



G*GRASS®

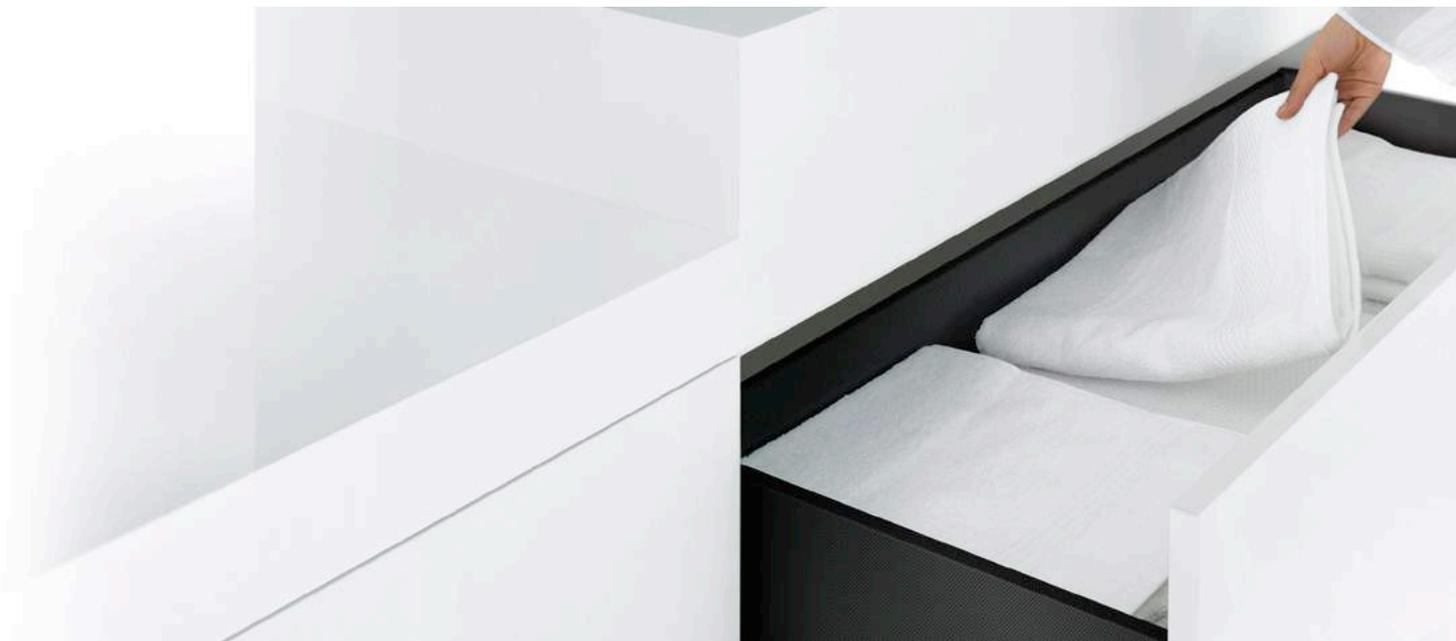
SLIDE SYSTEMS

Optimum movement for all drawers - either as invisible concealed slides for maximum comfort or as track-proven roller slides.





Concealed functionality
for the utmost individuality
in drawer design.





DYNAPRO SLIDE SYSTEM



reddot design award
winner 2010

**High load capacity. Synchronised movement.
4D adjustment. The multitude of special qualities makes
Dynapro a unique movement system for individualists.**

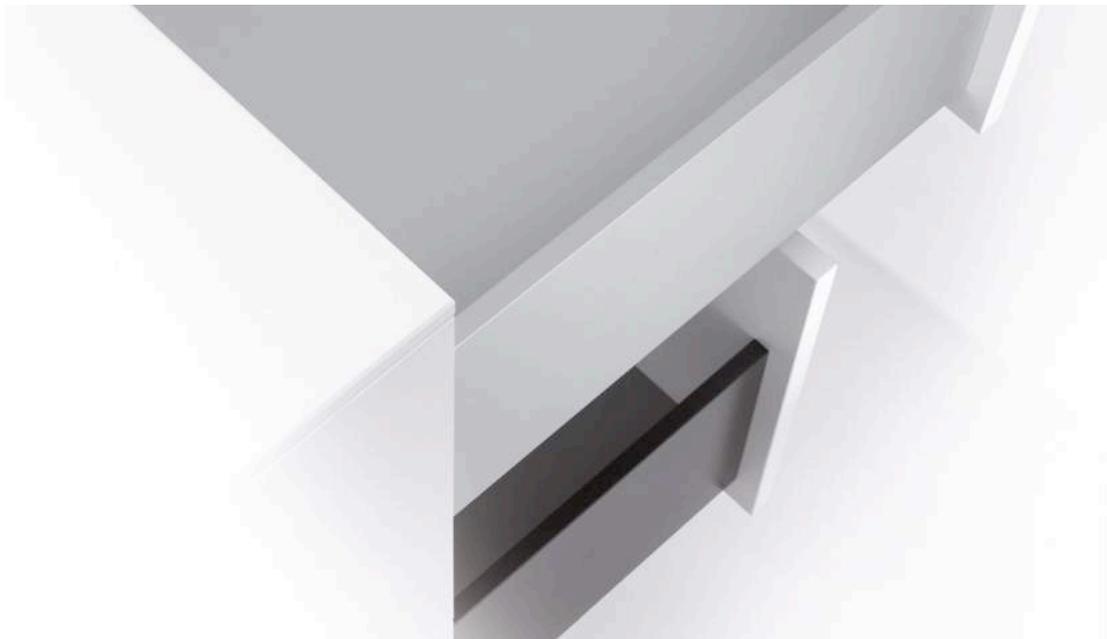
If you prefer unusual design and expect a concealed drawer slide to offer excellent running performance, high stability, precision and exceptional operating comfort – then Dynapro is exactly right for you. Handle-free surfaces, high fronts, wide drawers or unusual materials – the slide system for full-extension drawers offers unlimited design options.



Dynapro – the powerful precision slide for absolute design freedom.

The perfect combination: Vionaro drawer system

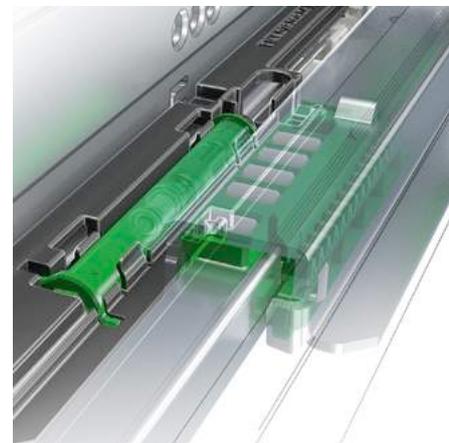
Dynapro – the slide that offers greater modularity. This concealed slide system serves as a basis for wooden drawers as well as for the GRASS Vionaro drawer system. The minimalist drawer sides in aluminium or steel add elegant visual design to the Dynapro slide technology.



DYNAPRO SLIDE SYSTEM

Whether you are dealing with wood, aluminium, glass, natural stone or concrete – let Dynapro provide the inspiration for new ideas.

Innovating means adopting new approaches. That applies just as much to the creation of new furniture designs as it does to the development of new movement systems. The more offbeat the idea, the more vital it becomes to have intelligent function characteristics. To cater for even the most exceptional requirements, GRASS has developed a completely new slide system that combines concealed functionality and outstanding running performance. For furniture designers, this opens up entirely new perspectives.



Synchronisation for excellent running characteristics.

Unlike conventional concealed slide systems, Dynapro is the only fitting worldwide that features a synchronisation mechanism. Even under high load, the excellent running performance of Dynapro remains unchanged. Load forces of up to 70 kg present no problem for the system. Abrasion-resistant plastic rollers ensure a smooth, even glide every time.

Four dimensions for perfect alignment.

Dynapro offers integrated height adjustment, side adjustment, tilt angle adjustment and depth adjustment. All adjustments are tool-free, readily accessible and easy to handle. In short, it takes just a few tweaks to achieve optimal alignment.

Four options for the utmost in operating comfort.

Soft-close, the successful damping system, closes Dynapro drawers gently and quietly. With Tipmatic, the mechanical opening system, it is possible to operate large handle-free fronts which will open with a gentle tap. The new Tipmatic Soft-close opening system combines the advantages of mechanical opening with the comfort of the track-proven Soft-close damping. In addition, GRASS is rounding off its range with Sensomatic - the electronically supported opening system.



Good to know the movement is not only technically functional, but also extremely comfortable. Opening and closing is an experience every time.

It was never easier to open drawers. And it was never more satisfying to close them. The GRASS comfort systems and our movement solutions complement each other to form a harmonious multi-functional unit. We want to combine the advantages of handle-free opening with the elegance of damped closing, as the combination of these exceptional functions guarantees the highest possible level of operating comfort.

It's good to find things that were simply made for each other.



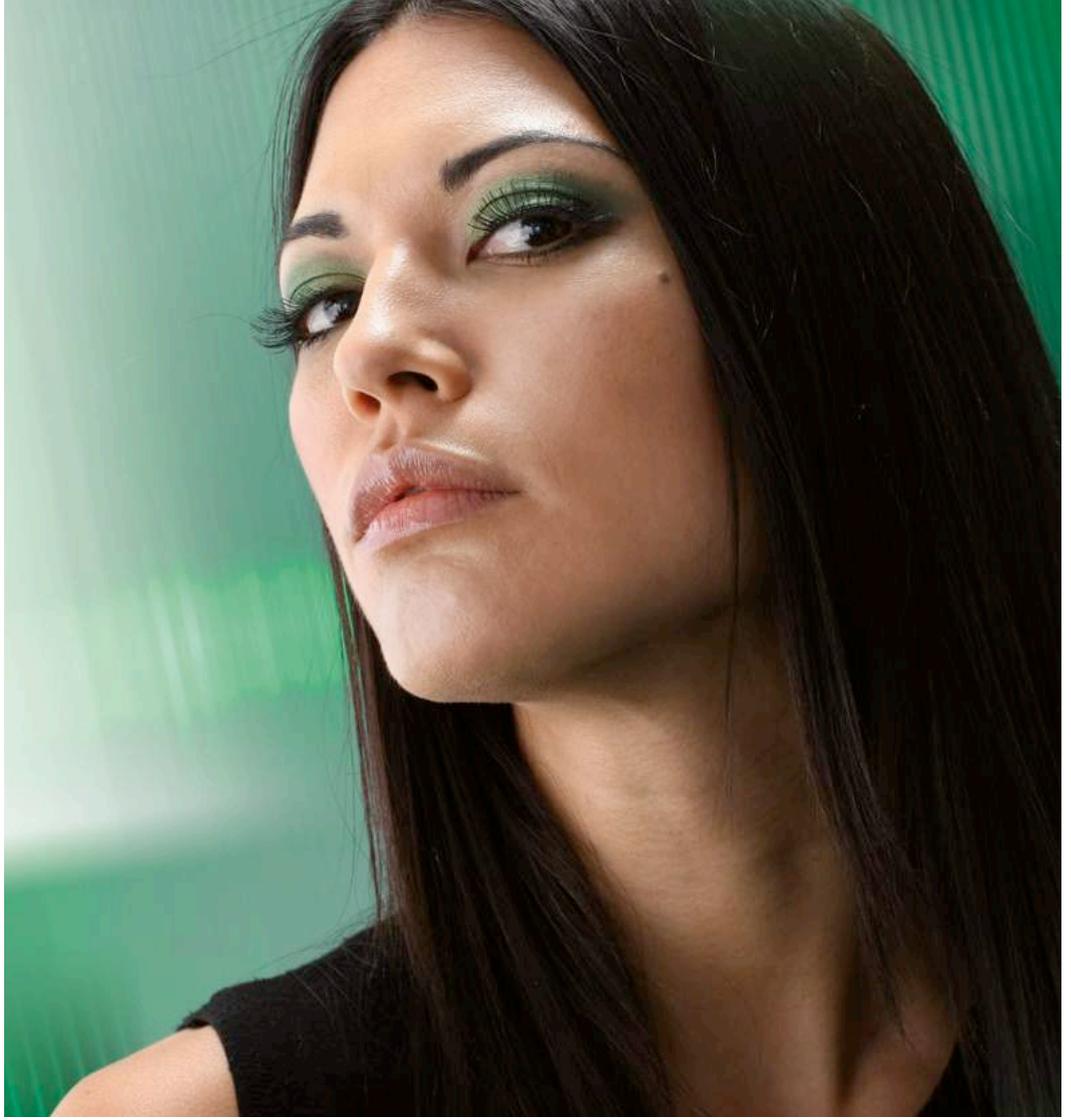
TIPMATIC SOFT-CLOSE
OPENING SYSTEM

The new Tipmatic Soft-close opening system combines the advantages of a mechanical system with the comfort of the tried-and-tested Soft-close damper and, with the 3-way adjustable ejection force, ensures elegant movement, irrespective of the weight and size of the furniture fronts.

TIPMATIC
OPENING SYSTEM

Mechanical opening of regular and pot drawers.

Tipmatic offers optimal design options for beautiful and elegant furniture. Thanks to the touch-activated mechanics and the synchronisation option, it is possible to open large, handle-free fronts with just a light touch.



SOFT-CLOSE
DAMPING SYSTEM

With the GRASS Soft-close damping concept, each movement becomes an experience. Because closing drawers with Soft-close is something special. Soft-close gently slows the fronts and pulls them to the fully closed position.

With the very low pull-out forces, slender handles are also possible.

SENSOMATIC
OPENING SYSTEM

Electro-mechanical opening of drawers for maximum operating comfort.

Action. Reaction. Interaction. Comfort cannot be more fascinating. Thanks to Sensomatic's automatic touch-sensitive function, a gentle trigger is enough to initiate the movement of regular and pot drawers with handle-free fronts.





GRASS SLIDE SYSTEMS

Concealed functionality for the utmost individuality.

CHARACTERISTICS	DYNAPRO	DYNAMOOV
30 kg load capacity	-	■
40 kg load capacity	■	-
70 kg load capacity	■	-
Full extension drawer for optimal access	■	■
Synchronisation without mid-way knock	■	■
Height adjustment	■	■
Side adjustment	■	-
Tilt angle adjustment	■	-
Depth adjustment	■	■
Soft-close damping system	■	■
Self-close closing system	-	■
Tipmatic Opening system	-	■
Tipmatic Opening system with optional synchronisation	■	-
Tipmatic Soft-close Opening system	■	-
Sensomatic opening system	■	-

SLIDE SYSTEMS

Concealed slide systems for all applications.

Elegant, convenient, concealed and extremely effective.

	DYNAPRO SLIDE SYSTEM	11
	Synchronised full extension slide with integrated three-dimensional adjustment for 40 kg and 70 kg load capacities. Slide-on mounting.	
	DYNAPRO TIPMATIC SOFT-CLOSE	14
	Mechanical opening system for handle-free fronts.	
	DYNAPRO SENSOMATIC	27
	Electromechanical opening system for regular and pot drawers.	
	DYNAMOOV SLIDE SYSTEM	49
	Synchronised full extension slide with integrated height adjustment and 30 kg load capacity. Slide-on mounting.	
	ROLLER SLIDES	63
	Sturdy single and full extension drawer slides of tried-and-tested quality.	



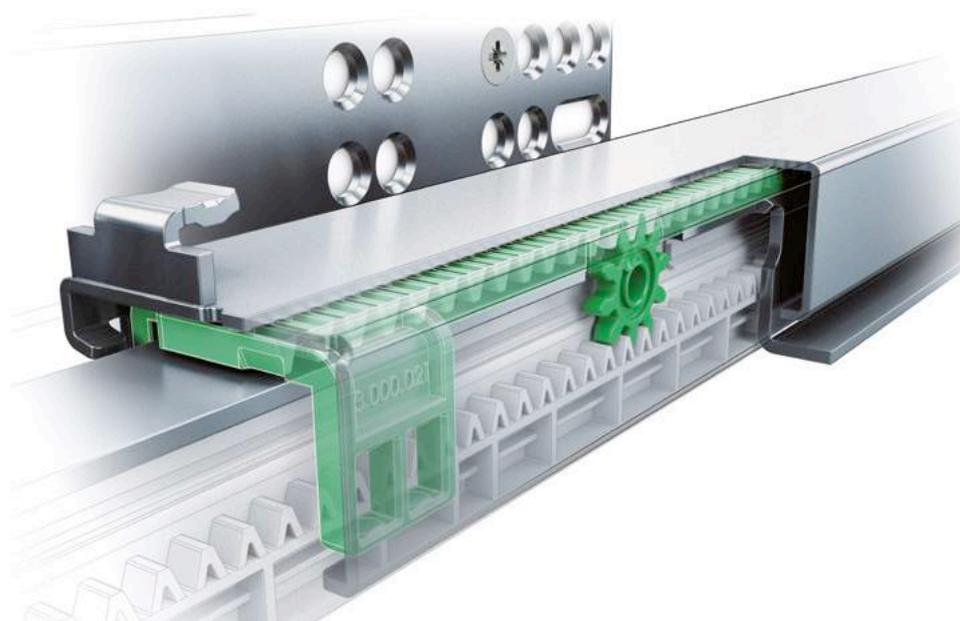
DYNAPRO SLIDE SYSTEM

The multitude of special qualities makes Dynapro a unique movement system for individualists.

QUALITY CERTIFICATE



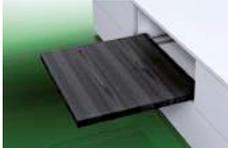
Excellent running characteristics, synchronised movement, 4D adjustment for perfectly aligned gaps and high load capacity are only some of the special features for which the million-fold tried-and-tested slide system received the Red Dot Design Award.



reddot design award
winner 2010

DYNAPRO SLIDE SYSTEM

A new slide generation for wooden drawers.
The powerful precision slide for absolute design freedom.

	Product description	Page
	<p>Dynapro full extension slide 40/70 kg Soft-close</p> <ul style="list-style-type: none"> • Soft-close damping system • 4-dimensional adjustment (side, height, tilt angle and depth adjustment) 	12
	<p>Dynapro full extension slide 40/70 kg Tipmatic Soft-close</p> <ul style="list-style-type: none"> • Tipmatic Soft-close opening system • 4-dimensional adjustment (side, height, tilt angle and depth adjustment) 	14
	<p>Dynapro full extension slide 40/60 kg Tipmatic</p> <ul style="list-style-type: none"> • Tipmatic opening system • 4-dimensional adjustment (side, height, tilt angle and depth adjustment) 	16
	<p>Dynapro for base panel mounting and pull-out shelf</p> <ul style="list-style-type: none"> • Installation on the cabinet base or additional base panel • Shelf holder set 	18
	Technical information	20
	Assembly aids	24

DYNAPRO SOFT-CLOSE

Full extension slide 40/70 kg



- Excellent running characteristics
- Fully synchronised slide technology
- Soft-close damping system
- Utmost lateral stability
- Minimum drawer deflection
- Stepless self-locking of the drawer when placed on the slide
- Tool-free 4D adjustment facility:
 - Height adjustment +3.5 mm
 - Side adjustment ±1.5 mm
 - Tilt angle adjustment +4 mm
 - Depth adjustment +3.5 mm

Packaging unit (PU):

- 204 = 5 units in a cardboard box
- 208 = 12 units in a cardboard box
- 210 = 15 units in a cardboard box
- 211 = 20 units in a cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box
- 533 = 200 units in PE in a cardboard box

ORDER INFORMATION

1 Dynapro full extension slide Soft-close Set: One left, one right						
NL	40 kg			70 kg		
	Art.-no.	PU		Art.-no.	PU	
250	F130107790	204	211	-		
270	F130107793	204	211	-		
300	F130107796	204	211	-		
320	F130107799	204	211	-		
350	F130107802	204	211	-		
380	F130107805	204	211	-		
400	F130107808	204	211	-		
420	F130107811	204	211	-		
450	F130107814	204	210	F130107832	204	210
480	F130107817	204	210	-		
500	F130107820	204	210	F130107838	204	210
520	F130107823	204	210	F130107841	204	210
550	F130107826	204	210	F130107844	204	210
580	-			F130107847	204	208
600	F130107829	204	208	F130107850	204	208
650	-			F130107853	204	208
700*	-			F130107856	204	208
750*	-			F130107859	204	208

* Load capacity 50 kg

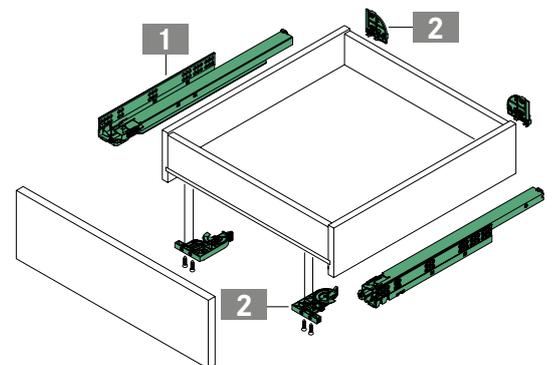
Individual components			
Description	Art.-no.	PU	
Front locking device (1D) Set: One left, one right	F134101220	233	517
Front locking device (2D) Set: One left, one right	F134108949	233	
Front locking device (3D) Set: One left, one right	F134108946	233	
Adjustment adapter (1D) Set: One left, one right	F134108952	233	

Optional: Depth adjustment (1D) for front locking device (2D) Set: One left, one right			
Art.-no.	PU		
F134108957	533		

2a Dynapro 4D set Front locking device (3D) and adjustment adapter (1D), one of each left/right			
Art.-no.	PU		
F134108955	517		

2b Dynapro 3D-Set Front locking device (2D) and adjustment adapter (1D), one of each left/right			
Art.-no.	PU		
F134108956	517		

2c Dynapro 2D set Front locking device (1D) and adjustment adapter (1D), one of each left/right			
Art.-no.	PU		
F134117193	517		



