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## Sound Reducing

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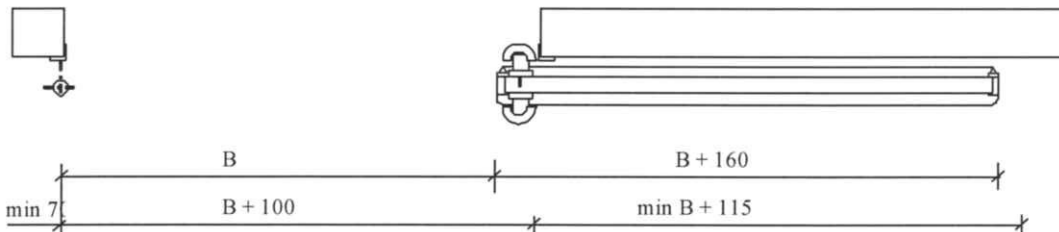
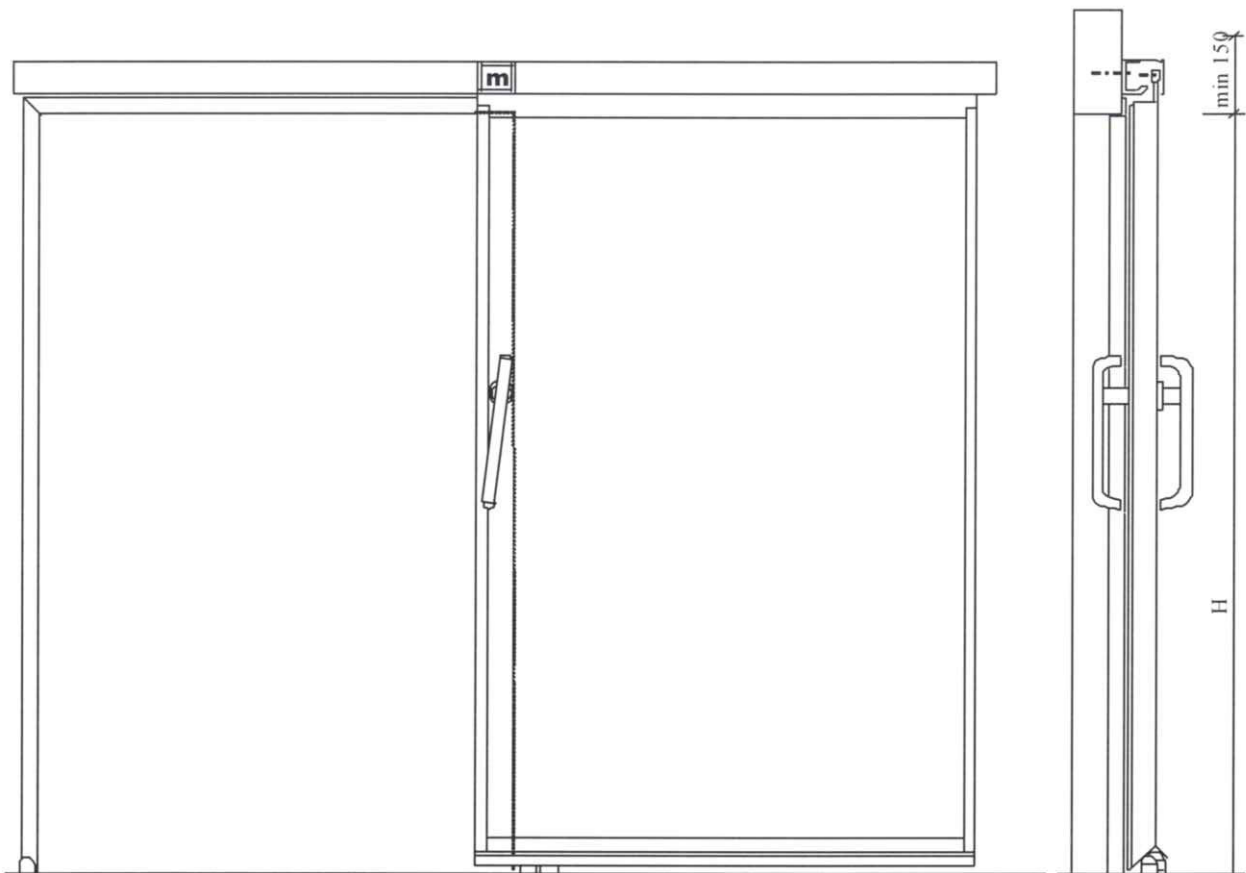
- o sliding doors up to 55 dB

28.3.1996



HANDBEDIENDE SCHUIFDEUR  
HANDBETÄTIGTE SCHIEBETÜR  
MANUAL SLIDING DOOR  
PORTE COULISSANTE MANUELLE

## TYPE M5



# MANUAL SLIDING DOOR

# TYPE M5

single leaf

## DOOR FRAME

To be manufactured and installed by the builder according to the standard drawing to be supplied by Markus

## DOORLEAF

Flush door single leaf thickness	56 mm door frame satin anodized extruded aluminium sections
Panel	approx. 41 mm thick. Core faced with plastic laminate e.g. Perstorp U or KN in one current colour. The composition of the core may vary per doortype. Isolation approx. 27dB

## SEALING

On frame	special rubber gasket fitted to door in the aluminium sections.
On floor	a flat rubber strip fitted to the bottompart doorleaf.

## PATENTED MARKUS RAIL CONSTRUCTION M5

Track	satin anodised extruded aluminium sections
Running gear	2 nylon sealed for life roller bearings. Each combined with a nylon pressure roller, which by means of a pressure piece, ensures a hermetic sealing upon closing
Track cover	Removable satin anodised aluminium fascia panel
Functioning	At opening, the door will come free 6 mm from wall and floor At closing, the door will fall under 45 against wall and floor

## OPERATION

Pair of satin anodised lever handles connected through door.

## AVAILABLE DOORTYPES

<b>M5</b>	general application
<b>M5-V</b>	moisture-resistant
<b>M5-W</b>	water-resistant
<b>M5-CR</b>	Cleanroom application with several adjustments to CR-climate
<b>M5-32dB</b>	sound-reducing
<b>M5-L1/L2</b>	with lead-inlay 1 or 2 mm
<b>M5-T30</b>	30 minutes fire-resistance (TNO report available)
<b>M5-G</b>	frame identical to flush door in which an aluminium profile + 8 mm hardened glasspanel in doorframe
<b>M5-DL</b>	service-hatch
<b>M5-H</b>	vertical service-hatch
<b>DM5</b>	double leaf

All type of doors are hermetically closing incl. cold smoke-barrier function.

## OPTIONS: AT EXTRA CHARGE (Availability dependant on the chosen doortype)

<b>Frame</b>	frame complete with finished linings to door reveals "Markus" type SKM5 in same colour as doorpanel (NO <sup>1</sup> for fire resistant door M5-T30)
<b>Vision panel</b>	8 mm plateglass in rubber profiles and satin anodised aluminium glassframe Standard measurements width and/or height 300-600-900 other types of glass: security-glass, leadglass etc. on demand
<b>Opener</b>	disabled opener to be used by handicapped people in wheel chairs with kept handfunction
<b>Lock</b>	- built-in espagnolette lock with Euronorm profile cylinder - toilet-lock, with one sided unlock-possibility
<b>Electric bolt</b>	electric lock. (Controlswitches - badge-reader e.g. - by third parties).
<b>Track cover</b>	satin anodised aluminium canopy with sloping head section, f.e. by CR-application
<b>Automation</b>	full electric drive
<b>Doors for medical rooms:</b>	in accordance with NEN-3134
<b>Self closing</b>	in addition to hand-operated doors, with choice of - permanently selfclosing or ditto with possibility for fixation in open position - selfclosing with holdmagnet and adjustable timer for tension 24 V-D.C. or 220V-A.C.
<b>Interlock</b>	- possibility of interlocking for 2 or 3 sliding doors combined with electric bolt

N.B.: The floor in, as well as next to the dooropening should be level and straight to allow a good sealing when the door is closed, otherwise to be assured of enough clearance underneath the moving door.

Subject to alterations.

25-02-1998



## SUMMARY OF SOUNDREDUCTIONS OF MARKUS HERMETIC SEALING SLIDING DOORS

			Airborn Soundreduction in dB at different frequencies						tested by
section	doortype	average reduction	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
industrial doors	M5P-50	31	24	25	29	23	39	49	
	M5P-120	31	28	24	26	29	43	53	
	M2P-50	31	24	25	29	23	3	49	
	M2P-120	31	28	24	26	29	43	53	
utility door	M5-32dB	32	25	30	28	31	33	39	Peutz bv
sound-insulating sliding doors	AM5-43dB	43	24	30	35	46	57	66	Uni-Luik
	AM2P-45dB	45Rw	32	37	41	45	47	54	Peutz bv
	AM10P-45dB	45Rw	32	37	41	45	47	54	Peutz bv
	AM2P-50dB	50Rw	41	41	45	51	60	63	Peutz bv
	AM10P-50dB	50Rw	41	41	45	51	60	63	Peutz bv
	AM2-55dB	55	44	48	53	57	61	67	TNO

