

MANUAL FOR HOUSING ASSEMBLY



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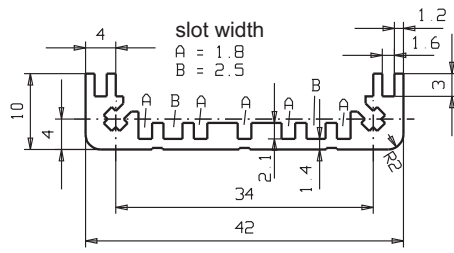
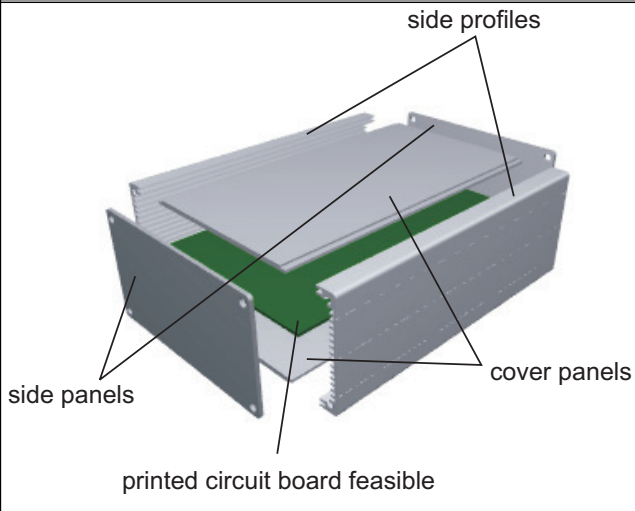
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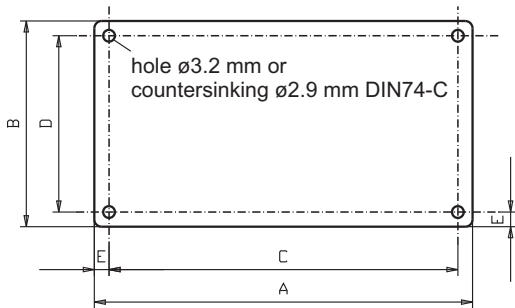
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Side section 1



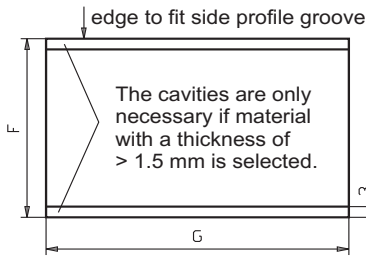
The length of the side section is the same as the length of the cover plate (G).

Side plates

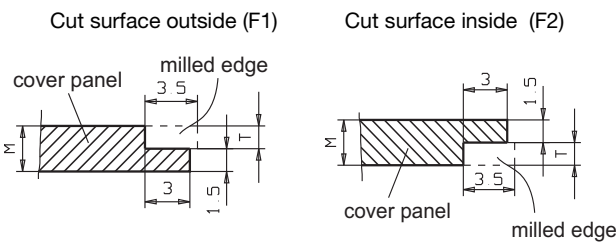


Width of housing (A) =	$\geq 30; \leq 1000$ mm
or (A) =	Board width + 3 mm
Height of housing (B) =	42 mm
C =	A - 8 mm
D =	34 mm
E =	4 mm
Material thickness =	≥ 2 mm
Corner radius =	2 mm

Cover plates



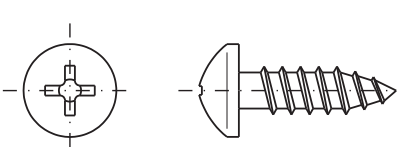
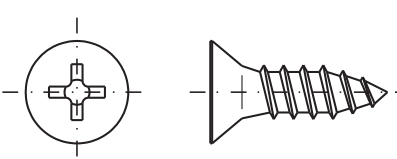
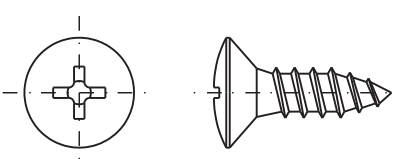
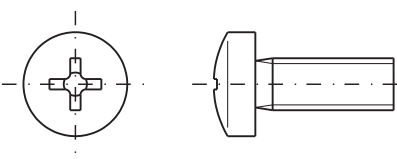
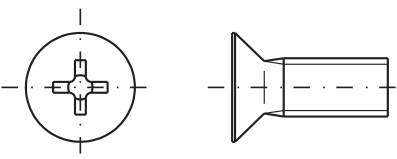
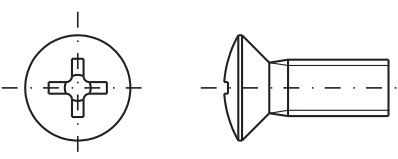
Cover plate length (G) =	$\geq 20; \leq 1000$ mm	
Material thickness (M) =	≥ 1.5 mm	
Corner radius =	0 mm	
Cover plate height (F) =	A - 14.2 mm	
Cut surfaces	F1 (Case 1)	F2 (Case 2)
Height =	3.5 mm	3.5 mm
Width =	G + 3 mm	G + 3 mm
Depth (T) =	M - 1.5 mm	M - 1.5 mm
Cut surface shape:	rectangular	rectangular
Corner radius =	1.5 mm	1.5 mm
Mill =	3 mm	3 mm
Rotation angle =	0° (when aligned horizontally) 90° (when aligned vertically)	
On reverse side:	no	yes



