

M8 – Wall bolts as surveying points

Application:

Marking of surveying points with a wall bolt (M8- female thread):

- as connection points instead of ground points in the land register and engineers surveying
- of the points in the building control surveying that have to be verified

Principle:

- the prism is automatically centred in the required point in the position (X, Y) and height (Z) by screwing in the wall adapter with the respective reflector holder (including prism) into the M8 wall bolt

AdV version:

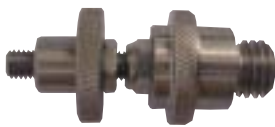
- The bolts have an M8 female thread and can be attached on buildings by plugging or mortar.
- The required surveying point P_0 is by definition on the axis of the M8 thread, 100 mm before the set up area on the wall bolt.
- The prism is rotatable around the screwing axis of the M8 thread and the tilting axis of the reflector holder. Because of the cardanic installation, the prism can be aligned on every instrument stand point.

Wall adapters for M8 bolts are available for prism holders with 5/8" - and Leica connection:

Wall adapter 5/8"

structural principle:

- 5/8" - thread for connection of the tiltable reflector holder.
- M8- thread for screwing in regular wall bolts.
- 5/8" and M8 threads have a common axis and are independently rotatable around this axis
- The turning resistance can be adjusted by a self securing screw.
- secure screwing in the wall bolt and reflector holder possible without tools
- In addition, the unscrewing of the wall adapter from the wall bolt can be supported by a fork spanner (13 mm)
- All wall adapters are made of stainless steel.



Wall adapter	Order-No.	Tilting axis height of the prism	matching prisms/reflecting targets	see catalogue page
WA 50	810 33,50 €	50 mm	series HIP-U 5/8"	7
			L-holder 5/8"	8
			series ONRT 50	10
			Zeiss ETR 1 with holder EZRT 50	58
			TOPCON Mini prism	-
WA 30	820 33,50 €	70 mm	CST/OMNI-mini prism	-

Wall adapter WA Leica (=WILD)

For tiltable reflector holders with Leica connection and same tilting axis height as Leica reflector GPH1. Structural principle same as WA 50, however the reflector connection is not done by a 5/8" thread, but by the practical Leica push-button connection (one-hand use).



Wall adapter	Order-No.	Matching prisms/reflecting targets + holder	see catalogue page
WA Leica	830 17,- €	• -series HIP-U Leica	7
		• -L-holder Leica	8
		• -series ONRT L	11
		• -all prism holder with 50 mm - tilting axis height and PRO-Leica Adapter PLA 5/8"	15
		• Leica (WILD) GPH1 + original + compatible	58

Wall bolt with M8- female thread

Wall bolt made of brass, inscription "Mess-Punkt", installation by mortar.

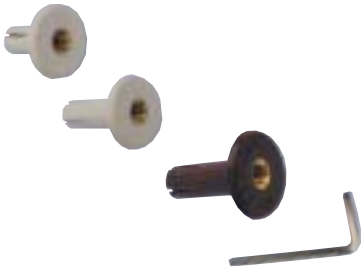


Mortar wall bolt, length 45 mm

Order-No. 891

1,45 €

Wall bolt made of synthetic material with a full brass core, which is spread by a thread tap. Inscription "Mess-Punkt". Allen key necessary to spread the shank.



Plug wall bolt, white, length 30 mm

Order-No. 893

0,95 €

Plug wall bolt, white, length 40 mm

Order-No. 895

1,00 €

Plug wall bolt, brown, length 40 mm

Order-No. 897

1,00 €

Allen Key, SW4

Order-No. 899

1,55 €

G 3/8" wall adapter for tunnel construction

Application:

Geodesic convergence surveying in tunnel construction to register actual three-dimensional movements of the tunnel construction.

Principle:

The convergence bolt with G 3/8" male thread also considers the characteristics of the AdV, same as the M8 wall bolt: the surveying point Po is situated on the axis of the G 3/8" thread, 100 mm before the measuring stop of the convergence bolt. For the centring in the point o we use:

$$\text{Tilting axis height prism/reflecting target} + \text{length wall adapter} = 100 \text{ mm}$$

To measure, you only have to screw the cardanically installed prism on to the convergence bolt and align it to the total station/EDM.

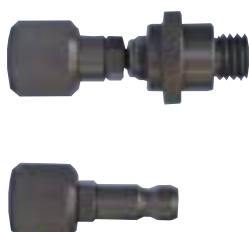
The visibility has to be done with existing spotlight or hand lamp by reflection.

Structural Principle:

see wall adapter for M8 wall bolts.

Wall adapter to connect with convergence bolts with G 3/8" male thread:

- all wall adapters made of stainless steel
- screwing the wall adapters on or off of the wall bolt can be done with a fork spanner 13 mm.
- matching prisms/reflecting targets and holders: see wall adapter for M8 wall bolts, page 20



reflector connection of the reflector	tilting axis height description	wall adapter	Order-No.
5/8"	50 mm	WAG 50	825 33,50 €
5/8"	60 mm	WAG 40	826 33,50 €
5/8"	70 mm	WAG 30	827 33,50 €
Leica (WILD)	= Leica GPH1	WAG Leica	832 20,— €