16.07.'97



**REFERENTIES - REFERENCES - REFERENZEN - REFERENCES  
 MARKUS GELUIDSISOLERENDE DEUREN - SOUND REDUCING  
 DOORS - SCHALLDÄMMENDE TÜREN - PORTES INSONORISÉE**

		type	dB	afmetingen dimensions Abmessungen dimensions
<b>NEDERLAND - THE NETHERLANDS - DIE NIEDERLANDE - LES PAYS BAS</b>				
Joop v.d. Ende Studio's	Aalsmeer	AM2	55	4474 x 4500
UCN	Almelo	AM2P	50	1115 x 2050
Urenco	Almelo	AM2P	50	2520 x 2510
Mitsubishi Warehouse	Almere	AM2P	41	4000 x 4000
Yanmar Europe	Almere	AM2P	45	2000 x 2600
Stadhuis-Muziektheater	Amsterdam	AM2	40	3000 x 9500
Avi West	Amsterdam	AM2P	45	3380 x 3325
Cult.Centrum de Meervaart	Amsterdam	AM2P	45	3400 x 2800
Theater School	Amsterdam	AM2	55	2314 x 2407
Theater School	Amsterdam	AM2	55	2714 x 5607
Vegin	Apeldoorn	AM2	40	3600 x 2500
General Electric	Bergen op Zoom	AM2P	41	2280 x 2485
Heembeton	Beringe	HM2P	41	6100 x 4600
Heembeton	Beringe	HM2P	41	4500 x 1500
R.W.Z.	Breskens	AM2	50	1000 x 2100
Vrumona	Bunnik	AM2P	41	1000 x 2100
't Spant	Bussum	AM2P	41	3280 x 4000
Carolus Ziekenhuis	Den Bosch	AM2	50	1200 x 2000
N.A.M.	Den Haag	AM2P	41	2470 x 3000
Kon. Schouwburg	Den Haag	AM2	45	5950 x 2975
Marinebasis	Den Helder	AM2P	41	3500 x 3000
Lenvinyl	Genemuiden	AM10P	45	5265 x 5020
Vliegbasis	Gilze Rijen	AM2	50	1800 x 2500
Stadsschouwburg	Groningen	AM2P	41	2500 x 4160
Suiker Unie	Groningen	AM2	45	1600 x 2100
Wolters Noordhoff	Groningen	AM2P	41	2100 x 3000
C.B.S.	Heerlen	AM2	50	1600 x 2500
N.O.S. N.O.B.	Hilversum	AM2P	41	3000 x 2800
Avro Studio	Hilversum	AM2P	41	2000 x 3250
Vara (NPS)	Hilversum	AM2	55	2970 x 2800
R.W.Z.	Hoek van Holland	AM2	50	1600 x 2590
Yamaha Service Centre	Hoofddorp	AM2P	45	2000 x 2100
Yamaha Service Centre	Hoofddorp	AM2P	45	1800 x 2100
Yamaha Service Centre	Hoofddorp	AM2P	45	3000 x 3000
Yamaha Service Centre	Hoofddorp	AM2P	45	3720 x 3975
Bronkhorst & v. Tielrooy	IJmuiden	AM2P	45	2830 x 2935
M.C.P.L.	IJsselsteijn	AM2P	45	1550 x 2075
Douwe Egberts	Kampen	AM10P	50	3290 x 3920
Industrion	Kerkrade	AM2P	50	4000 x 4000
NAM	Kootstertille	AM2P	45	3240 x 3475
Waterloopkundig Lab. N.O.P.	Kraggenburg	AM2	50	5570 x 2990
Universiteit, Faculteit der Letteren	Leiden	AM2	50	1000 x 2100
W.O.B. Pompstation	Lith	AM2P	41	1100 x 2150



Provinciehuis	Maastricht	AM2	50	1400 x 2100
Enci	Maastricht	AM2P	41	3000 x 2600
Maas en Waal	Malden	HAM2P	41	2000 x 3200
Fa. Nedalo	Mijdrecht	AM2P	45	3770 x 3945
Hotel de Rustende Jager	Nieuw Venne	AM2	45	3488 x 3405
R.Z.I.	Nijmegen	AM2P	50	1500 x 3000
Estec	Noordwijk	AM2P	41	2000 x 2200
Gasunie	Ommen	AM2	50	3710 x 3540
Gasunie	Ommen	AM2	50	4014 x 5090
Gasunie	Ommen	AM2	50	3500 x 5070
Gasunie	Ommen	AM2	50	3500 x 3540
R.W.Z.	Oostburg	AM2	50	2000 x 2000
Cultureelcentrum de Lievekamp	Oss	AM2P	45	2000 x 3000
NAM	Rotterdam	AM2P	41	3260 x 3475
Electriciteits Centrale	Rotterdam	AM2	40	5520 x 5000
Roca	Rotterdam	HAM2P	41	5150 x 5000
Warmtekrachtcentrale Roca	Rotterdam	HAM2P	41	4810 x 5675
Warmtekrachtcentrale Roca	Rotterdam	HAM2P	41	5350 x 5675
AGAM Motoren	Rotterdam	AM2P	45	2830 x 2925
Deltec Fuel Systems	Rotterdam	AM2P	45	1800 x 2000
Blue Horse Productions	Rotterdam	AM2	55	2514 x 4507
Blue Horse Productions	Rotterdam	HAM2P	45	4200 x 6435
Blue Horse Productions	Rotterdam	AM2	45	3450 x 4500
N.S.	Tilburg	AM2P	41	2000 x 2500
Tennishal	Twello	AM2P	45	1980 x 2475
Vliegbasis	Valkenburg	AM2	50	1700 x 2300
De Blauwe Kei, theater	Veghel	AM2P	45	3280 x 2975
Hevo	Veghel	AM2P	45	3280 x 2975
St. Jozef Ziekenhuis	Veldhoven	AM2P	41	2610 x 3245
Océ Nederland	Venlo	AM2P	45	1650 x 2175
Mengstation Gasunie	Vilsteren	AM2	55	1000 x 2100
Mengstation Gasunie	Vilsteren	AM2	50	3560 x 3640
Jeroenhuis	Wassenaar	AM2	55	2010 x 2380
Odeon Theater Congrescentrum	Zwolle	AM2	55	1970 x 2900

#### **BELGIË - BELGIUM - BELGIEN - LA BELGIQUE:**

Kon. Nederlandse Schouwburg	Antwerpen	AM2	40	3610 x 3910
Het Laatste Nieuws	Hasselt	AM2	55	800 x 2000
Cultureel Centrum	Meise	AM2	55	3014 x 3407
Het Laatste Nieuws	Kobbegeem	AM2P	41	2600 x 4600
Agfa Gevaert	Mortsel	AM5	43	1600 x 2100
Agfa Gevaert	Mortsel	AM5	43	1600 x 2100
Volvo	St. Truiden	AM2P	41	1300 x 3000

#### **DUITSLAND - GERMANY - DEUTSCHLAND - L'ALLEMAGNE**

A.R.D. Hauptstadtstudio	Berlin	AM2P	45	970 x 2105
Sony	Hamburg	AM5	43	1500 x 2100
VAP Medientrum	Hamburg	AM2	55	3544 x 3637
WDR	Köln	AM5	43	1040 x 2040
RTL	Köln	AM10	45	5190 x 7000
ZDF	Mainz	AM10P	50	6685 x 8000

#### **OOSTENRIJK - AUSTRIA - ÖSTERREICH - L'AUTRICHE:**

O.R.F.	Wenen	AM2	55	6000 x 5200
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**FRANKRIJK - FRANCE:**

Zénith	Orléans	AM2P	50	4510 x 4520
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**ENGELAND - ENGLAND - GROSSBRITANNIEN - L'ANGLETERRE**

BIC Centre	Birmingham	AM10	50	6300 x 9000
Rolls Royce Works	Derby	AM2	55	4460 x 4400
South Drive House NCB	Doncaster	AM2	50	900 x 2100
North Drive House NCB	Doncaster	AM2P	41	2800 x 2700
Harlow Theatre	Harlow	AM2P	41	2500 x 5700
British Aerospace	Hatfield	AM2	55	3980 x 3670
ICI Acoustics	Hereford	AM2	55	4000 x 4000
Eve Constr. Ltd.	Kent	AM2P	41	3000 x 3265
Higgsand Hill	London	AM10	40	3000 x 6000
Lee electric Ltd.	London	AM2P	41	4000 x 4000
London Weekend Television	London	AM2	55	3600 x 3920
Millennium Dome	London	AM2	45	4870 x 2413
Shepperton Studio's	London	AM2	40	4790 x 4980
T.V.A.M. Studio	London	AM2	55	2380 x 3310
Taylor Woodrow Constr.	London	AM2	40	2300 x 2450
Telestage	London	AM2	40	6000 x 5000
The Old Vic	London	M2T60	40	2750 x 5500
Vision Promotion	London	AM2P	41	2300 x 3000
BBC	Manchester	AM2	50	3000 x 4800
Granada Television	Manchester	AM2	55	3075 x 4320
Tyne Tees Television	Newcastle	AM2	55	2600 x 3200
Central T.V.	Nottingham	AM2	50	4520 x 6010
Norvest Holst	Nottingham	AM2P	41	2865 x 2600
Television South West	Plymouth	AM2	55	1980 x 3070
Thames Television	Teddington	AM2	50	2700 x 3650
Tyne Tees T.V.	Tyne	AM2	55	2600 x 2300
RAF	Waddington	AM2	50	2000 x 2300

**SPANJE - SPAIN:**

Aguila y Asociados	Madrid	AM2	55	2030 x 2990
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**ZWEDEN - SWEDEN:**

Swedisch Broadcasting		AM2	50	3000 x 4000
Riksteatern	Botkyrka	AM2P	41	3080 x 3275
Folkerts thus Oxen	Uppsala	AM2P	41	4100 x 5500
		AM2	40	4100 x 5500
Folkhögskola	Kalix	AM2P	41	1780 x 3570

**U.S.A. + CANADA:**

CBC	Toronto, Canada	AM10P	50	3000 x 3000
Michigan State University Campus	East Lake Michigan, U.S.A.	AM2	55	3040 x 3620

**JAPAN**

Chofu Civic Culture Plaza	Chofu	AM2	55	4500 x 2400
LCE, Defence Agency	Higashi - Chitose, Hokaido	AM2	55	4600 x 4800
Honda	Kawasaki	AM2P	41	3000 x 2800
Kobe Kanakodai Substation	Kobe	AM2	55	4000 x 5000
T.V. Yamanashi Studio	Tokyo	AM2	55	3080 x 3040
Sunplaza	Saporro			
Sitosa Center	Saporro			



**HONG KONG:**

Academy for Performing Arts	Hong Kong	M10-T60	40	3900 x 9000
Convention + Exhibition Center	Hong Kong	AM10	40	4550 x 4775

