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Stage

**Auditorium**

<table>
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<tr>
<th>balcony</th>
<th>dress circle</th>
<th>168 seats</th>
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</thead>
<tbody>
<tr>
<td>boxes</td>
<td>= lighting boxes</td>
<td></td>
</tr>
<tr>
<td>procenium boxes</td>
<td>40 seats</td>
<td></td>
</tr>
<tr>
<td>max.</td>
<td><strong>208 seats</strong></td>
<td></td>
</tr>
</tbody>
</table>

| stalls | rows A, B, C | 45 seats |
| --- | (A, B are on the orchestra platform) |
| rows 1 – 18 | = scenic entrance |
| boxes | 437 seats |
| max. | **482 seats** |
| total | **690 seats** |

All seats in the auditorium are removable one by one. The seats for the fire protection staff are located in the orchestra boxes and under the tower stage left.

**Measurements**

| orchestra platform | ca. 9,50m x 2,25m, range: -3,14m to ± 0 |
| stage height | 0,83m above auditorium level |
| golden portal (decoration portal) | ca. 9m x 5,50m |
| Technical portal (towers and bridge) | ca. 11m x 5,70m |
| proscenium | ca. 9m x 1,50m, with removable floor elements |
| stage size | ca. 12m x 13,50m |
| understage | - 3,14m |
| backstage | ca. 12m x 6,50m x 6,50m |
| sliding stage gates | 3,20m x 6,40m |
| goods lift (inside measurements) | 1,95m x 6,60m x 3,99m max. load: 10 000 kg |
| loading lift table (inner courtyard) | 2m x 4m, lift 1,34m max. load: 2 000 kg |
Fly system & understage

General information

- fly bars: 5 steel ropes each, precision steel pipe 50mm/5mm
- fly bars can be disconnected between their ropes
- computer controlled fly system by TTS (Theatertechnische Systeme Syke), requirement class 5
- main control panel on the left tower, two mobile panels available
- Grid grate: mesh 65/65 mm
  Grid area, max. load: 500 kp/m²

Fly system

Proscenium

- V 1  5 spot lines between golden portal and iron curtain (firecurtain)
  range: + 0,30m to 5,80m
  max. load: 50 kp/spot line
  speed: 0 – 0,3 m/s

- V 2  4-lines
  range: + 0,30m to 6,07m
  max. load: 250 kp
  speed: 0 – 0,3 m/s

- V 3  3-lines
  range: + 0,30m to 6,23m
  max. load: 250 kp
  speed: 0 – 0,3 m/s

- V 4  fly bar for lighting
  4-lines
  special profile with dimmer outlets
  range: + 0,30m to 6,17m,
  length 7,81 m
  max. load: 250 kp
  speed: 0 – 0,3 m/s

Curtain area

- „Hauptvorhang“
  counterweighted fly system
  length: 11,12m
  range: + 1,50m to 13,70m
  max. load: 300 kp

- „Schleier“
  automated fly system
  length: 11,12m
  range: +1,50m to 13,70m
  max. load: 500 kp
  speed: 0 – 1,0 m/s
- “Portalzug“
  counterweighted fly system
  length: 11,12m
  range: +1,50m to 13,70m
  max. load: 300 kp

- “Schall“
  automated fly system
  length of fly bar: 11,12m
  range: +1,50m to 13,70m
  max. load: 300 kp
  speed: 0 – 1,0m/s

**Bridge**
- lighting bridge
  range: +1,5m to 5,70m
  max. load: 2 000 kp, 125 kg/m²
  speed: 0 – 0,05m/s

- bridge hoist
  4 spot lines
  range: +0,30m to 6,00m
  max. load: 300 kp
  speed: 0 – 0,3m/s

**Stage**
- fly bars 1 + 18
  automated fly system
  length: 12,92m
  range: +0,30m to 16,80m
  max. load: 400 kp
  speed: 0 – 0,6m/s

