

*Oper*Graz

TECHNICAL DATASHEET

Opernhaus Graz GmbH
Kaiser Josef Platz 10
A – 8010 Graz

Tel +43 (0) 316 8008 0
www.oper-graz.com

1. TABLE OF CONTENTS

1.	Table of Contents.....	2
2.	Contact Information.....	3
3.	History.....	4
4.	Front Of House	5
4.1.	Auditorium	5
4.2.	Orchestra Pit and Prompt Box	7
4.3.	Curtain & Proscenium	8
5.	Stage	10
5.1.	Stage Terms.....	10
5.2.	Fly System / Winches.....	10
5.3.	Under stage machinery	12
5.4.	Stage wagon systems	13
5.5.	Stage Equipment.....	13
6.	Delivery.....	14
7.	Lighting	16
7.2.	Fixtures (See lighting plot for exact positions)	16
7.3.	Mobile lights	18
8.	Video equipment.....	20
8.1.	Content requirements.....	20
8.2.	Fixed positions	21
8.3.	Mobile equipment.....	22
9.	Sound equipment	24
9.	25	
10.	Dressing Rooms	26
11.	Studio stage Opera.....	27
11.1.	Studio Stage.....	27
11.2.	Lighting.....	28
11.3.	Video	29
12.	Rehearsal Rooms	30
12.1.	Rehearsal Stage Thalia.....	30
12.2.	Rehearsal Stage "Malersaal"	31
12.3.	Ballet room	32

Attachements:

- I. Floor Plan Operahouse
- II. Section Plan Operahouse
- III. Lighting Plan
- IV. Floor Plan Rehearsal Stage
- V. Floor Plan Studio Stage
- VI. Loading Platform

2. CONTACT INFORMATION

Address:

OPERNHAUS GRAZ GmbH
Kaiser Josef Platz 10
A - 8010 Graz

Contacts:

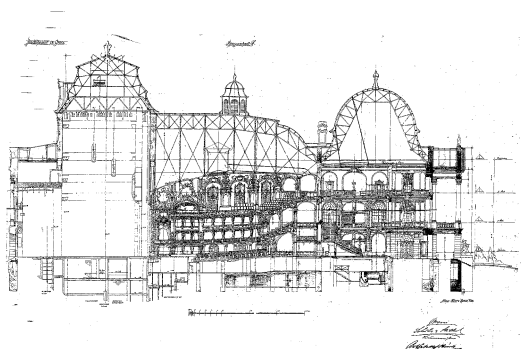
Position	Name	Tel./Fax. [+43 (0) 316 8008]	E-Mail [@oper- graz.com]
Technical Director	Michael Nußbaumer	-1222	michael.nussbaumer
Secretary of TD	Christa Kindler	-1100	christa.kindler
Head of technical production office	Martin Lipp	-1210	martin.lipp
Assistant of technical production office	Sebastian Weiss	-1214	sebastian.weiss
Head of Costume	Silke Fischer	-1258	silke.fischer
Coordination of Costume	Elisabeth Perteneder	-1208	elisabeth.perteneder
Head of Stage Carpentry	Gerald Trummer Hannes Peindl	-2007	gerald.trummer hannes.peindl
Head Of Lighting Dept.	Sebastian Alphons	-2933	sebastian.alphons
Head of Sound Dept.	Christian Komp	-2403	christian.komp
Stage Machinery	Željko Crnjak	-2410	zeljko.crnjak
Armorer	Helmut Wallner	-2405	helmut.wallner
Property Master	Christian Ogertschnig Ursula Pompernigg	-2008	christian.ogertschnig ursula.pompernigg
Fire Marshall	Željko Crnjak	-2410	zeljko.crnjak
Head of Dress Dept.	Sandra Spelec	-2103	sandra.spelec
Head of Make-Up Dept.	Stephanie Klock	-2409	stephanie.klock
Head of Facility Mgmt.	Thomas Mussbacher	-1003	thomas.mussbacher
House Electricians	Wolfgang Schmidt (Deputy of Facility Mgmt.)	-1005	wolfgang.schmidt

3. HISTORY

The first evidence of opera performances in Graz reaches back into the 17th century. In the year 1736, an adapted couch house of the royal stable served as a theatre that as well staged opera productions. Although the existing facilities were quite modest, the program was an attractive one: The avant-gardists Gluck and Pergolesi were performed and the theatre as a consequence acquired such a good reputation that the empress Maria Theresa offered to adapt a building for the theatre that belonged to the cathedral of Graz. In the year 1776, the National Theatre was opened on the "Freiheitsplatz" – the building today is still hosting the theatre of Graz.



The theatre owed its reputation primarily to its staging of opera productions like Mozart's "Le nozze di Figaro", "The Abduction from the Seraglio" or "Don Giovanni". Johann Nestroy, later known as Austrian comedian and playwright, sang several bass parts, e.g. the Figaro in Rossini's "Il barbiere di Siviglia" in 1826. In the year 1864 the opera received its first building of its own that was the direct predecessor of today's building, an ancient dodecagonal circus with room for 2000 visitors. Famous artists like Karl Millöcker, Wilhelm Kienzl and Franz Schalk worked as Musical Directors there.



Original drawing by Fellner & Fellner Architects

Finally a building that reflected the opera's splendor was erected. Ferdinand Fellner and Hermann Helmer, both renowned architects of the empire, were assigned to plan a new opera house. Particular attention was paid to the baroque-manner interior of the auditorium that is kept in the colors gold, white and red. The auditorium provides seats for 1200 visitors and has more than 40 boxes. The house was opened with Schiller's drama "Wilhelm Tell" on 16 September 1899, followed by the first premiere of an opera on the next day with Richard Wagner's "Lohengrin". In 1906 the Austrian premiere of "Salome" took place under the direction of the composer.

From 1983 till 1985, the house has been sensitively adapted in order to meet today's requirements of stagecraft by building a glass bridge that connects the stage area to the newly erected scene dock. Throughout the last hundred years the opera has continuously staged countless productions and has like this turned into an important centre for southeastern music culture. In the season 2000/2001 it was selected as "Opera House of the Year" by 50 international theatre critics.

