres can
quickly be adapted to any desired
bore diameter using
exchangeable fixing studs in steps of
0,1mm. Magnetic inserts hold these
measuring accessories in place.

For non-ferrous metals or castings,
hemispheres with fixing screws are
used.

For measuring threads or welded
bolts, magnetic hemispheres with
sleeves are used.

All hemispheres are machined out of
anodized aluminium with tolerances of
0,02mm.



Set #84700 in wooden case,
Description on opposite page
Also available in inch sizes

Set in wooden case, 198 pcs

#84700, comprising of:

Measuring accessory for threaded or stamped holes

FX Adapter with magnet

No.	Qty.	Dim
84801	4	D=30
84802	4	D=25
84805	1	D=25/22
84808	1	D=30/20
84809	1	D=25/17,5
84811	1	D=25/17,5
84814	1	D=25/14
84815	1	D=30/14
84820	1	D=25

FX Adapter without magnet

No.	Qty.	Dim
32010	1	D=30
32012	1	D=25
32014	1	D=30/20
32016	1	D=25/17,5
32018	1	D=30/14
32020	1	D=25/14

Fixing screw

No.	Qty.	Dim
32022	2	M3

Fixing studs

No.	Qty.	Dim
32050	1	D=2,0
Q		Q
32209	1	D=15,9

Fixing studs
with ISO thread

No.	St.	Dim.
32135	1	M3/2,5
32136	1	M4/3,3
32137	1	M5/4,2
32138	2	M6/5,0
32139	2	M8/6,8
32140	1	M10/8,5
32141	1	M12/10,2
32142	1	M16/14,0

1x all Dias in steps of 0,1mm
from 32050 to 32129 and 32150 to 32209
Dias 5,3; 6,8; are included 2x
Dias 2,5; 3,3; 4,2; 8,5; 10,2; 14,0 are included 3x

Measuring accessory for threaded and welded bolts

Adapter with sleeve D=35

No.	Qty.	Dim
84825	1	d=5,1
84826	1	d=6,1
84827	1	d=8,1
84828	1	d=10,1

Adapter with sleeve D=30

No.	Qty.	Dim
84833	1	d=5,1
84834	1	d=6,1
84835	1	d=8,1
84836	1	d=10,1

Adapter with sleeve D=25

No.	Qty.	Dim
84840	1	d=5,1
84841	1	d=6,1

Adapter with sleeve, elongated D=22

No.	Qty.	Dim
84846	1	d=5,1
84847	1	d=6,1

FX Adapter threaded w/o magnet D=30

No.	Qty.	Dim
32025	1	M5
32026	1	M6
32027	1	M8
32028	1	M10

FX Adapter threaded w/o magnet D=25

No.	Qty.	Dim
32033	1	M5
32034	1	M6
32035	1	M8
32036	1	M10

Wooden case with 2 metal trays

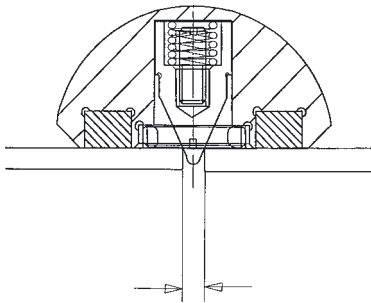
No.	Qty.
85153	1

This set is an example. Customers often order large quantities of a limited number of sizes rather than a large range of different sizes.

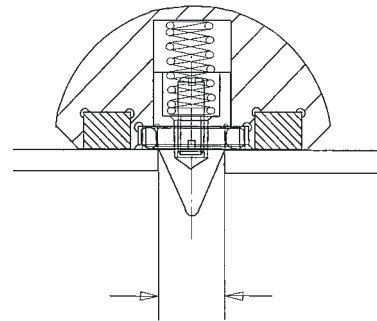
FX Adapter with magnet, self-centering



Springloaded FIXINSPECT® Adapters self-centre in bores. Hole diameters from 2mm to 9mm can be measured using the same adapter (#85198), without having to make any further changes using studs or sleeves.



Minimum hole diameter
to be measured

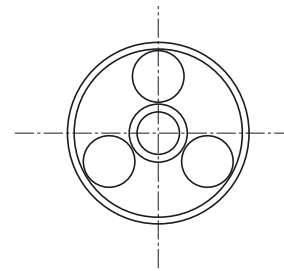
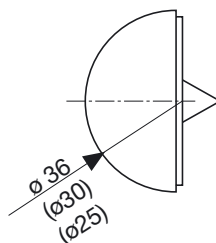


Maximum hole diameter
to be measured



FX Adapter with magnet, self-centering

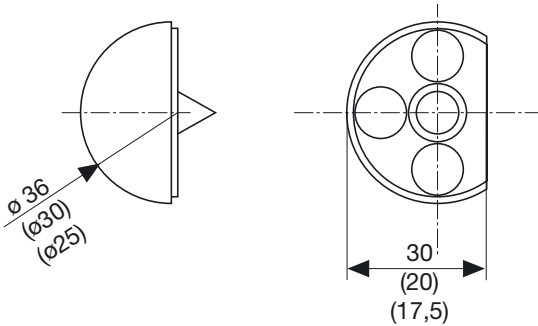
No.	Dim1	for Dia
85198	D=36	2-9 mm
87488	D=30	4,5-8 mm
89172	D=25	3-6mm
92427	D=36	8-14mm