PAGE REFERENCES

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PLANNING DIMENSIONS

All dimensions in millimetres

Installation dimensions

$LWS = (LWK - 42)^{+0}_{-1.5}$
 min. LWS = 138 mm (3D/4D)
 145 mm (2D)

min. 7
 max. 16
 min. 37
 10
 min. 53
 max. 13
 min. 10
 21
 LWK

Drawer

$SKL = NL - 10 \pm 0.5$
 min. 12
 37
 MET = NL + 3

Inset drawer

$SKL = NL - 10 \pm 0.5$
 min. 7
 max. 16
 min. 12
 MET = NL + 21

	NL	SKL	MET
250	240	253	
270	260	273	
300	290	303	
320	310	323	
350	340	353	
380	370	383	
400	390	403	
420	410	423	
450	440	453	
480	470	483	
500	490	503	
520	510	523	
550	540	553	
580	570	583	
600	590	603	
650	640	653	
700	690	703	
750	740	753	

Locking device fixing position

10
 min. 35
 HV +3.5 mm
 69
 72.5
 2D
 TV +3.5 mm
 7.5
 19 | 23
 min. 69
 SV ±1.5 mm
 23 | 19
 min. 55

Adjustment adapter fixing position

10
 32
 7
 15
 32
 min. 35
 NV +4 mm

Fixing positions for full extension slide

Euro screw $\varnothing 6.3 \times 14$ mm
 Chipboard screw $\varnothing 4 \times 16$ mm
 Screw head $\varnothing 7$ mm

KV
 18
 9 | 23 | 9
 10
 12
 28
 37
 250 - 320
 350 - 450
 480 - 520
 550
 600
 384
 352
 288
 256
 224
 192
 160
 128
 32
 0
 MET = NL + 3
 40 kg

KV
 28
 37
 450
 500 - 580
 600 - 650
 700* - 750*
 *50 kg
 384
 372
 352
 340
 288
 276
 247
 224
 128
 32
 0
 MET = NL + 3
 70 kg

LEGEND

HV Height adjustment	MET Minimum installation depth	SV Side adjustment
KV Front edge of cabinet	NL Nominal length	TV Depth adjustment
LWK Inside cabinet width	NV Tilt angle adjustment	
LWS Internal drawer width	SKL Length of drawer	

DYNAPRO TIPMATIC SOFT-CLOSE

Full extension slide 40/70 kg



- Mechanical opening system for handle-free fronts
- Combines Tipmatic function with Soft-close damping
- Tool-free assembly of the Tipmatic Soft-close unit
- Can be used for Dynapro Soft-close full extension slides
- One unit for all nominal lengths and weight classes
- 3-stage adjustment of the opening force
- Wide trigger range due to synchronisation rod

Packaging unit (PU):

- 204 = 5 units in a cardboard box
- 207 = 10 units in a cardboard box
- 208 = 12 units in a cardboard box
- 210 = 15 units in a cardboard box
- 211 = 20 units in a cardboard box
- 213 = 25 units in a cardboard box
- 223 = 100 units in a cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box
- 607 = 10 units in a cardboard box in a cardboard box

Note:

- Dynapro Tipmatic Soft-close can be used from nominal length (NL) 270

ORDER INFORMATION

1 Dynapro full extension slide Soft-close Set: One left, one right					
NL	40 kg		70 kg		
	Art.-no.	PU	Art.-no.	PU	
270	F130107793	204 211	-		
300	F130107796	204 211	-		
320	F130107799	204 211	-		
350	F130107802	204 211	-		
380	F130107805	204 211	-		
400	F130107808	204 211	-		
420	F130107811	204 211	-		
450	F130107814	204 210	F130107832	204	210
480	F130107817	204 210	-		
500	F130107820	204 210	F130107838	204	210
520	F130107823	204 210	F130107841	204	210
550	F130107826	204 210	F130107844	204	210
580	-		F130107847	204	208
600	F130107829	204 208	F130107850	204	208
650	-		F130107853	204	208
700*	-		F130107856	204	208
750*	-		F130107859	204	208

* Load capacity 50 kg

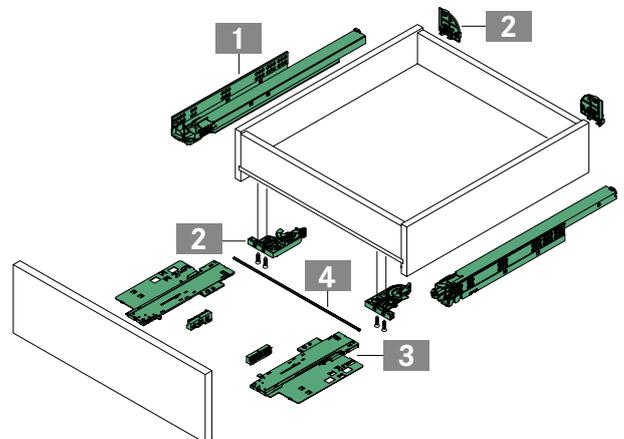
4 Synchronisation rod Single item: For cutting to length					
L	Art.-no.	PU			
952	F134109410	207			

Individual components			
Description	Art.-no.	PU	
Dynapro Tipmatic Soft-close unit Set: One left, one right	F134109324	213	
Dynapro Tipmatic Soft-close activator Set: One left, one right	F134109325	223	
Front locking device (1D) Set: One left, one right	F134101220	233	517
Front locking device (2D) Set: One left, one right	F134108949	233	
Adjustment adapter (1D) Set: One left, one right	F134108952	233	

2a Dynapro 3D-Set Front locking device (2D) and adjustment adapter (1D), one of each left/right					
Art.-no.	PU				
F134108956	517				

2b Dynapro 2D set Front locking device (1D) and adjustment adapter (1D), one of each left/right					
Art.-no.	PU				
F134117193	517				

3 Dynapro Tipmatic Soft-close Set: Unit and activator, one of each left/right					
Art.-no.	PU				
F134109323	607				



PAGE REFERENCES

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PLANNING DIMENSIONS

All dimensions in millimetres

Installation dimensions

Drawer

Inset drawer

NL	SKL	MET
270	260	273
300	290	303
320	310	323
350	340	353
380	370	383
400	390	403
420	410	423
450	440	453
480	470	483
500	490	503
520	510	523
550	540	553
580	570	583
600	590	603
650	640	653
700	690	703
750	740	753

Synchronisation rod cutting dimension

Locking device fixing position

Adjustment adapter fixing position

Position of the synchronisation rod

NL	A	B
270 - 320	248	265
350 - 750	283	300

Fixing positions for full extension slide

Euro screw Ø 6.3 x 14 mm
Chipboard screw Ø 4 x 16 mm
Screw head Ø 7 mm

LEGEND

HV Height adjustment	LWS Internal drawer width	SKL Length of drawer
KV Front edge of cabinet	MET Minimum installation depth	SV Side adjustment
L Length	NL Nominal length	
LWK Inside cabinet width	NV Tilt angle adjustment	

DYNAPRO TIPMATIC

Full extension slide 40/60 kg



- Full extension slide Tipmatic for handle-free fronts
- Tipmatic ejector unit integrated into the slide
- Excellent running characteristics
- Fully-synchronised slide technology
- Utmost lateral stability
- Minimum drawer deflection
- 4D adjustment facility:
 - Height adjustment +3.5 mm
 - Side adjustment ± 1.5 mm
 - Tilt angle adjustment +4 mm
 - Front gap adjustment +1.5 mm

Packaging unit (PU):

- 204 = 5 units in a cardboard box
- 207 = 10 units in a cardboard box
- 210 = 15 units in a cardboard box
- 211 = 20 units in a cardboard box
- 212 = 24 units in a cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box

ORDER INFORMATION

1 Dynapro full extension slide Tipmatic Set: One left, one right					
NL	40 kg		60 kg		
	Art.-no.	PU	Art.-no.	PU	
250	F130117458	204 211	-		
270	F130117459	204 211	-		
300	F130117460	204 211	-		
320	F130117461	204 211	-		
350	F130117462	204 211	-		
380	F130116955	204	-		
400	F130117463	204 211	-		
420	F130117464	204 210	-		
450	F130117465	204 210	F130117470	204	210
480	F130117466	204 210	-		
500	F130117467	204 210	F130117471	204	210
520	F130116956	204	F130116957	204	
550	F130117468	204 210	F130117472	204	210
580	-		F130117473	204	
600	-		F130116941	204	
650	-		F130117474	204	
700*	-		F130117534	204	
750*	-		F130117535	204	

* Load capacity 50 kg

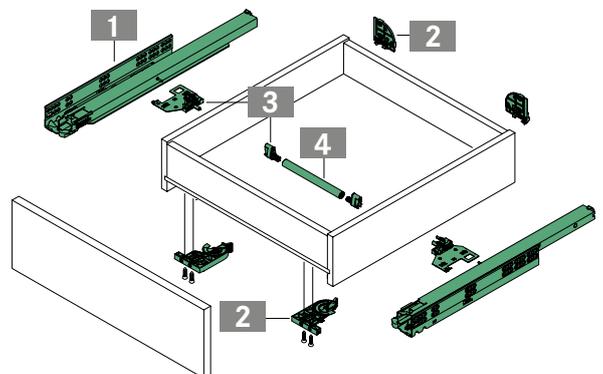
4 Synchronisation rod Single item: For cutting to length					
L	Art.-no.	PU			
981	F134116947	207 211			

Individual components		
Description	Art.-no.	PU
Synchronisation module, 40 kg Set: One left, one right	F134117114	212
Synchronisation module, 60 kg Set: One left, one right	F134117115	212
Synchronisation lever Single item: Can be used on left/right	F134125079	233
Front locking device (1D) Set: One left, one right	F134101220	233 517
Front locking device (2D) Set: One left, one right	F134108949	233
Adjustment adapter (1D) Set: One left, one right	F134108952	233

2a Dynapro 3D-Set Front locking device (2D) and adjustment adapter (1D), one of each left/right					
	Art.-no.	PU			
	F134108956	517			

2b Dynapro 2D set Front locking device (1D) and adjustment adapter (1D), one of each left/right					
	Art.-no.	PU			
	F134117193	517			

3 Synchronisation unit Set: Synchronisation module and synchronisation lever, one of each left/right					
	40 kg		60 kg		
	Art.-no.	PU	Art.-no.	PU	
	F134117475	517	F134117476	517	



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PLANNING DIMENSIONS

All dimensions in millimetres

Installation dimensions

Drawer

Inset drawer

	NL	SKL	MET
	250	240	253
	270	260	273
	300	290	303
	320	310	323
	350	340	353
	380	370	383
	400	390	403
	420	410	423
	450	440	453
	480	470	483
	500	490	503
	520	510	523
	550	540	553
	580	570	583
	600	590	603
	650	640	653
	700	690	703
	750	740	753

Synchronisation rod cutting dimension

Locking device fixing position

Adjustment adapter fixing position

Position of the synchronisation rod

NL	A
250 - 320	205
350 - 750	241

Fixing positions for full extension slide

Euro screw Ø 6.3 x 14 mm
Chipboard screw Ø 4 x 16 mm
Screw head Ø 7 mm

LEGEND

HV	Height adjustment	LWS	Internal drawer width	SKL	Length of drawer
KV	Front edge of cabinet	MET	Minimum installation depth	SV	Side adjustment
L	Length	NL	Nominal length		
LWK	Inside cabinet width	NV	Tilt angle adjustment		

DYNAPRO

Base panel mounting and pull-out shelf



Dynapro for base panel mounting:

- Full extension drawer synchronised, 40 kg load capacity
- Soft-close damping system
- Assembly on cabinet base or additional base panel
- Particularly suitable for pull-out shelves (no screw-on bracket at side)

Shelf holder set for shelves:

- Height adjustment +3.5 mm
- Optional depth adjustment +3.5 mm
- Stepless shelf self-locking
- Compatible with all Dynapro slides

Packaging unit (PU):

- 204 = 5 units in a cardboard box
- 210 = 15 units in cardboard box
- 211 = 20 units in cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box
- 533 = 200 units in PE in a cardboard box

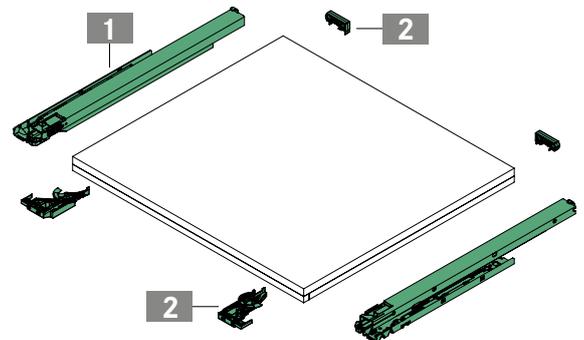
ORDER INFORMATION

1 Dynapro full extension slide Soft-close for base panel mounting Set: One left, one right											
NL	40 kg										
	Art.-no.	PU									
400	F130107878	204	211								
450	F130107884	204	210								
500	F130107890	204	210								
550	F130107893	204									

2 Dynapro 1D set Front locking device (1D) and shelf holder, one of each left/right											
	Art.-no.	PU									
	F134107411	517									

Individual components							
Description		Art.-no.	PU				
Front locking device (1D) Set: One left, one right		F134101220	517	233			
Shelf holder Set: One left, one right		F134101305	533				

Optional: Depth adjustment (1D) Set: One left, one right							
	Art.-no.	PU					
	F134101313	533					

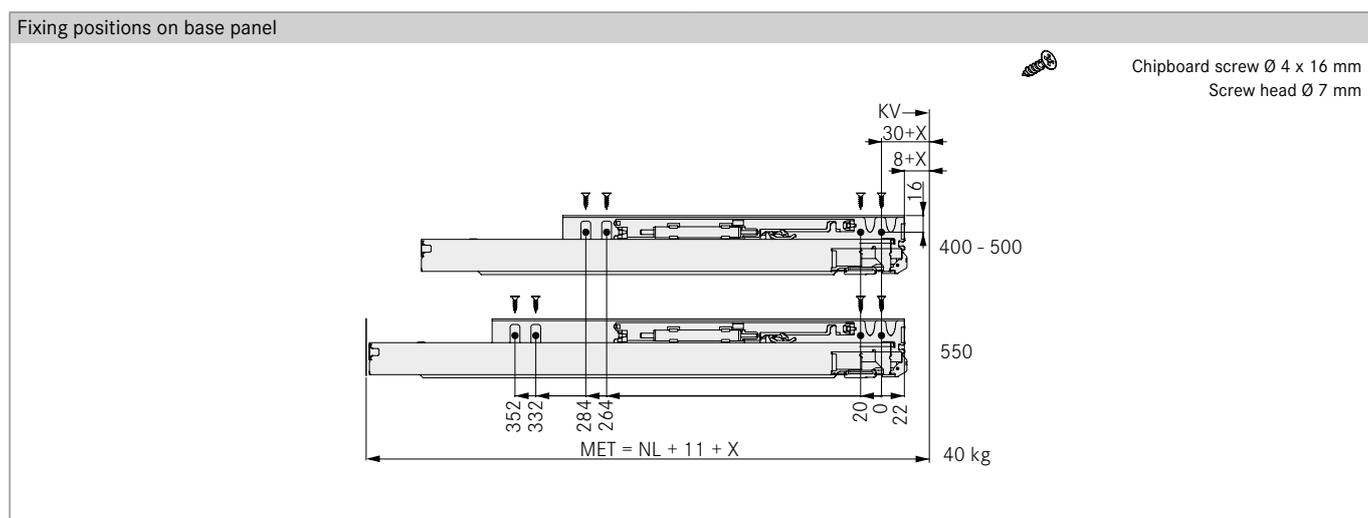
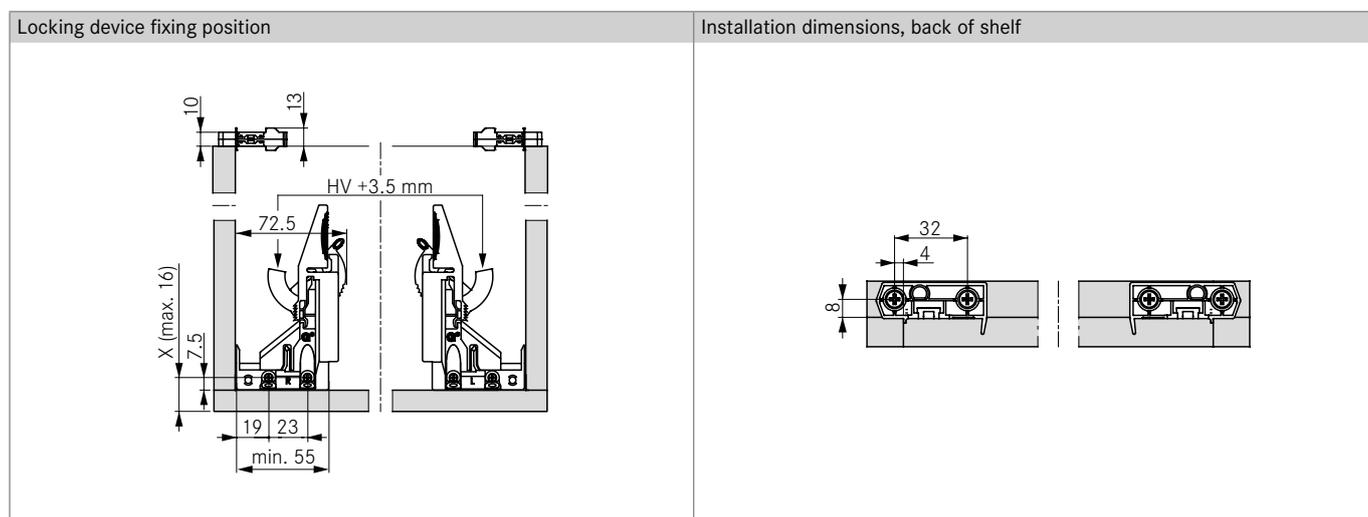
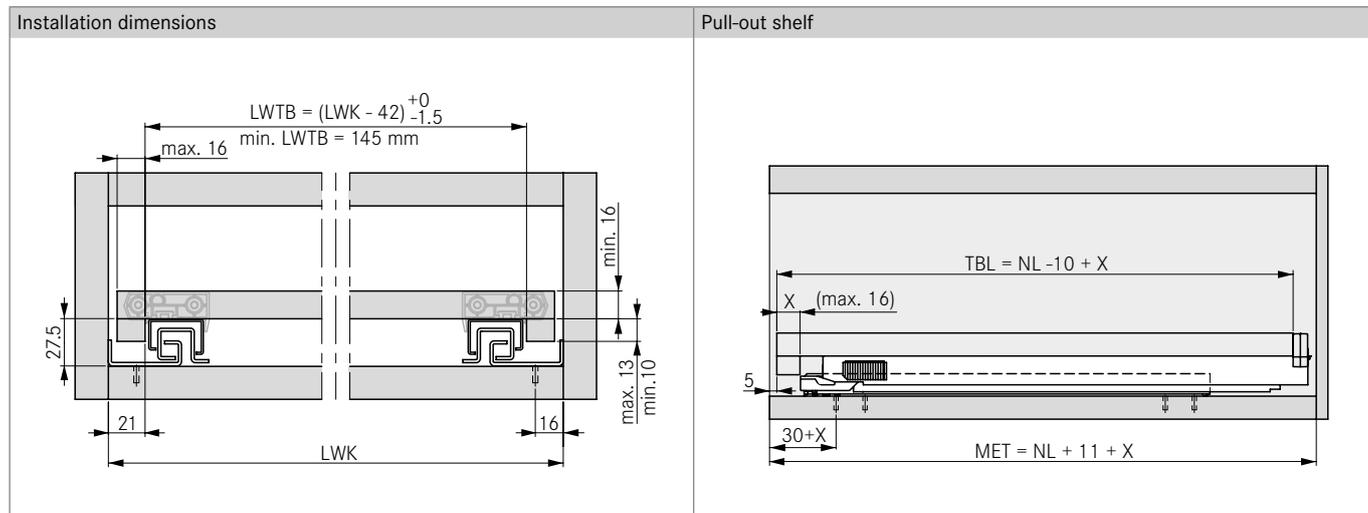


PAGE REFERENCES

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Dynapro Tipmatic Soft-close	14	Technical information	20	Packaging code	75

INSTALLATION INFORMATION

All dimensions in millimetres



LEGEND

HV	Height adjustment
LWK	Inside cabinet width
LWTB	Clear shelf width
MET	Minimum installation depth

NL	Nominal length
TBL	Shelf length

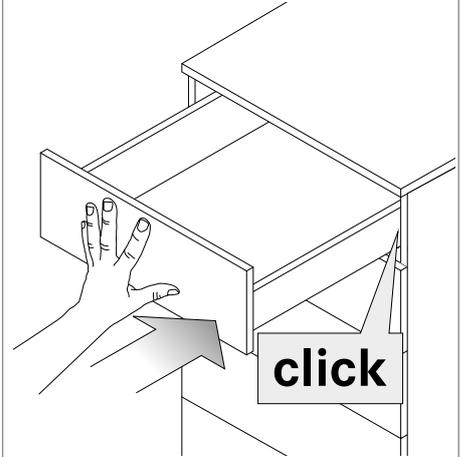
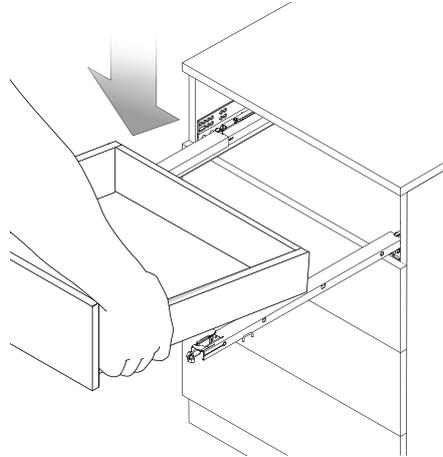
DYNAPRO

Technical information

INSTALLATION INFORMATION

Inserting the drawer

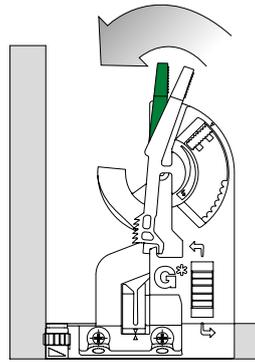
Place the drawer on the extended Dynapro slides and push in until it audibly engages.