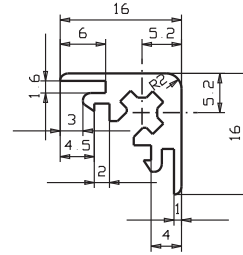
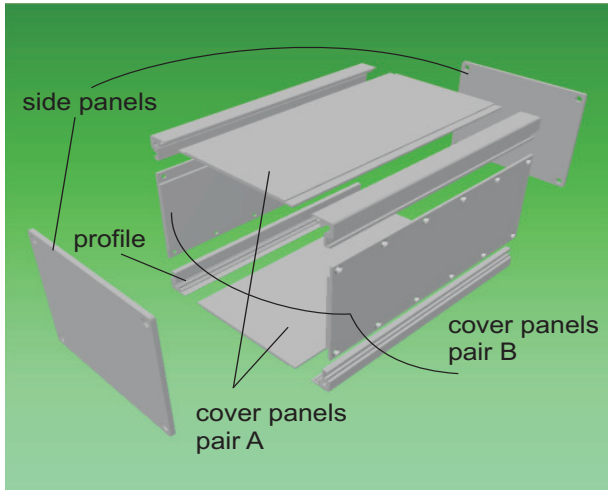
With material thicknesses >2.5 mm the cover plate overlaps the side section. It is then useful to position the cut surface inside.

When the alignment is vertical the X and Y values are exchanged.

Setting points for the cut surfaces (horizontal alignment)	F1 (Case 1)	F2 (Case 2)
lower cut surface	X =	G / 2
	Y =	1.25 mm
upper cut surface	X =	G / 2
	Y =	F - 1.25 mm

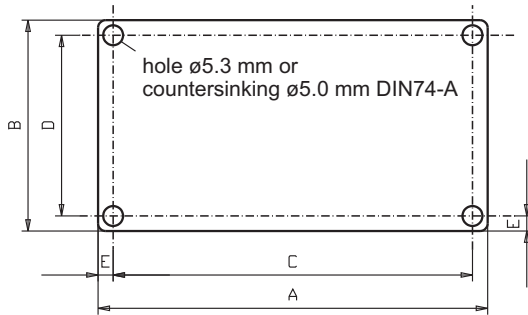
Order numbers for side sections 1 & 2 and accessories		
Order numbers for side sections 1 & 2 (Surface anodized, cut edges blank)		
Designation	Order – No.	Remarks
Side section 1 (nature)	GL GP 10 11 - ****	**** corresponds to the required length in mm, min. 30 mm, max. 1000 mm. Cutting accuracy: up to 200 mm length ± 0.1 mm, greater lengths ± 0.2 mm
Side section 2 (nature)	GL GP 10 21 - ****	
Side section 1 (black)	GL GP 10 13 - ****	
Side section 2 (black)	GL GP 10 23 - ****	
Accessories order numbers		
An assembly kit comprises 8 $\varnothing 2.9 \times 9.5$ mm screws in acc. with DIN 7981, 7982 or 7983 and 4 self-adhesive, black rubber feet, \varnothing 8mm, height = 2.5 mm. The screws are supplied as either nickel-plated, black or white galvanized.		
A box of assorted screws contains 50 $\varnothing 2.9 \times 9.5$ mm screws in acc. with DIN 7981, 7982 or 7983. The screws are supplied as either nickel-plated, black or white galvanized.		
The $\varnothing 2.9 \times 9.5$ mm screws are suitable for side panel thicknesses from 1.5 to 3.0 mm.		
Designation	Order-No.	Screws
Screws white galvanized		
Assembly kit ISP / A3,0-ZI	GG MS 1101	Oval head screws in acc. with DIN 7981
Assembly kit ISP / B3,0-ZI	GG MS 1102	Countersunk head screws in acc. with DIN 7982
Assembly kit ISP / C3,0-ZI	GG MS 1103	Oval countersunk head screws in acc. with DIN 7983
Assorted screws ISP / A3,0-ZI	GG SO 1101	Oval head screws in acc. with DIN 7981
Assorted screws ISP / B3,0-ZI	GG SO 1102	Countersunk head screws in acc. with DIN 7982
Assorted screws ISP / C3,0-ZI	GG SO 1103	Oval countersunk head screws in acc. with DIN 7983
Screws nickel-plated		
Assembly kit ISP / A3,0-NI	GG MS 1111	Oval head screws in acc. with DIN 7981
Assembly kit ISP / B3,0-NI	GG MS 1112	Countersunk head screws in acc. with DIN 7982
Assembly kit ISP / C3,0-NI	GG MS 1113	Oval countersunk head screws in acc. with DIN 7983
Assorted screws ISP / A3,0-NI	GG SO 1111	Oval head screws in acc. with DIN 7981
Assorted screws ISP / B3,0-NI	GG SO 1112	Countersunk head screws in acc. with DIN 7982
Assorted screws ISP / C3,0-NI	GG SO 1113	Oval countersunk head screws in acc. with DIN 7983
Screws black galvanized		
Assembly kit ISP / A3,0-SW	GG MS 1121	Oval head screws in acc. with DIN 7981
Assembly kit ISP / B3,0-SW	GG MS 1122	Countersunk head screws in acc. with DIN 7982
Assembly kit ISP / C3,0-SW	GG MS 1123	Oval countersunk head screws in acc. with DIN 7983
Assorted screws ISP / A3,0-SW	GG SO 1121	Oval head screws in acc. with DIN 7981
Assorted screws ISP / B3,0-SW	GG SO 1122	Countersunk head screws in acc. with DIN 7982
Assorted screws ISP / C3,0-SW	GG SO 1123	Oval countersunk head screws in acc. with DIN 7983
Small screw primer (M3:1)		
DIN 7981	DIN 7982	DIN 7983
		