FX Adapter with magnet, self-centering

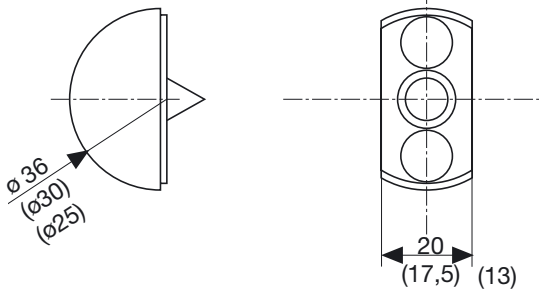
FX Adapter with magnet, one flat, self-centering

No.	Dim1	for Dia
85199	D=36/30	2-9 mm
89101	D=30/20	4,5-8 mm
89173	D=25/17,5	3-6 mm



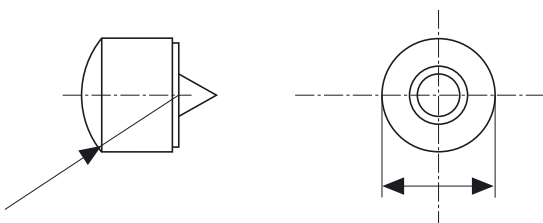
FX Adapter with magnet, parallel flats, self-centering

No.	Dim1	for Dia
85200	D=36/20	2-9 mm
89103	D=30/17,5	4,5-8 mm
90414	D=25/13	3-6 mm



FX Adapter with magnet, elongated, self-centering

No.	Dim1	for Dia
85203	D=36/30	2-9 mm
89108	D=30/20	3-6 mm

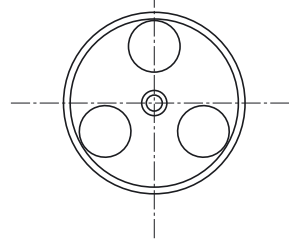
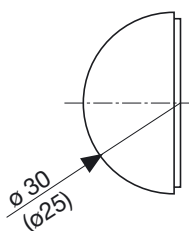


FX Adapters with magnet



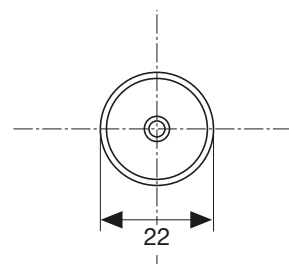
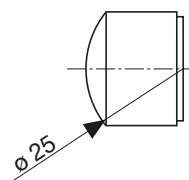
FX Adapter with magnet

No.	Dim
84801	D=30
84802	D=25



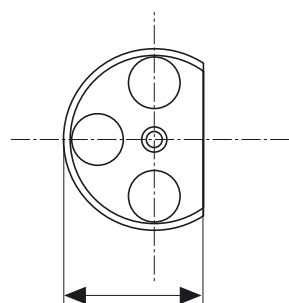
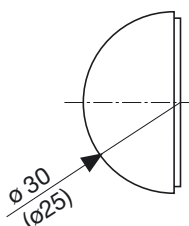
FX Adapter elongated

No.	Dim
84805	D=25/22



FX Adapter, one flat surface

No.	Dim
84808	D=30/20
84809	D=25/17,5

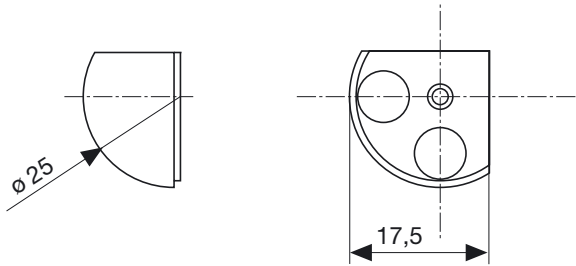


FX Adapters with magnet

FX Adapter 90°,

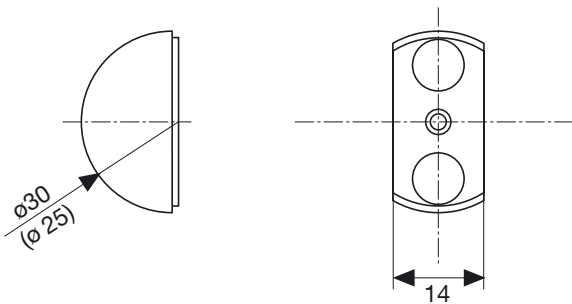
(corner cut to 90° angle)

No.	Dim
84811	D=25/17,5



FX Adapter, parallel flat surfaces

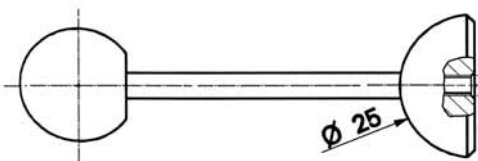
No.	Dim
84815	D=30/14
84814	D=25/14



FX Adapter with ball tip

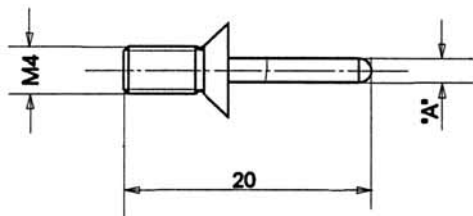
for concealed measuring points; with screw-on grip