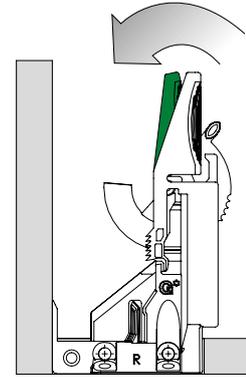
Removing the drawer

Pull out the drawer, actuate the lever of the front locking device on both sides and pull the drawer off the slide towards the front.

Dynapro 3D/4D



Dynapro 2D



NOTES

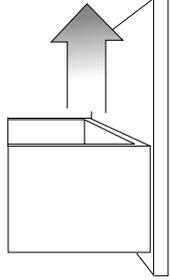
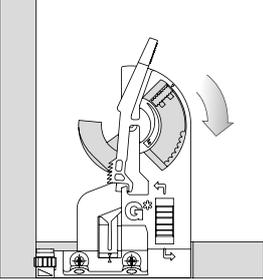
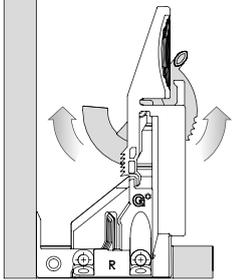
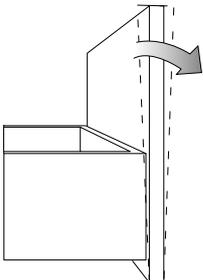
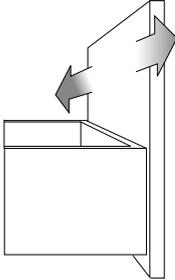
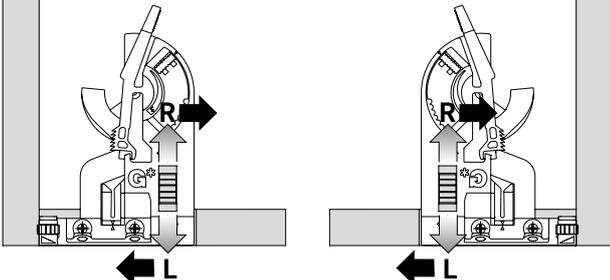
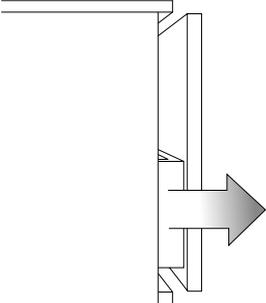
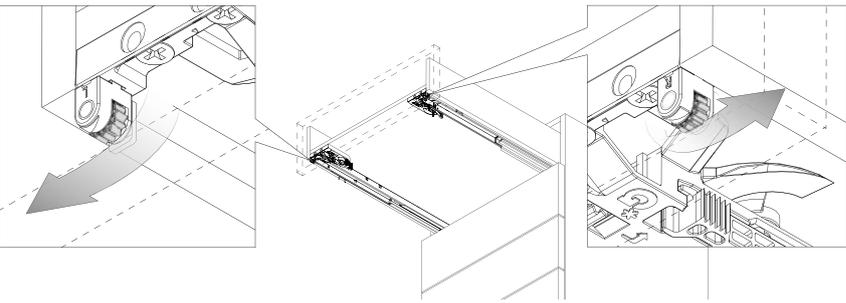
Fixing the cabinet rails:

The screw recommendations are guide values only. Screw head \varnothing 7 mm.
Assemblers must ensure that the substrate material is thick enough.

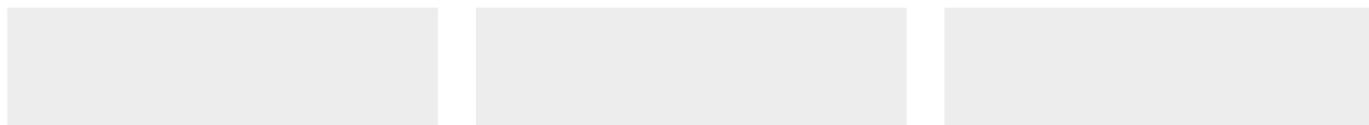
PAGE REFERENCES

Dynapro Soft-close	12	Dynapro Tipmatic	16	Assembly aids	24
Dynapro Tipmatic Soft-close	14	Pull-out shelf	18	Sensomatic	27

ADJUSTMENT

<p>Height adjustment (max. +3.5 mm)</p> 	<p>Dynapro 3D/4D</p> 	<p>Dynapro 2D</p> 
<p>Tilt angle adjustment of front (max. +4.0 mm)</p> 	<p>Dynapro 2D/3D/4D</p> 	
<p>Side adjustment (max. ±1.5 mm)</p> 	<p>Dynapro 3D/4D</p> 	
<p>Depth adjustment (max. +3.5 mm)</p> 	<p>Dynapro 4D</p> 	

LEGEND

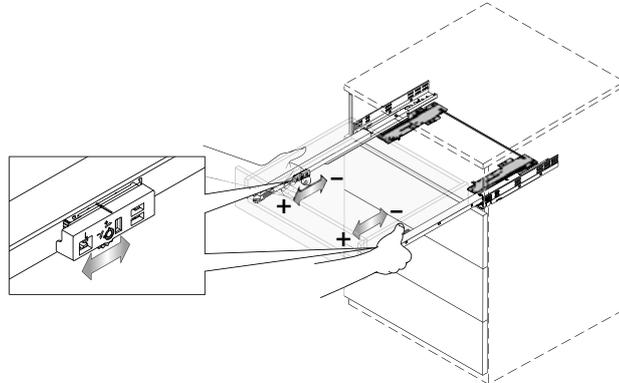
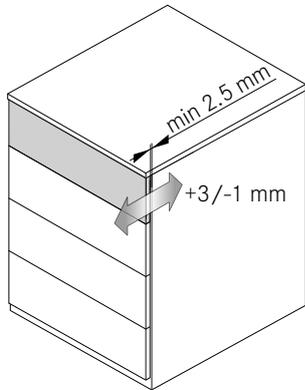


DYNAPRO

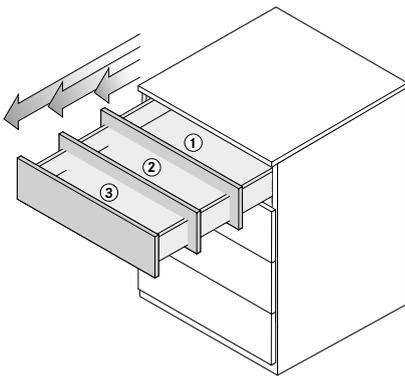
Technical information

DYNAPRO TIPMATIC SOFT-CLOSE

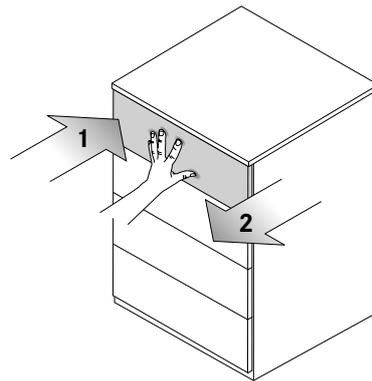
Front gap adjustment (+3 mm / -1 mm)



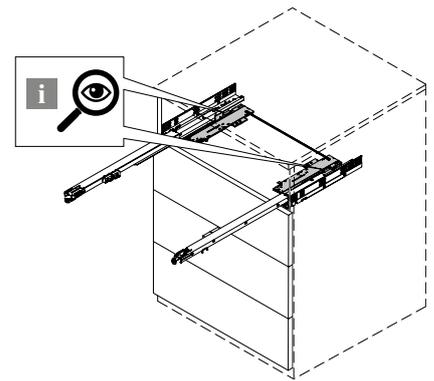
Opening force



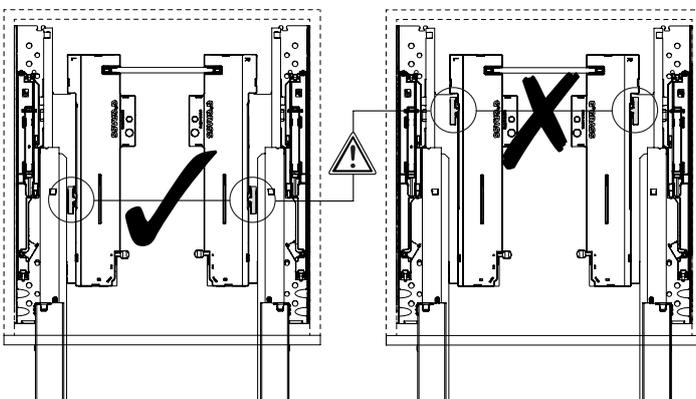
A



B

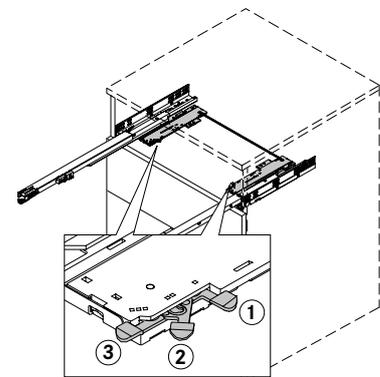


i



X → A
✓ → C

C

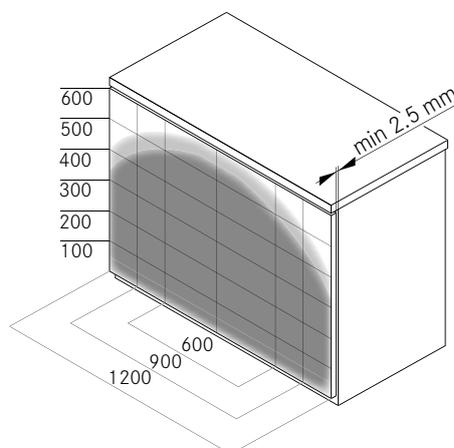


PAGE REFERENCES

Dynapro Soft-close	12	Dynapro Tipmatic	16	Assembly aids	24
Dynapro Tipmatic Soft-close	14	Pull-out shelf	18	Sensomatic	27

DYNAPRO TIPMATIC SOFT-CLOSE

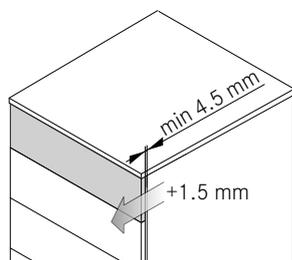
Activation zone



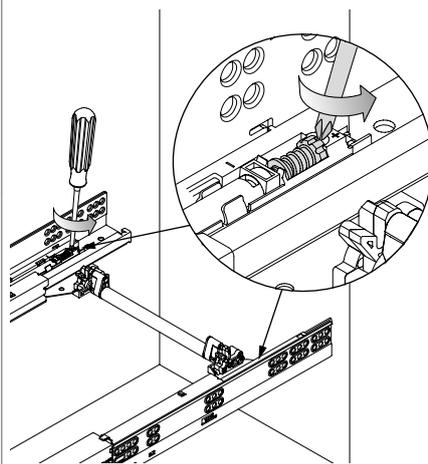
DYNAPRO TIPMATIC

Front gap adjustment (max. +1.5 mm)

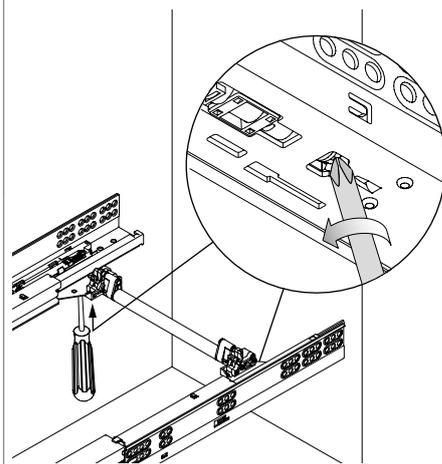
Reliable opening and closing of the drawer depends on the front gap adjustment (min. 4.5 mm = factory setting). If the front height is greater than 300 mm the front gap must be increased to the maximum 6 mm.



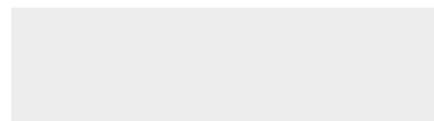
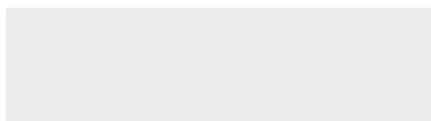
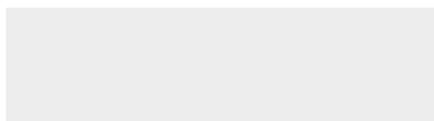
Front gap adjustment from above



Front gap adjustment from below



LEGEND



DYNAPRO

Assembly aids

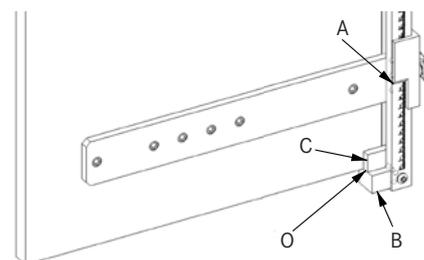


DRILLING JIG FOR CABINET MEMBER

One set includes:

- Guide rule (1x)
- Marking elements (4x)
- Stop plates B + C (1 each)

A. Reading edge = centre of holes
 B. Stop plate for loose cabinet parts
 C. Stop plate for assembled cabinet
 O. Zero scale position



	Art.-no.	PU
	F146094730	501



INDIVIDUAL MARKING ELEMENT

For extending the drilling jig
 for cabinet member F146094730

	Art.-no.	PU
	F146094721	299



DRILLING JIG FOR CABINET MEMBER

For use with pilot drill bit F146035692

	Art.-no.	PU
	F146101348	507



DRILLING JIG FOR DRAWER

Pre-drilling the holes for:

- Locking coupler
- Adjustment adapter for Dynapro
- 37 mm cabinet member hole
- For use with pilot drill bit F146035692

	Art.-no.	PU
	F146109874	299

PAGE REFERENCES

Dynapro Soft-close	12	Dynapro Tipmatic	16	Technical information	20
Dynapro Tipmatic Soft-close	14	Pull-out shelf	18	Sensomatic	27



EURO SCREW

	Art.-no.	PU
Ø 6.3 x 14 mm Screw head Ø 7 mm	F148115049	147



SCREWDRIVER

GRASS cross head screwdriver
(Pozidriv No. 2)

	Art.-no.	PU
	F147010256	001



PILOT DRILL BIT

The pilot drill bit is used for
pre-drilling holes for countersunk
chipboard screws Ø 3.5 mm

	Art.-no.	PU
Pilot drill bit	F146035692	299
Spare drill bit Ø 2.7 mm	F146090561	299

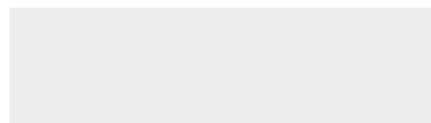
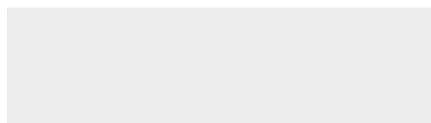
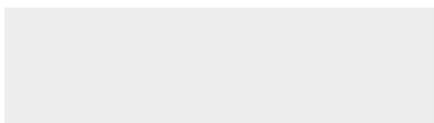


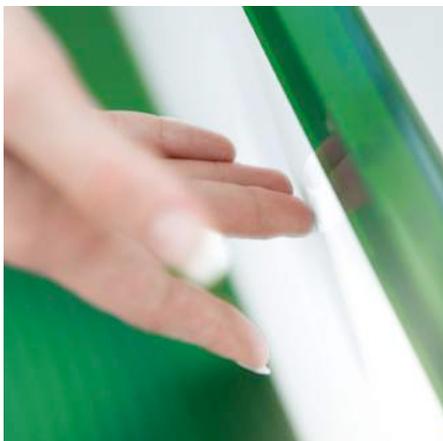
DRILLING JIG FOR SENSOMATIC

For pre-drilling the holes for fixing brackets
at the assembled cabinet or loose bottom
or top panel, for the Sensomatic system

	Art.-no.	PU
	F146109850	299

LEGEND





SENSOMATIC OPENING SYSTEM

Small lever. Large effect.
Functional technology starts with the detail.

QUALITY CERTIFICATE
LGAI

The development of new movement systems ideally means dealing directly with the people who will be using them. Sensomatic is the best reference in this respect.

The electro-mechanical system supports the opening process with a small lever which gently starts the drawer movement. Sensomatic is, however, very undemanding. This is true of both the consumption of electricity and the space required by the drive unit behind the drawer.

The fact that the opening system can be triggered anywhere on the front surface means that it is a perfect movement system that already now meets the functional requirements of the future.

DYNAPRO SENSOMATIC

Electro-mechanical opening of wooden drawers and pot drawers. For a balance between stylish design and functional comfort.

Product designation	Page
Dynapro Sensomatic single set	30
Standard cabinet with horizontal wooden stretcher	32
Standard cabinet with vertical wooden stretcher	34
Single drawer with overhead frame set mounting	36
Single drawer with back panel frame set mounting	38
Sink cabinet with bottom panel frame set mounting	40
Sink cabinet with side panel frame set mounting	42
Installation instructions	44
Assembly aids	25

DYNAPRO SENSOMATIC

Electro-mechanical opening of wooden drawers and pot drawers. For a balance between stylish design and functional comfort.

	Product description	Page
	<p>Dynapro Sensomatic single set</p> <ul style="list-style-type: none"> • Complete set for a single drawer • For cabinet widths of up to 1200 mm • Easy to install • Very simple wiring (plug and play) 	30
	<p>Standard cabinet with horizontal wooden stretcher</p> <ul style="list-style-type: none"> • Minimal additional space requirement between drawer back panel and cabinet • Very simple wiring (plug and play) • Just one drive unit for cabinet widths of up to 1200 mm • Large trigger range 	32
	<p>Standard cabinet with vertical wooden stretcher</p> <ul style="list-style-type: none"> • Minimal additional space requirement between drawer back panel and cabinet • Very simple wiring (plug and play) • Just one drive unit for cabinet widths of up to 1200 mm • Large trigger range 	34
	<p>Single drawer with overhead frame set mounting</p> <ul style="list-style-type: none"> • Minimal additional space requirement between drawer back panel and cabinet • Very simple wiring (plug and play) • Just one drive unit for cabinet widths of up to 1200 mm • Large trigger range 	36

	Product description	Page
	<p>Single drawer with back panel frame set mounting</p> <ul style="list-style-type: none"> • Minimal additional space requirement between drawer back panel and cabinet • Very simple wiring (plug and play) • Just one drive unit for cabinet widths of up to 1 200 mm • Large trigger range 	38
	<p>Sink cabinet with bottom panel frame set mounting</p> <ul style="list-style-type: none"> • Minimal additional space requirement between drawer back panel and cabinet • Very simple wiring (plug and play) • Just one drive unit for cabinet widths of up to 1 200 mm • Large trigger range 	40
	<p>Sink cabinet with side panel frame set mounting</p> <ul style="list-style-type: none"> • Minimal additional space requirement between drawer back panel and cabinet • Very simple wiring (plug and play) • Just one drive unit for cabinet widths of up to 1 200 mm • Large trigger range 	42

DYNAPRO SENSOMATIC

Single set



- Electro-mechanical opening system
- Combines handle-free opening with Soft-close damping system
- 1 drive unit for all weight classes
- Easy to fit
- Simple plug and play wiring
- Small additional installation depth
- Single sets include all components necessary for installation
- Ideal for heavy pot drawers and waste separating systems

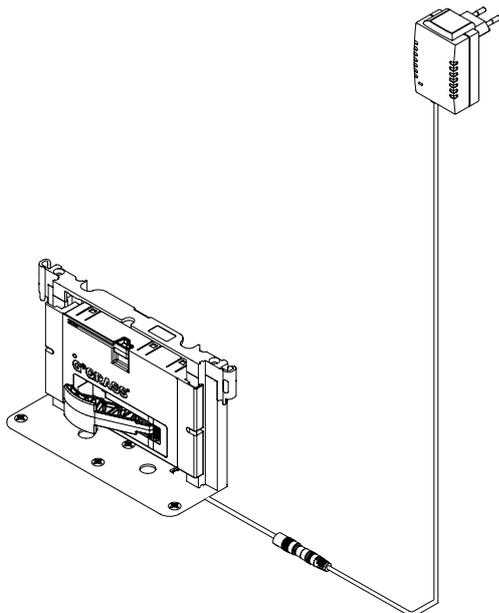
- **Note:**
Sets for other countries available on request

ORDER INFORMATION

Sensomatic single set	
	Art.-no. PU
for Dynapro	F121101208 201

1 set includes:

- 1** drive unit (1x)
- 2** installation set (1x)
- 3** power supply unit with plug (1x)
(Central Europe, DE, FR, IT, CH, ES, RU, PT, NL)
- 4** spring-loaded front buffers (4x)
drilling and installation instructions (1x)

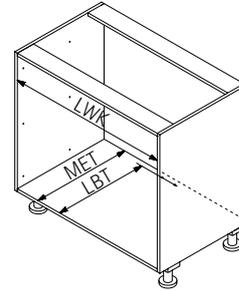
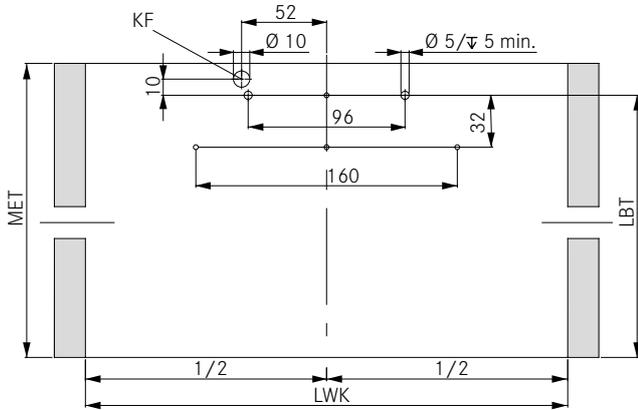


PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

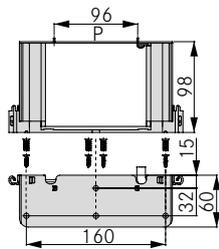
INSTALLATION INFORMATION

Installation dimensions

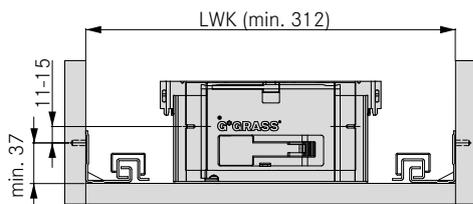


RW	MET	LBT
Wood	NL + 15	NL

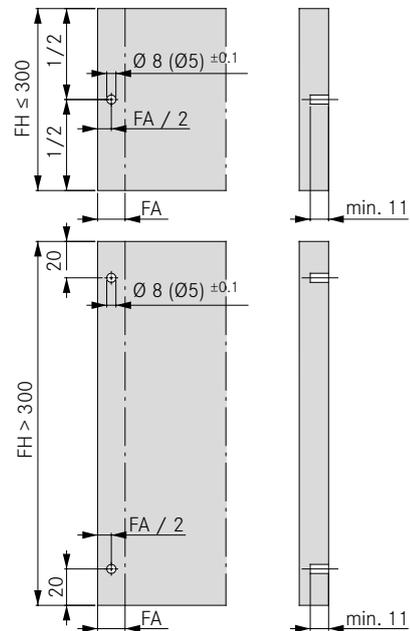
Installation set



Position of drive unit



Position of front buffer



Note:

When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.