**SAUDI ARABIA:**

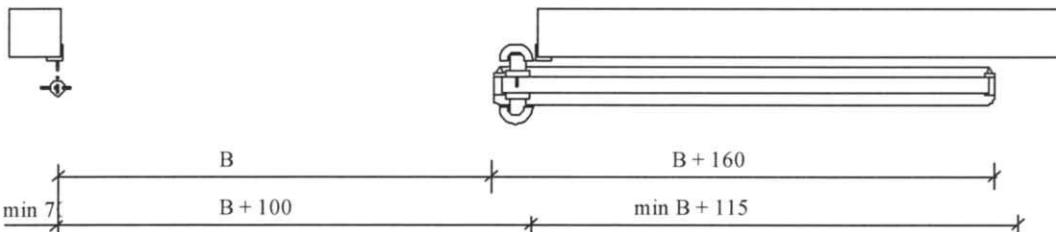
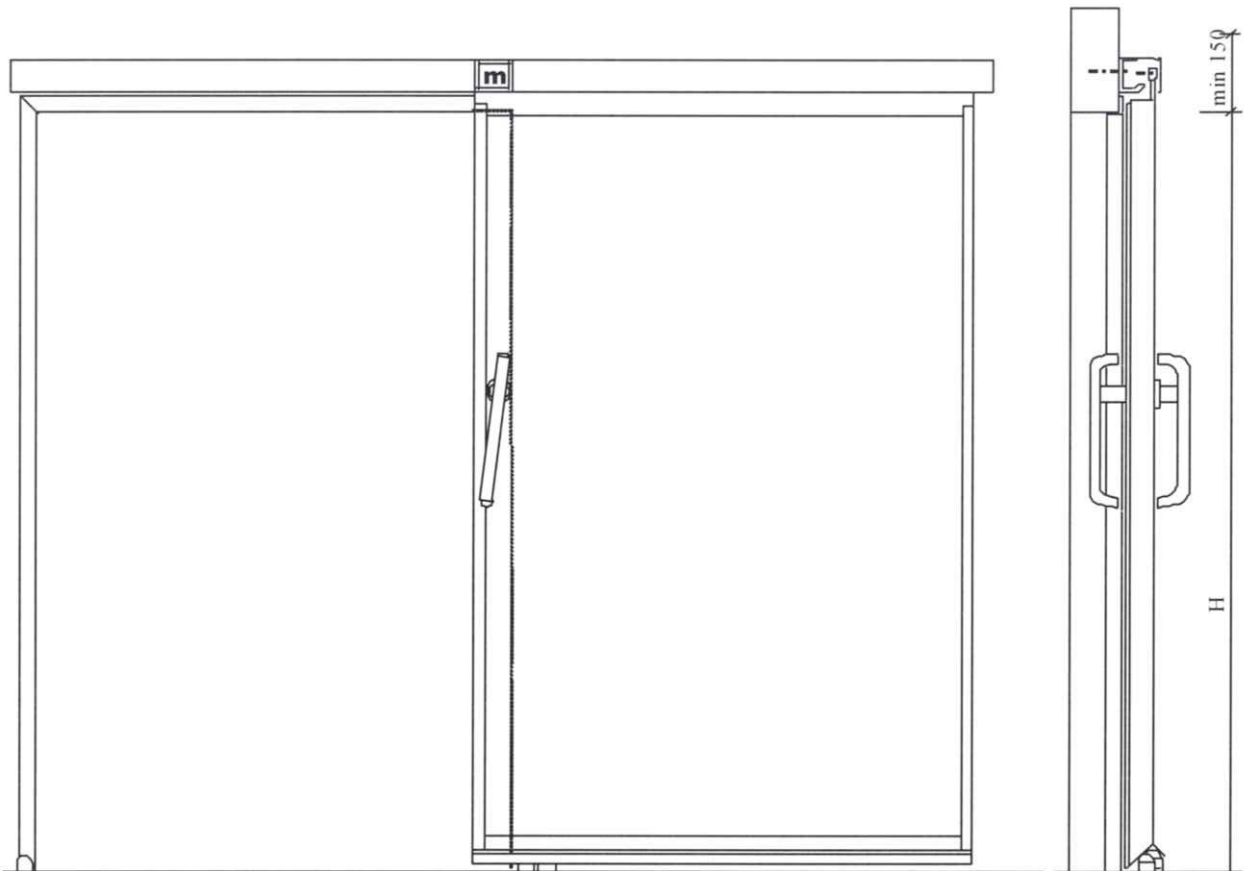
Nat. Guard Health Care Serv./ Hospital of Riyadh	Jeddah	AM2	40	7298 x 4490
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HANDBEDIENDE SCHUIFDEUR  
HANDBETÄTIGTE SCHIEBETÜR  
MANUAL SLIDING DOOR  
PORTE COULISSANTE MANUELLE

## TYPE M5



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**SOUND REDUCING SLIDING DOOR**

**TYPE M5-32dB**

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**MARKUS HERMETISCHE DEUREN B.V.**  
Griendstraat 11, 2921 LA Krimpen aan den IJssel  
P.O. Box 46, 2920 AA Krimpen aan den IJssel  
The Netherlands  
Tel. +31-180-51.44.66, Fax +31-180-51.77.01



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## SOUND REDUCING SLIDING DOOR

TYPE M5-32dB

(Doorconstruction as per specification sliding door M5)

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### DOORPANEL

thickness : approx. 41 mm  
weight : approx. 24 kg/m<sup>2</sup>

Inside the M5-side-, top- and bottomprofiles of the doorleaf, sound reducing doorpanels are inserted

Airborne sound insulation of the installed door in conformity with Lab. test: Rw (ISO 717): 32dB

### COMPOSITION

**Panelassembly:**

4 panels of chipboard, 2 of 8 mm and 2 of 10 mm each

**Finish:**

The doorpanel on both sides finished with plastic laminate, i.e. Perstorp U or KN in one current uni-colour.  
Other types of plastic laminate on request.

**Coverstrip:**

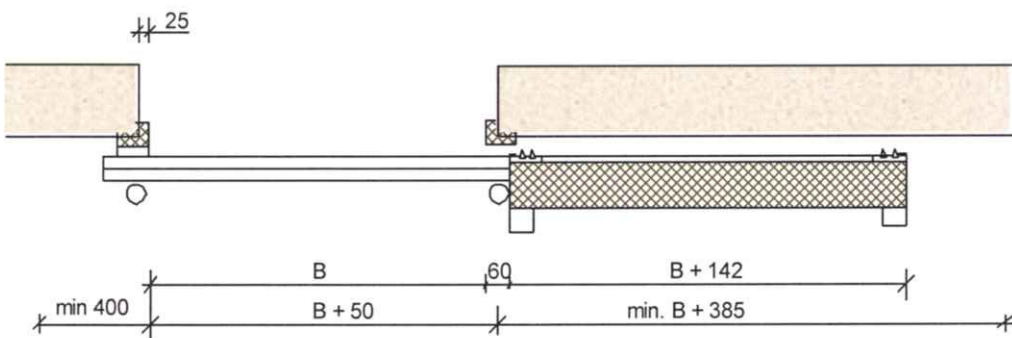
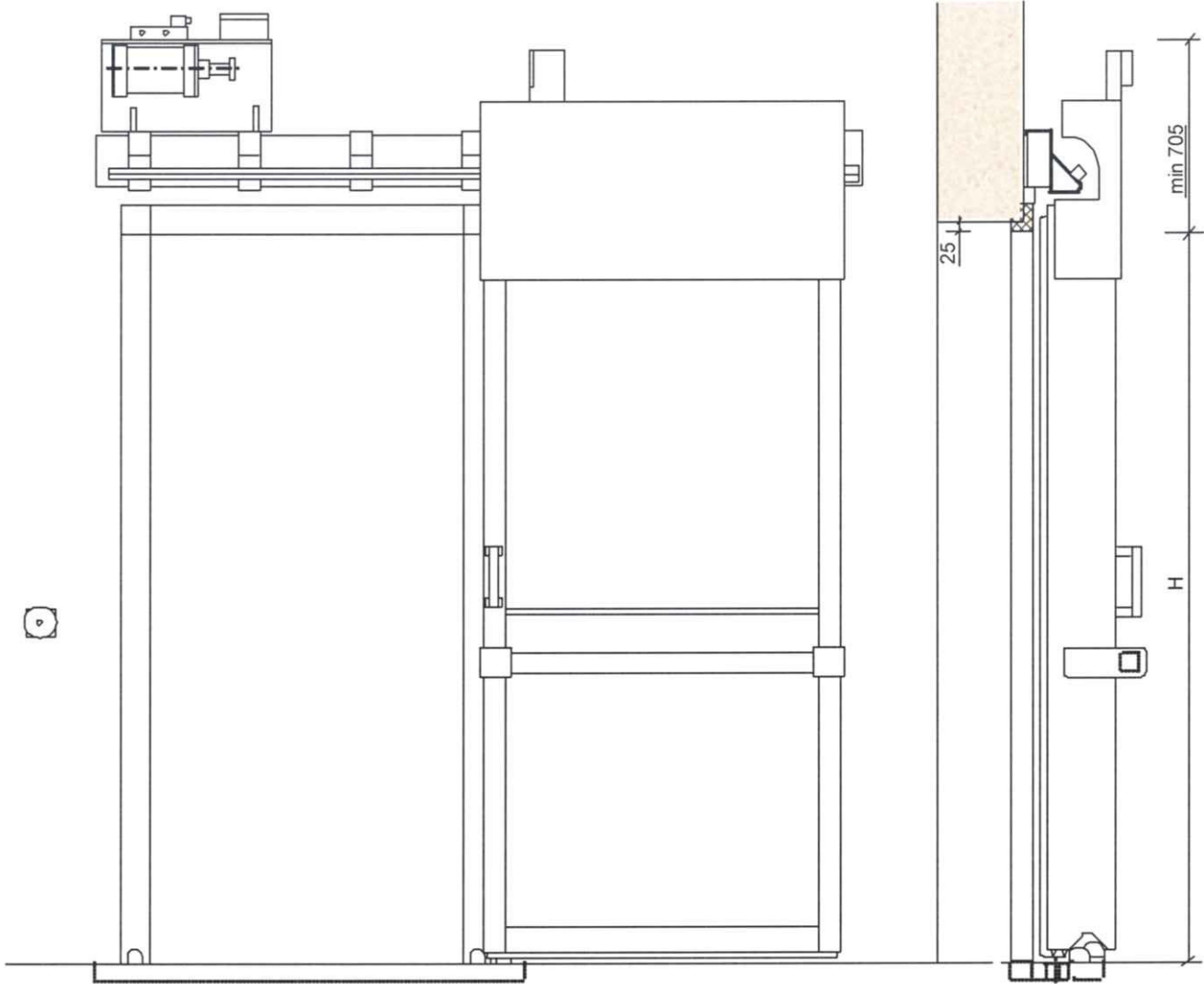
Doorleaves for a free-passage opening from 1125 mm upwards, are provided with a vertical aluminium coverstrip over the seam between the plastic laminate sheets.