No.	Dim
84820	D=25

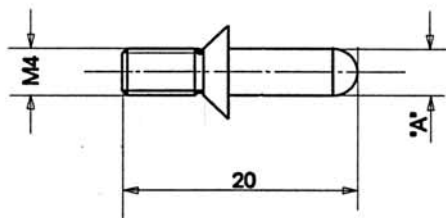


Fixing studs Dia 2,0 - 9,9 mm

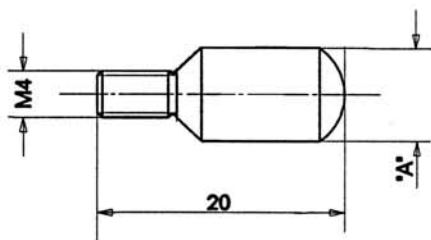
Ø 2,0 - Ø 4,9



Ø 5,0 - Ø 6,9



Ø 7,0 - Ø 9,9



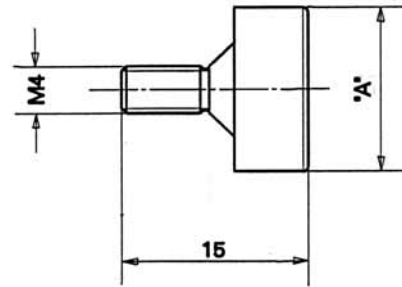
No.	Dim „A“	No .	Dim „A“
32050	D=2,0	32065	D=3,5
32051	D=2,1	32066	D=3,6
32052	D=2,2	32067	D=3,7
32053	D=2,3	32068	D=3,8
32054	D=2,4	32069	D=3,9
32055	D=2,5 (M3)		
32056	D=2,6	32070	D=4,0
32057	D=2,7	32071	D=4,1
32058	D=2,8	32072	D=4,2 (M5)
32059	D=2,9	32073	D=4,3
		32074	D=4,4
32060	D=3,0	32075	D=4,5
32061	D=3,1	32076	D=4,6
32062	D=3,2	32077	D=4,7
32063	D=3,3 (M4)	32078	D=4,8
32064	D=3,4	32079	D=4,9

No .	Dim „A“	No .	Dim „A“
32080	D=5,0 (M6)	32090	D=6,0
32081	D=5,1	32091	D=6,1
32082	D=5,2	32092	D=6,2
32083	D=5,3	32093	D=6,3
32084	D=5,4	32094	D=6,4
32085	D=5,5	32095	D=6,5
32086	D=5,6	32096	D=6,6
32087	D=5,7	32097	D=6,7
32088	D=5,8	32098	D=6,8 (M8)
32089	D=5,9	32099	D=6,9

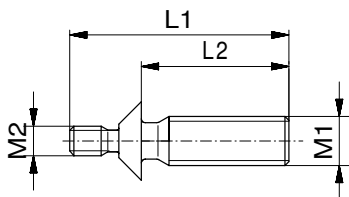
No .	Dim „A“	No .	Dim „A“
32100	D=7,0	32115	D=8,5 (M10)
32101	D=7,1	32116	D=8,6
32102	D=7,2	32117	D=8,7
32103	D=7,3	32118	D=8,8
32104	D=7,4	32119	D=8,9
32105	D=7,5		
32106	D=7,6	32120	D=9,0
32107	D=7,7	32121	D=9,1
32108	D=7,8	32122	D=9,2
32109	D=7,9	32123	D=9,3
		32124	D=9,4
32110	D=8,0	32125	D=9,5
32111	D=8,1	32126	D=9,6
32112	D=8,2	32127	D=9,7
32113	D=8,3	32128	D=9,8
32114	D=8,4	32129	D=9,9

Fixing studs Dia 10,0 - 15,9 mm

No .	Dim „A“	No .	Dim „A“
32150	D=10,0	32180	D=13,0
32151	D=10,1	32181	D=13,1
32152	D=10,2 (M12)	32182	D=13,2
32153	D=10,3	32183	D=13,3
32154	D=10,4	32184	D=13,4
32155	D=10,5	32185	D=13,5
32156	D=10,6	32186	D=13,6
32157	D=10,7	32187	D=13,7
32158	D=10,8	32188	D=13,8
32159	D=10,9	32189	D=13,9
32160	D=11,0	32190	D=14,0 (M16)
32161	D=11,1	32191	D=14,1
32162	D=11,2	32192	D=14,2
32163	D=11,3	32193	D=14,3
32164	D=11,4	32194	D=14,4
32165	D=11,5	32195	D=14,5
32166	D=11,6	32196	D=14,6
32167	D=11,7	32197	D=14,7
32168	D=11,8	32198	D=14,8
32169	D=11,9	32199	D=14,9
32170	D=12,0	32200	D=15,0
32171	D=12,1	32201	D=15,1
32172	D=12,2	32202	D=15,2
32173	D=12,3	32203	D=15,3
32174	D=12,4	32204	D=15,4
32175	D=12,5	32205	D=15,5
32176	D=12,6	32206	D=15,6
32177	D=12,7	32207	D=15,7
32178	D=12,8	32208	D=15,8
32179	D=12,9	32209	D=15,9

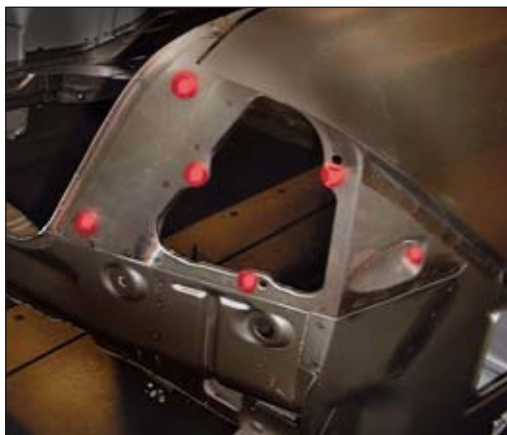
Ø 10,0 - Ø 15,9


FX Adapters can be used with exchangeable fixing studs ranging from 2 to 15,9mm for corresponding bore diameter