Until today, the Oper Graz has hosted numerous renowned composers and singers and often served as a springboard for their world careers. Franz Schalk, who later was Director of the Viennese State Opera, Clemens Krauss and Karl Böhm worked among others as conductors in Graz, Robert Stolz launched his career as a conductor before becoming a celebrated composer of operettas and film music. Among the great singer celebrities, especially Ljuba Welitsch and Maria Kouba, both will remain unforgettable for their "Salome", as well as the mezzo-soprano Hertha Töpper, who was also born in Graz, rose to fame. Angelika Kirchschlager also was part of the ensemble of the opera house and gave her role debut as "Octavian" ("The Knight of the Rose") in Graz.



(Source: www.oper-graz.com)

4. FRONT OF HOUSE

4.1. Auditorium

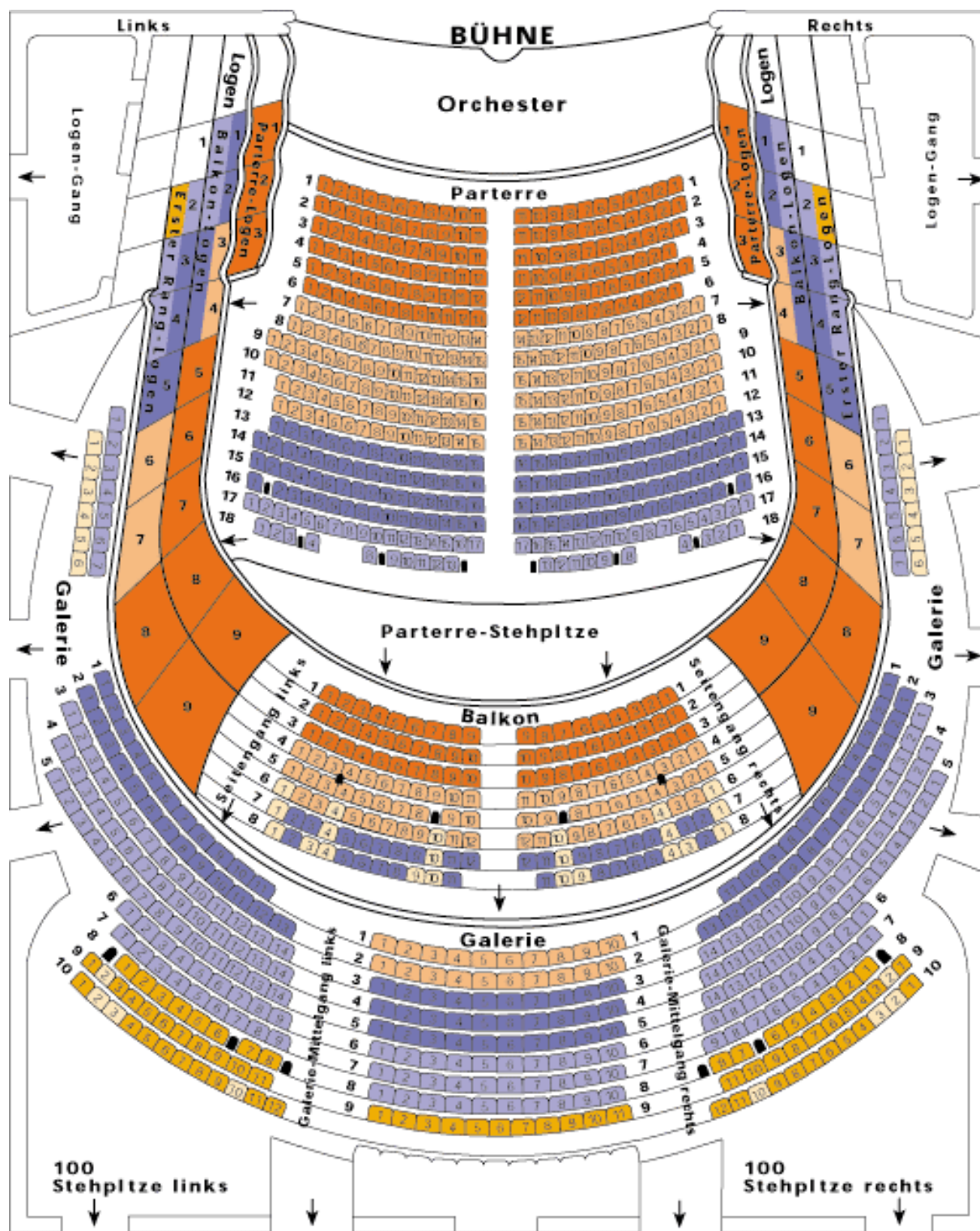


4.1.1. Seating

Dark brown „Thonet“- folding chairs with red velvet upholstery

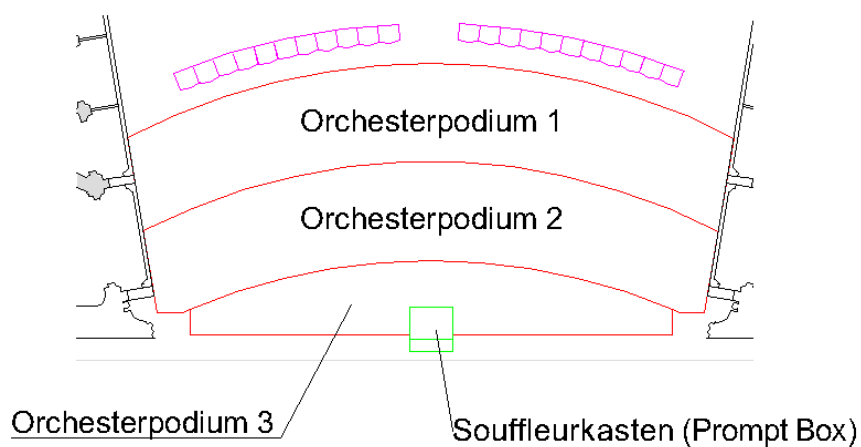
4.1.2. Capacity

Seated		Standing	
Designation	Capacity	Designation	Capacity
Parterre	499	Parterre	100
Parterre loges	24 in 6 loges	Balcony	100
Balcony	170	-	-
Balcony loges	78 in 18 loges	-	-
2 nd Balcony	345	-	-
2 nd Balcony loges	70 in 16 loges	-	-
Total	1186	Total	200



On the website of the Opera Graz (www.oper-graz.com/eckdaten.php) you can do a virtual tour of both the auditorium and the lobby.