Subject to alterations  
21-07-1997



**GELUIDISOLERENDE SCHUIFDEUR  
SCHALLDAMMENDE SCHIEBETUR  
SOUND INSULATING SLIDING DOOR  
PORTE COULISSANTE ACOUSTIQUE**

**AM2-45dB**



# SOUND REDUCING SLIDING DOOR

# TYPE AM2-45dB

## DOOR FRAME

Posts and upper sill	hot dipped galvanised steel sheet 60x80 mm
Lower sill	2 hot dipped galvanised UNP 5 profiles

## DOOR

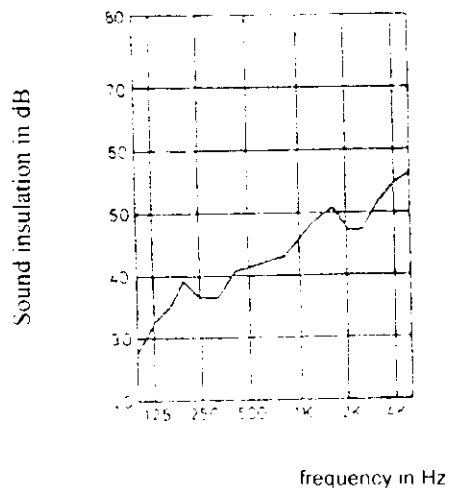
Thickness	194 mm
Frame	frameprofiles of angle-bended steelsheet
Panels	horizontal sound reducing panels approx. ca. 120 mm thickness, effective height approx. 1200 mm core Rockwool, both sides covered by fireproof sheet
Finishing	doorpanels both sides covered with senzimir galvanised steel sheet cladded with plastisol coating in standard neutral grey colour. Frame profiles hot dipped galvanised

## SEALING

On the frame and the sill double rubber profile

## SOUND INSULATION

This door has been tested by Peutz b.v. The laboratory test gives the following result



## PATENTED MARKUS RAIL CONSTRUCTION

For doorblades up to approx 2400 kos	
Rail beam	steel profile with supports
Rail	solid square steel profile
Runners	4 steel roller bearings dia. 75 mm
Suspension	cornerpieces with basisprofile for running wheels With protecting sheet of galvanised steelsheet over total width of door
Treatment	all steel parts hot dipped galvanised
Damping	by means of hydraulic brake or damper (depending on doorweight)

## OPERATION: SEMI-AUTOMATIC

Pneumatic opener cylinder with short stroke with which the door can be opened out of closed position in such a way, that the running wheels are pushed out of the closing notches and are placed on the running surface of the railprofile. Further opening and closing is to be done manually, for which purpose a handle has been fitted. Operation of opener cylinder by means of 2 pushbuttons (included in delivery).

## LOCKING

Padlockeyes at railside.

## PROTECTION DOORBLADE

Included in delivery is a horizontal square tubular bumper construction in standard colour orange, with rubber buffers, flexibly fixed to the frameprofiles of the doorblade.

## OPTIONS: TO BE SUPPLIED AT EXTRA PRICE

### Finishing:

- Plastisol coating of doorpanels in colour, other than standard neutral grey
- Choice out of (limited) colour collection from supplier

### Automation:

- electro/pneumatic continuous automation
- with pushbutton automation in deadman's switch.

### Structural architectural mesures/technical installation:

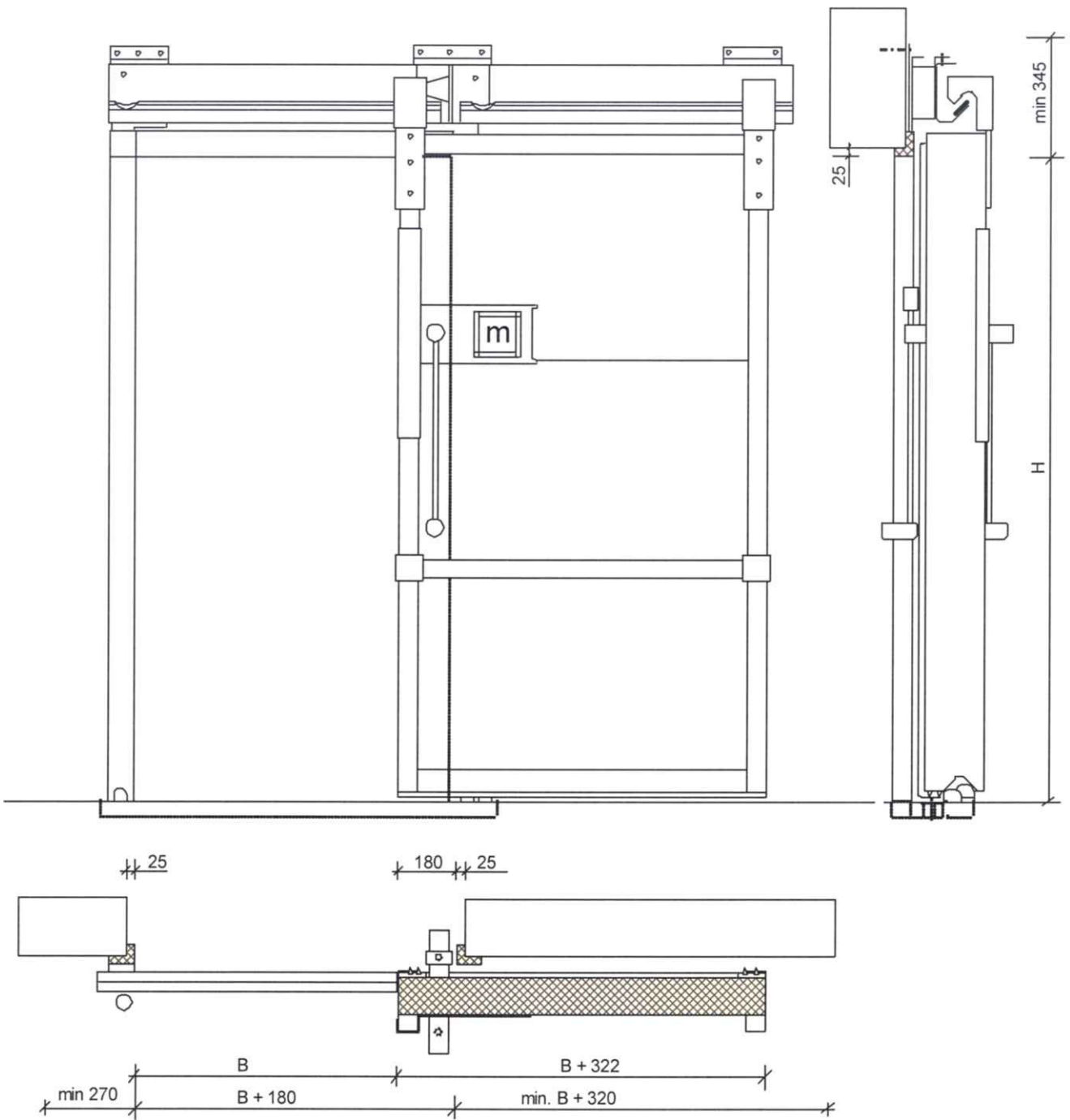
To be made by third parties, based upon a standard Markus installation drawing and technical details to be provided by Markus.

The floor at the sliding space (next to dooropening) may definitely **not** be higher than the floor at the dooropening, so that the sealing profiles underneath the doorblade cannot touch the floor during the sliding movement.



GELUIDISOLERENDE SCHUIFDEUR  
 SCHALLDÄMMENDE SCHIEBETÜR  
 SOUND INSULATING SLIDING DOOR  
 PORTE COULISSANTE ACOUSTIQUE

AM2P-45dB



# SOUND REDUCING SLIDING DOOR

# TYPE AM2P-45dB

## DOOR FRAME

Posts and upper sill	hot dipped galvanised steel sheet 60x80 mm
Lower sill	2 hot dipped UNP 5 profiles

## DOOR

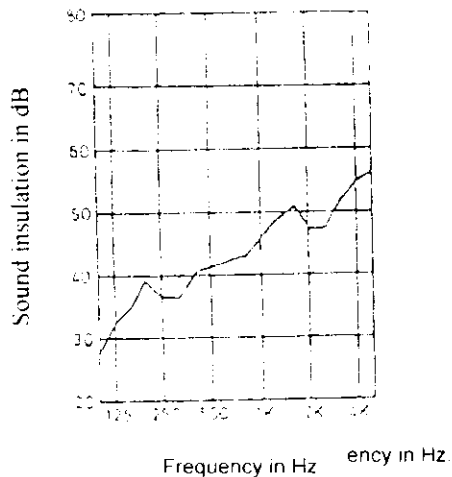
Thickness	194 mm
Frame	frameprofiles of angle-bended steelsheet
Panels	horizontal sound reducing panels approx. 120 mm. thickness. effective height approx. 1200 mm. core Rockwool. both sides covered by fireproof sheet
Finishing	doorpanels on both sides covered with senzimir galvanised steel sheet. cladded with plastisol coating in standard neutral grey colour Hot dipped galvanised frame profiles

## SEALING

On the frame and the sill double rubber profile

## SOUND INSULATION

This door has been tested by Peutz b.v. The laboratory test gives the following result



## PATENTED MARKUS RAIL CONSTRUCTION

For doorblades up to approx 800 kos	
Rail beam	hot dipped galvanised steel profile
Rail	solid rectangular profile
Runners	4 roller bearings Ø 75 mm
Suspension	roller carriages
Braking	rubber catcher

## OPERATION

Manual operation with combined inside/outside opener

## PROTECTION DOORBLADE

Standard delivery includes:  
A horizontal square tubular bumper construction in standard colour orange, with rubber buffers, flexibly fixed to the frameprofiles on the doorblade

## OPTIONS: TO SUPPLY AT EXTRA PRICE

### Lock:

- cylinderlock key-operated at railside with unlocking device at the inside

### Automatic operation:

- semi-automation**  
The door is started by means of compressed air, but has to be opened and closed entirely by hand
- electro/pneumatic continuous automation**  
with pushbutton operation in deadman's switch.