Threaded fixing pins

No.	M1	M2	L1 (mm)	L2 (mm)
54566	M8	M4	15	10
32925	M6	M3	16	9
32926	M8	M3	16	9
32927	M10	M3	16	8
55019	M6	M3	18	10,7
55020	M8	M3	18	10,7
52223	M6	M4	20	12
52224	M8	M4	20	12
52225	M10	M4	20	12
52226	M12	M4	20	12
54517	M5	M3	23	15,7
53676	M6	M3	23	15,7
53677	M8	M3	23	15,7
53678	M10	M3	23	15,7
54519	M12x1,5	M3	23	15,7
55740	M12	M3	23	15,7
55534	M12x1,5	M3	49,3	40



Measuring FIXINSPECT® accessories is four times faster than measuring the holes themselves



FX Adapter without magnet, with threaded bore M3 for holes in non-magnetic workpieces

FX Adapter w/o magnet

No.	Dim
32010	D=30
32012	D=25



FX Adapter w/o magnet, one flat

No.	Dim
32014	D=30/20
32016	D=25/17,5



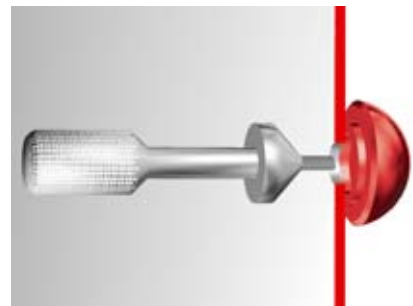
FX Adapter w/o magnet, parallel flats

No.	Dim
32018	D=30/14
32020	D=25/14



Screw for FX Adapter w/o magnet, selfcentering

No.	Dim
32022	M3

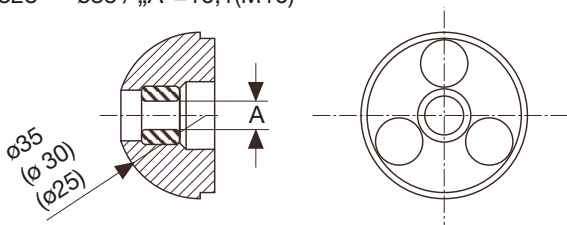


FX Adapters for welded and threaded bolts

FX Adapter with sleeve and magnet



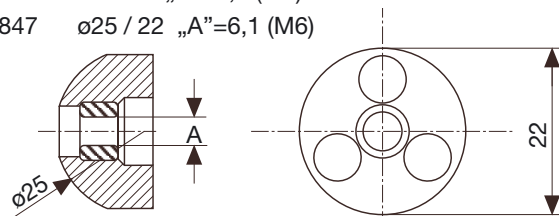
No.	Dim	No.	Dim
84840	ø25 / „A”=5,1 (M5)	84833	ø30 / „A”=5,1 (M5)
84841	ø25 / „A”=6,1 (M6)	84834	ø30 / „A”=6,1 (M6)
84825	ø35 / „A”=5,1 (M5)	84835	ø30 / „A”=8,1 (M8)
84826	ø35 / „A”=6,1 (M6)	84836	ø30 / „A”=10,1(M10)
84827	ø35 / „A”=8,1 (M8)		
84828	ø35 / „A”=10,1(M10)		



FX Adapter with sleeve and magnet, elongated



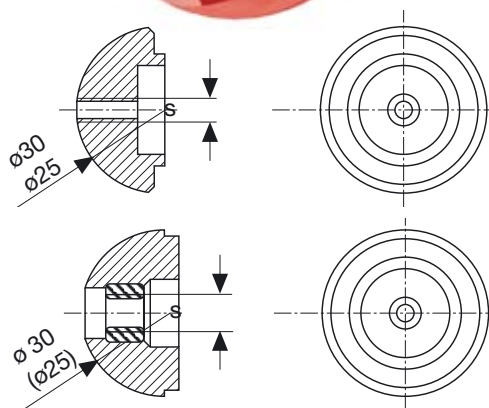
No.	Dim
84846	ø25 / 22 „A”=5,1 (M5)
84847	ø25 / 22 „A”=6,1 (M6)



FX Adapter threaded without magnet



w. sleeve	wo. sleeve	Dim.
51110	96721	30 / "S" = M4
32025 *)	96722	30 / "S" = M5x1,5875
54957	96799	30 / "S" = M5
32026	96607	30 / "S" = M6
32027	96723	30 / "S" = M8
32028	96724	30 / "S" = M10
55333	96800	25 / "S" = M4
32033 *)	96725	25 / "S" = M5x1,5875
54956	96801	25 / "S" = M5
32034	96726	25 / "S" = M6
32035	96727	25 / "S" = M8
32036	96728	25 / "S" = M10



*) for weldpins

FX Adapter without magnet Selfcentering and selfclamping for non-magnetic workpieces

FX adapter w/o magnet with conical clutch bolt for holes

Ball Dia	for hole Dia	for sheet metal thickness
D=36	from d=6 to 16	from t = 0,8 to 1,2

Clamping range is always +/- 0,2mm

The diameter of the hole to be measured should be stated when ordering



FX adapter w/o magnet with collet for bolts

No.	Ball Dia	for bolt Dia
96612	D=40	4
96613	D=40	5
96614	D=40	6
96615	D=40	8
96616	D=40	8,6
96617	D=40	10
96618	D=40	12



Assembly accessory for FX adapters with Clutch bolt or collet

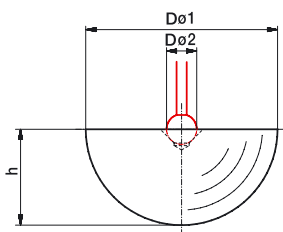
No.	Dim h x b x t
93964	75 x 42 x 37



FIXINSPECT LT for lasertracker: Measuring accessory for optical measuring to hold a ball like reflector

A new extension to our range of well-known Fixinspect measuring accessories is now available for optical systems. These new accessories fit onto sheet metal parts. Ball shaped reflectors in steel used by laser-trackers when measuring sit snugly in the concave hollow with magnets.