DIN 7985	DIN 965	DIN 966
		

Housing section 1



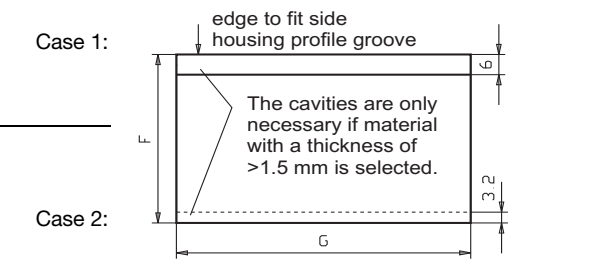
The length of the side section is the same as the length of the cover plate (G).

Side plates

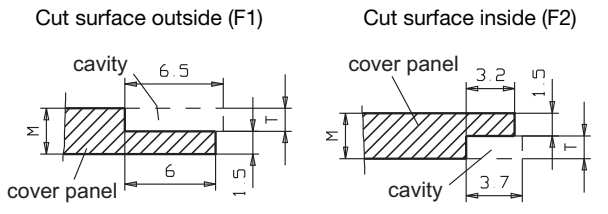


Width of housing (A) =	$\geq 40; \leq 1000$ mm
Height of housing (B) =	$\geq 40; \leq 1000$ mm
C =	A - 10.4 mm
D =	B - 10.4 mm
E =	5.2 mm
Material thickness =	≥ 2 mm
Corner radius =	2 mm

Deckplatten



	Pair A	Pair B
Cover plate length (G) =	$\geq 40; \leq 1000$ mm	
Material thickness (M) =	≥ 1.5 mm	
Corner radius =	0 mm	
Cover plate height (F) =	A - 20.2 mm	B - 20.2 mm
Cut surfaces	F1 (Case 1)	F2 (Case 2)
Height =	6.5 mm	3.7 mm
Width =	G + 3 mm	G + 3 mm
Depth (T) =	M - 1.5 mm	M - 1.5 mm
Cut surface shape:	rectangular	rectangular
Corner radius =	1.5 mm	1.5 mm
Mill =	3 mm	3 mm
Rotation angle =	0° (when aligned horizontally) 90° (when aligned vertically)	
On reverse side:	no	yes



With material thicknesses >2.5 mm the cover plate overlaps the side section. It is then useful to position the cut surface inside.