### Structural architectural measures/technical installation:

To be made by third parties, based upon a standard Markus installation drawing and technical details to be provided by Markus.

The floor at the sliding space (next to dooropening) may definitely **not** be higher than the floor at the dooropening, so that the sealing profiles underneath the doorblade cannot touch the floor during the sliding movement.

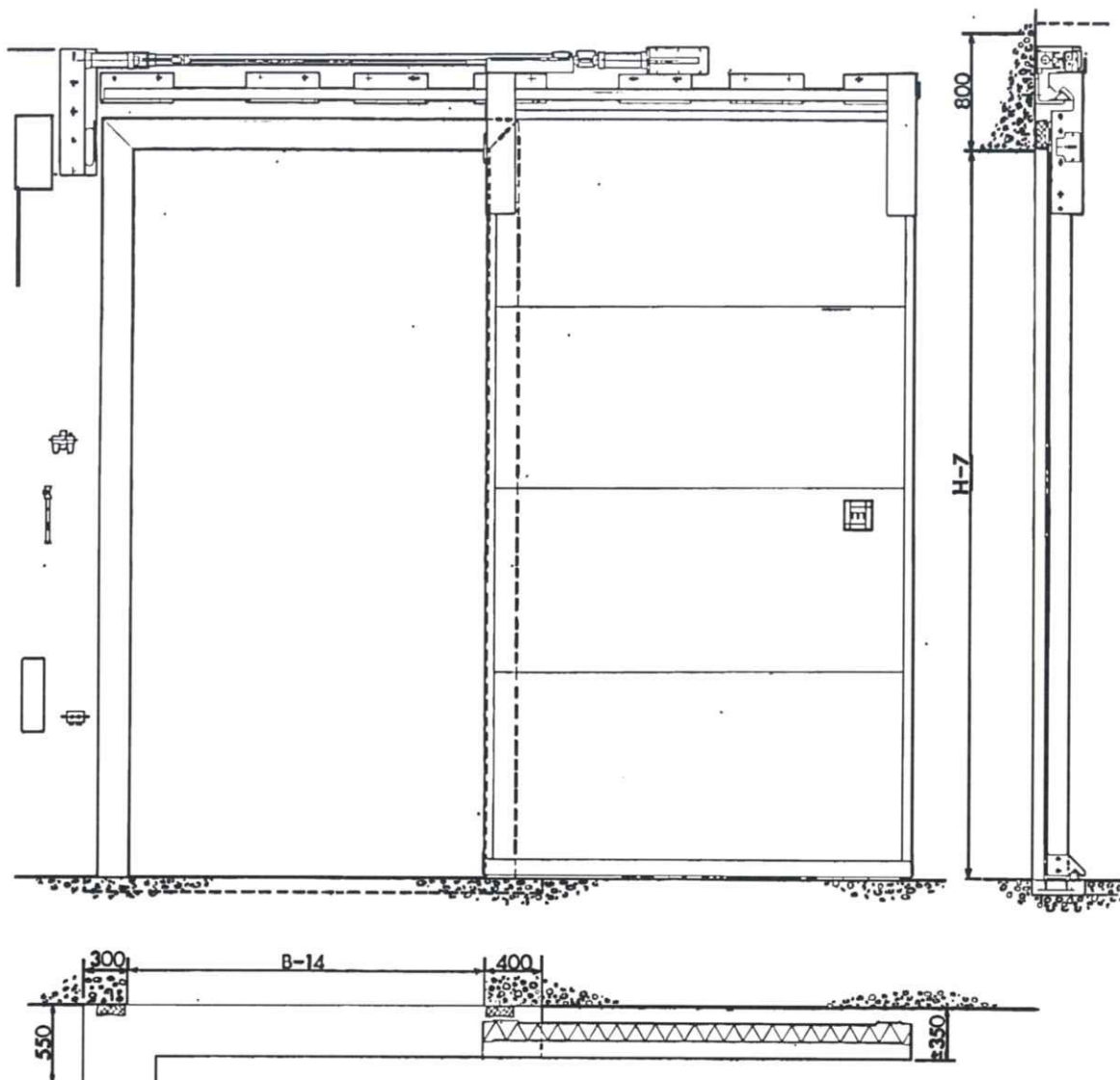
Subject to alterations

11-09-1996



SCHUIFDEUR  
SCHIEBETÜR  
SLIDING DOOR  
PORTE COULISSANTE

## TYPE AM10P-45dB





# SOUND REDUCING SLIDING DOOR

# TYPE AM10P-45dB

## DOOR FRAME

Posts and upper sill	hot dipped galvanised steel sheet 60x80 mm
Lower sill	2 hot dipped galvanised JNF 5 profiles

## DOOR

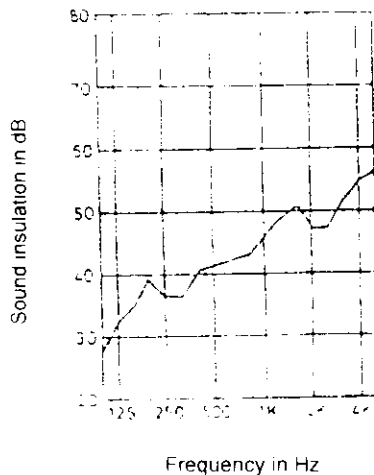
Thickness	194 mm
Frame	frameprofiles angle-berided steelsheet
Panels	horizontal sound reducing panels, thickness ca 120 mm, effective height 1200 mm, core Rockwool, both sides covered with fireproof sheet
Finishing	doorpanels both sides covered with senzimir galvanised steel sheet, with plastisol coating in standard colour neutral grey Frame profiles hot dipped galvanised

## SEALING

On the frame and the sill: double rubber profile

## SOUND INSULATION

This door has been tested by Peutz b.v. The laboratory test gives the following result.



## PATENTED MARKUS RAIL CONSTRUCTION

For doorblades	a) until approx. 4000 kos b) until approx. 8000 kos
Railsupport	steel brackets 200x200x16 mm
Rail	steel L-profile 80x80x8 mm
Running gear	4 carrying wheels with ballbearings dia. 160 mm
Suspension	to wheelbrackets
Treatment	all steel parts hot dipped galvanised

## OPERATION, SEMI AUTOMATIC

Pneumatic openercylinder with short stroke, with which the door can be pushed open out of closed position, until the wheels have been put on the running surface of the railprofile. Further entirely opening of the door to be done manually with the aid of a handle. Operation openercylinder by means of 2 pushbuttonswitches (standard).

## OPTIONS: TO BE SUPPLIED AT EXTRA PRICES

### Finishing:

Plastisol coating of doorpanels in another colour than standard neutral grey.  
Choice from (limited) colour collection of supplier.

### Automation:

electro/pneumatic continuous automation unit with pushbuttons in deadman's switch.

### Structural architectural mesures/technical installation:

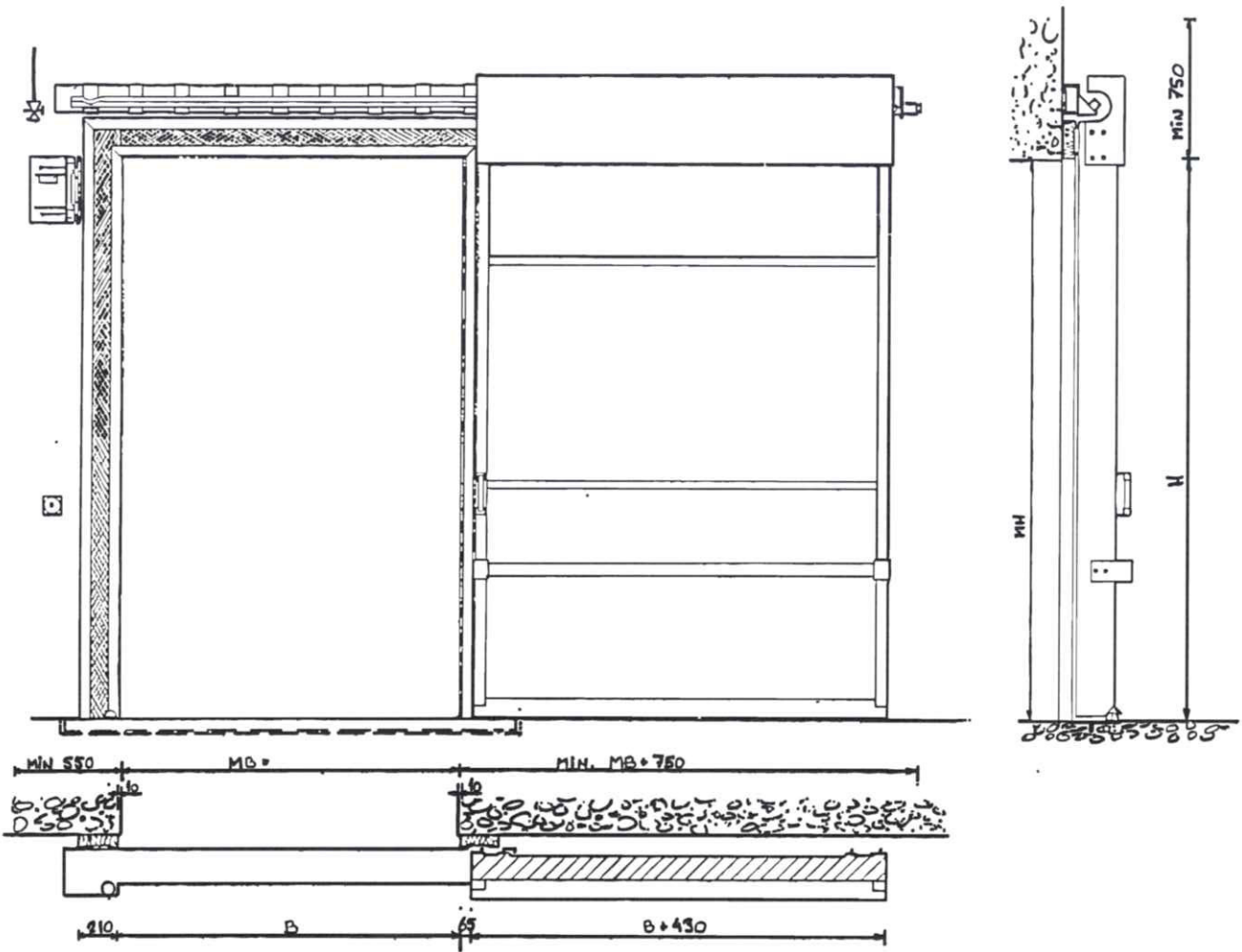
To be done by third parties, based upon standard Markus installation drawings and technical details to be supplied by Markus.