4.2. Orchestra Pit and Prompt Box



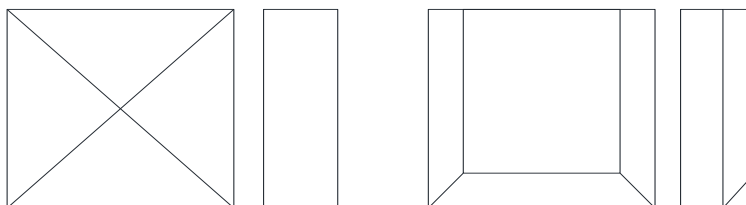
The Opera house in Graz has three electrical powered orchestra lifts. The “Orchesterpodium 2” has a fixed lug sub podium 200cm underneath the main deck. You can enter the orchestra pit trough the basement at fixed heights between -180cm and -215cm. The orchestra pit is usually used at -180cm for opera-, operetta- and musical productions. Sometimes it is also used at -215cm and rarely at -145 cm.

The balustrade between orchestra pit and auditorium can be removed completely.

Orchestra lifts cannot be used for scenic changes!

Lift		Area [m²]	
1	15,1 x 4,1	36,1	±0 ... -2,83
2	14,3 x 3,8	34,3	±0 ... -5,20
3	12,0 x 1,8	17,4	±0 ... -2,15

The prompt box can be used with the orchestra lift number 3 set between -180cm and -215cm. Currently there are two ready-to-use covers for the prompt box (both in black)



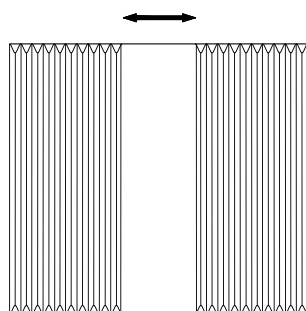
Prompt-box covers

4.3. Curtain & Proscenium

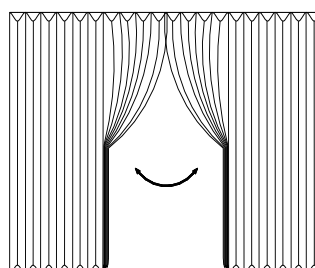
4.3.1. Fire Curtain

The former main curtain (painted by Alexander Rothaug) is glued to the front of the steel structure of the fire curtain. The fire curtain cannot be used for scenic changes.

4.3.2. Main Curtain



Divide



Gather

The Opera Graz has a main curtain made of red velvet. It can either be divided or gathered to be opened.

4.3.3. Proscenium Bars

There are two electrically powered flybars (guided by wires on each end) just behind the main curtain in front of the proscenium.

4.3.4. Sound Curtain

The sound curtain is a seven-layer thick black velvet that is positioned right behind the two Proscenium Bars and can be lifted vertically.

4.3.5. Proscenium

The width of the proscenium opening is 12m; the height is variable between 0,2m and 9m.

4.3.6. Technical Data

All flybars are computerized (except for the fire curtain) and can be used for scenic changes.

Abb.	Name	Comments	Max. load	Scenic changes	Speed	Number	Length	Depth	Height
			[kg]		[m/s]				
EV	Fire Curtain			No	0,3	1	15	0,2	9,5
HV-H	Main Curtain	Only for maintenance		No	0,1	1	19	-	+1,5...11,5
HV-T	Main Curtain divide - electrical	Variable speed		Yes	0,001...1,5	1	19	-	-
HV-R	Main Curtain gather - electrical	Variable speed		Yes	0,001...1,5	1	19	-	-
SL1	Scrim bar 1		500	Yes	0,001...1,2	1	17	-	+0,2...24,5
SL2	Scrim bar 2		500	Yes	0,001...1,2	1	17	-	+0,2...24,5
S3	Sound Curtain		750	Yes	0,001...1,2	1	17	-	+0,5...24
-	Proscenium	Height is variable		Yes	0,1	1	12	1,3	+0,2...9

5. STAGE

5.1. Stage Terms

Stadtseite (St.S.) = Bühne Rechts = "City side" = Stage Left

Parkseite (P.S.) = Bühne Links = "Park side" = Stage Right

Orchesterpodium III = Kernhub = Orchestra lift 3

5.2. Fly System / Winches

All flybars and winches are electrically powered and computerized. They adhere to the German Safety Standard BGV C1 and are rated as safe to use for flying people.

5.2.1. Stage

Abb.	Name	Comments	Max. load	Speed	Number	Length	Depth	Height
			[kg]	[m/s]		[m]	[m]	[m]
E1... E36	Flybar	Speed depending on load	500 (750)	0,001 ...1,2- 0,8	33	18,8; max. 19,8		+0,2... 25,4
E37...E39	Flybar	Speed depending on load	500-750	0,001 ...1,2- 0,8	3	18,2; max. 19,2		+0,2... 24,4
L6, L19, L34	Heavy Load Flybar		1500	0,001 ...0,7	3	18,8; max. 19,8		+0,5... 25,4
Pa1...Pa4	Panorama Flybar	Pa1: stage right	500	0,001 ...1,2	4		11,25	+0,2... 24,5
		Pa2: stage left						
		Pa3: stage right (outside)						
		Pa4: stage left (outside)						
P1...P12	Point hoist	Can be set up at almost any point of the stage	500	0,001 ...1,2	12			+0,2... 24

The maximum speed of the bars depends on the load; Loads up to 500kg can be moved with up to 1.2m/s and loads between 500kg and 750kg with up to 0.8 m/s.