Fixinspect LT accessories sit magnetically in holes using self centering tips or fixing pins. They sit on bolts, on corners or edges accurately positioning laser tracker reflector balls.400



Measuring accessory FX LT steel hemisphere

No.	D1	D2	h
54971	1,5"	D6	19,05
54972	1,5"	D3	19,05
54973	0,5"	D6	6,35
54974	0,5"	D3	6,35

Measuring accessory FX LT reducer in steel for small reflectors

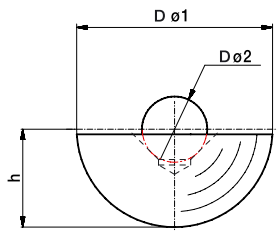
No.	D1	D2	h
96245	1,5"	0,5"	19,05
96246	1,5"	0,875"	19,05

We reserve the right to make technical changes.

#96245



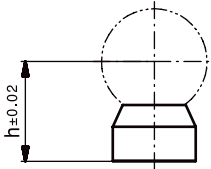
Example



**Measuring accessory
with magnets that can be used
in combination with fixing studs**

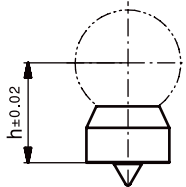
No.	forø	h
96426	D=0,5"	25
96181	D=1"	30
96182	D=1,5"	36

Fixing stud shown see also Pages 418-419



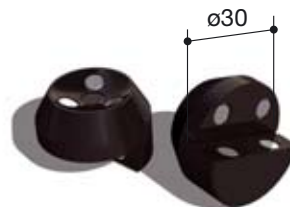
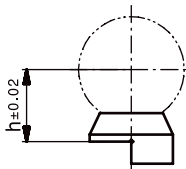
**Measuring accessory with magnets
selfcentering spring loaded cone**

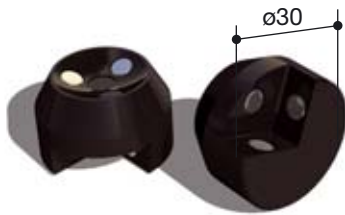
No.	dia	forø	bore range	h
96427	30	D=0,5"	2 - 9 mm	25
96428	35	D=0,5"	8 - 14 mm	25
96185	30	D=1"	2 - 9 mm	30
96186	35	D=1"	8 - 14 mm	30
96187	30	D=1,5"	2 - 9 mm	36
96188	35	D=1,5"	8 - 14 mm	36



**Measuring accessory with magnets
to sit on the side edge of workpieces**

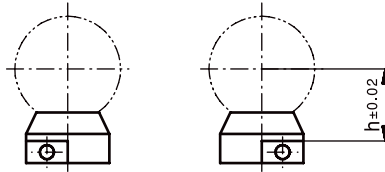
No.	forø	h
96429	D=0,5"	15
96190	D=1"	20
96191	D=1,5"	26





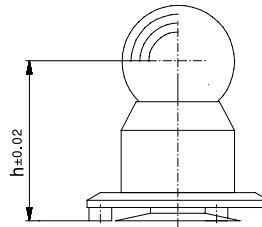
Measuring accessory with magnets for positioning on the corners of workpieces

No.	forø	d
96430	D=0,5"	14
96193	D=1"	20
96194	D=1,5"	26



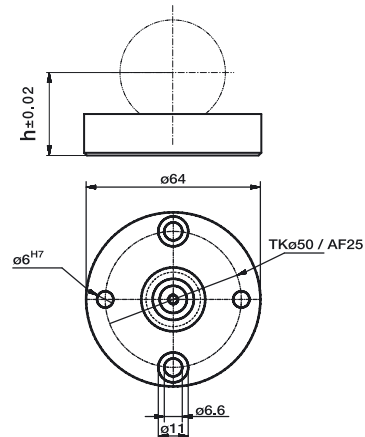
Measuring accessory with suction cup

No.	forø	h
97965	D=0,5"	36
97966	D=1"	42
97967	D=1,5"	48



Measuring accessory with magnet, and protective cap with two fixation bores for fixing and dowling

No.	forø	h
96196	D=1,5"	30



We reserve the right to make technical changes.

FIXINSPECT PG

Measuring accessory for photogrammetry systems

The Fixinspect PG adapters can be placed on the work piece as needed and have an individual coded dot-matrix for measuring with photogrammetry systems. Magnets hold the dice to the work piece, pins or spring loaded cones ensure the exact positioning of the dice. Special adapters are available for work piece edges or corners.

*) Witte has developed a code system for photogrammetry accessories. Each code denotes the different configuration of dots on the 5 available surfaces of each dice as well as the colour in which it has been anodized. Code 1 is black, code 2 is red, code 3 is violet. Individual coding is also available on request. Please contact us for further information. We reserve the right to make technical changes.