When the alignment is vertical the X and Y values are exchanged.	Setting points for the cut surfaces (horizontal alignment)		F1 (Case 1)	F2 (Case 2)
	lower cut surface	X =	G / 2	G / 2
		Y =	2.75 mm	1.35 mm
	upper cut surface	X =	G / 2	G / 2
Y =		F - 2.75 mm	F - 1.35 mm	

Order numbers for housing section 1 and accessories

Surface of the sections anodized (cut edges are blank)

Designation	Order - No.	Remarks
Housing section 1 (nature)	GL GP 20 11 - ****	**** corresponds to the required length in mm, min. 30 mm, max. 1000 mm. Cutting accuracy: up to 200 mm length ± 0.1 mm, greater lengths ± 0.2 mm
Housing section 1 (black)	GL GP 20 13 - ****	

Accessories

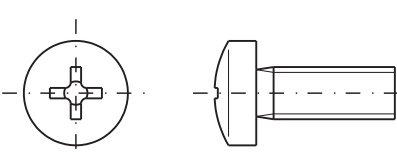
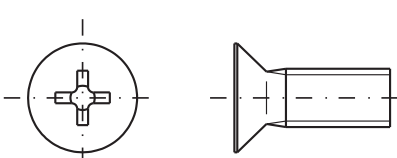
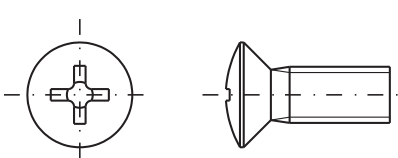
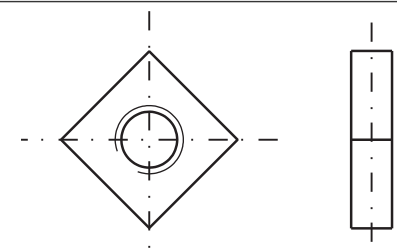
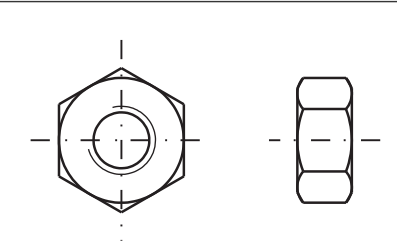
An assembly kit comprises 8 M5 x 20 mm screws in acc. with DIN 7985, 965 or 966 and 4 self-adhesive, black rubber feet, $\varnothing 8$ mm, height = 2.5 mm. The screws are supplied as either nickel-plated, black or white galvanized.

A box of assorted screws contains 50 M5 x 20 mm screws in acc. with DIN 7985, 965 or 966. The screws are supplied as either nickel-plated, black or white galvanized.

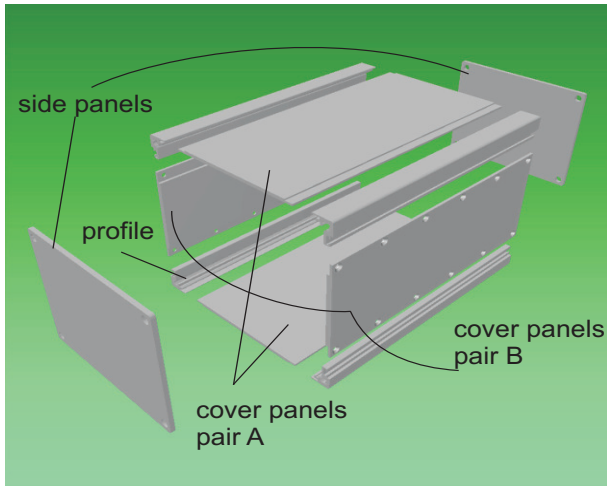
The M5 x 20 mm screw is suitable for side plate thicknesses from 1.5 to 6.0 mm.

Designation	Order-No.	Screws
Screws white galvanized		
Assembly kit IGP / A6,0-ZI	GG MS 1601	Oval countersunk head screws in acc. with DIN 7985
Assembly kit IGP / B6,0-ZI	GG MS 1602	Countersunk head screws in acc. with DIN 965
Assembly kit IGP / C6,0-ZI	GG MS 1603	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGP / A6,0-ZI	GG SO 1601	Oval countersunk head screws in acc. with DIN 7985
Assorted screws IGP / B6,0-ZI	GG SO 1602	Countersunk head screws in acc. with DIN 965
Assorted screws IGP / C6,0-ZI	GG SO 1603	Oval countersunk head screws in acc. with DIN 966
Screws nickel-plated		
Assembly kit IGP / A6,0-NI	GG MS 1611	Oval countersunk head screws in acc. with DIN 7985
Assembly kit IGP / B6,0-NI	GG MS 1612	Countersunk head screws in acc. with DIN 965
Assembly kit IGP / C6,0-NI	GG MS 1613	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGP / A6,0-NI	GG SO 1611	Oval countersunk head screws in acc. with DIN 7985
Assorted screws IGP / B6,0-NI	GG SO 1612	Countersunk head screws in acc. with DIN 965
Assorted screws IGP / C6,0-NI	GG SO 1613	Oval countersunk head screws in acc. with DIN 966
Screws black galvanized		
Assembly kit IGP / A6,0-SW	GG MS 1621	Oval countersunk head screws in acc. with DIN 7985
Assembly kit IGP / B6,0-SW	GG MS 1622	Countersunk head screws in acc. with DIN 965
Assembly kit IGP / C6,0-SW	GG MS 1623	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGP / A6,0-SW	GG SO 1621	Oval countersunk head screws in acc. with DIN 7985
Assorted screws IGP / B6,0-SW	GG SO 1622	Countersunk head screws in acc. with DIN 965
Assorted screws IGP / C6,0-SW	GG SO 1623	Oval countersunk head screws in acc. with DIN 966