LEGEND

FA Front overlay
FH Height of front
KF Cable routing
LBT Depth of hole pattern

LWK Inside cabinet width
MET Minimum installation depth
NL Nominal length
P Positioning aid

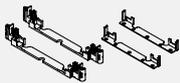
RW Back panel

DYNAPRO SENSOMATIC

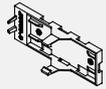
Standard cabinet horizontal wooden stretcher

ORDER INFORMATION

1 Drive unit			
	Art.-no.	PU	
for Dynapro	F121101195	607	

3 Fastening set consisting of: items 3a (2x) and 3b (2x)			
	Art.-no.	PU	
	F121100610	507	

3b Fixing brackets top/bottom			
	Art.-no.	PU	
	F121100270	211	

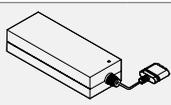
5 Power supply unit holder			
	Art.-no.	PU	
	F121100604	507	

7 Connection cable with 2-way adapter			
	Length	Art.-no.	PU
	600	F121100288	207
	1000	F121100289	207
	2000	F121100291	207

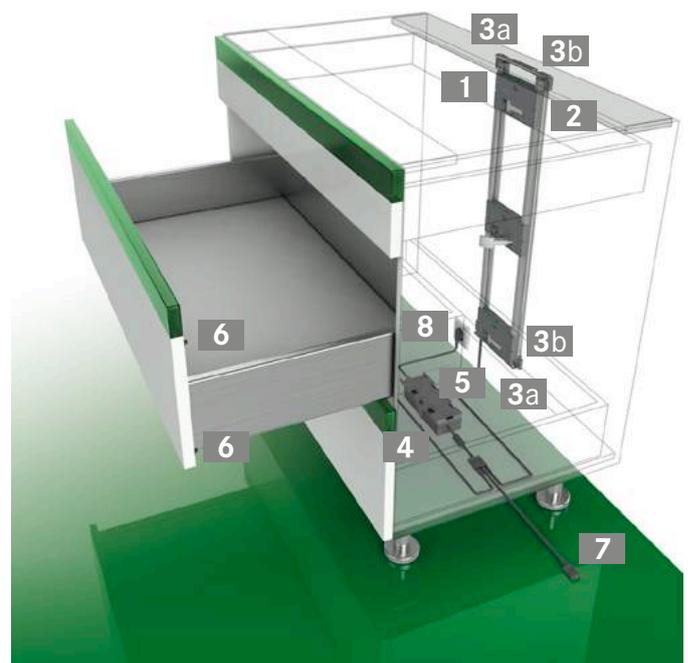
8 Power supply cable				
	K A E L D C			
	Plug	Art.-no.	PU	
	Power supply cable K (USA, CAN)	F120069760	207	
	Power supply cable K (JP)	F120072445	207	
	Power supply cable A (DE, ES, FR, IT, RU, NL, SE)	F120069761	207	
	Power supply cable E (DK)	F120069763	207	
	Power supply cable L (CH)	F120069765	207	
	Power supply cable D (UK, AE, MY)	F120069766	207	
	Mains cable C (AU, NZ)	F120078669	207	
	without plug	F120069767	207	

2 Frame sides including frame side cable			
	Length	Art.-no.	PU
	653	F121100284	207
	750	F121100285	207
	1170	F121100286	207

3a Frame connector			
	Art.-no.	PU	
	F121100282	211	

4 Power supply unit			
	Art.-no.	PU	
	F121100269	607	

6 Front buffer, spring-loaded				
	Ø	Front gap	Art.-no.	PU
	5	2.2	F121100294	223
		3	F121100295	223
	8	2.2	F121100297	223
		3	F121100298	223



PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

INSTALLATION INFORMATION

Installation dimensions								
		<table border="1"> <thead> <tr> <th>RW</th> <th>MET</th> <th>LBT</th> </tr> </thead> <tbody> <tr> <td>Wood</td> <td>NL + 15</td> <td>NL</td> </tr> </tbody> </table>	RW	MET	LBT	Wood	NL + 15	NL
RW	MET	LBT						
Wood	NL + 15	NL						
Fixing brackets top/bottom								
Position of drive unit	Position of front buffer							
<p>Note: When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.</p>								

LEGEND

FA Front overlay
FH Height of front
KF Cable routing
LBT Depth of hole pattern

LHK Inside cabinet height
LWK Inside cabinet width
MET Minimum installation depth
NL Nominal length

P Positioning aid
RW Back panel
TL Length of frame side

DYNAPRO SENSOMATIC

Standard cabinet vertical wooden stretcher

ORDER INFORMATION

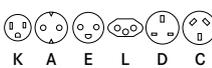
1 Drive unit			
	Art.-no.	PU	
for Dynapro	F121101195	607	

3 Frame connector			
	Art.-no.	PU	
	F121100282	211	

5 Fixing bracket, back inside mounted			
	Art.-no.	PU	
	F121100275	207	

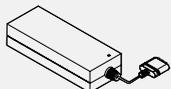
7 Power supply unit holder			
	Art.-no.	PU	
	F121100604	507	

9 Connection cable with 2-way adapter			
	Length	Art.-no.	PU
	600	F121100288	207
	1000	F121100289	207
	2000	F121100291	207

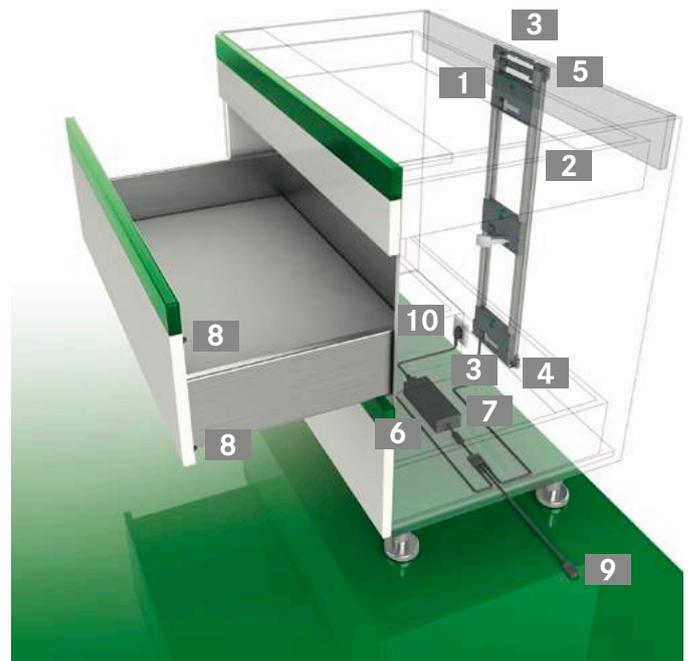
10 Power supply cable				
	K A E L D C			
	Plug	Art.-no.	PU	
	Power supply cable K (USA, CAN)	F120069760	207	
	Power supply cable K (JP)	F120072445	207	
	Power supply cable A (DE, ES, FR, IT, RU, NL, SE)	F120069761	207	
	Power supply cable E (DK)	F120069763	207	
	Power supply cable L (CH)	F120069765	207	
	Power supply cable D (UK, AE, MY)	F120069766	207	
	Mains cable C (AU, NZ)	F120078669	207	
	without plug	F120069767	207	

2 Frame sides including frame side cable			
	Length	Art.-no.	PU
	653	F121100284	207
	750	F121100285	207
	1170	F121100286	207

4 Fixing brackets top/bottom			
	Art.-no.	PU	
	F121100270	211	

6 Power supply unit			
	Art.-no.	PU	
	F121100269	607	

8 Front buffer, spring-loaded				
	Ø	Front gap	Art.-no.	PU
	5	2.2	F121100294	223
		3	F121100295	223
	8	2.2	F121100297	223
		3	F121100298	223

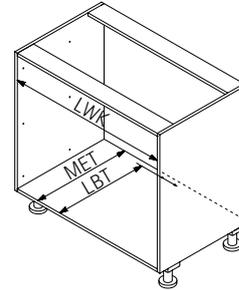
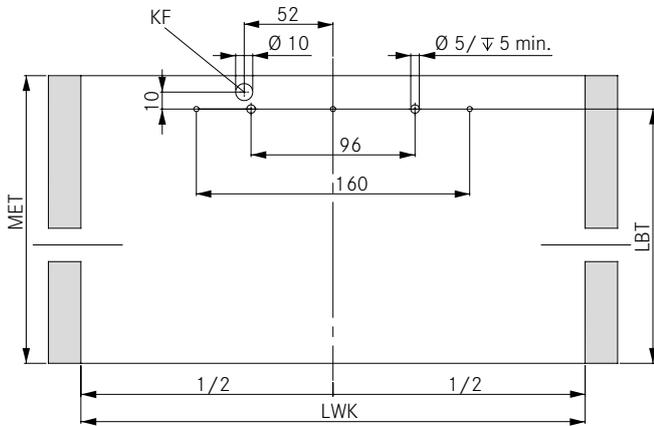


PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

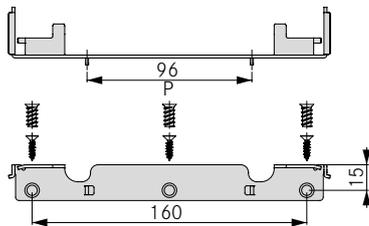
INSTALLATION INFORMATION

Installation dimensions

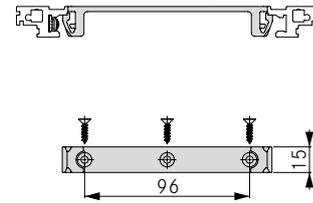


RW	MET	LBT
Wood	NL + 15	NL

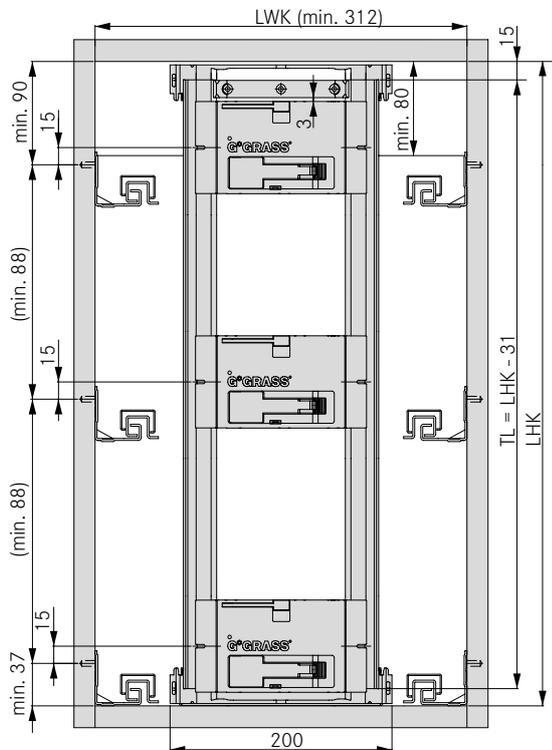
Fixing brackets top/bottom



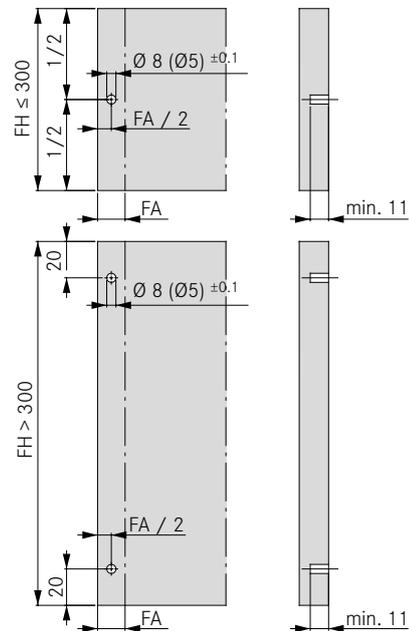
Fixing bracket, back inside mounted



Position of drive unit



Position of front buffer



Note:
When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.

LEGEND

FA Front overlay
FH Height of front
KF Cable routing
LBT Depth of hole pattern

LHK Inside cabinet height
LWK Inside cabinet width
MET Minimum installation depth
NL Nominal length

P Positioning aid
RW Back panel
TL Length of frame side

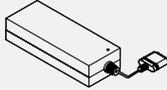
DYNAPRO SENSOMATIC

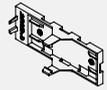
Single drawer with overhead frame set mounting

ORDER INFORMATION

1 Drive unit			
		Art.-no.	PU
for Dynapro		F121101195	607

2 Installation set			
		Art.-no.	PU
		F121100273	207

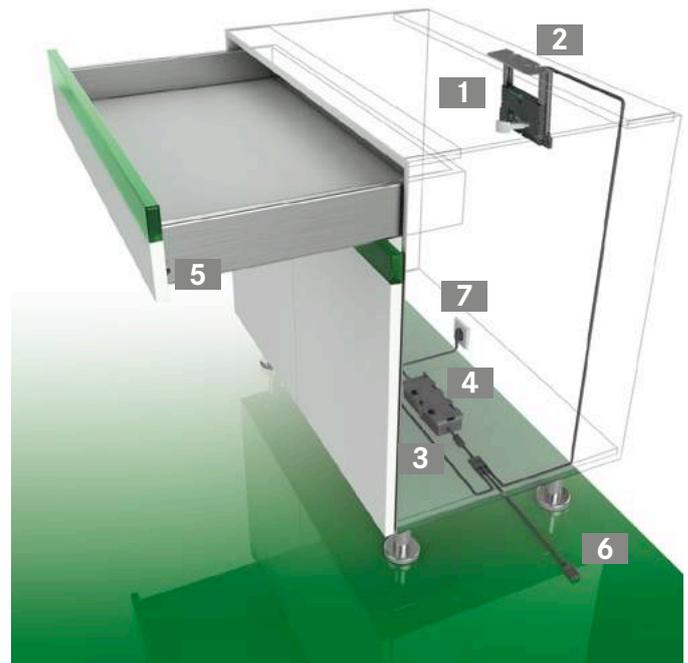
3 Power supply unit			
		Art.-no.	PU
		F121100269	607

4 Power supply unit holder			
		Art.-no.	PU
		F121100604	507

5 Front buffer, spring-loaded				
\varnothing	Front gap	Art.-no.	PU	
5	2.2	F121100294	223	
	3	F121100295	223	
8	2.2	F121100297	223	
	3	F121100298	223	

6 Connection cable with 2-way adapter				
		Art.-no.	PU	
Length				
600		F121100288	207	
1000		F121100289	207	
2000		F121100291	207	

7 Power supply cable			
			
Plug	Art.-no.	PU	
Power supply cable K (USA, CAN)	F120069760	207	
Power supply cable K (JP)	F120072445	207	
Power supply cable A (DE, ES, FR, IT, RU, NL, SE)	F120069761	207	
Power supply cable E (DK)	F120069763	207	
Power supply cable L (CH)	F120069765	207	
Power supply cable D (UK, AE, MY)	F120069766	207	
Mains cable C (AU, NZ)	F120078669	207	
without plug	F120069767	207	

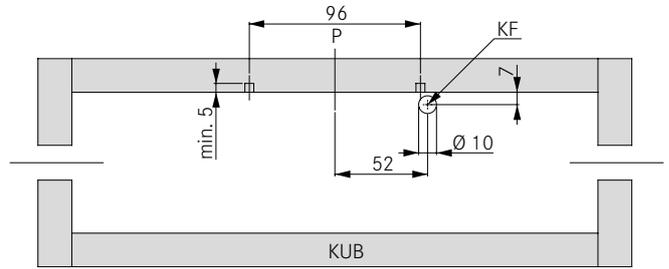
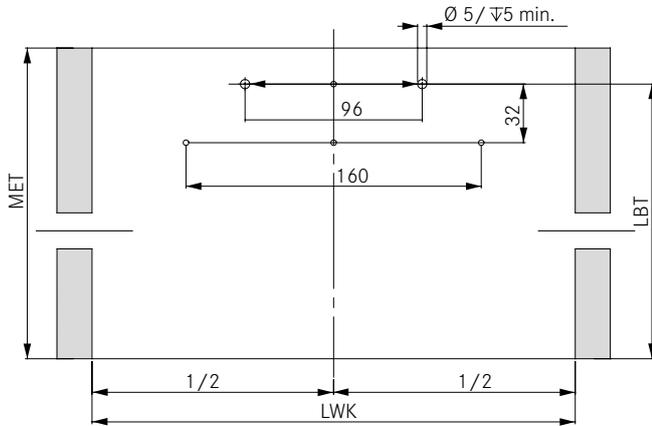


PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

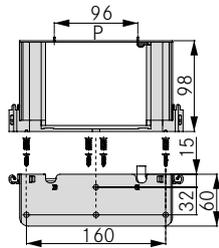
INSTALLATION INFORMATION

Installation dimensions

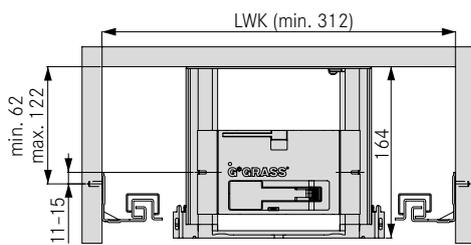


RW	MET	LBT
Wood	NL + 15	NL

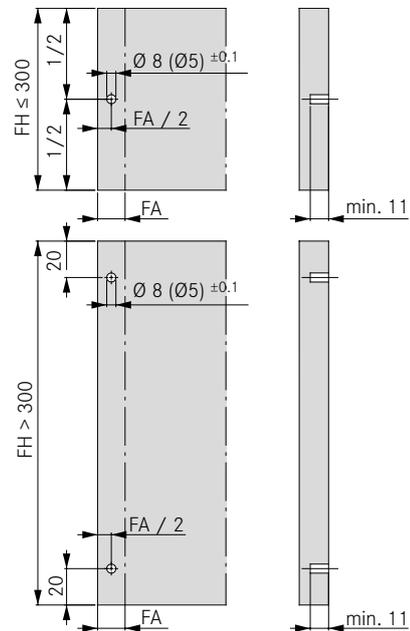
Installation set



Position of drive unit



Position of front buffer



Note:

When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.