The floor at the sliding space (next to dooropening) may definitely **not** be higher than the floor at the dooropening, so that the sealing profiles underneath the doorblade cannot touch the floor during the sliding movement.



SCHUIFDEUR  
SCHIEBETÜR  
SLIDING DOOR  
PORTE COULISSANTE

# TYPE AM2-50dB



# SOUND REDUCING SLIDING DOOR

# TYPE AM2-50dB

## DOOR FRAME

Posts and upper sill composed boxconstruction 210x70 mm with rockwool filling at frontside covered with expanded metal  
Lower sill 2 L-profiles 100x50x6 mm

## DOOR

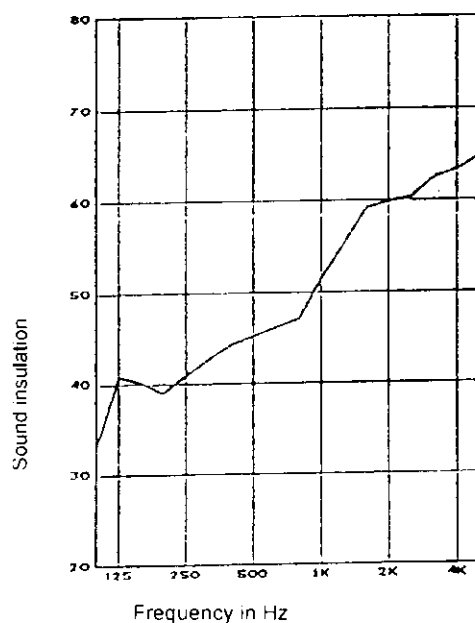
Thickness 194 mm  
Frame frameprofiles of angle-bended steelsheet  
Panels horizontal sound reducing panels, thickness ca. 120 mm, with core of Rockwool covered at both sides with steel sheet and fireresistant sheet.  
Finishing the visible sides of the panels covered with sendzimir-galvanized steelsheet with plastisol coating in standard neutral grey colour  
Frame profiles hot dipped galvanized

## SEALING

On the frame and the sill double rubber profile with absorbing insulation in between, covered with expanding metal

## SOUND INSULATION

This door has been tested by Peutz b.v. The laboratory test gives the following result.



## PATENTED MARKUS RAIL CONSTRUCTION

For doorblades with weight upto 2400 kos  
Rail beam steel profile with supports  
Rail solid square steel profiles  
Runners 4 steel running wheels with roller bearings wheels diameter 75 mm  
Suspension by means of corner pieces with coupling iron with galvanized protection sheet over total doorwidth  
Finishing all steel parts hot dipped galvanized  
Damping by means of hydraulic brake or damper (depending on doorweight)

## OPERATION, semi-automatic

Pneumatic opener cylinder with short stroke with which the door can be opened out of closed position in such a way that the running wheels are pushed out of the closing notches and are placed on the running surface of the railprofile  
Further opening and closing is to be done manually, for which purpose a handle is provided.  
Impulse of opener cylinder by means of 2 pushbuttons included in the delivery.

## LOCKING

Padlockeyes at railside.

## PROTECTION DOORBLADE

In the standard delivery has been included a horizontal tubular steel guardfence in standard orange colour, with rubber buffers, flexibly fixed onto the frameprofiles of the doorblade.

## OPTIONS: TO BE SUPPLIED AT EXTRA PRICE

### Finishing:

- Plastisol coating of doorpanels in colour, other than standard neutral grey  
Choice from supplier's (limited) colour collection.

### Automation:

- electro/pneumatic continuous automation with pushbutton automation in deadman's switch.

### Structural architectural mesures/technical installation:

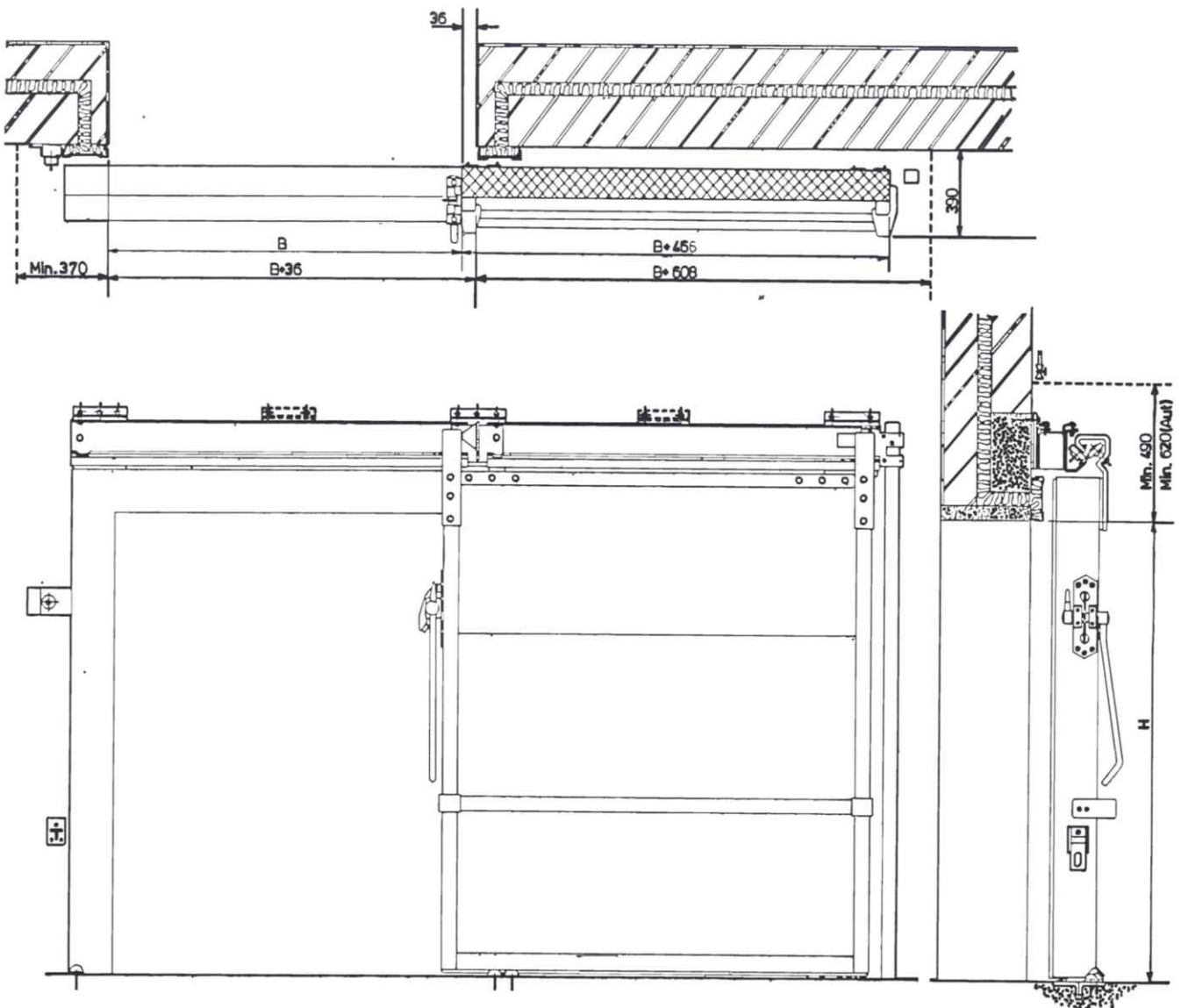
To be made by third parties, based upon a standard Markus installation drawing and technical details to be provided by Markus.

The floor at the sliding space (next to dooropening) may definitely **not** be higher than the floor at the dooropening, so that the sealing profiles underneath the doorblade cannot touch the floor during the sliding movement.



SCHUIFDEUR  
SCHIEBETÜR  
SLIDING DOOR  
PORTE COULISSANTE

## TYPE AM2P-50dB



# SOUND REDUCING SLIDING DOOR

# TYPE AM2P-50dB

## DOOR FRAME

Posts and upper sill	composed boxconstruction 210x70 mm with rockwool filling, at frontside covered with expanded metal
Lower sill	Z L profiles 100x50x6 mm

## DOOR

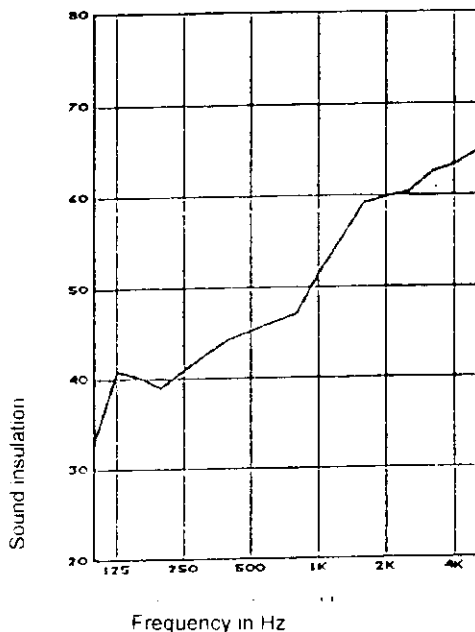
Thickness	194 mm
Frame	frameprofiles of angle bended steelsheet
Panels	horizontal sound reducing panels thickness ca. 120 mm with core of Rockwool covered at both sides with steel sheet and fireresistant sheet
Finishing	the visible sides of the panels covered with sendzimir-galvanized steelsheet with plastisol coating in standard neutral grey colour Frame profiles hot dipped galvanized.