Fixinspect PG accessories in use

Basic Set Fixinspect PG

Measuring Accessory with code 1*) (see explanation above) and fixing studs

No. 96877

comprising of:

No.	Qty.	Item
900101	4	FX PG for use with fixing studs
900102	4	FX PG, self centering for 2-9mm
900103	4	FX PG, self centering for 8-14mm
900104	2	FX PG to sit on edges of workpieces
900105	4	FX PG with corner step 90°
900106	2	FX PG with cut out corner 90°
32110	4	Fixing stud ø8
32150	4	Fixing stud ø10
32171	4	Fixing stud ø12
32200	4	Fixing stud ø15
96878	1	Storage case





**FX PG "cube" 30x30x30mm,
with magnets for use with fixing studs.**

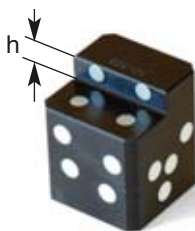
No.	Code	
900101	1	
900201	2	

For fixing studs see also catalog pages 416-417



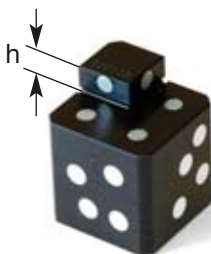
**FX PG "cube" 30x30x30mm,
with magnets, self centering spring loaded cone**

No.	Code	for ϕ
900102	1	2 - 9 mm
900103	1	8 - 14 mm
900202	2	2 - 9 mm
900203	2	8 - 14 mm



**FX PG "cube" 30x30x30mm,
with magnets to sit on edges of workpieces**

No.	Code	h
900104	1	7
900204	2	7
900109	1	25
900209	2	25

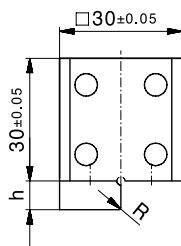


**FX PG "cube" 30x30x30mm,
with magnets and corner step 90°**

No.	Code	h
900105	1	7
900205	2	7
900110	1	25
900210	2	25

Additional with radius 3 mm at inner corner:

900111	1	7
900211	1	7



Witte has developed a code system for photogrammetry accessories. Each code denotes the different configuration of dots on the 5 available surfaces of each dice as well as the colour in which it has been anodized. Code 1 is black, code 2 is red, code 3 is violet. Individual coding is also available on request. Please contact us for further information.

We reserve the right to make technical changes.

**FX PG "cube" 30x30x30mm,
with magnets and cut out corner 90°**

No.	Code
900106	1
900206	2



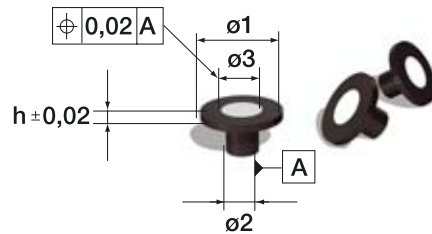
**FX PG "cube" 30x30x30mm
with suction cup**

No.	Code
900112	1
900212	2



Target reference with ceramic insert

No.	ø1	ø2	ø3	h
96203	20	8h7	10	2
96399	20	12,5h7	10	2
96745	15	8h7	5	2



Check plate for targets, supplied in case

No.	Dim
94868	15 x 400 x 400

in high-tensile aluminium,
anodized black, incl. 36 holes with Dia
5h7, 6h7, 1/4" h7, 8h7, 10h7, 12h7
for storing targets



Witte has developed a code system for photogrammetry accessories. Each code denotes the different configuration of dots on the 5 available surfaces of each dice as well as the colour in which it has been anodized. Code 1 is black, code 2 is red, code 3 is violet. Individual coding is also available on request. Please contact us for further information.

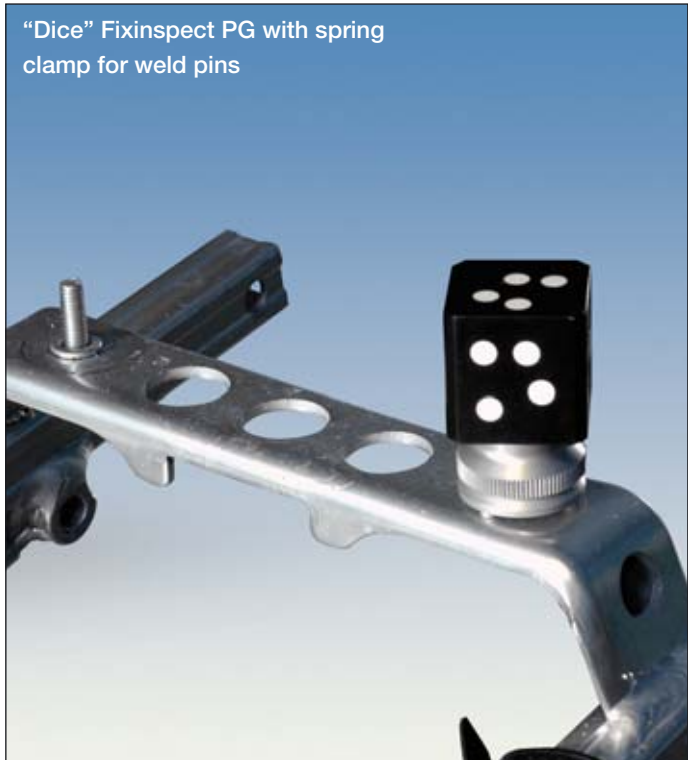
We reserve the right to make technical changes.



“Dice” Fixinspect PG part number #900101 mounted to a 3-jaw keyless chuck (part #82220). This setup can for example be securely placed on pins or in large diameter holes. More info regarding this and a variety of chucks can be found on pages 130-135.