LEGEND

FA Front overlay
FH Height of front
KF Cable routing
KUB Cabinet base

LBT Depth of hole pattern
LWK Inside cabinet width
MET Minimum installation depth
NL Nominal length

P Positioning aid
RW Back panel

DYNAPRO SENSOMATIC

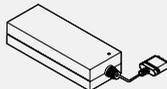
Single drawer with back panel frame set mounting

ORDER INFORMATION

1 Drive unit			
	Art.-no.	PU	
for Dynapro	F121101195	607	

2 Frame sides for back panel frame set mounting including hole drilling			
	Art.-no.	PU	
	F121100283	207	

3 Frame connector			
	Art.-no.	PU	
	F121100282	211	

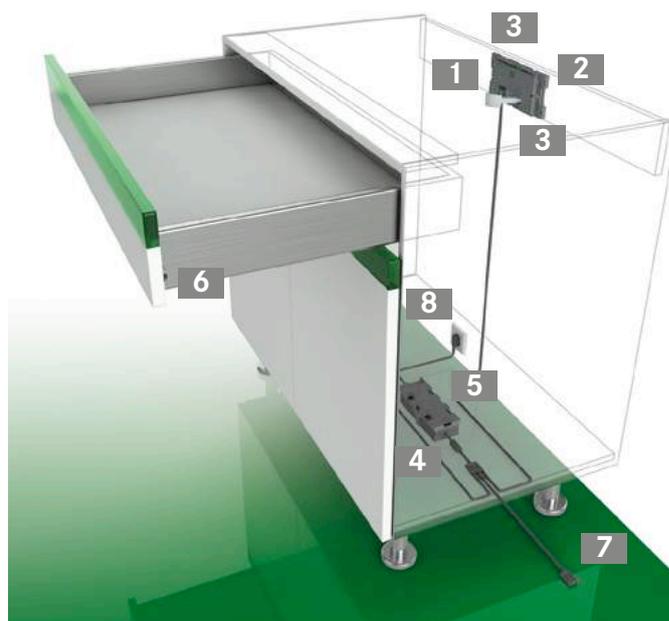
4 Power supply unit			
	Art.-no.	PU	
	F121100269	607	

5 Power supply unit holder			
	Art.-no.	PU	
	F121100604	507	

6 Front buffer, spring-loaded				
	Ø	Front gap	Art.-no.	PU
	5	2.2	F121100294	223
		3	F121100295	223
	8	2.2	F121100297	223
		3	F121100298	223

7 Connection cable with 2-way adapter			
	Length	Art.-no.	PU
	600	F121100288	207
	1000	F121100289	207
	2000	F121100291	207

8 Power supply cable			
			
Plug	Art.-no.	PU	
Power supply cable K (USA, CAN)	F120069760	207	
Power supply cable K (JP)	F120072445	207	
Power supply cable A (DE, ES, FR, IT, RU, NL, SE)	F120069761	207	
Power supply cable E (DK)	F120069763	207	
Power supply cable L (CH)	F120069765	207	
Power supply cable D (UK, AE, MY)	F120069766	207	
Mains cable C (AU, NZ)	F120078669	207	
without plug	F120069767	207	



PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

INSTALLATION INFORMATION

Installation dimensions

RW	MET
Wood	NL + 15

Frame sides

Position of drive unit

Position of front buffer

Note:
When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.

LEGEND

FA	Front overlay	MET	Minimum installation depth
FH	Height of front	NL	Nominal length
KF	Cable routing	RW	Back panel
LWK	Inside cabinet width	SPS	Chipboard screw

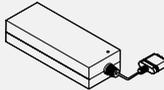
DYNAPRO SENSOMATIC

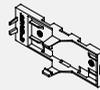
Sink cabinet with bottom panel frame set mounting

ORDER INFORMATION

1 Drive unit			
			
		Art.-no.	PU
for Dynapro		F121101195	607

2 Installation set			
			
		Art.-no.	PU
		F121100273	207

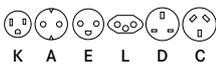
3 Power supply unit			
			
		Art.-no.	PU
		F121100269	607

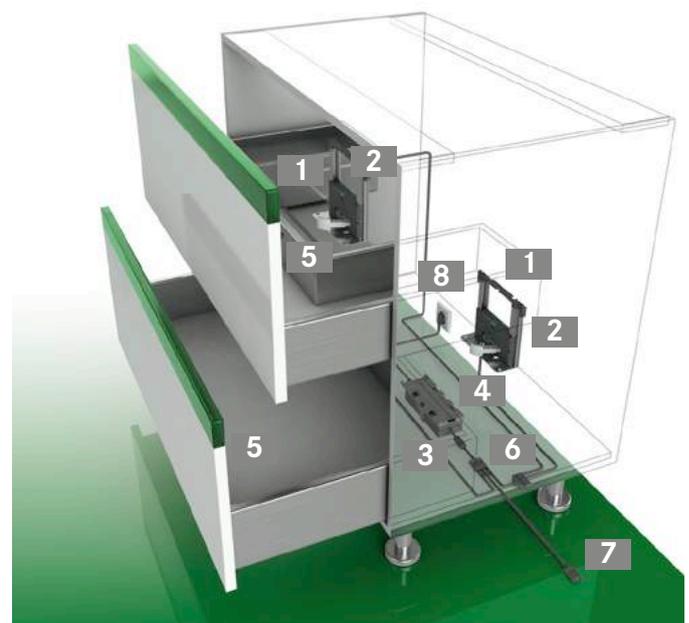
4 Power supply unit holder			
			
		Art.-no.	PU
		F121100604	507

5 Front buffer, spring-loaded			
			
\varnothing	Front gap	Art.-no.	PU
5	2.2	F121100294	223
	3	F121100295	223
8	2.2	F121100297	223
	3	F121100298	223

6 4-way adapter			
			
		Art.-no.	PU
		F121100293	207

7 Connection cable with 2-way adapter			
			
Length		Art.-no.	PU
600		F121100288	207
1000		F121100289	207
2000		F121100291	207

8 Power supply cable			
 			
Plug		Art.-no.	PU
Power supply cable K (USA, CAN)		F120069760	207
Power supply cable K (JP)		F120072445	207
Power supply cable A (DE, ES, FR, IT, RU, NL, SE)		F120069761	207
Power supply cable E (DK)		F120069763	207
Power supply cable L (CH)		F120069765	207
Power supply cable D (UK, AE, MY)		F120069766	207
Mains cable C (AU, NZ)		F120078669	207
without plug		F120069767	207

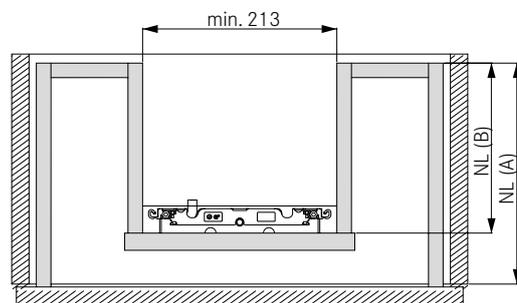
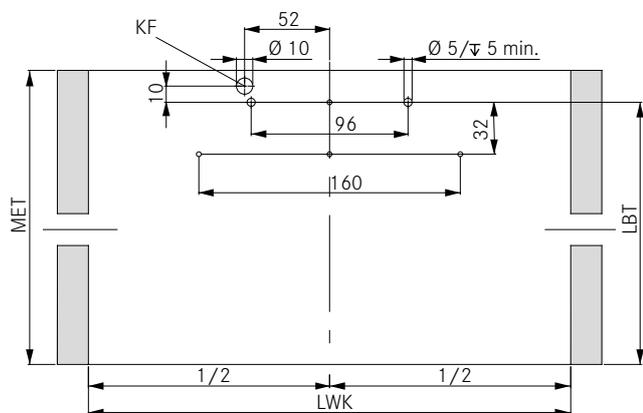


PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

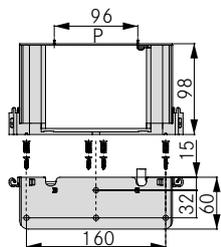
INSTALLATION INFORMATION

Installation dimensions - bottom panel frame set mounting

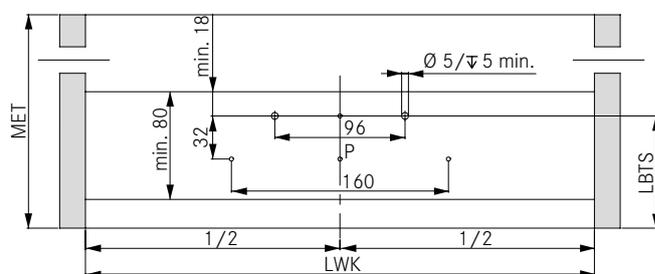


RW	MET	LBT	LBTS
Wood	NL + 15	NL	NL(A) - NL(B) + 9

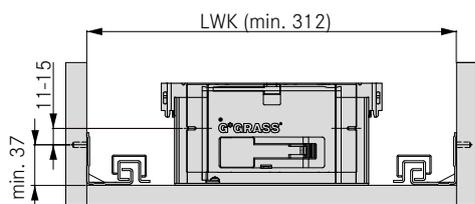
Installation set



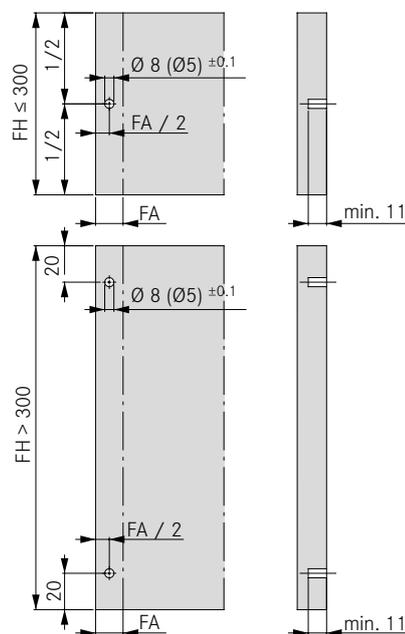
Sink cabinet installation



Position of drive unit



Position of front buffer



Note:

When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.

LEGEND

FA	Front overlay
FH	Height of front
KF	Cable routing
LBT	Depth of hole pattern

LBTS	Sink drawer, depth of hole pattern
LWK	Inside cabinet width
MET	Minimum installation depth
NL	Nominal length

P	Positioning aid
RW	Back panel

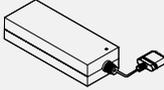
DYNAPRO SENSOMATIC

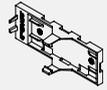
Sink cabinet with side panel frame set mounting

ORDER INFORMATION

1 Drive unit			
			
		Art.-no.	PU
for Dynapro		F121101195	607

2 Installation set			
			
		Art.-no.	PU
		F121100273	207

3 Power supply unit			
			
		Art.-no.	PU
		F121100269	607

4 Power supply unit holder			
			
		Art.-no.	PU
		F121100604	507

5 Front buffer, spring-loaded			
			
\varnothing	Front gap	Art.-no.	PU
5	2.2	F121100294	223
	3	F121100295	223
8	2.2	F121100297	223
	3	F121100298	223

6 Synchronisation cable 10 m			
			
		Art.-no.	PU
		F121100287	207

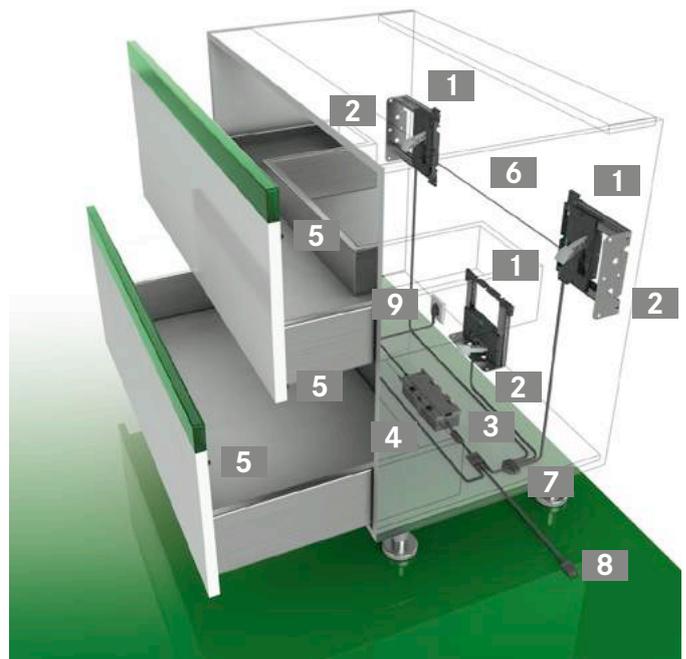
7 4-way adapter			
			
		Art.-no.	PU
		F121100293	207

8 Connection cable with 2-way adapter			
			
Length		Art.-no.	PU
600		F121100288	207
1000		F121100289	207
2000		F121100291	207

9 Power supply cable			
 			
Plug		Art.-no.	PU
Power supply cable K (USA, CAN)		F120069760	207
Power supply cable K (JP)		F120072445	207
Power supply cable A (DE, ES, FR, IT, RU, NL, SE)		F120069761	207
Power supply cable E (DK)		F120069763	207
Power supply cable L (CH)		F120069765	207
Power supply cable D (UK, AE, MY)		F120069766	207
Mains cable C (AU, NZ)		F120078669	207
without plug		F120069767	207

NOTE

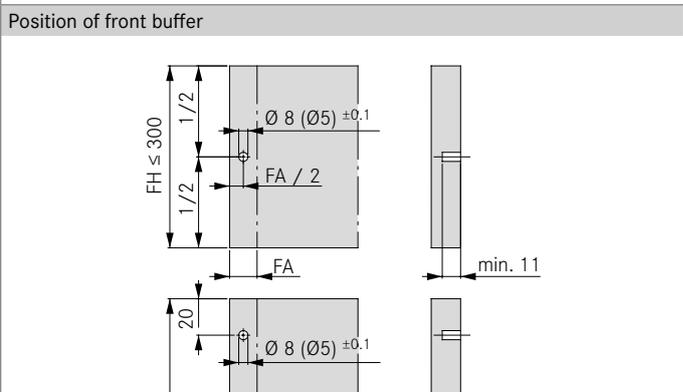
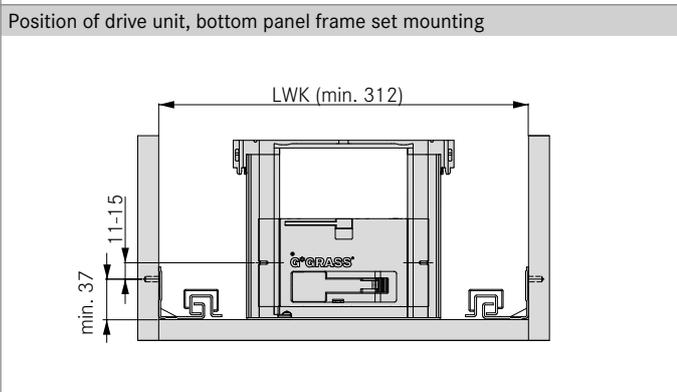
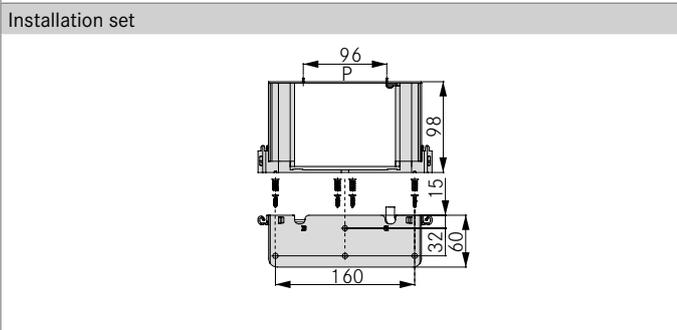
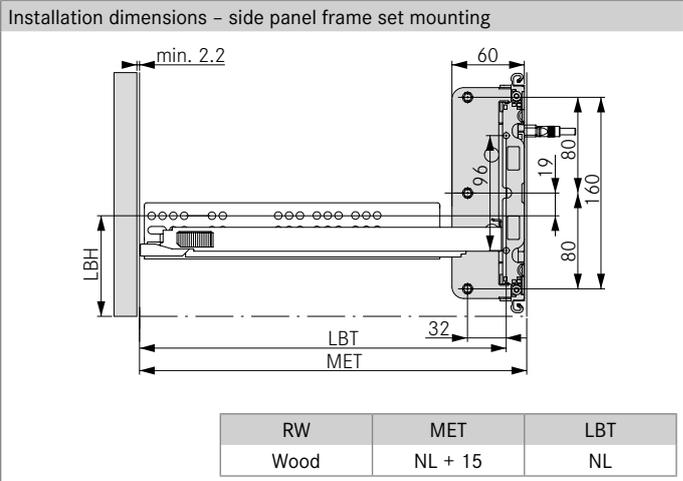
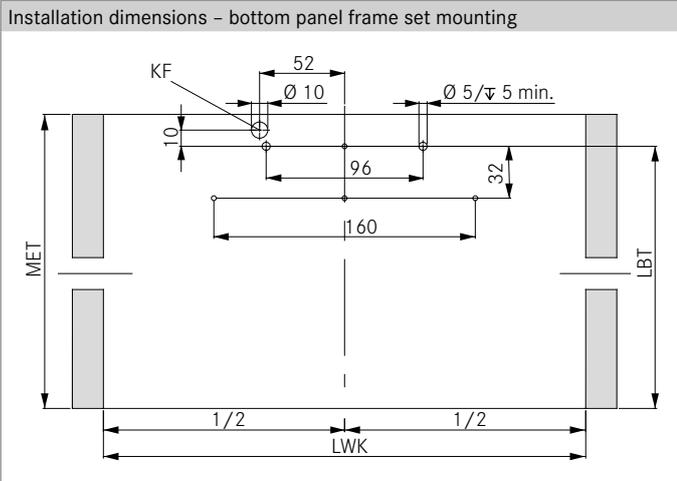
Suitable from NL 350



PAGE REFERENCES

Dynapro Soft-close	12	Installation instructions	44		
Technical information	25	Packaging code	75		

INSTALLATION INFORMATION



Note:
When installing Dynapro slides 70 kg, 4 front buffers must be inserted into the front.

LEGEND

FA	Front overlay
FH	Height of front
KF	Cable routing
LBH	Height of hole pattern

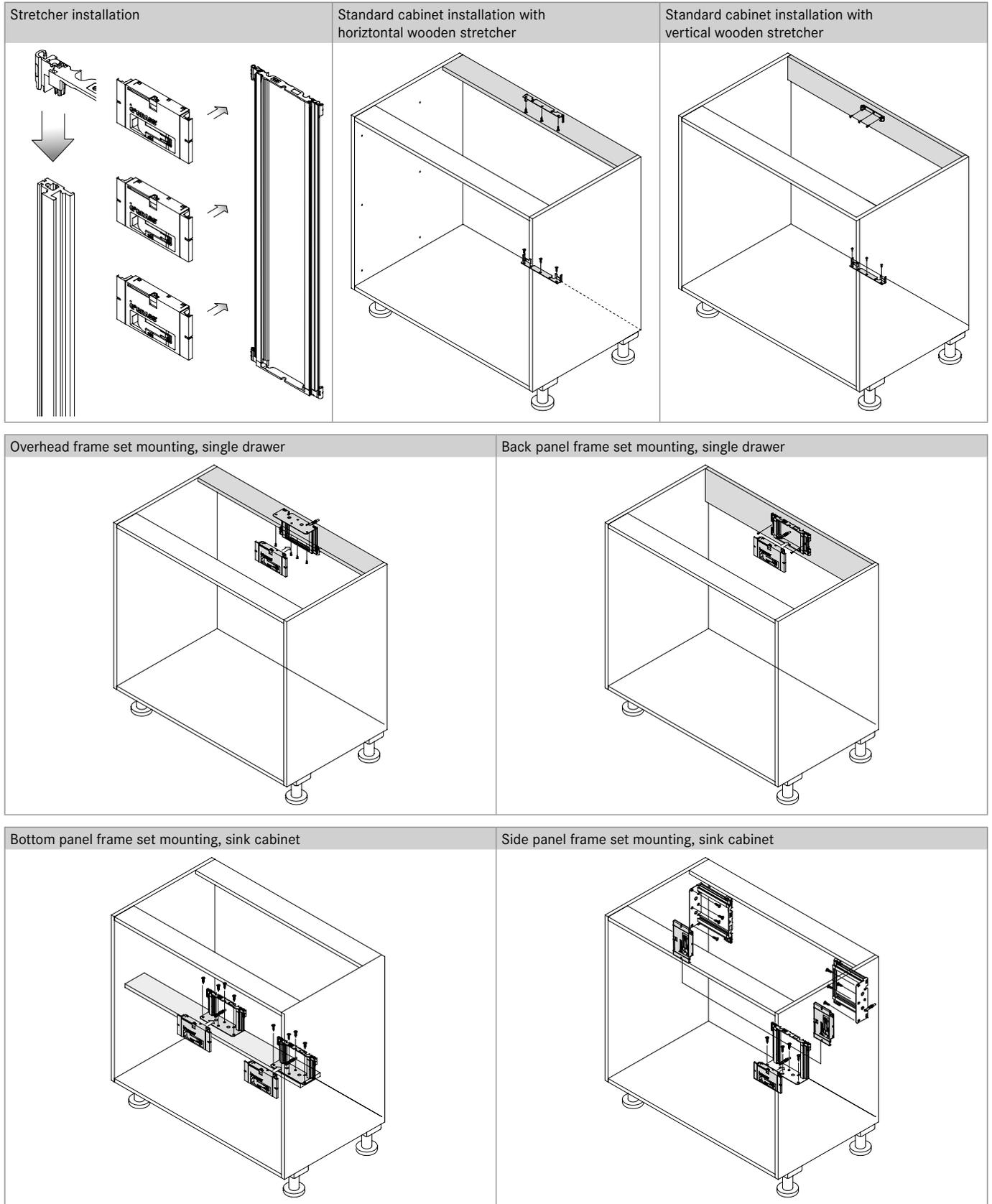
LBT	Depth of hole pattern
LWK	Inside cabinet width
MET	Minimum installation depth
NL	Nominal length