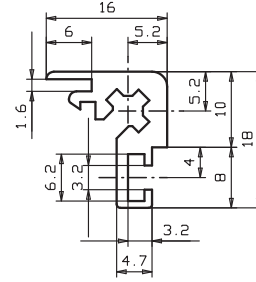
Small screw primer (M 3:1)

DIN 7985	DIN 965	DIN 966
		
DIN 562	DIN 934	
		

Housing profile 2



For lacking measures see housing profile 1



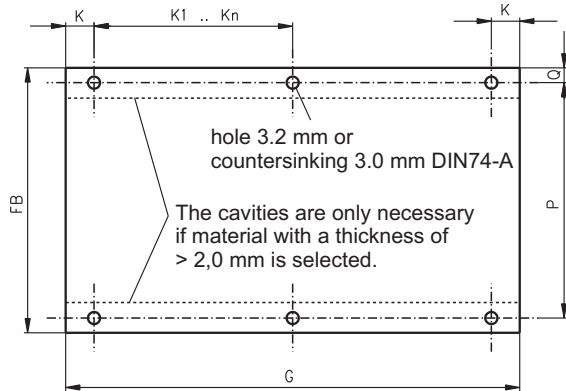
The length of the side profile is the same as the length of the cover panel (G).

Side panels

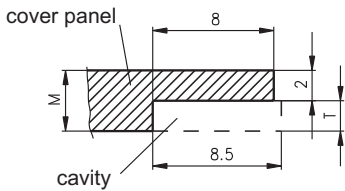
see housing profile 1

Cover panels Pair A see housing profile 1

Cover panels Pair B



cavity facing inwards



	Pair B
cover panel length (G) =	$\geq 40; \leq 1000$ mm
material thickness (M) =	> 1.5 mm
corner radius =	0
FB =	$B - 20.2$ mm
K =	min. 5 mm; max. 10 mm
K1 .. Kn	min. 50 mm; max 100 mm
Q =	3.9 mm
P =	$FB - 7.8$ mm or $B - 28$ mm
	cavity
height =	8.5 mm
width =	$G + 3$ mm
depth (T) =	$M - 2.0$ mm
cavity shape:	rectangular
corner radius =	1.5 mm
milling cutter =	3 mm
rotation angle =	0° (when aligned horizontally) 90° (when aligned vertically)
on the reverse side:	yes

When the alignment is vertical the X and Y values are exchanged.

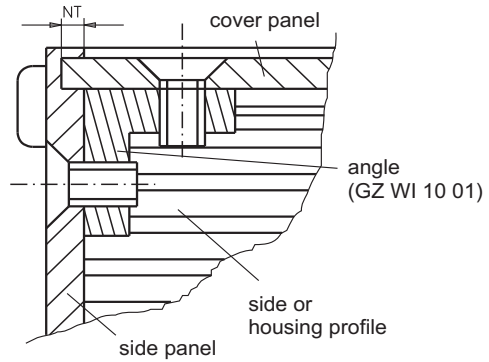
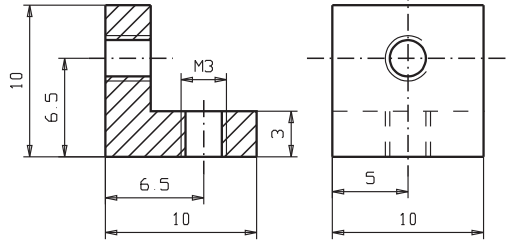
Setting points for the cavities (horizontal alignment)