## SEALING

On the frame and the sill: double rubber profile with absorbing insulation in between, masked with expanding metal.

## SOUND INSULATION

This door has been tested by Peutz b.v. The laboratory test gives the following result



## PATENTED MARKUS RAIL CONSTRUCTION

For doorblades up to approx 800 kg	
Rail beam	hot dipped galvanized steel profile
Rail	solid rectangular profile
Runners	4 roller bearings, Ø 75 mm
Suspension	roller carriages
Braking	rubber catcher

## OPERATION

Outer handles against edge of doorblade  
Recessed inner opener at frameside

## LOCKING

Padlockeyes at railside

## PROTECTION DOORBLADE

In the standard delivery has been included a horizontal tubular steel guardfence in standard orange colour, with rubber buffers, flexibly fixed onto the frameprofiles on the doorblade

## OPTIONS: TO SUPPLY AT EXTRA PRICE

### Automatic operation:

- semi-automation**  
The door will be started and opened by means of compressed air, but has to be fully opened and closed by hand
- electro/pneumatic continuous automation**  
with pushbuttons and deadman's switch

### Structural architectural mesures/technical installation:

To be made by third parties, based upon a standard Markus installation drawing and technical details to be provided by Markus.

The floor at the sliding space (next to dooropening) may definitely **not** be higher than the floor at the dooropening, so that the sealing profiles underneath the doorblade cannot touch the floor during the sliding movement.

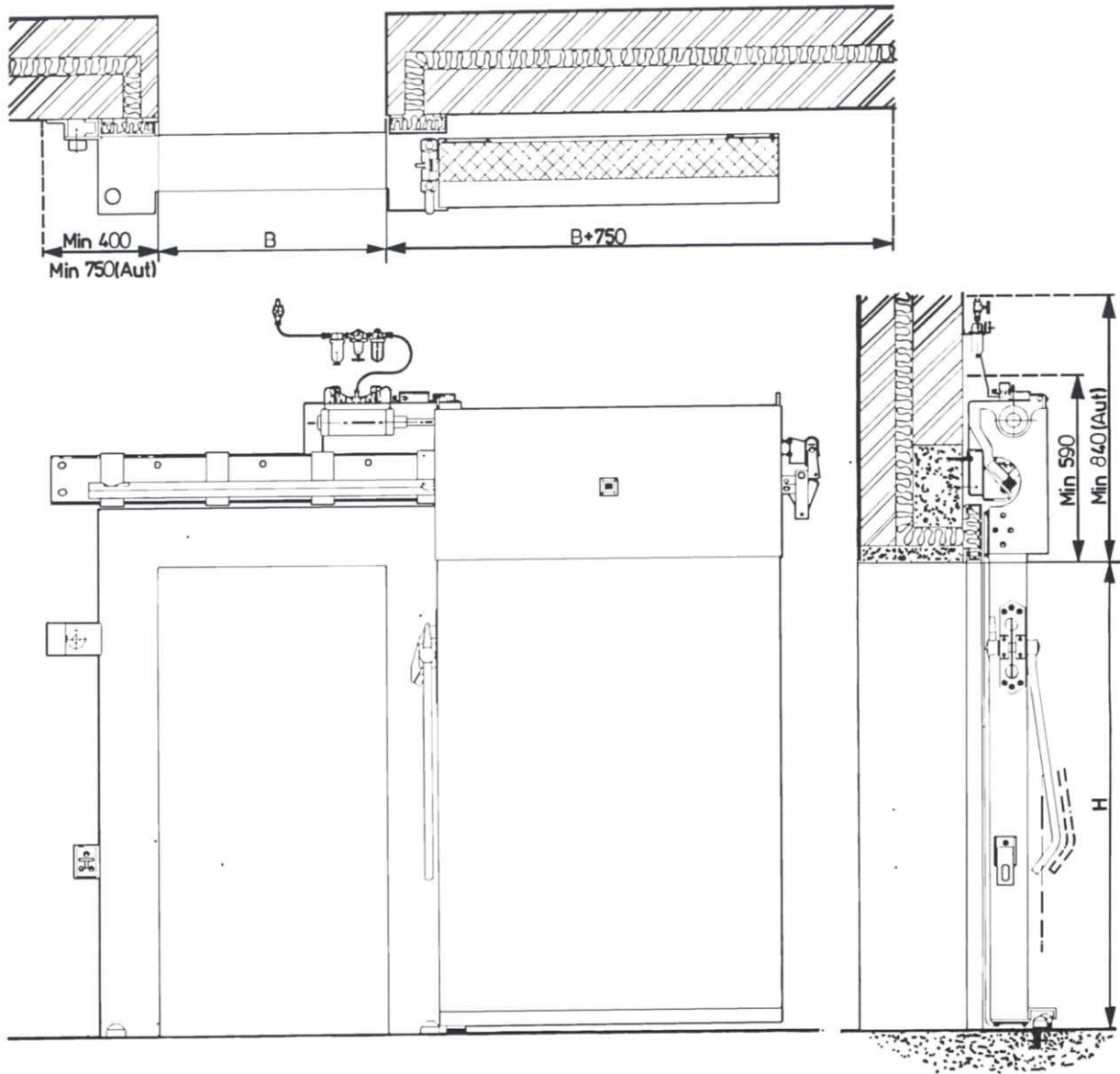
Subject to alterations

06-02-1997

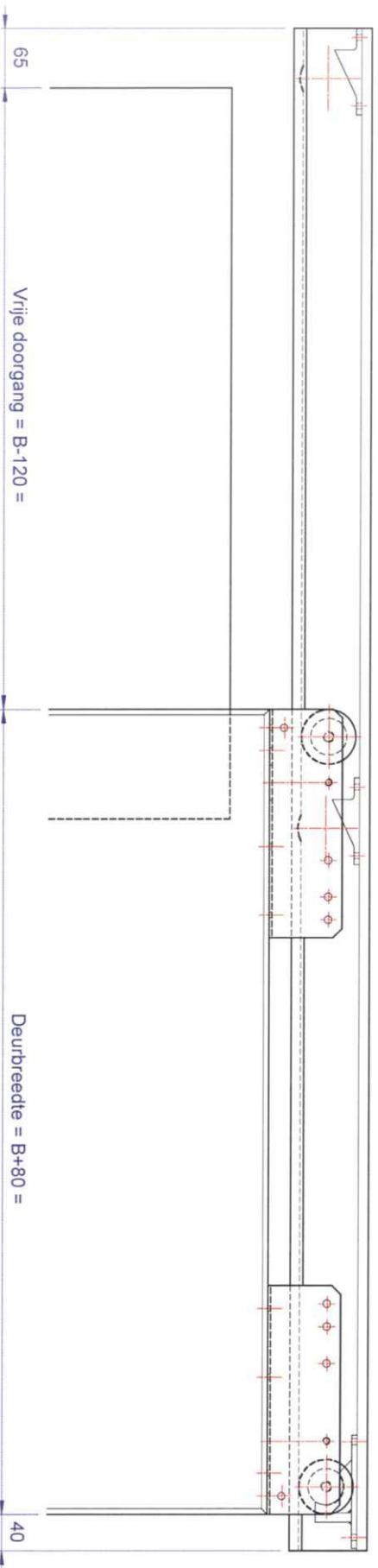
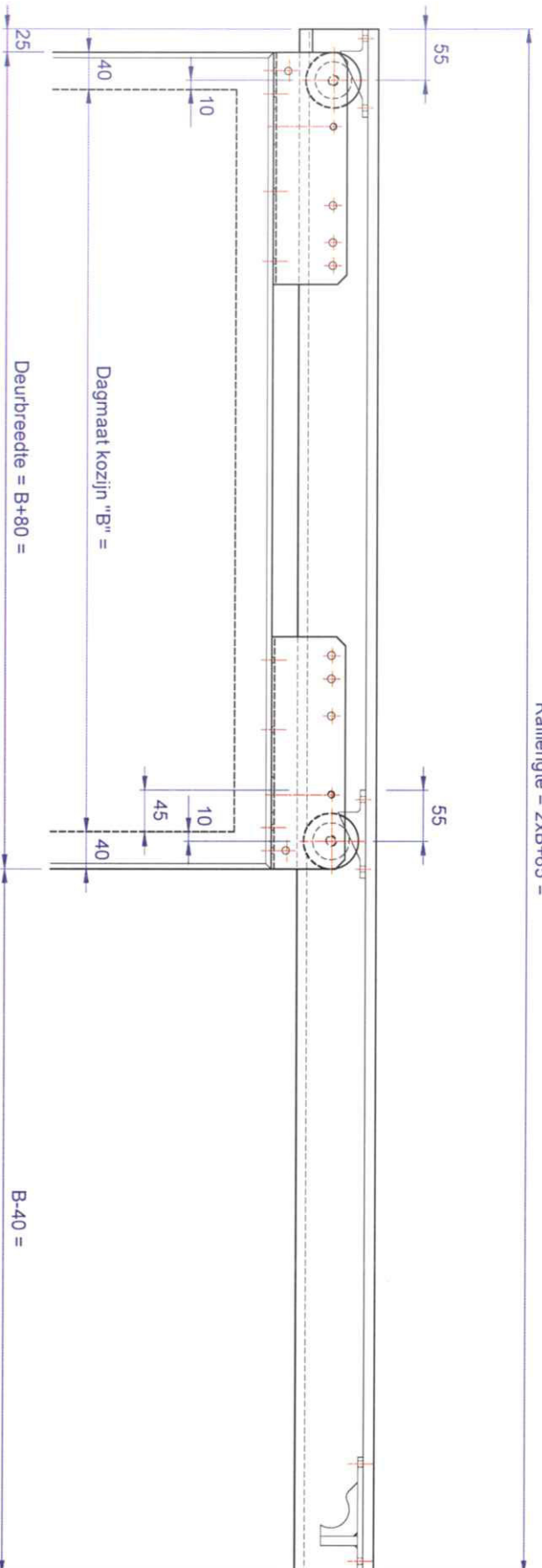