5.2.2. LX bars

Abb.	Name	Comments	Max. load	Speed	Number	Length	Depth	Height
			[kg]	[m/s]				
OL1, OL2	Overhead Lights 1 & 2	Each in three parts OL1 L / M / R, OL2 L / M / R	2000 (500/ 1000/ 500)	0,001...0,6 0	2	18,8 (5,1/ 8,2/ 5,1)	1	+0,2...18
OL3	Overhead Light 3	-	1000	0,001...0,6 0	1	18,2	-	+0,2...24,4
OL4	Overhead Light 4	Upstage	750	0,001...0,6 0	1	18,8	-	+0,2...+11, 0
PL1... PL4	Panorama Light	-	250	0,001...0,3 0	4	-	10	+0,2...8

5.2.3. Upstage Flybars

Abb.	Name	Comments	Max. load	Speed	Number	Length	Depth	Height
			[kg]	[m/s]				
HB1... HB5	Upstage Flybar	-	500	0,001... 1,20	5	19	-	+0,1... +11,8

5.3. Under stage machinery

Name	Comments	Speed	Number	Width	Depth	Turn radius / Lift height
		[m/s]		[m]	[m]	[°/m]
Revolving Stage (computerized)	Ø13,9m, both directions possible	0,001...1,2	1	Ø 13,9		±0°...360°
Double deck platform (computerized)	Rope engine, rated for personal transport and scenic uses, Static load (upper deck): 500 kg/m², Static load (lower deck) 250 kg/m², Dynamic load (upper deck): 250 kg/m², Dynamic load (lower deck): 250 kg/m², Maximum dynamic load: 10.000 kg	0,001...0,3	1	10	4	-3,0...4
Trap Doors	Covered openings in the floor to place the trap mechanisms	-	16	2	1	-
Trap Mechanism "Waagner-Biro"	Maximum load both static and dynamic 250kg	0,05...0,5	1	1,98	1	-3,0... ±0
Trap Mechanism "Hauleitner"	Maximum load both static and dynamic 500kg	ca. 0,1	1	1	1	-3,2... ±0
Trap Mechanism "Tüchler"	Static load max. 500kg, dynamic load max.150kg, maximum speed while transporting persons 0,5m/s	0,01...0,7	1	1,96	1	-3,1... ±0
Drop storage lift	Not for scenic use	0,05	1	22,4	2	±0 --+5

Additional information about the double deck platform

Due to the fact that the platform is hanging in ropes it is very sensitive to lateral forces and unbalanced heavy loads. It is therefore necessary to limit lateral forces (maximum 5000 N) and distribute heavy loads evenly onto the platform.

5.4. Stage wagon systems

Name	Comments	Speed	Number	Width	Depth	Height
		[m/s]		[m]	[m]	[mm]
Stage wagon in "Hoac"-frame (Height: 140mm); Manufacturer: Greenmotion	Remote controlled; can be used for scenic changes; direct load up to 500kg/m ² ; movable loads on plane surfaces approx. 3500kg	0,005...0,5	2	1	1	200
Stage wagon in aluminum frame, Manufacturer: Greenmotion, (Height: 105mm)	Remote controlled; can be used for scenic changes; direct load up to 500kg/m ² ; movable loads on plane surfaces approx. 3500kg	0,005...0,5	2	1	1	167
	synchronizable		2			

5.5. Stage Equipment

Stage Area: Black brick wall

Deck: Interlocked wooden multilayer boards, black, maximum load 1000 kg/m²

Platforms: Standard heights: 16 cm, 33 cm, 50 cm, 66 cm, 75 cm, 83 cm, 100 cm

Main Curtain: Red velvet, width: 17 m, height: 10 m, permanently installed

Sound Curtain: Black velvet, width: 16.5 m, height: 11 m, permanently installed

Additionally, we offer a standard selection of scrims made of tulle in black, gray, and white, as well as black velvet for borders, legs, and masking.

Rear and front projection screens are available in white, gray, and black.

For detailed planning regarding scrims, borders, masking, legs, and projection screens, we kindly ask for personal consultation.

6. DELIVERY

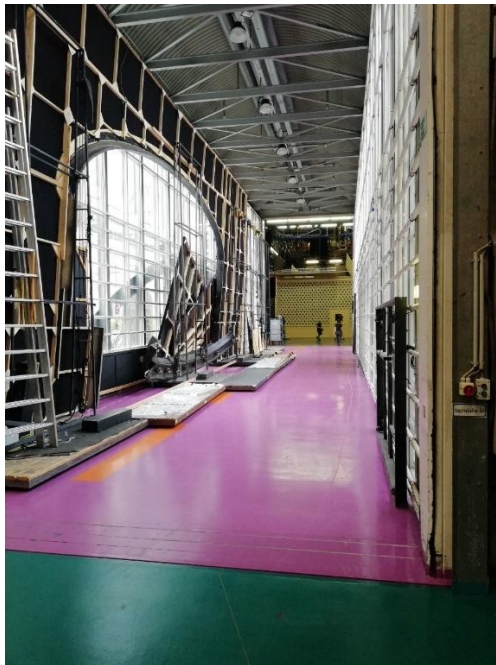
6.1.1. Loading dock and gate:

The Opera Graz has a hydraulic loading dock which extends onto the back of the truck. For detailed measurements and information concerning the driveway see attachment VI.

The gate at the loading dock has the following measurements:

Height:	3,5m
Width:	5,0m

6.1.2. Glass Bridge



All decorations will be brought on stage using the glass bridge. The glass bridge connects the wing stage with the assembly hall and all of the storage facilities. In order to ensure fast and easy load in/load out it is necessary to limit the maximum height of all decorations to 8m.

Since the glass bridge is partly used for storage it usually has a usable width of 3m

Overall measurements of the glass bridge:

Height:	8,0m
Width:	5,8m

6.1.3. Backstage Gate

In very exceptional cases decoration can also be brought directly on stage through a gate at the back of the stage. The backstage gate measures as follows:

Height:	3,5m
Width:	2,3m

6.1.4. Freight Elevator

The freight elevator is adjacent to the assembly hall and connects to "Studio stage", Storage rooms of the "Next Liberty" and the rehearsal stage.

Height:	8,0m
Width:	3,1m
Length:	5,6m

Depending on the destination the usable elevator door size varies:

Basement (Studio Stage)	1,75m x 4,0m
1.OG (Assembly Hall)	3,5m x 8,0m
3.OG (Rehearsal Stage)	3,1m x 8,0m