lower cavity	X =	G/2
	Y =	3.75 mm
upper cavity	X =	G/2
	Y =	$FB - 3.75$ mm

Order numbers for housing section 2 and accessories		
Surface of the sections anodized (cut edges are blank)		
Designation	Order – No.	Remarks
Housing section 2 (nature)	GL GP 20 21 - ****	**** corresponds to the required length in mm, min. 30 mm, max. 1000 mm. Cutting accuracy: up to 200 mm length ± 0.1 mm, greater lengths ± 0.2 mm
Housing section 2 (black)	GL GP 20 23 - ****	
Accessories (Please take the order numbers for the assembly kit or the screw assortment from the “Order numbers for housing section 1 and accessories” overview)		
To assemble cover plate pair B you will require the screws detailed below.		
An assembly kit comprises 12 screws M3 x 4 mm or M3 x 5 mm in acc. with DIN 7985, 965 or 966 and 12 square nuts M3 in acc. with DIN 562. The screws are supplied as either nickel-plated, black or white galvanized, the nuts are always white galvanized.		
A box of assorted screws contains 50 screws M3 x 4 mm or M3 x 5 mm in acc. with DIN 7985, 965 or 966 or 50 square nuts M3 in acc. with DIN 562. The screws are supplied as either nickel-plated, black or white galvanized.		
The M3 x 4 mm screw is suitable for 1.5 mm and the M3 x 5 mm screws for 2.0 to 2.5 mm thick cover plates (excluding the cut surface).		
Designation	Order-No.	Screws
Screws white galvanized		
Assembly kit IGPS / A1,5-ZI	GG MS 1701	Oval head screws in acc. with DIN 7985
Assembly kit IGPS / B1,5-ZI	GG MS 1702	Countersunk head screws in acc. with DIN 965
Assembly kit IGPS / C1,5-ZI	GG MS 1703	Oval countersunk head screws in acc. with DIN 966
Assembly kit IGPS / A2,5-ZI	GG MS 1731	Oval head screws in acc. with DIN 7985
Assembly kit IGPS / B2,5-ZI	GG MS 1732	Countersunk head screws in acc. with DIN 965
Assembly kit IGPS / C2,5-ZI	GG MS 1733	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / A1,5-ZI	GG SO 1701	Oval head screws in acc. with DIN 7985
Assorted screws IGPS / B1,5-ZI	GG SO 1702	Countersunk head screws in acc. with DIN 965
Assorted screws IGPS / C1,5-ZI	GG SO 1703	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / A2,5-ZI	GG SO 1731	Oval head screws in acc. with DIN 7985
Assorted screws IGPS / B2,5-ZI	GG SO 1732	Countersunk head screws in acc. with DIN 965
Assorted screws IGPS / C2,5-ZI	GG SO 1733	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / M - ZI	GG SO 9903	Square nuts M3 in acc. with DIN 562
Screws nickel-plated		
Assembly kit IGPS / A1,5-NI	GG MS 1711	Oval head screws in acc. with DIN 7985
Assembly kit IGPS / B1,5-NI	GG MS 1712	Countersunk head screws in acc. with DIN 965
Assembly kit IGPS / C1,5-NI	GG MS 1713	Oval countersunk head screws in acc. with DIN 966
Assembly kit IGPS / A2,5-NI	GG MS 1741	Oval head screws in acc. with DIN 7985
Assembly kit IGPS / B2,5-NI	GG MS 1742	Countersunk head screws in acc. with DIN 965
Assembly kit IGPS / C2,5-NI	GG MS 1743	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / A1,5-NI	GG SO 1711	Oval head screws in acc. with DIN 7985
Assorted screws IGPS / B1,5-NI	GG SO 1712	Countersunk head screws in acc. with DIN 965
Assorted screws IGPS / C1,5-NI	GG SO 1713	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / A2,5-NI	GG SO 1741	Oval head screws in acc. with DIN 7985
Assorted screws IGPS / B2,5-NI	GG SO 1742	Countersunk head screws in acc. with DIN 965
Assorted screws IGPS / C2,5-NI	GG SO 1743	Oval countersunk head screws in acc. with DIN 966
Screws black galvanized		
Assembly kit IGPS / A1,5-SW	GG MS 1721	Oval head screws in acc. with DIN 7985
Assembly kit IGPS / B1,5-SW	GG MS 1722	Countersunk head screws in acc. with DIN 965
Assembly kit IGPS / C1,5-SW	GG MS 1723	Oval countersunk head screws in acc. with DIN 966
Assembly kit IGPS / A2,5-SW	GG MS 1751	Oval head screws in acc. with DIN 7985
Assembly kit IGPS / B2,5-SW	GG MS 1752	Countersunk head screws in acc. with DIN 965
Assembly kit IGPS / C2,5-SW	GG MS 1753	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / A1,5-SW	GG SO 1721	Oval head screws in acc. with DIN 7985
Assorted screws IGPS / B1,5-SW	GG SO 1722	Countersunk head screws in acc. with DIN 965
Assorted screws IGPS / C1,5-SW	GG SO 1723	Oval countersunk head screws in acc. with DIN 966
Assorted screws IGPS / A2,5-SW	GG SO 1751	Oval head screws in acc. with DIN 7985
Assorted screws IGPS / B2,5-SW	GG SO 1752	Countersunk head screws in acc. with DIN 965
Assorted screws IGPS / C2,5-SW	GG SO 1753	Oval countersunk head screws in acc. with DIN 966