- fly bars 2 - 17
  automated fly system, changeable to counterweigthed system
  length: 12,92m
  range: +0,30 to 16,80m
  max. load: 500 kp at 0 – 1m/s
  200 kp at 0 – 2m/s

- fly bars 19 + 38
  automated fly system
  length: 11,02m
  range: +0,30m to 16,80m
  max. load: 400 kp
  speed: 0 – 0,6m/s

- fly bars 20 - 28, 32 - 34, 36, 37
  automated fly system
  length: 11,02 m
  range: +0,30m to 16,80 m
  max. load: 500 kp at 0 –1m/s
  200 kp at 0 –2m/s

- fly bars 29 - 31, fly facility for lighting
  automated fly system
  3 point truss 500
  length: 11m
  range without deflector and luminaires
  +0,30m to 16,80m
Münchner Kammerspiele

Kammer 1

- fly bar 35, fly facility for loudspeakers
  max. load: 1 000 kp
  speed: 0 - 0,3m/s
  automated fly system
  2 point truss 500
  length: 2,40m each, located at pipe end
  range without speaker:
  +0,30m to 16,80m
  max. load: 500 kp
  speed: 0 - 0,3m/s

- Spot line system, PZ 1.1 - 1.5, ... 6.1 - 6.5
  max. load: 500 kp
  speed: 0 - 0,3m/s
  automated fly system
  6 horizontal tracks with
  5 movable spot lines per track
  range: +0,30m to 16,85m
  max. load: 200 kp
  speed: 0 – 1,0m/s

- Panorama fly facility, P 1 - 4
  max. load: 200 kp
  speed: 0 – 1m/s
  2 spot lines
  left and right in front of the galleries
  range: +0,30m to 17,00m

Backstage

- fly facilities K 1 - K 3
  max. load: 250 kp
  speed:
  10m/min (2 at a time)
  5m/min (4 at a time)
  automated fly bars
  length: 10,35m
  range: +0,30m to 6,20m
  max. load: 500 kp
  speed: 0 – 0,3m/s

Technical grid above auditorium

- 6 movable chain hoists (Chainmaster)
  max. load: 250 kp
  speed:
  10m/min (2 at a time)
  5m/min (4 at a time)

- “Kuppelzug”, fly facility for lighting outlets
  2 chain hoists, special provile with dimmer
  length: 5m
  range without luminaires:
  + 0,30m to 8,71m
  max. load: 500 kp
  speed: 5m/min

Technical grid above stage

- 16 movable chain hoists (Loadstar)
  range: +0,10m to 17,00m
  max. load: 500 kp
  speed: 8m/min
**Understage machinery**

**Procenium**
- orchestra platform with 4 Spiralifts
  - black stage floor
    - removable floor elements
    - 0,5m x 1m x 4,5cm
    - max. load: 500 kg/m²
    - max. point load: 350 kg
    - range: -3,14m to ± 0
    - speed: 0 - 0,1m/s (noisy!)

**Stage**
- black stage floor
  - removable floor elements
    - 0,5m x 2,2m x 8,5cm
    - max. load: 500 kg/m²
    - max. point load: 350 kg
  - deconstructable steel construction
  - 2 vertical elevators
    - platform: 1m x 1m
    - static load: 500 kg,
    - dynamic load: 150 kg
    - range: -2,50m to ± 0
    - lift: 2,30m
    - speed: 0 - 0,50m/s
  - hydraulic system
    - distributor with 6 connections
      - max. pressure: 130 bar
      - pump 1: 80 l/min
      - pump 2: 20 l/min
  - hydraulic cylinder, electronically regulated
    - static load: 2 000 kg,
    - dynamic load: 1 000 kg
    - lift: 2,50m
    - speed: 0 - 0,10m/s
  - connections for compressed air 0 – 10 bar
  - water connections available in unterstage
Lighting