7. LIGHTING

7.1.1. Light Console

Grand MA 2 Fullsize
Backup: Grand MA 2 light
Mobil: Grand MA 2 OnPC Tourpack

7.1.2. Used Connectors

CEE 16A, 32A und BNS 63A

7.1.3. Mains

240/380V

7.2. Fixtures (See lighting plot for exact positions)

Type	Wattage	Qty.
Auditorium: loges + procenium area + balcony		
Niethammer HPZ 215+Scroller (Logen)	160W	6
Niethammer HPZ 215 (Logen)	160W	10
Clay Paky Rhapsodia (Loge Front)	1500W	4
Robert Juliat OZ Verfolger (Logen)	1100W	2
JB P18 HCRI LED Profiler (Logen)	1100W	8
JB P 12 HCRI (Goldportal)	500W	2
JB A12 (Goldportal)	400W	2
PAR64 mit CP62 (Goldportal)	1000W	6
Profil Limax (Goldportal)	1200W	2
Lighting Bridge		
JB P 12 HCRI	800W	3
JB A12 Sparx	760W	4
Clay Paky K 10	500W	2
Desisti Stufenlinse	5000W	2
Niethammer HPZ Profiler 211	2000W	4
Niethammer HPZ Profiler 215	2000W	8
Niethammer HPZ Profiler 2511	2500W	6
NV 1200 Superbeam	1200W	6
Strobe Hungaroflash	6000W	1
JB A12 Washlight	800W	6
Selecon Fresnel (7-55°)	1200W	4
Nanopix 2880 LED RGBWwKw	300W	6
1st & 2nd technical gallery		
Niethammer HPZ Profiler 2511	2500W	20
NV 1000 / PANI	1000W	10

Portal towers		
Sola Frame 750	400W	2
Vari Lite VL 1000	575W	2
JB A12 LED Wash	400W	2
ADB Niethammer HPZ 2515+Scroller	2500W	4
ADB Niethammer HPZ 2515	2500W	5
ADB Niethammer HPZ 215	2000W	7
ADB Niethammer HPZ 2511	2500W	1
Robert Juliat 614 SX (28-54°)	1200W	3
Six Pack PAR 64 CP 62	6x1000W	4
HVP 208 / Niethammer	2000W	4
NV 1000 / PANI	1000W	2
ETC Source 4 (26°)	575W	2
ETC Source 4 (36°)	575W	2
Strobe Hungaroflash	6000W/25A	2
LX bars		
JB P12 HP (OL 1+2)	640W	8
Solawash 2000 (OL 1+2)	600W	8
JB 18 MKII Wash WW (OL 1+2)	1100W	8
Martin Mac Ultra Profile (OL 3)	1500W	5
Martin Mac Ultra Profile (OL 4)	1500W	5
JB A 12 LED (OL3)	300W	6
ARRI HMI+Scroller (Motorbügel) (OL 1+2)	2500W	4
ARRI HMI+Scroller (Motorbügel) (OL 1+2)	4000W	2
Mac Encore Performance CLD (Pano Schienen)	500W	10

7.3. Mobile lights

Please do not plan with the listed fixtures below before talking with the head of lighting!

Type	Wattage	Qty.
HMIs		
With motorized yoke and scroller:		
ARRI HMI	4000W	4
ARRI HMI	2500W	4
On light stand, with scroller:		
ARRI HMI (old)	4000W	1
ARRI HMI	2500W	4
D` Artagnan MSR 11-25°	2500W	2
D` Artagnan MSR 29-50°	2500W	2
Moving Heads		
JB P 18 MK2 HCRI	1100W	4
JB A 12 LED	300W	4
MAC Encore Performance LED	500W	2
PARs		
RGBW LED Pars mit Zoom	120W	8
RGBWA LED Pars (Akkubetrieb möglich)	120W	8
Profile lights		
ETC Source 4 (26°)	575W	3
ETC Source 4 (36°)	575W	9
ETC Source 4 (26°)	750W	2
ETC Source 4 (36°)	750W	4
ETC Source 4 Jr. (26°)	575W	8
Niethammer HPZ 2511	2500W	1
Niethammer HPZ 2515 / ADB 15-40°	2500W	5
Niethammer HPZ 215	2000W	1
Profiler Limax	1200W	2
Fresnel		
Pollux	5000W	4
ADB F 51	500W	10
Floods		
LDDE Nanopix Fluter Asymetrisch LED RGBWwKw	200W	18
flourecents/LED-bars		
Nanopix 2880 LED RGBWwKw	240 W	12
Nanopix slim LED RGBWwKw	80 W	24
Nanopix FR 1440 Fußrampe	80 W	12
Side light boom (on casters)		
Booms	Par, Profil, Profil, Par, Profil	10

Miscellaneous		
ADB Svobodarampen Doppelt	2500W	8
HQI Lampe	150W	4
Astera Titan Tube	48W	40
Astera Nyx Bulb		32
Astera Pixel Brick		8
Astera AX 9		8
Astera Hydra Panel		8
Nebelmaschinen:		
MDG Atmosphere		2
Unique		4
Aqua Low Fog		2
Windmaschine		4

8. VIDEO EQUIPMENT

8.1. Content requirements

File names should not contain any special characters such as brackets or dots. Only the following are permitted: A-Z, a-z, 0-9, hyphen (-) and underscore (_).

Technical notes such as a looped video or alpha channel are very welcome as part of the file name.

In addition, each file should have a consecutive version number at the end.

e.g. "Video01_V01.m2v" or "Video02_Loop_Alpha_V02.m2v"

The following parameters must be met for videos or animations:

- Codec: Mpeg-2 without audio track (xxx.m2v)
- Bit rate: SD 8MBit/s, HD max. 35MBit/s; CBR (constant bitrate!)
- Frame rate: 25p
- GoP settings: GOP-1 (I-frames only)
- Formats, resolutions, frame rates and codecs that deviate from this must be agreed with the video department in advance.

The three projectors on the backstage are able to create a softedge projection in the approximate size of 17.6m x 9.8m (with projection surface in E39). Content for this process should have the format 1920 x 1200px (WUXGA). Higher resolutions are also possible after consultation (up to approx. 3200 x 1920px).