Housing bracket

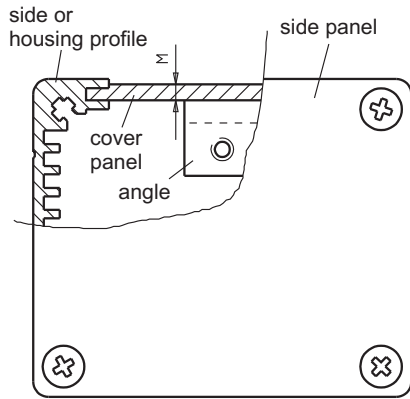
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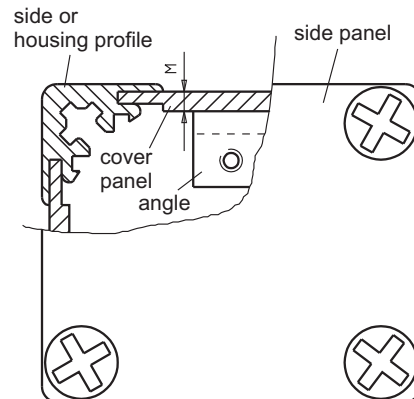
The housing bracket GZ WI 10 01 can be used, to stabilise housings which are assembled from side or housing profiles. The use of this bracket is recommended from a width of 150 mm (for housing profiles this also applies analogously to the height).

Definition by cases

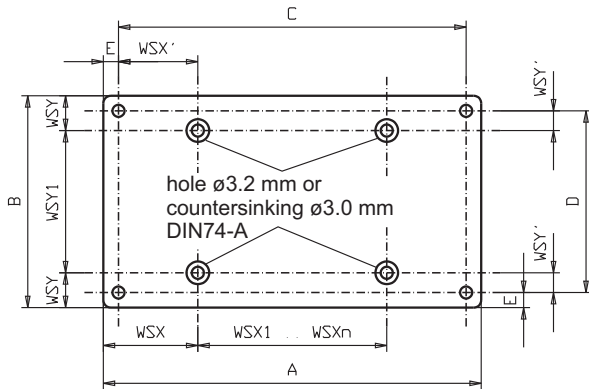
Case 1



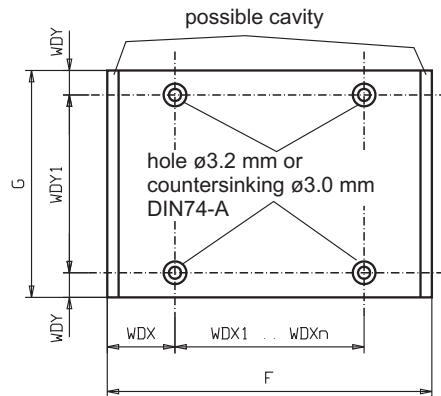
Case 2



Side panels



Cover panels



Equations

	Side profiles		Housing profiles			
	Case 1	Case 2	Case 1	Case 2		
WSX=	min. 50 mm; max. 100 mm		min. 50 mm; max. 100 mm		A:	housing width
WSX1 .. n=	min. 80 mm; max. 100 mm		min. 80 mm; max. 100 mm		B:	housing height
WSX'	WSX - 4 mm		WSX - 5,2 mm		C =	A - 2E
WSY=	9,3 mm	M + 7,7 mm	9,1 mm	M + 7,5 mm	E _(side profile) =	4,0 mm
WSY'	5,3 mm	M + 3,7 mm	3,9 mm	M + 2,3 mm	E _(housing profile) =	5,2 mm
WDX=	WSX - 7,1 mm		WSX - 10,1 mm		F:	cover panel width
WDX1 .. n=	WSX1 .. n		WSX1 .. n		G:	cover panel length
WDY _(NT=0) =	6,5 mm		6,5 mm		WSY1=	B - 2WSY
WDY _(NT>0) =	NT + 6,4 mm		NT + 6,4 mm		WDY1=	G - 2WDY

Order numbers for housing brackets

Surface of the brackets natural anodized

Designation	Order – No.	Remarks
Housing bracket 4 x per unit	GG WS 0111	surface drummed
Housing bracket 8 x per unit	GG WS 0112	
Housing bracket 12 x per unit	GG WS 0113	
Housing bracket 25 x per unit	GG WS 0114	

To assemble a housing bracket you will require 2 screws M3 x 5 mm, M3 x 6 mm or M3 x 8 mm.

A packet of screws contains 50 M3 x 5 mm, M3 x 6 mm or M3 x 8 mm screws in acc. with DIN 7985, 965 or 966. The screws are supplied as either nickel-plated, black or white galvanized.