SCHUIFDEUR  
SCHIEBETÜR  
SLIDING DOOR  
PORTE COULISSANTE

## TYPE AM2-55dB

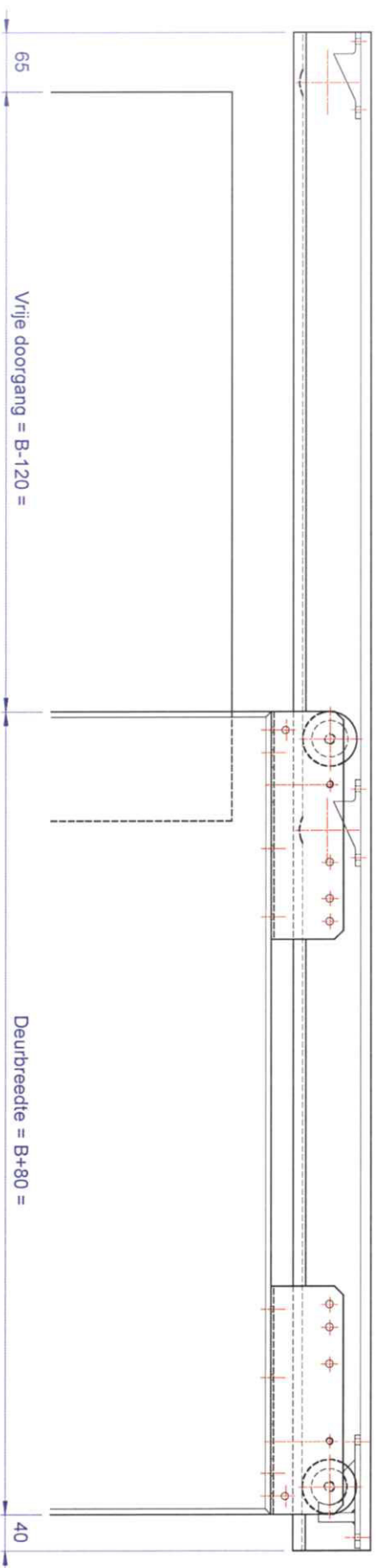
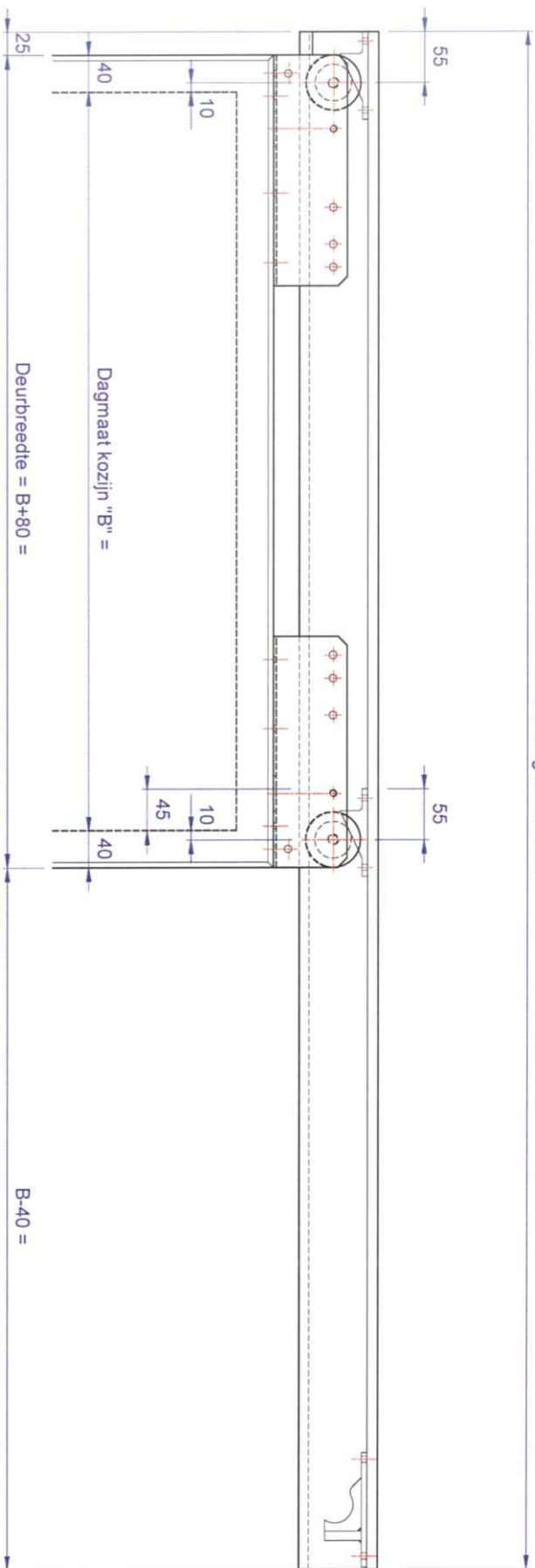


Railenlengte =  $2 \times B + 65 =$



		<b>markus hermetische deuren b.v.</b> Postbus 46, 2920 AA Krimpen aan den IJssel Nederland		Tel. (00)31-180-514466 Fax. (00)31-180-517701		order nr.: M11-				
		Op al onze ontwerpen, tekeningen en overige werken behouden wij ons uitdrukkelijk het auteursrecht en in voorkomend geval oeven intellectueel eigendomsrecht voor.		onderwerp: Overzicht maatvoering deur + rail		klant:				
projectie		gewijzigd	behoord bij:	Markcomomic 120mm in de dag	datum	getekend	gezien	formaat	tekening nr.	wijz.
		1:1	schaal	maateenh.	mm	12-09-2007	A.R.	A3	M11-00-01	

Raillengte = 2xB+65 =



		<b>markus hermetische deuren b.v.</b> Postbus 46, 2920 AA Krimpen aan den IJssel Nederland		Tel. (00)31-180-514466 Fax. (00)31-180-517701		order nr.: M11-	
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projectie	gewijzigd	behoord bij:	Markonomie 120mm in de dag	datum	getekend	gezien	formaat
		schaal	mateenh.	1:1	mm	12-09-2007	A.R.
						tekening nr. M11-00-01 wijz.	



# SOUND REDUCING SLIDING DOOR

# TYPE AM2-55dB

## DOOR FRAME

Posts and upper sill	composed boxconstruction 206x70 mm with rockwool filling, at frontside covered with expanded metal
Lower sill	2 L-profiles 100x50x6 mm
Finishing	all steel parts hot dipped galvanized

## DOOR

The doorblade consists of 2 parts

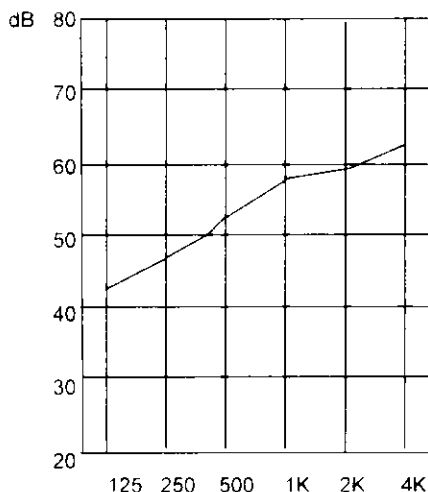
- outerblade with oregon frame, multiplex outerpanel and finished with 2 mm galvanized steelsheet
  - Innerblade, being insulated in the outerblade by means of vibration absorbers
  - Innerblade, thickness ca. 108 mm composed of a wooden frame, on both sides with 2 mm galvanized steelsheet
- All hollow spaces inside the doorblade have been filled up with rockwool.  
Thickness composed doorblade 230 mm.

## SEALING

On the frame and the sill:  
double rubber profile with absorbing insulation in between, covered with expanding metal.

## SOUND INSULATION

This door has been tested by Peutz b.v. The laboratory test gives the following result.



## PATENTED MARKUS RAIL CONSTRUCTION

Rail beam	steel profile with supports
Rail	solid square steel profiles
Runners	4 steel running wheels with roller bearings, wheels diameter 75 mm
Suspension	by means of corner pieces with coupling iron, with galvanized protection sheet over total doorwidth
Finishing	all steel parts hot dipped galvanized
Damping	by means of hydraulic brake or damper (depending on doorweight)

## OPERATION, semi-automatic

- For doors with a weight of approx 800 kg, manual operation by means of a handle against headside of the doorblade, and a recessed swivelling opener in the doorblade at frameside
- with heavier doors:  
Pneumatic opener cylinder with short stroke with which the door can be opened out of closed position in such a way, that the running wheels are pushed out of the closing notches and are placed on the running surface of the railprofile.  
Further opening and closing is to be done manually, for which purpose a handle is provided.  
Impulse of opener cylinder by means of 2 pushbuttons included in the delivery

## LOCKING

Padlockeyes at railside.

## PROTECTION DOORBLADE

In the standard delivery has been included a horizontal tubular steel guardfence in standard orange colour, with rubber buffers, flexibly fixed onto the frameprofiles of the doorblade.

## OPTIONS: TO BE SUPPLIED AT EXTRA PRICE

### Automation:

- electro/pneumatic continuous automation  
with pushbutton automation in deadman's switch.

### Structural architectural measures/technical installation, compressed air/electric:

To be made by third parties, based upon a standard Markus installation drawing and technical details to be provided by Markus.

The floor at the sliding space (next to dooropening) may definitely **not** be higher than the floor at the dooropening, so that the sealing profiles underneath the doorblade cannot touch the floor during the sliding movement.