8.2. Fixed positions

Type	Output	Qty.	Position
Fixed mounted Projector			
Panasonic-PT-RQ22K Panasonic Objektiv ET-D3LEW10	21000 Ansi Lumen 4K+	1	Vorbühne, erster Balkon mitte
Cristie Roadster WV20K Crimson WU Cristie HD Fix-Objektiv 0.67:1	25000 LM 1920x1200px	3	Upstage Portrait Mode
Media Server			
Medienserver Coolux Pandoras Box (2 Output)	4K	2	Hauptbühne
Medienserver Coolux Pandoras Box (4 Output) R4 PK2	HDTV	1	Hauptbühne (Rückpro)
Coolux Pandoras Box Server (2 Output) R4 PK2	4K	1	Mobil
Switches			
Analogway Diventix 2	HDTV	1	Hauptbühne
Kramer VP-727XL	HDTV	1	Hauptbühne
Recorder			
BlackMagic Atem Mini-SDI-ISO	HDTV	1	Hauptbühne

8.3. Mobile equipment

Type	Output	Qty.	Position
Beamer / lenses			
Eiki LC-XT5	15000 Ansi Lumen 1024x768px	2	
Eiki Optik Wide 1:0,8		1	
Eiki Optik Standard Zoom		1	
Eiki Optik Tele		1	
Eiki LC-X85	7000 Ansi Lumen 1024x768px	1	
Eiki Optik Wide 1:0,8		1	
Eiki Optik Standard Zoom		2	
Eiki Optik Tele		1	
Panasonic PT-D 10000	10000 Lm 1400x1050px	2	
Panasonic Optik ET-D 75 LE 5 – Wide		2	
Panasonic Optik ET-D 75 LE 3 - Standard		2	
Panasonic-PT-RQ22K Panasonic Objektiv ET-D3LEW50	21000 Ansi Lumen 4K+	1	
Panasonic lens ET-D 75 LE 3 - Standard	10500 Ansi Lumen 1400x1050px	2	Workshop
Panasonic-PT-RQ22K Panasonic Objektiv ET-D3LEW50		1	Werkstatt
Screens			
Stumpfl AV Vario 32		1	
- 4m x 3m Leinwand für Vario 32 Auf- + Rückpro		Je 1	
- 4m x 3m Leinwand für Vario 32 Auf- + Rückpro		Je 1	
Cameras			
Sony PMW EX-3	HDTV	1	
Sony Alpha A7S-III	4K	1	
Sigma 24-70mm 2.8 DG DN		1	
Sony !6-38mm FE 2.8 GM		1	
Sony 70-200 FE 2.8 GM OSS-II		1	
Sony 2x TeleConverter SEL20TC		1	

Recording Equipment			
Atomos Ninja-5 + SDI-Expansion		1	
Sennheiser MKE-600		1	
Rode NTG-2		1	
Sony URX-P03D (2-Kanal Empfänger incl. Mi-Shoe-Adapter)		1	
Sony UTX-B40 (Audio Sender Bodypack incl. Lav-Mic)		2	
Tentacle Sync-E Timecode Generator		2	
Stativ (Sachtler FSB8 Speedlook)		1	
Stativ (Sachtler Flowtech 75 + Active 8T)		1	
DJI Ronin RS2-ProKit		1	
Tilta Float Kit für RS2-Pro		1	

9. SOUND EQUIPMENT



Location	Qty.	Type
Mixing desk		
	1	DIGICO Quantum 7T (steht nicht für Gastproduktionen zur Verfügung!)
	1	Behringer X32 (Fixinstallation Studiobühne)
	1	Behringer X32 (Mobil)
	1	Behringer X32 Compact (Mobil)
		diverse Klein-Mischpulte
Speaker		
Front	2	d&b V7P
	4	d&b V-G SUB
Center		Bohlender & Gräbener Planar Magnetic Transducers
Procenium	4	L132-A3
	2	L190-A3
	2	L365
	2	Studt S1214T
	2	Studt S121S 21" Bassreflex Subs
	3	Xilica ControllerXD8080
	5	LAB Gruppen C48:4 Amps
Delay	4	d&b 16C-Säulen
Upstage	2	d&b Ci14 Tops
	2	d&b Ci7 Subs
Dome (above auditorium)	1	d&b 2x Q1 + 1x Q7
Monitoring	8	d&b M6
	6	d&b Maxx 10" 1"
	6	d&b E-Pacs
	6	d&b E3 + d&b E-Pacs
	4	LD SAT82AG
		diverse Aktivlautsprecher (Mackie, FBT, LD, ...)

Designation	Qty.	Type
Microphones		
HF-Mikrofone		32 channel Sennheiser Digital 6000 and 9000 series, microphones: DPA 4060 lavalier microphone or Sennheiser HSP 2-3 neckband microphone
	8	Sennheiser SK 5212-A
	24	SK6212 pocket transmitter
	8	Sennheiser SKM6000+MME865
condenser microphones	2	Audix SCX25A
	6	Haun MBUM630
	4	Microtech Gefell M297
	12	Microtech Gefell M300
	6	Microtech Gefell M930
	2	Microtech Gefell UMT 70S
	20	Neumann KM184
	2	Neumann TLM103
	4	Sennheiser AKH 8020
	3	Sennheiser e865
	22	SCHOEPS CCM 4
dynamic microphones	4	Shure SM58
	1	Shure BETA 57
	1	Shure BETA 58
	1	Shure BETA 56
	1	AKG D112
Miscellaneous		
stands	60	stands
FX	1	Lexicon PCM96
playback	2	Ableton Live