P	Positioning aid
RW	Back panel

DYNAPRO SENSOMATIC

Installation instructions

INSTALLATION INSTRUCTIONS

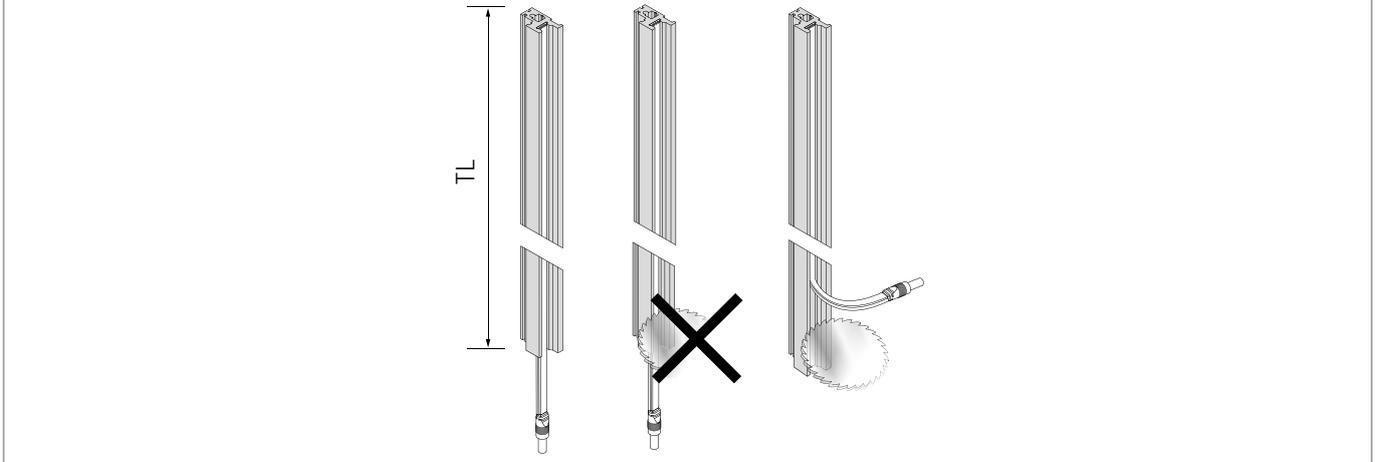


PAGE REFERENCES

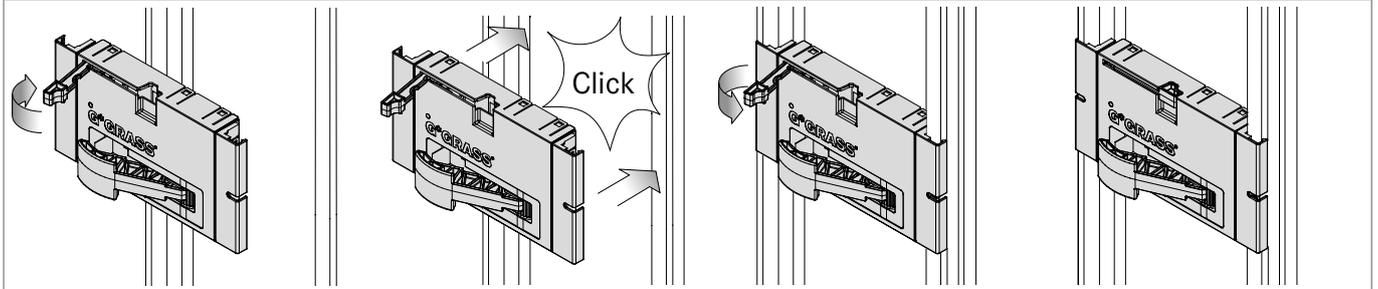
Horizontal wooden stretcher	32	Overhead frame set mounting	36	Bottom panel frame set mounting	40
Vertical wooden stretcher	34	Back panel frame set mounting	38	Side panel frame set mounting	42

INSTALLATION INSTRUCTIONS

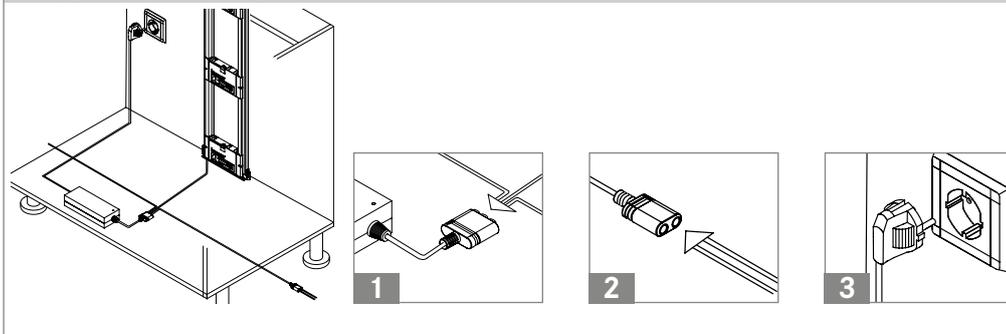
Cutting stretcher to length (horizontal and vertical wooden stretcher)



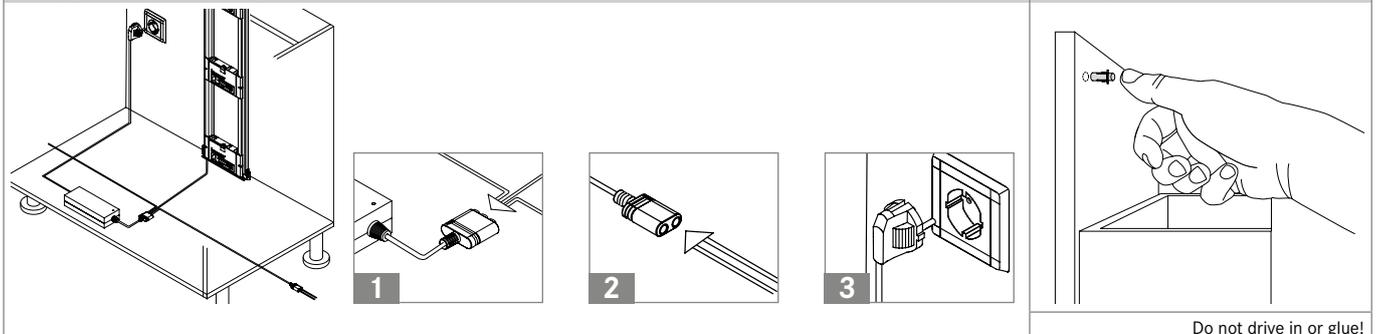
Installation of drive unit



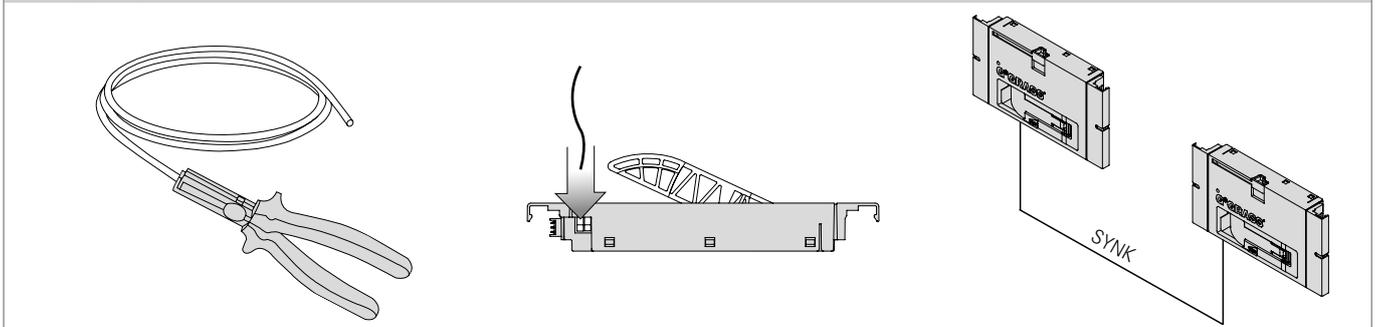
Wiring (connection sequence)



Inserting front buffer



Installing the synchronisation cable



LEGEND

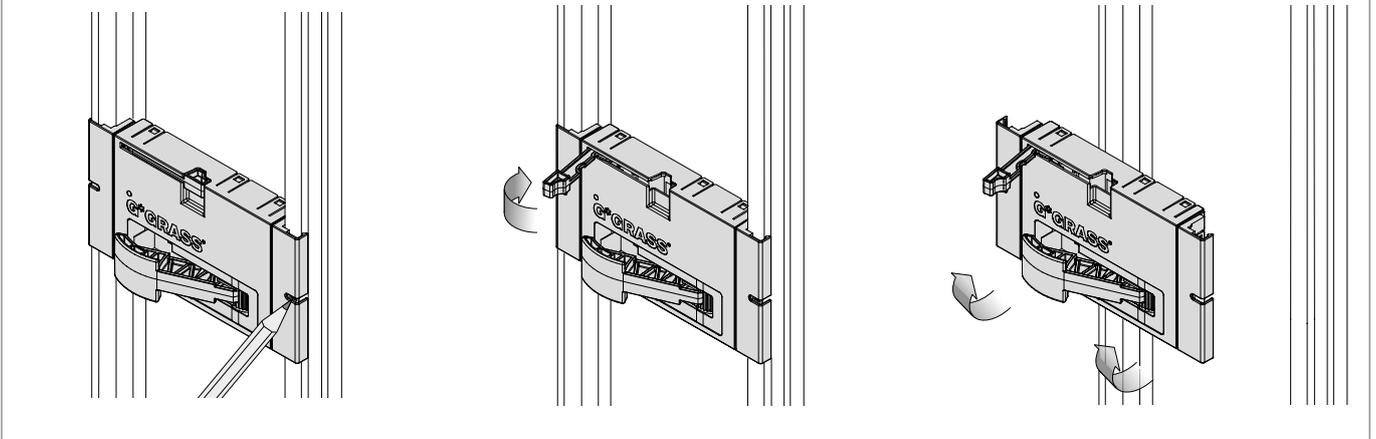
SYNK Synchronisation cable
TL Length of frame side

DYNAPRO SENSOMATIC

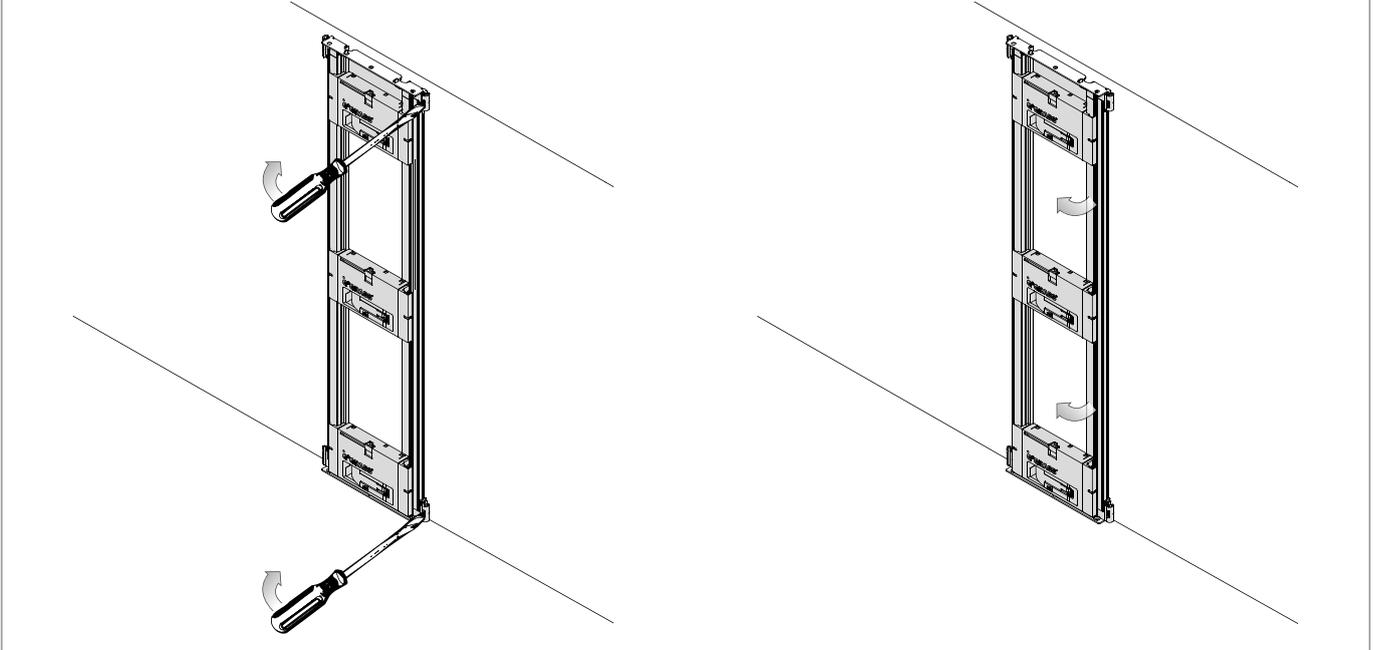
Dismantling instructions

DISMOUNTING

Dismantling the drive unit



Dismantling the frame sides



Dismantling the synchronisation cable

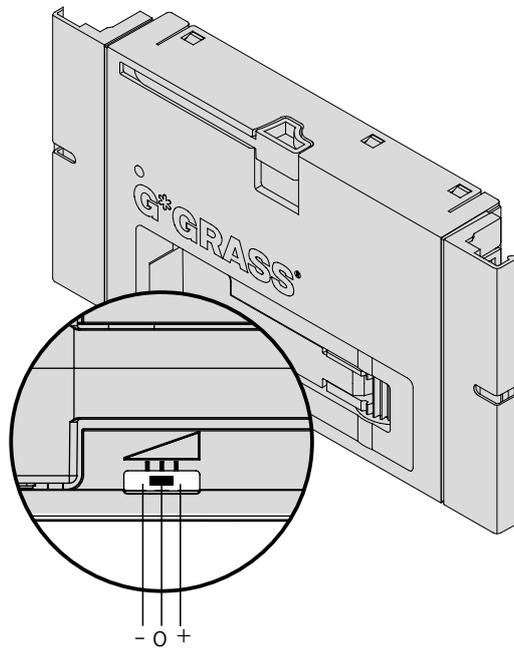


PAGE REFERENCES

Horizontal wooden stretcher	32	Overhead frame set mounting	36	Bottom panel frame set mounting	40
Vertical wooden stretcher	34	Back panel frame set mounting	38	Side panel frame set mounting	42

ADJUSTMENT

Variable drive force



NOTES

- Cabinet must be level
- System must be disconnected for installation and dismantling!
- Provide switched sockets
- From a cabinet width of 1200 mm we recommend the installation of 2 drive units. The synchronisation cable ensures that these units are activated simultaneously
- **Important:**
In the area of the drive lever, no screws must be inserted into the drawer back panel
- Per power supply unit it is possible to operate up to 30 drive units

TECHNICAL DATA

- **Application area**
only in dry, indoor rooms
- **Power supply unit**
Voltage supply: 100 to 240 V
Power supply frequency: 50 to 60 Hz
Max. power output: 230 W
- **Drive unit**
Voltage supply: 24 V
- **Operating conditions**
Temperature: 0 to 50 °C
Relative humidity: 15 to 90 %
non-condensing

LEGEND

SYNK Synchronisation cable



DYNAMOOV SLIDE SYSTEM

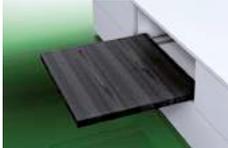
The economical alternative for those who do not want to make any compromises when it comes to running characteristics.

QUALITY CERTIFICATE
LGAD



DYNAMOOV SLIDE SYSTEM

The highly efficient movement system for the future.

	Product description	Page
	<p>Dynamooov full extension slide 30 kg Soft-close</p> <ul style="list-style-type: none"> • Soft-close damping system • Integrated height adjustment without tools + 3.5 mm 	50
	<p>Dynamooov full extension slide 30 kg Self-close</p> <ul style="list-style-type: none"> • Self-close closing system • Integrated height adjustment without tools + 3.5 mm 	52
	<p>Dynamooov full extension slide 30 kg Tipmatic</p> <ul style="list-style-type: none"> • Tipmatic opening system • Integrated height adjustment without tools + 3.5 mm • Integrated front gap adjustment + 2 mm 	54
	<p>Dynamooov for base panel mounting and pull-out shelf</p> <ul style="list-style-type: none"> • Installation on the cabinet base or additional base panel • Shelf holder set 	56
	Technical information	58
	Assembly aids	60

DYNAMOOV SOFT-CLOSE

Full extension slide 30 kg



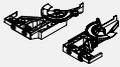
- Excellent running characteristics
- Fully synchronised slide technology
- Soft-close damping system
- Stepless self-locking of the drawer when placed on the slide
- Integrated height adjustment, tool-free +3.5 mm
- Optional depth adjustment +3.5 mm

Packaging unit (PU):

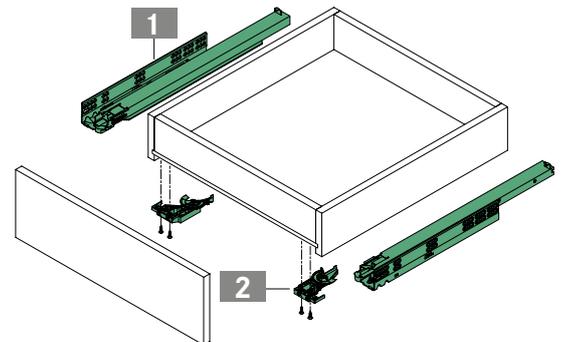
- 204 = 5 units in a cardboard box
- 208 = 12 units in a cardboard box
- 210 = 15 units in cardboard box
- 211 = 20 units in cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box
- 533 = 200 units in PE in a cardboard box

ORDER INFORMATION

1		Dynamooov full extension slide		Soft-close		Set: One left, one right			
NL	30 kg								
	Art.-no.	PU							
250	F130107760	204							
270	F130107761	204	211						
300	F130107764	204	211						
320	F130107767	204							
350	F130107768	204	211						
380	F130107771	204							
400	F130107772	204	211						
420	F130107775	204							
450	F130107776	204	210						
480	F130107779	204							
500	F130107780	204	210						
520	F130107783	204							
550	F130107784	204	210						
600	F130107787	204	208						

2		Front locking device (1D)		Set: One left, one right			
	Art.-no.	PU					
	F134101220	517	233				

Optional: Depth adjustment (1D)		Set: One left, one right			
	Art.-no.	PU			
	F134101313	533			



PAGE REFERENCES

Pull-out shelf	56	Assembly aids	60		
Technical information	58	Packaging code	75		

PLANNING DIMENSIONS

All dimensions in millimetres

Installation dimensions

$LWS = (LWK - 42) \begin{matrix} +0 \\ -1.5 \end{matrix}$
max. 16 min. LWS = 145

min. 37
10
21
LWK
max. 13
min. 10

Drawer

min. Z
 $SKL = NL - 10 \begin{matrix} \pm 0.5 \\ \text{min. } 12 \end{matrix}$
37
MET = NL + 3

Inset drawer

37
 $SKL = NL - 10 \begin{matrix} \pm 0.5 \\ \text{min. } 12 \end{matrix}$
16
min. Z
MET = NL + 21

NL	SKL	MET
250	240	253
270	260	273
300	290	303
320	310	323
350	340	353
380	370	383
400	390	403
420	410	423
450	440	453
480	470	483
500	490	503
520	510	523
550	540	553
600	590	603

Locking device fixing position

min. 35
HV + 3.5 mm
72.5
7.5
19 23
55 min.

Back panel hole

Z
 $\varnothing 6 \times 10$
min. 35

Fixing positions for full extension drawer

30 kg
KV
18
9 23 9
10
12
28
37
384 352 288 256 224 192 160 128 32 0 4
MET = NL + 3

Euro screw $\varnothing 6.3 \times 14$ mm
Chipboard screw $\varnothing 4 \times 16$ mm
Screw head $\varnothing 7$ mm

LEGEND

HV	Height adjustment	MET	Minimum installation depth
KV	Front edge of cabinet	NL	Nominal length
LWK	Inside cabinet width	SKL	Length of drawer
LWS	Internal drawer width		

DYNAMOOV SELF-CLOSE

Full extension slide 30 kg

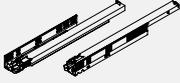


- Excellent running characteristics
- Fully synchronised slide technology
- Self-close closing system
- Stepless self-locking of the drawer when placed on the slide
- Integrated height adjustment, tool-free +3.5 mm
- Optional depth adjustment +3.5 mm

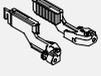
Packaging unit (PU):

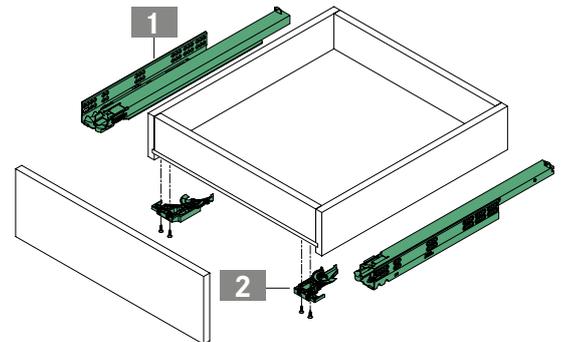
- 204 = 5 units in a cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box
- 533 = 200 units in PE in a cardboard box

ORDER INFORMATION

1		Dynamooov full extension slide		Self-close		Set: One left, one right			
NL	30 kg								
	Art.-no.	PU							
270	F130101161	204							
300	F130101162	204							
350	F130101164	204							
400	F130101166	204							
450	F130101168	204							
500	F130101170	204							
550	F130101172	204							

2		Front locking device (1D)		Set: One left, one right			
	Art.-no.	PU					
	F134101220	517	233				

Optional: Depth adjustment (1D)		Set: One left, one right			
	Art.-no.	PU			
	F134101313	533			



PAGE REFERENCES

Pull-out shelf	56	Assembly aids	60		
Technical information	58	Packaging code	75		

PLANNING DIMENSIONS

All dimensions in millimetres

Installation dimensions

$LWS = (LWK - 42) \begin{smallmatrix} +0 \\ -1.5 \end{smallmatrix}$
max. 16 min. LWS = 145

min. Z

min. 37

10

21

LWK

max. 13

min. 10

Drawer

min. Z

$SKL = NL - 10 \pm 0.5$
min. 12

37

$MET = NL + 3$

Inset drawer

37

$SKL = NL - 10 \pm 0.5$

min. 12

16

$MET = NL + 21$

NL	SKL	MET
270	260	273
300	290	303
350	340	353
400	390	403
450	440	453
500	490	503
550	540	553

Locking device fixing position

min. 35

HV +3.5 mm

72.5

7.5

19 23

55 min.