“Dice” Fixinspect PG with spring clamp for weld pins



FIXINSPECT FT - Feature Target

Measuring accessory for photogrammetry systems,
for mounting retro-reflective tapes

In order to avoid complex glueing and removing of retro reflective tapes, we now offer a new range of Fixinspect FT accessories, which complements our already well-known range of Fixinspect. These targets mounted with tapes, were conceived particularly for optical measuring purposes and can be easily fixed on workpieces and removed again as required.

For positioning on smooth as well as curved surfaces the adapters come with a suction cup and three-point contact. The spring loaded suction cup with bayonet lock in extended mode enables careful handling of workpiece. After pressing down lightly and turning 30° to the right the target is accurately secured ensuring defined height of tapes in relation to workpiece surface.

Please refer to the box on the right for detailed description of how to use the targets with suction cup.



Tapes which have to be placed over holes are fixed via magnetic self-centering FT measuring accessories with spring loaded tip for bores diameter 2-9mm and 8-14mm.



1. Put adapter onto required position on workpiece



2. Press lightly to activate suction cup



3. Turn 30° to the right to lock into position



4. To release after measuring pull adapter up lightly and turn 30° to the left



5. Access to sucker is free and adapter is easily removed to use again for new part



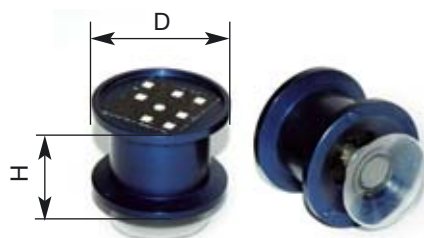
**FX FT "hemisphere",
with three-point contact and suction cup**

No.	D	Version
97909	48	Anodized blue, matt



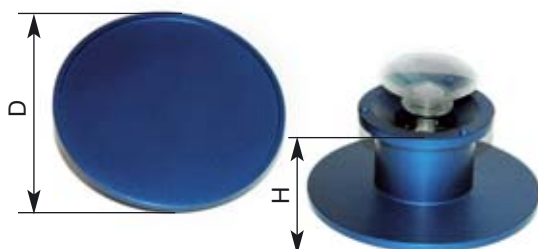
**FX FT "round",
self-centering, spring loaded tip**

No.	Dia	H	hole Ø	for tapes	Version
97711-3	41	20	Ø2 - Ø9	25x25	Anodized blue, matt
97711-8	41	20	Ø2 - Ø9	25x25	Material: polyamide
97712-3	71	20	Ø2 - Ø9	47x47	Anodized blue, matt
97712-8	71	20	Ø2 - Ø9	47x47	Material: polyamide
97713-3	41	20	Ø8 - Ø14	25x25	Anodized blue, matt
97713-8	41	20	Ø8 - Ø14	25x25	Material: polyamide
97714-3	71	20	Ø8 - Ø14	47x47	Anodized blue, matt
97714-8	71	20	Ø8 - Ø14	47x47	Material: polyamide



**FX FT "round",
with three-point contact and suction cup**

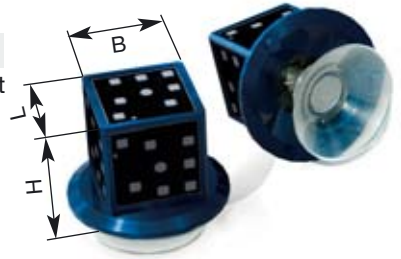
No.	Dia	H	for tapes	Version
97715-3	41	20	25x25	Anodized blue, matt
97715-8	41	20	25x25	Material: polyamide
97716-3	71	20	47x47	Anodized blue, matt
97716-8	71	20	47x47	Material: polyamide



The retro-reflective tapes are not included in delivery.
Further designs are available upon request.
We reserve the right to make technical changes.

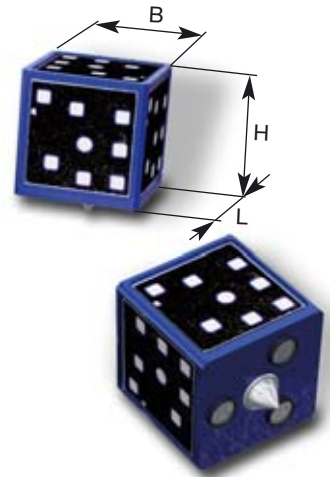
**FX FT “dice”,
with three-point contact and suction cup**

No.	L	W	H	for tapes	Version
97723-1	30	30	37,5	25x25	Anodized black, matt
97723-3	30	30	37,5	25x25	Anodized blue, matt
97723-8	30	30	37,5	25x25	Material: polyamide



**FX FT “dice”,
self centring with spring loaded cone**

No.	L	B	H	for \varnothing	for tapes	Version
98076-1	30	30	30	2 - 9	25x25	Anodized blue, matt
98076-3	30	30	30	2 - 9	25x25	Anodized black, matt
98076-8	30	30	30	2 - 9	25x25	Material: polyamide
98077-1	30	30	30	8 - 14	25x25	Anodized blue, matt
98077-3	30	30	30	8 - 14	25x25	Anodized black, matt
98077-8	30	30	30	8 - 14	25x25	Material: polyamide



The retro-reflective tapes are not included in delivery.

Further designs are available upon request.

We reserve the right to make technical changes.