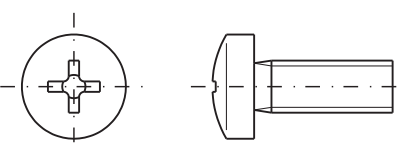
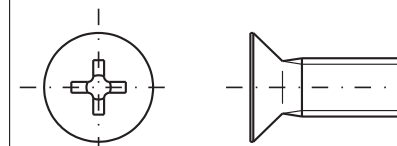
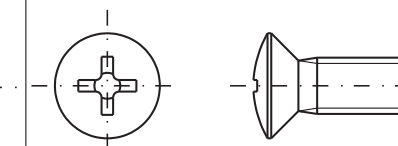
The M3 x 5 mm screw is suitable for 1.5 mm thick plates.

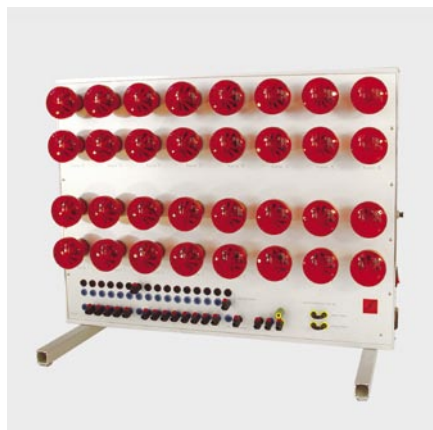
The M3 x 6 mm screw is suitable for 2.0 – 3.0 mm thick plates.

The M3 x 8 mm screw is suitable for 4.0 mm thick plates.

Designation	Order-No.	Screws
Screws white galvanized		
Screw packet M3x5-7985-ZI	GG RB 1105	Oval head screws in acc. with DIN 7985
Screw packet M3x5-965-ZI	GG RB 1305	Countersunk head screws in acc. with DIN 965
Screw packet M3x5-966-ZI	GG RB 1405	Oval countersunk head screws in acc. with DIN 966
Screw packet M3x6-7985-ZI	GG RB 1106	Oval head screws in acc. with DIN 7985
Screw packet M3x6-965-ZI	GG RB 1306	Countersunk head screws in acc. with DIN 965
Screw packet M3x6-966-ZI	GG RB 1406	Oval countersunk head screws in acc. with DIN 966
Screw packet M3x8-7985-ZI	GG RB 1108	Oval head screws in acc. with DIN 7985
Screw packet M3x8-965-ZI	GG RB 1308	Countersunk head screws in acc. with DIN 965
Screw packet M3x8-966-ZI	GG RB 1408	Oval countersunk head screws in acc. with DIN 966
Screws nickel-plated		
Screw packet M3x5-7985-NI	GG RB 2105	Oval head screws in acc. with DIN 7985
Screw packet M3x5-965-NI	GG RB 2305	Countersunk head screws in acc. with DIN 965
Screw packet M3x5-966-NI	GG RB 2405	Oval countersunk head screws in acc. with DIN 966
Screw packet M3x6-7985-NI	GG RB 2106	Oval head screws in acc. with DIN 7985
Screw packet M3x6-965-NI	GG RB 2306	Countersunk head screws in acc. with DIN 965
Screw packet M3x6-966-NI	GG RB 2406	Oval countersunk head screws in acc. with DIN 966
Screw packet M3x8-7985-NI	GG RB 2108	Oval head screws in acc. with DIN 7985
Screw packet M3x8-965-NI	GG RB 2308	Countersunk head screws in acc. with DIN 965
Screw packet M3x8-966-NI	GG RB 2408	Oval countersunk head screws in acc. with DIN 966
Screws black galvanized		
Screw packet M3x5-7985-SW	GG RB 3105	Oval head screws in acc. with DIN 7985
Screw packet M3x5-965-SW	GG RB 3305	Countersunk head screws in acc. with DIN 965
Screw packet M3x5-966-SW	GG RB 3405	Oval countersunk head screws in acc. with DIN 966
Screw packet M3x6-7985-SW	GG RB 3106	Oval head screws in acc. with DIN 7985
Screw packet M3x6-965-SW	GG RB 3306	Countersunk head screws in acc. with DIN 965
Screw packet M3x6-966-SW	GG RB 3406	Oval countersunk head screws in acc. with DIN 966
Screw packet M3x8-7985-SW	GG RB 3108	Oval head screws in acc. with DIN 7985
Screw packet M3x8-965-SW	GG RB 3308	Countersunk head screws in acc. with DIN 965
Screw packet M3x8-966-SW	GG RB 3408	Oval countersunk head screws in acc. with DIN 966

Small screw primer (M 3:1)

DIN 7985	DIN 965	DIN 966
		



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