Back panel hole

Z

$\varnothing 6 \times 10$

min. 35

Fixing positions for full extension drawer

30 kg

KV

18

9 23 9

10

12

28

37

28

37

32

0

4

352

288

256

224

192

160

128

32

$MET = NL + 3$

270 - 300

350 - 450

500

550

Euro screw $\varnothing 6.3 \times 14$ mm

Chipboard screw $\varnothing 4 \times 16$ mm

Screw head $\varnothing 7$ mm

LEGEND

HV	Height adjustment	MET	Minimum installation depth
KV	Front edge of cabinet	NL	Nominal length
LWK	Inside cabinet width	SKL	Length of drawer
LWS	Internal drawer width		

DYNAMOOV TIPMATIC

Full extension slide 30 kg



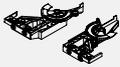
- Tipmatic full extension slide for handle-free fronts
- Tipmatic ejector unit integrated into the slide
- Excellent running characteristics
- Fully synchronised slide technology
- Integrated height adjustment, tool-free +3.5 mm
- Integrated front gap adjustment +1.5 mm
- The Tipmatic unit will not suffer damage when the drawer is pulled open in the conventional way
- Pressing within the central third of the front produces optimum opening action

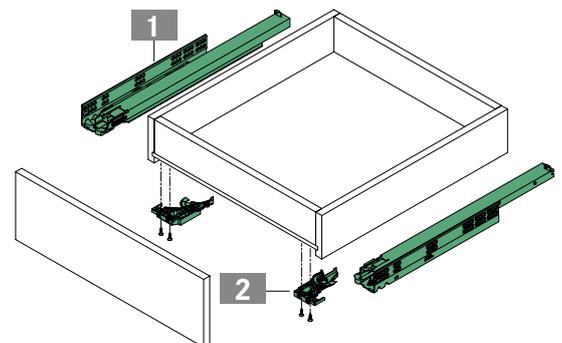
Packaging unit (PU):

- 204 = 5 units in a cardboard box
- 210 = 15 units in cardboard box
- 211 = 20 units in cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box

ORDER INFORMATION

1		Dynamooov full extension slide Tipmatic Set: One left, one right			
NL	30 kg				
	Art.-no.	PU			
270	F130101114	204 211			
300	F130101115	204 211			
350	F130101117	204 211			
400	F130101119	204 211			
450	F130101121	204 210			
500	F130101123	204 210			
550	F130101125	204 210			

2		Front locking device (1D) Set: One left, one right			
	Art.-no.	PU			
	F134101220	517 233			



PAGE REFERENCES

Pull-out shelf	56	Assembly aids	60		
Technical information	58	Packaging code	75		

PLANNING DIMENSIONS

All dimensions in millimetres

Installation dimensions	Drawer	NL	SKL	MET
		270	260	273
		300	290	303
		350	340	353
		400	390	403
		450	440	453
		500	490	503
		550	540	553

Inset drawer

Locking device fixing position	Back panel hole

Fixing positions for full extension drawer

30 kg

Euro screw Ø 6.3 x 14 mm
Chipboard screw Ø 4 x 16 mm
Screw head Ø 7 mm

LEGEND

HV	Height adjustment	MET	Minimum installation depth
KV	Front edge of cabinet	NL	Nominal length
LWK	Inside cabinet width	SKL	Length of drawer
LWS	Internal drawer width		

DYNAMOOV

Base panel mounting and pull-out shelf



Dynamoov for base panel mounting:

- Full extension drawer synchronised, 30 kg load capacity
- Soft-close damping system
- Assembly on cabinet base or additional base panel
- Particularly suitable for pull-out shelves (no screw-on bracket at side)

Packaging unit (PU):

- 210 = 15 units in cardboard box
- 211 = 20 units in cardboard box
- 233 = 200 units in a cardboard box
- 517 = 50 units in PE in a cardboard box
- 533 = 200 units in PE in a cardboard box

Shelf holder set for shelves:

- Height adjustment +3.5 mm
- Optional depth adjustment +3.5 mm
- Stepless shelf self-locking
- Compatible with all Dynamoov slides

ORDER INFORMATION

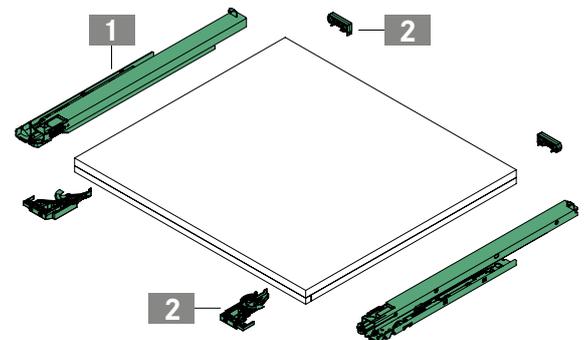
1		Dynamoov full extension slide		Soft-close for base panel mounting		Set: One left, one right			
NL*	30 kg								
	Art.-no.	PU							
400	F130107917	211							
450	F130107920	210							
500	F130107923	210							
550	F130107929	210							

* upon request

2		Dynamoov 1D set		Front locking device (1D) and shelf holder, one of each left/right			
	Art.-no.	PU					
	F134107411	517					

Individual components					
Description	Art.-no.	PU			
Front locking device (1D) Set: One left, one right	F134101220	517	233		
Shelf holder Set: One left, one right	F134101305	533			

Optional: Depth adjustment (1D)				Set: One left, one right			
	Art.-no.	PU					
	F134101313	533					

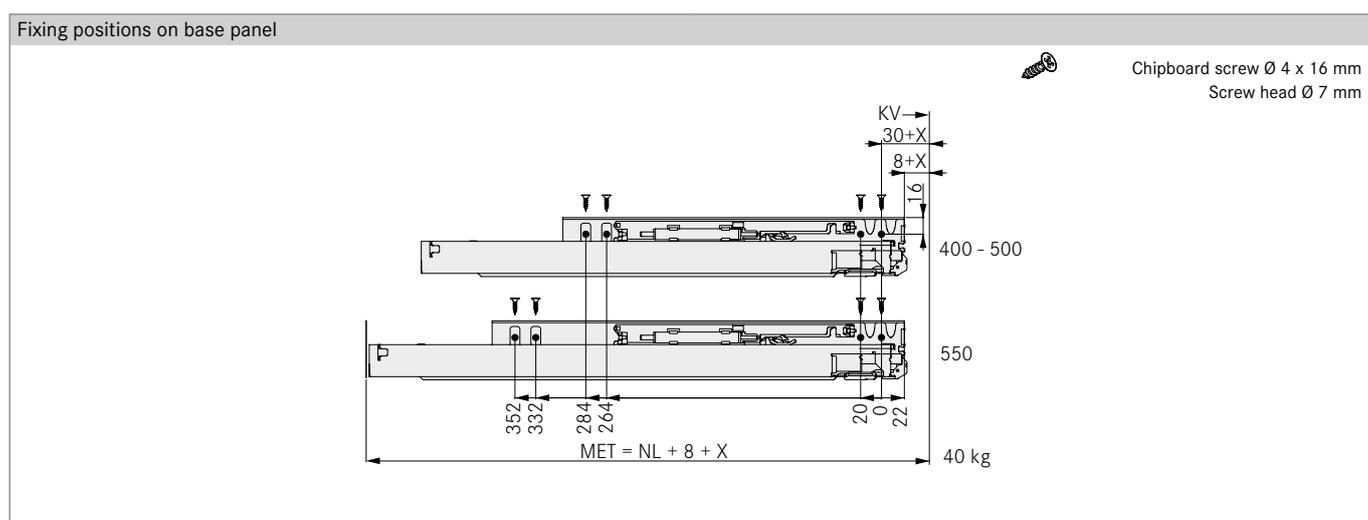
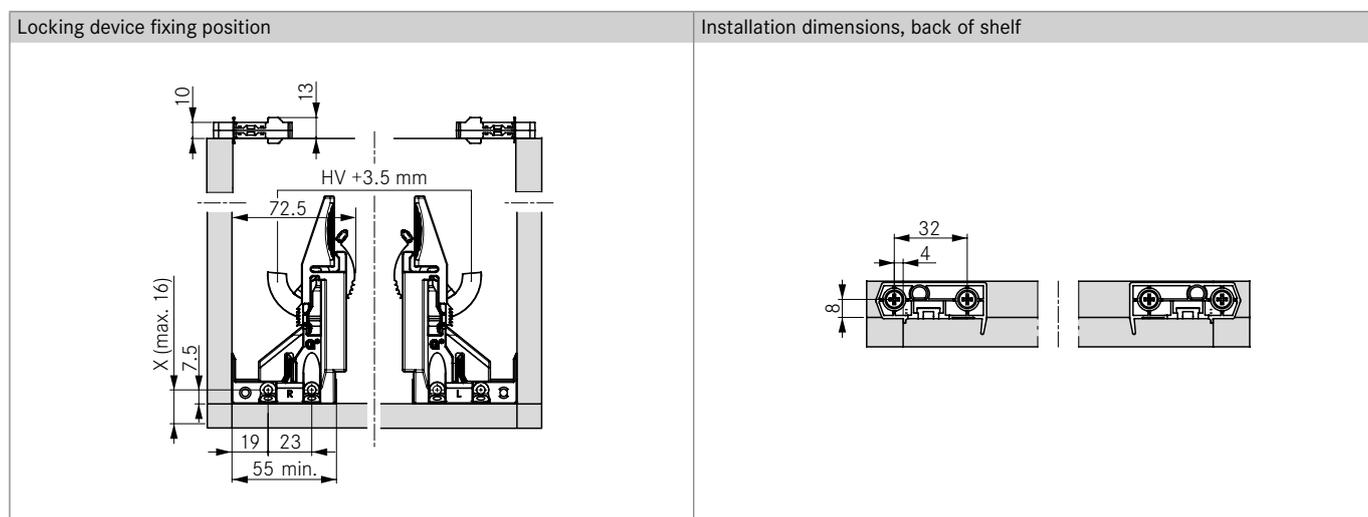
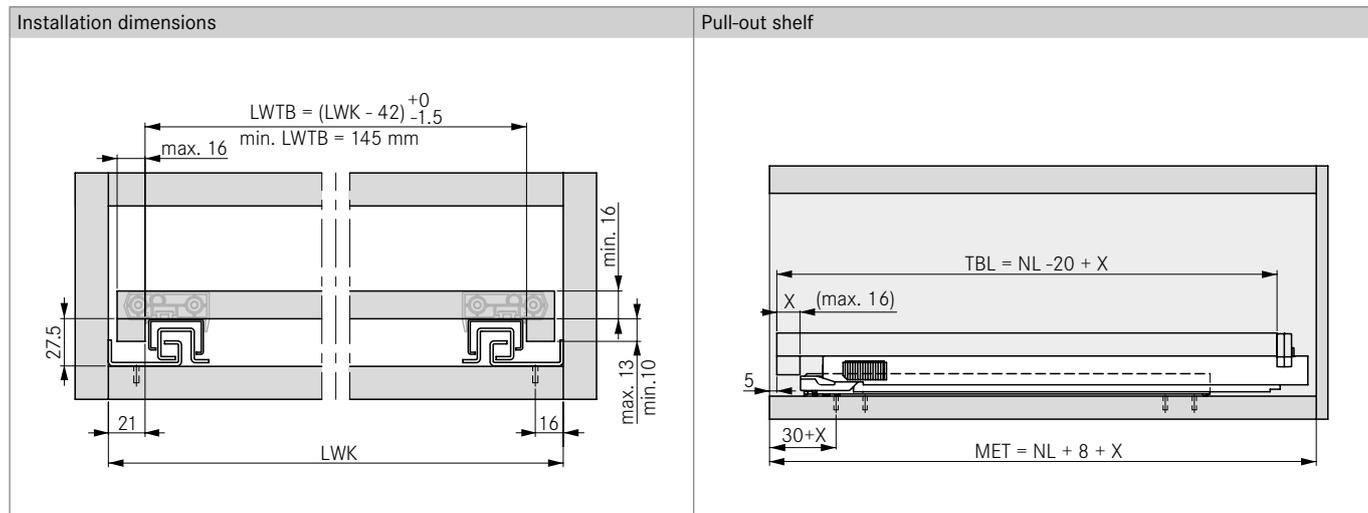


PAGE REFERENCES

Dynamoov Soft-close	50	Dynamoov Tipmatic	54	Assembly aids	60
Dynamoov Self-close	52	Technical information	58	Packaging code	75

INSTALLATION INFORMATION

All dimensions in millimetres



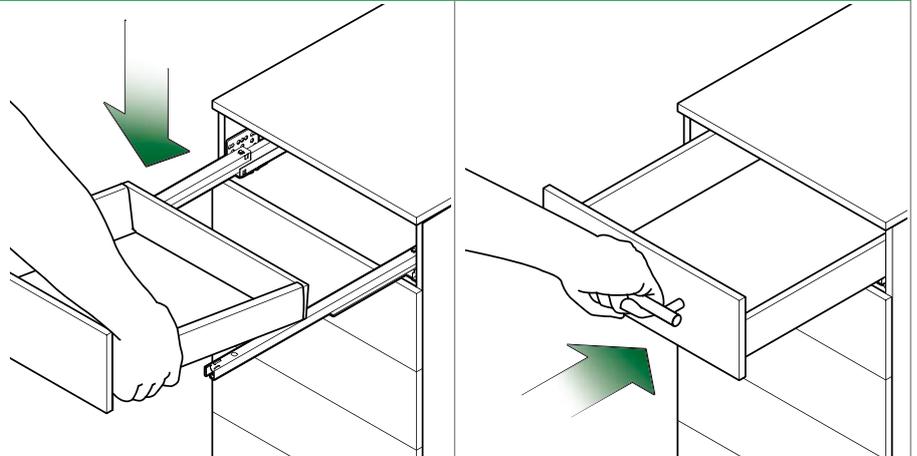
LEGEND

HV	Height adjustment	NL	Nominal length	
LWK	Inside cabinet width	TBL	Shelf length	
LWTB	Clear shelf width			
MET	Minimum installation depth			

INSTALLATION INFORMATION

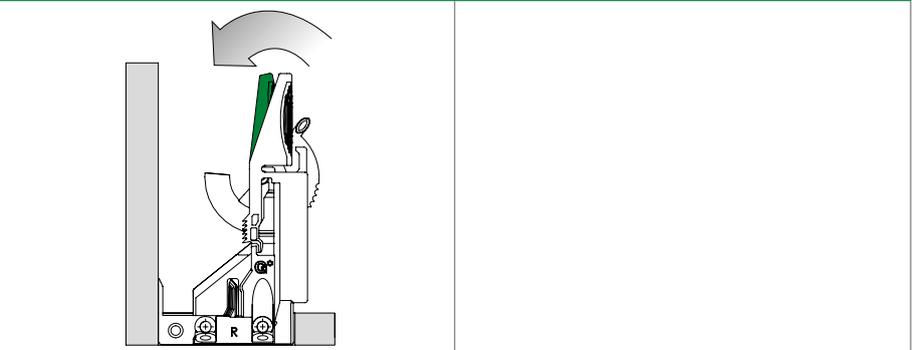
Inserting the drawer

Drawer on extended Dynamoov slides and push in until it audibly engages.



Removing the drawer

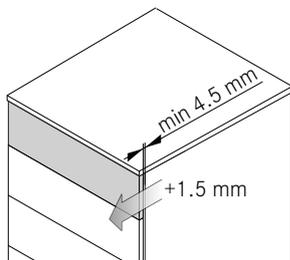
Pull out the drawer, actuate the lever of the front locking device on both sides and pull the drawer off the slide towards the front.



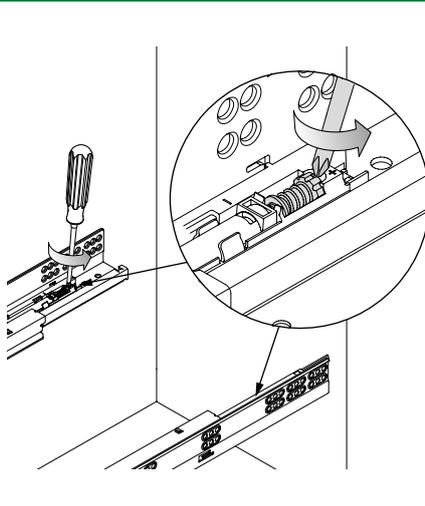
DYNAMOOV TIPMATIC

Front gap adjustment (max. +1.5 mm)

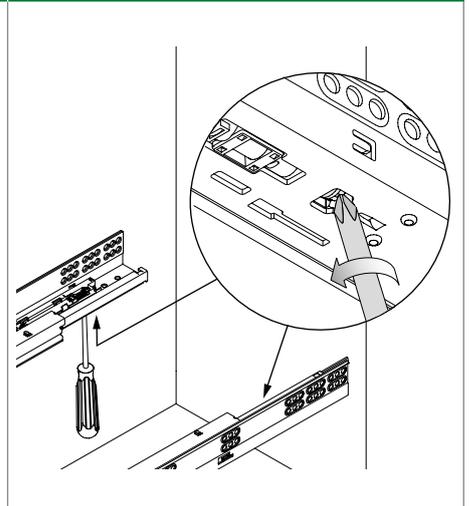
Reliable opening and closing of the drawer depends on the front gap adjustment (min. 4.5 mm = factory setting). If the front height is greater than 300 mm the front gap must be increased to the maximum 6 mm.



Front gap adjustment from above



Front gap adjustment from below



NOTES

Fixing the cabinet rails:

The screw recommendations are guide values only.

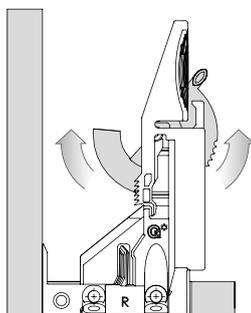
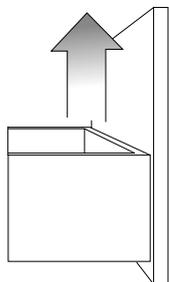
Assemblers must ensure that the substrate material is thick enough.

PAGE REFERENCES

Dynamoov Soft-close	50	Dynamoov Tipmatic	54	Assembly aids	60
Dynamoov Self-close	52	Pull-out shelf	56	Packaging code	75

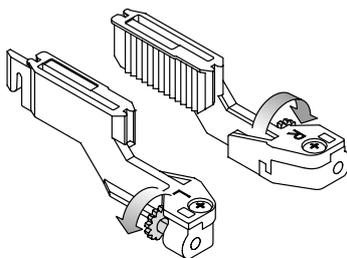
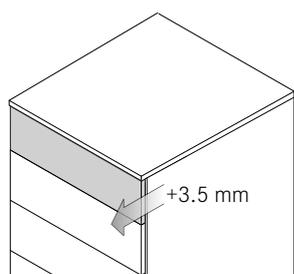
ADJUSTMENT

Height adjustment (max. +3.5 mm)

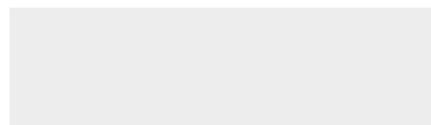
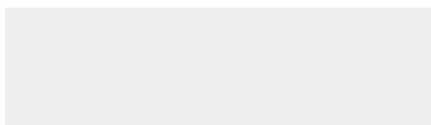
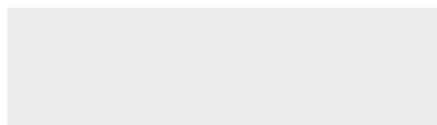


Depth adjustment (max. +3.5 mm)

Can be used for Dynamoov Soft-close/Self-close.



LEGEND



DYNAMOOV

Assembly aids

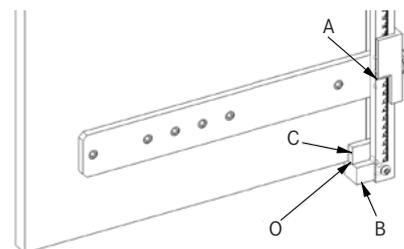


DRILLING JIG FOR CABINET MEMBER

One set includes:

- Guide rule (1x)
- Marking elements (4x)
- Stop plates B + C (1 each)

A. Reading edge = centre of holes
 B. Stop plate for loose cabinet parts
 C. Stop plate for assembled cabinet
 O. Zero scale position



	Art.-no.	PU
	F146094730	501



INDIVIDUAL MARKING ELEMENT

For extending the drilling jig
 for cabinet member F146094730

	Art.-no.	PU
	F146094721	299



DRILLING JIG FOR CABINET MEMBER

For use with pilot drill bit F146035692

	Art.-no.	PU
	F146101348	507



DRILLING JIG FOR DRAWER

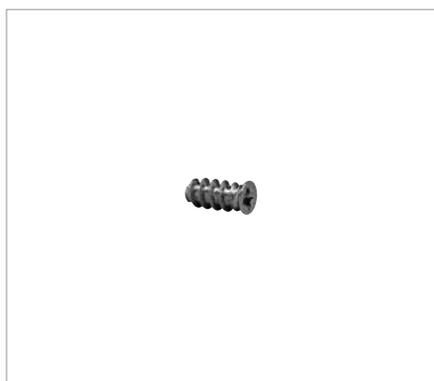
Pre-drilling the holes for:

- Locking coupler
- Hook placement
- 37 mm cabinet member hole
- For use with pilot drill bit F146035692

	Art.-no.	PU
	F146109874	299

PAGE REFERENCES

Dynamoov Soft-close	50	Dynamoov Tipmatic	54	Technical information	58
Dynamoov Self-close	52	Pull-out shelf	56	Packaging code	75



EURO SCREW

	Art.-no.	PU
Ø 6.3 x 14 mm Screw head Ø 7 mm	F148115049	147



SCREWDRIVER

GRASS cross head screwdriver
(Pozidriv No. 2)

	Art.-no.	PU
	F147010256	001

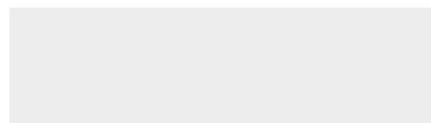
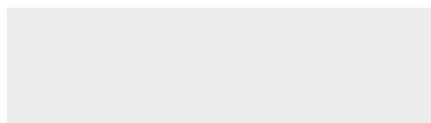
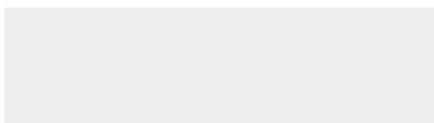


PILOT DRILL BIT

The pilot drill bit is used for
pre-drilling holes for countersunk
chipboard screws Ø 3.5 mm

	Art.-no.	PU
Pilot drill bit	F146035692	299
Spare drill bit Ø 2.7 mm	F146090561	299

LEGEND





ROLLER SLIDES

The classic standard range for domestic and commercial furniture with track-proven quality and benefits.