9.3.1. Signal flow

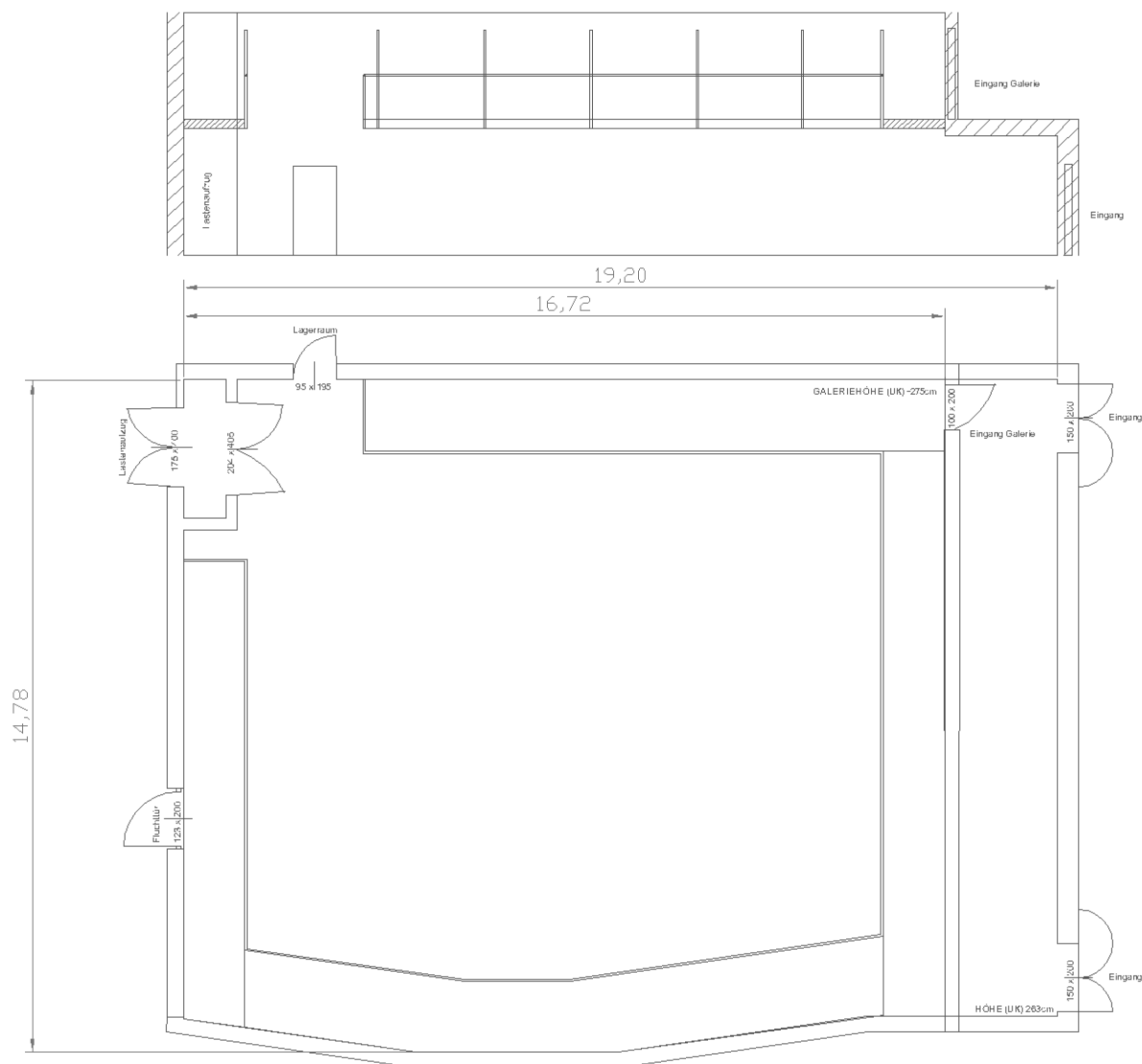
The signal inputs are organized in 8 DigiRack I/O Frames which are spread throughout the house in 4 different places. The signals are linked through two redundant Optocore networks. There are over 60 connection boxes for both audio and video signals in the stage area, the auditorium and the sound and light booths. All signals are linked through to central patch panels and the DigiRacks.

10. DRESSING ROOMS

 	Solo, Choir, Extras	Room	Location	Capacity	Seats for make up	Floor
Women	Solo	101	Stage Right	7	2	1st
		102		3	0	
Men	Solo	202	Stage Right	7	2	2nd
		203		4	0	
Women	Choir	302	Stage Right	12	1	3rd
		303		9	1	
Men	Choir	304	Stage Left	22	2	5th
Women	Extras	502	Stage Right	24	2	
Men	Extras	505	Stage Left	28	3	
		507 kinds dressing room		9	0	
Women & Men	Ballet	1 Men	Giraditrakt	7	5.places ballet- mask	2nd basement
		2 Men		5		
		3 Women		5		
		4 Women		5		
		5 Women		5		
		6 guests	-	5	5	

11. STUDIO STAGE OPERA

11.1. Studio Stage



Information:

Floor	Black dance floor
Area	280m ²
Lights	No daylight
Gallery	2,75m above ground level, Walking floor +2,98m, Width 1,5m
Maximum size for decorations	Height less than 2,75m Width=1,7m x Length=5,15m Heights over 2,75m: W=1,35m x L=5,15m x H=4,0m

11.2. Lighting

11.2.1. Lighting desk:

GrandMA2 OnPC Tourpack (*from mobile equipment*)

11.2.2. Lights:

Type	Wattage [W]	Qty.
Solaframe 750 Theatre	750W	4
VariLite VL 1000	1000W	6
Clay Paky Aleda K 10 LED	500W	12
Arri Fresnel	2000W	8
ETC S4 - 36°	750W	8

Sound

11.2.3. Mixer:

Behringer X32 Digital Desk / digital stagebox 32/8

11.2.4. Speaker System

Qty.	Type
4x	Powered Speakers QSC 10" 1"
2x	Powered Speakers QSC 12" 2"
2x	Powered Subwoofer Mackie SWA1801 Z

11.2.5. Wireless-System

Qty.	Type
	Sennheiser EM3032
	4-Channel wireless system
4x	Beltpack
4x	Handheld wireless sender

11.2.6. Players & Other

Qty.	Type
	CD-Player
	PC + Wavelab

11.2.7. Mobile

Qty.	Type
2x	Powered Speakers Mackie SA1532Z
2x	Powered Monitoring Mackie SRM 450

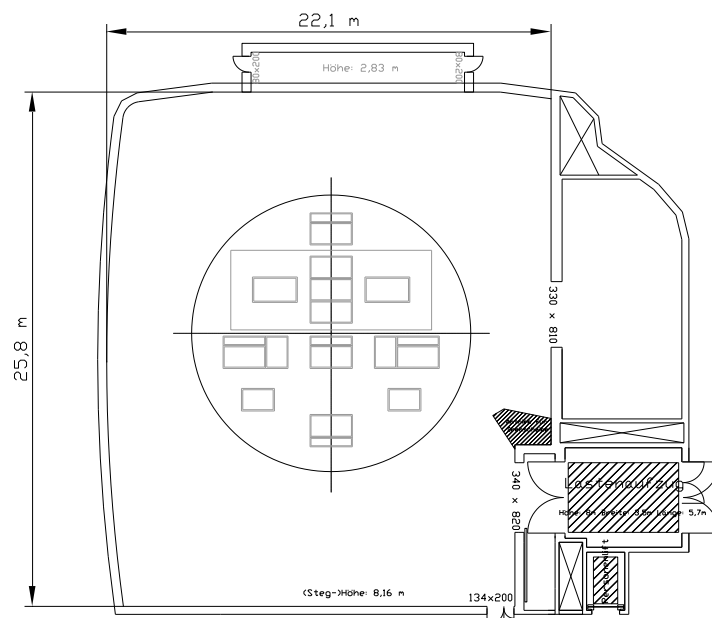
All additional equipment (i.e. cables, DI boxes, microphones, amps, effects, etc.) are also used in the Opera house and therefore availability is subject to change.