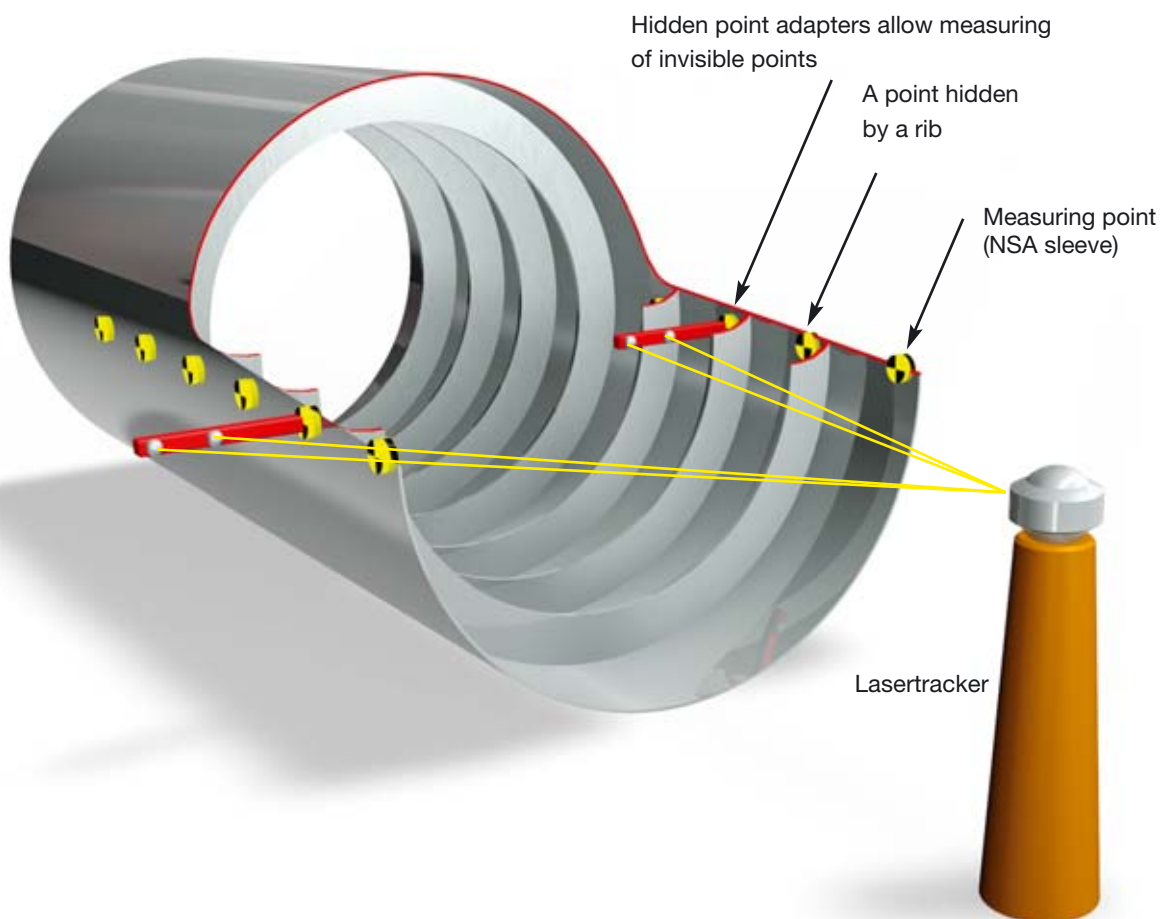
Measuring accessory for aircraft builders

FIXINSPECT Hidden point

Used to measure hidden points (difficult to access) on the outer skin or inside fuselage parts

- made of high-tensile aluminium (AlZnMgCu 1,5)
- surface protection: anodized red
- characterized by low weight and short design
- measuring is done by laser trackers via 0,5" reflector balls, which are held by magnets on Hidden point adapters
- the measuring accessories are fixed using hydraulic clamping pins
- comes as a standard equipped with two or four ball seats
- other dimensions and special connections to work pieces are available on request

Explanatory diagramme



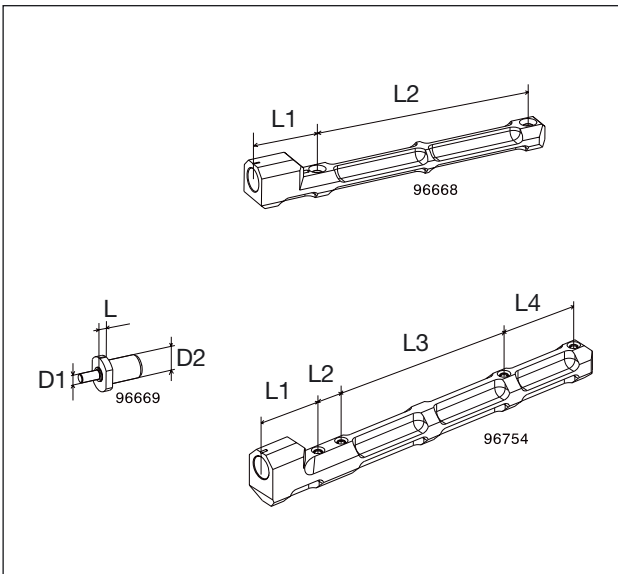


Hidden point measuring accessory with magnets positioning 0,5" reflector balls

No.	version	L1±0,05	L2±0,05	L3±0,05	L4±0,05
96668	2fach	49	160	-	-
96754	4fach	49	20	140	40

Hydraulic clamping pin to fix Hidden point adapters on a NSA 9501-100 sleeve

No.	L±0,05	D1	D2	Clamping area on D1
96669	6	6,32	16g6	max. 0,05 mm





Modular Fixturing Systems



Subcontracting



Vacuum-Clamping Technology

Witte – Specialists for Modular fixturing systems Subcontracting Vacuum clamping technology

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