QUALITY CERTIFICATE
LGAD

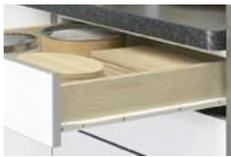
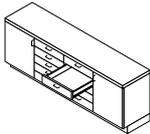
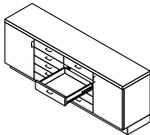
Standard roller slides for a number of furniture applications.

With its wide range of roller slides, GRASS covers a large part of classic furniture construction. Single or full extension drawer slides with different load capacities and sophisticated technical details ensure high quality standards. Silent running, minimum drawer deflection, excellent lateral stability and edge clearance are some of the features of the GRASS slides.



ROLLER SLIDES

Sturdy single and full extension drawer slides of tried-and-tested quality for demanding specifications.

	Product description		Page
	Single extension drawer slide 30 kg <ul style="list-style-type: none"> • With plastic rollers • Installation width 12.5 mm • Bottom mounting 		64
	Full extension drawer slide 50 kg <ul style="list-style-type: none"> • With plastic rollers • Installation width 12.5 mm • Bottom mounting 		66
	Accessories		68
	Technical information		70
	Assembly aids		72

ROLLER SLIDES

Single extension drawer slide 30 kg



- Single extension drawer slide with plastic rollers, 30 kg, installation width 12.5 mm, bottom mounting
- Parallel closing action
- Reliable closing, minimal gap widths
- Bottom edge clearance
- Clearance of screw heads in the cabinet rail
- Double stop
- Secure stop in open state is possible

Packaging unit (PU):

- 213 = 25 items in a cardboard box
- 223 = 100 items in a cardboard box
- 511 = 20 items in PE in a cardboard box

ORDER INFORMATION

1 Single extension drawer slide 30 kg
Set: One left, one right



NL	White			Cream white			Brown					
	Art.-no.	PU		Art.-no.	PU		Art.-no.	PU				
250	F080115434	511		F080073981	511		F080073983	213				
300	F080115435	511	223	F080073984	511	223	F080073986	213				
350	F080115436	511		F080073987	511		F080073990	213				
400	F080115437	511	223	F080073991	511	223	F080073993	213				
450	F080115438	511		F080073994	511		F080073996	213				
500	F080115439	511	223	F080073997	511	223	F080073999	213				
550	F080115440	511	223	F080074000	511		F080074002	213				
600	F080115432	511	213	F080074276	511	223	-					
650	F080074280	511	223	F080074279	511		-					
700	F080074282	511	223	F080074281	511	223	-					
750	F080074285	511		F080074284	511		-					
800	F080074287	511		F080074286	511		-					

PAGE REFERENCES

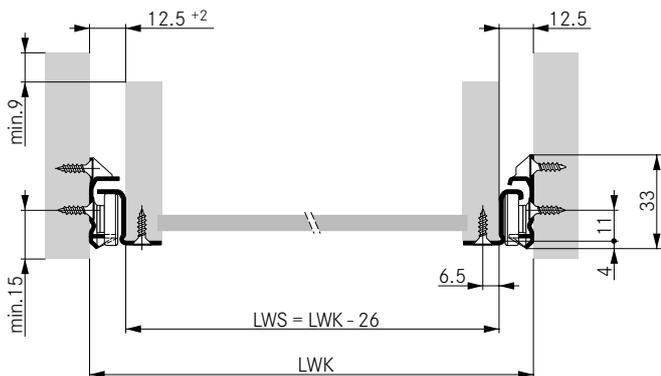
Accessories	68	Assembly aids	72		
Technical information	70	Packaging code	75		

INSTALLATION INFORMATION

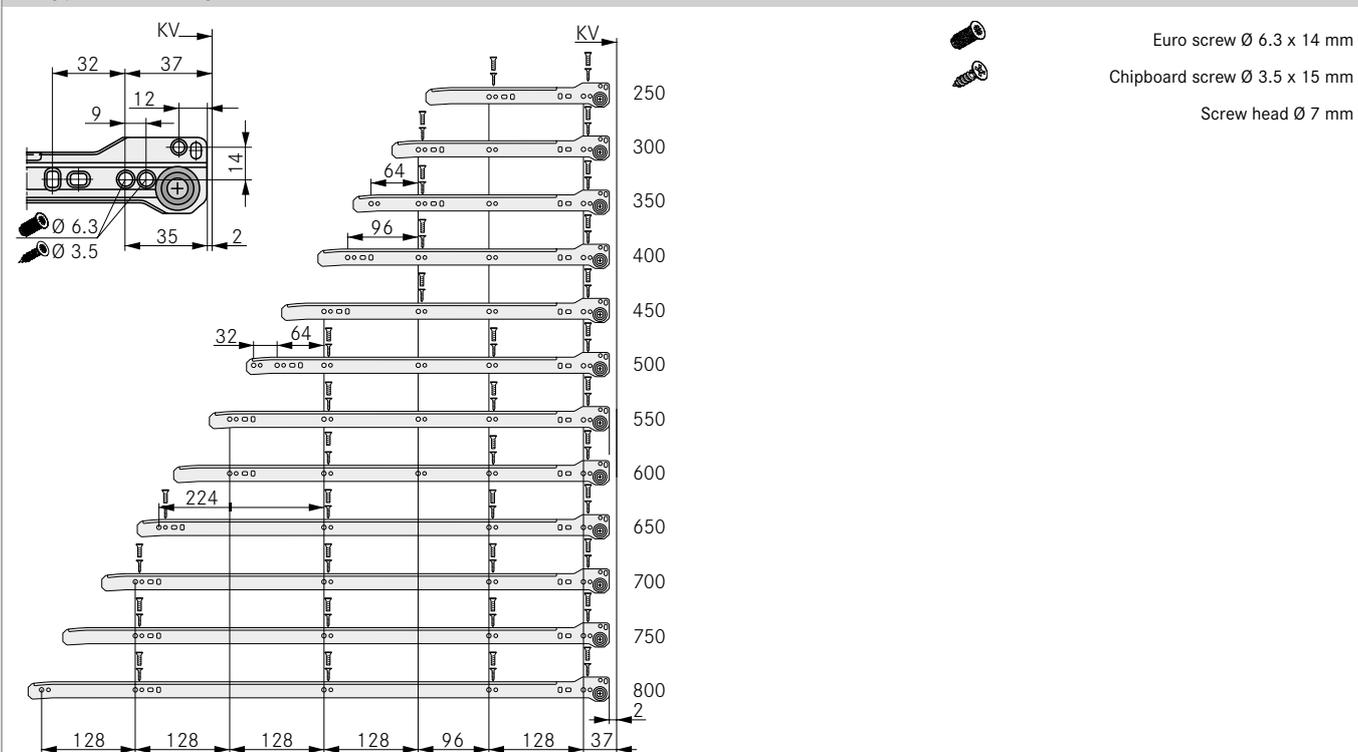
All dimensions in millimetres

Installation dimensions	NL	AZV 1	AZV 2
	250	90	73
	300	90	73
	350	90	73
	400	90	73
	450	103	86
	500	103	86
	550	118	101
	600	118	101
	650	128	111
	700	138	121
	750	153	136
	800	153	136

Loss of drawer space (AZV) 1: is the amount of space lost in the not locked position.
Loss of drawer space (AZV) 2: is the amount of space lost in the locked position.



Fixing positions for single extension drawer



LEGEND

AZV	Drawer space loss	NL	Nominal length
KV	Front edge of cabinet		
LWK	Inside cabinet width		
LWS	Internal drawer width		

ROLLER SLIDES

Full extension drawer slide 50 kg



- Full extension drawer slide with plastic rollers, 50 kg, installation width 12.5 mm, bottom mounting
- 30 mm over-extension
- Convenient access
- Control of central rail
- Reliable parallel action
- Safety lock
- Reliable connection between drawer and cabinet
- Bottom edge clearance
- Drawer rail is flush with the bottom corner

Packaging unit (PU):

507 = 10 items in PE in a cardboard box

ORDER INFORMATION

1 Full extension drawer slide 50 kg
Set: One left, one right



NL	White			Cream white			Brown					
	Art.-no.	507	PU	Art.-no.	507	PU	Art.-no.	507	PU			
250	F080074520	507		F080074519	507		F080074521	507				
300	F080074523	507		F080074522	507		F080074524	507				
350	F080074526	507		F080074525	507		F080074527	507				
400	F080074529	507		F080074528	507		F080074530	507				
450	F080074532	507		F080074531	507		F080074533	507				
500	F080074535	507		F080074534	507		F080074536	507				
550	F080074538	507		F080074537	507		F080074539	507				
600	F080074541	507		F080074540	507		F080074542	507				
650	F080074544	507		F080074543	507		-					
700	F080074546	507		F080074545	507		-					
750	F080074549	507		F080074548	507		-					
800	F080074551	507		F080074550	507		-					

PAGE REFERENCES

Accessories	68	Assembly aids	72		
Technical information	70	Packaging code	75		

INSTALLATION INFORMATION

All dimensions in millimetres

Installation dimensions	Over-extension												
	<p>The critical advantage: better access When the drawer is assembled it can be set to 30 mm over-extension. This ensures that the front panel above does not inhibit full access.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th>NL</th> <th>UA</th> <th></th> </tr> </thead> <tbody> <tr> <td>250</td> <td>10</td> <td></td> </tr> <tr> <td>300 - 350</td> <td>15</td> <td></td> </tr> <tr> <td>400 - 800</td> <td>30</td> <td></td> </tr> </tbody> </table>	NL	UA		250	10		300 - 350	15		400 - 800	30	
NL	UA												
250	10												
300 - 350	15												
400 - 800	30												

Fixing positions for full extension drawer

Euro screw Ø 6.3 x 14 mm
Chipboard screw Ø 3.5 x 15 mm
Screw head Ø 7 mm

LEGEND

KV	Front edge of cabinet	UA	Over-extension
LWK	Inside cabinet width		
LWS	Internal drawer width		
NL	Nominal length		

ROLLER SLIDES

Accessories



- Can be retrofitted, easy to install
- Up to a drawer weight of 25 kg on one side and up to an external cabinet width of 600
- On both sides up to a drawer weight of 50 kg
- Tested with 100,000 opening and closing operations
- Suitable for roller slides

Packaging unit (PU):

238 = 300 units in a cardboard box

538 = 300 units in PE in a cardboard box

SOFT-CLOSE FOR ROLLER SYSTEMS

Soft-close for roller systems Set: Damping unit and activator Can be used on left/right		
Description	Art.-no.	PU
Damping set for wooden drawers	F084101803	538

Individual components		
Description	Art.-no.	PU
Damping unit Single item: Can be used on left/right	F084101800	238
Activator for wooden drawers Single item: Can be used on left/right	F080101802	238

PAGE REFERENCES

Single extension slide	64	Technical information	70	Packaging code	75
Full extension slide	66	Assembly aids	72		



LEGEND



ROLLER SLIDES

Technical information

DRAWER SPACE LOSS

Loss of drawer space with single extension drawers

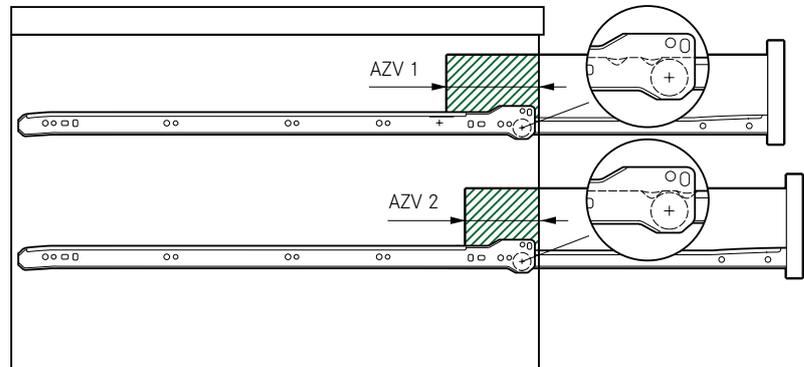
Single extension drawers have two types of loss of drawer space (AZV).

AZV 1:

The amount of space lost in the not locked position.

AZV 2:

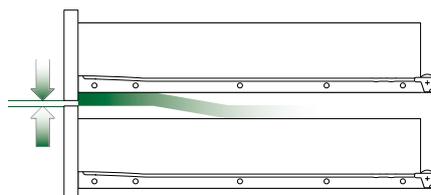
The amount of space lost in the locked position.



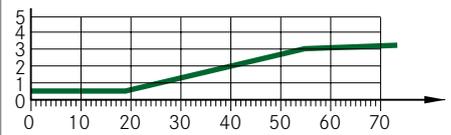
MINIMUM REVEAL

Small minimum reveal

Owing to the parallel closing action it is possible to achieve minimal reveals



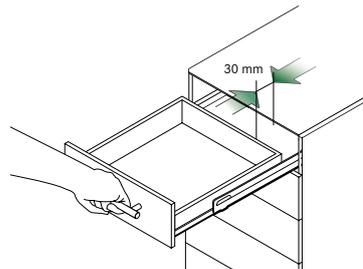
Minimum reveal with 19 mm front panel = 0.5 mm



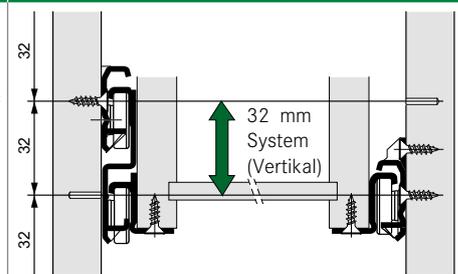
FULL EXTENSION DRAWER SLIDES

Over-extension with full extension drawer slides

The critical advantage: better access.
When the drawer is assembled it can be set to 30 mm over-extension.
This ensures that the front panel above does not inhibit full access.



Single and full extension drawer slides in the 32 mm system are interchangeable

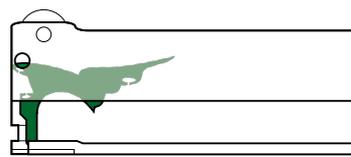


TWIST-LOCK

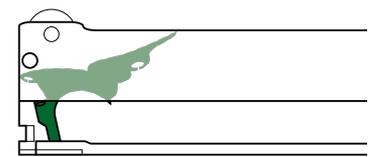
Installation advice

- For reliable self-retraction
- For safe carrying capacity of 50 kg
- For convenient drawer insertion and removal

Check mounting positions Correct position for inserting drawer



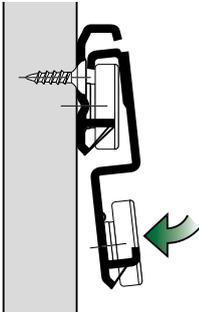
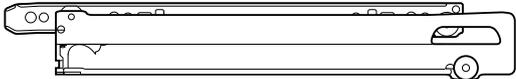
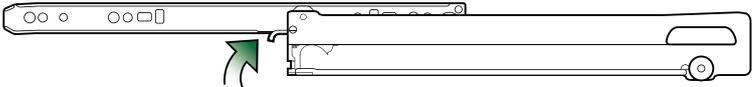
Wrong position Insertion of centre rail is not possible.



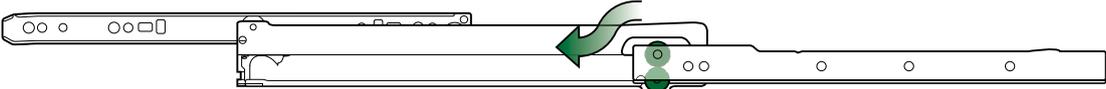
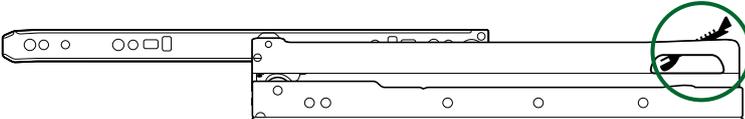
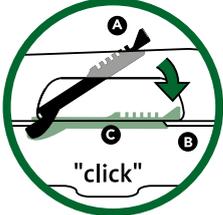
PAGE REFERENCES

Single extension slide	64	Accessories	68	Packaging code	75
Full extension slide	66	Assembly aids	72		

ADJUSTMENTS

Inserting the centre rail.	Correct position	
<p>Insert centre rails into the cabinet rails at the very rear at a slight tilt.</p> 	 <th data-bbox="568 566 1481 595">Wrong position</th> 	Wrong position

ADJUSTMENTS

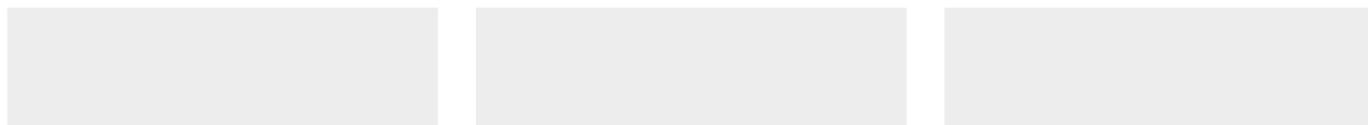
Insertion, securing and removal of drawer	
	
	
<p>Inserting the drawer Pull the centre rail out to its stop. Insert drawer over the rollers as horizontally as possible, simultaneously on both sides.</p> <p>Malfunction of twist-lock Any malfunction of the centre rail is automatically corrected by fully extending the drawer.</p> <p>Inserting the safety locks One pair of black safety locks is supplied with the cabinet slide. Separate safety locks and insert (A) and push into (B) the opening of the centre rail with the drawer fully open - pay attention to the direction of the arrow.</p>	<p>Removing the drawer Pull the drawer out to the stop, lift safety lock at the centre (C) and disengage. Move twist-lock into the insertion position. This makes it possible to insert the centre rail and remove it if required.</p> <p>Safety lock The safety lock prevents accidental removal of the drawer and is a key safety feature.</p>

NOTES

Fixing the cabinet rails:

Details are based on reference chipboard in accordance with DIN 68858, MDF and hardwood board.
Where other wood qualities and thicknesses are used, the number and position of screws should be adjusted accordingly.

LEGEND



ROLLER SLIDES

Assembly aids



DRILLING JIG FOR CABINET MEMBER

For use with pilot drill bit F146035692

	Art.-no.	PU
	F146101347	507



PILOT DRILL BIT

The pilot drill bit is used for pre-drilling holes for countersunk chipboard screws Ø 3.5 mm

	Art.-no.	PU
Pilot drill bit	F146035692	299
Spare drill bit Ø 2.7 mm	F146090561	299



SCREWDRIVER

GRASS cross head screwdriver (Pozidriv No. 2)

	Art.-no.	PU
	F147010256	001

PAGE REFERENCES

Single extension slide	64	Accessories	68	Packaging code	75
Full extension slide	66	Technical information	70		

PACKAGING CODE

Explanation



TYPE OF PACKAGING

Code	Explanation
1	PE (bag, film or band)
2	Cardboard box
3	Reusable packaging (cardboard)
4	Reusable packaging (different containers)
5	PE (bag, film or band) in cardboard box
6	Cardboard box in cardboard box
7	Cardboard box in various containers
8	PE (bag, film or band) in different containers

PACKAGING UNIT

Code	Unit	Code	Unit	Code	Unit
01	01	23	100	45	800
02	02	24	120	46	900
03	04	25	125	47	1000
04	05	26	136	48	1100
05	06	27	140	49	1200
06	08	28	150	50	1500
07	10	29	170	51	2000
08	12	30	175	52	2200
09	14	31	180	53	2500
10	15	32	190	54	3000
11	20	33	200	55	4000
12	24	34	225	56	5000
13	25	35	240	57	6000
14	30	36	250	58	7000
15	35	37	275	59	8000
16	40	38	300	60	9000
17	50	39	400	61	10000
18	60	40	500	62	15000
19	70	41	550	63	20000
20	75	42	600	64	30000
21	80	43	700	99	X
22	85	44	750		

QUICK OVERVIEW

Packaging code	Explanation
147	1000 units in PE (bag, film or band)
201	1 unit in a cardboard box
204	5 units in a cardboard box
207	10 units in a cardboard box
208	12 units in a cardboard box
210	15 units in a cardboard box
211	20 units in a cardboard box
212	24 units in a cardboard box
213	25 units in a cardboard box
223	100 units in a cardboard box
233	200 units in a cardboard box
238	300 units in a cardboard box
299	X units in a cardboard box
501	1 unit in PE (bag, film or band) in a cardboard box
507	10 units in PE (bag, film or band) in a cardboard box
511	20 units in PE (bag, film or band) in a cardboard box
513	25 units in PE (bag, film or band) in a cardboard box
517	50 units in PE (bag, film or band) in a cardboard box
533	200 units in PE (bag, film or band) in a cardboard box
538	300 units in PE (bag, film or band) in a cardboard box
607	10 units in a cardboard box in a cardboard box

TERMS

Unit	X single items/sets in specific packaging
Single item	X parts of one type (e.g. installation hooks only)
Set	X parts of different types (e.g. railing, railing bracket (front/back) and cover cap, one of each left/right)

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