11.3. Video

There will always be at least one projector – fitted for the room size - available

12. REHEARSAL ROOMS

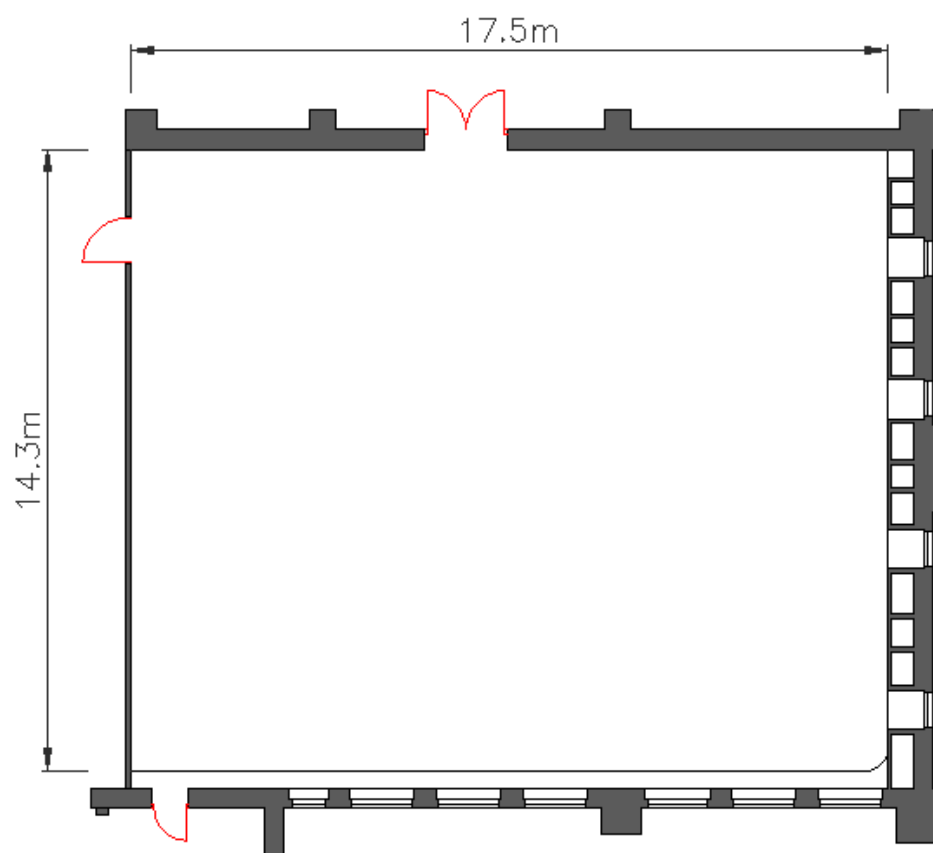
12.1. Rehearsal Stage Thalia



Information

Floor	White wooden floor
Area	Approx. 500m ²
Lights	No Daylight
Specials	The rehearsal stage is fitted with a fully functioning turntable, which has the same measurements as the turntable on the main stage. Movements of the turntable can be directly transferred to the main stage.
Maximum size for decorations	Width=3,0m x Length=5,15m x Height=8,15m

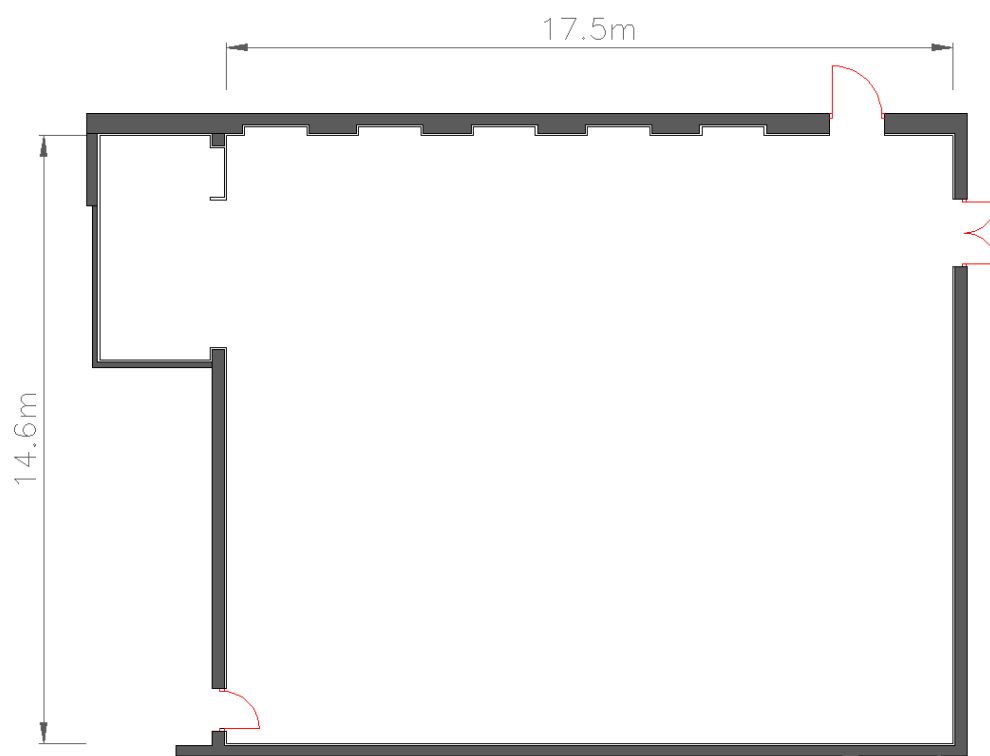
12.2. Rehearsal Stage “Malersaal”



Information

Floor	Black dance floor
Area	235m ²
Lights	Daylight
Specials	-
Maximum size for decorations	Width=1m Length=2,5m x Height 2,0m Weight maximum 50kg

12.3. Ballet room



Information

Floor	White dance floor
Area	255m ²
Light	Partly daylight
Specials	Mirrored walls on three sides Ballet bars on three sides
Maximum size for decorations	Width=1m Length=2,5m x Height 2,0m Weight maximum 50kg