Lighting desk
2 ETC EOS TI 4k, protocols: sACN, net3, artnet
3 Dimmerrooms with a total of:
293 dimmers 5kW, 283 dimmers 2,5kW and 96 non dimmable lines for HMI
Type Transtechnik FDX2000 with realtime feedback for dimmers and HMI circuits
24 dimmers 2,5kW AlexMX for turntable stage
96 2kW sinewave dimmers by Swisson
DMX and Ethernet connection
DMX-network configuration and DMX extension via LSS Mastergate/LSS Masterport
DMX-feed in via ETC Net3 4port Gateway
10 DMX Universes via Transtechnik E-Gate Max and LSS Masterport
Worklights control via Profibus and LSS Digiplus Touchpanel

Luminaires K1 (see basic lighting plot K1):
Tungsten and HMI fixtures at various wattages
Scrollers and shutters by Licht Technik Mag Max / Dark Vader / Mag Vader
Motorized units:
2 Arri 5kW tungsten fresnel in LT-motor yoke with LT-scroller- in the lighting fly bar 30
3 Arri 4kW HMI fresnel in LT-Motorbügel with LT-scroller- in lighting fly bar 30
4 ETC Revolution- in the auditorium
2 LED SolaFrameTheatre (Highend) – in the „dome lighting fly bar“.
5 LED SolaFrameTheatre (Highend)- in the lighting fly bar „V4“
4 LED SolaFrameTheatre (Highend) – in the auditorium left and right
2 Amptown HP Squarcle - in the auditorium left and right
2 MTS Teleskope TLM70 with 2 Spotlight ARC Svobodas - in the auditorium
2 Spotlight ARC Svoboda - in the lighting fly bar 30
3 ETC S4 Daylight Series2 - in the auditorium
4 Source Four CE LED Lustre+ LED profile spotlights - in the auditorium left and right

Special luminaires and controls:
3 Varilite VL4000
7 Varilite VL1100AS
15 LDDE NanoPix 3240-I-RGB WW LED
8 Martin RushPar2 Zoom LED
Sound

Front - PA
KS 6x T4  FOH
    1 x T4  Centercluster
    2x T4-W  incl. Amp/Controller
    2 x CPA 1  with Firmod, Delaycluster for the balcony
    2 x CPA 1  Front Fill for proscenium boxes
    6 x CPA 04  coaxial active small fill speaker for positions under the balcony and orchestra boxes

Surround system
KS 5x T3
    14x CL 208 incl. Amp/Controller, different shapes
    4 special edition speakers for up to 4 channel Surround sound in the balcony boxes
    4x CPA 1202 selfpowered variable line-speaker 12x2"
    1 x CPA 2 grid above auditorium
    2 separate subwoofer in the back of the auditorium

Fixed speakers on stage
KS 2x CPA 2
    2x CL 106
    2x CPA 08
    4x T10 long throw system 60/40° (2x upstage L/R movable, 2x technical grid above stage)
    4x T10-W subwoofer, (2x upstage L/R movable, 2x technical grid above stage)

Mobile speakers
KS CPA 1  active system, monitor version available
    CPA 2  active system, monitor version available
    3x CPA 11 active
    6x CPA W active
    6x CPA Sub active
    15x CL 106 with controlleramp CA4-U, max.12 separate channels
    6x CPA 04, active coax speakers
    8x C04, coax speaker, 100V
    Meyer 8 x MM4 incl. amp/controller (2 channels)

Mixing console
Salzbrenner C.A.S.-Mix 64 digital DSP supported 64x64 matrix mixing console, connected to Nexus via Madi in/out
The console is positioned on the balcony in the center of the auditorium.
Small mobile WLAN Remote with laptop, for controlling every parameter of the main console
Redundant Audio DSP

Audio Server
Raid 5, 180 GB, Mac OSX, connected to all computers of all stages and rehearsal stages.

Effects (FX)
Lexicon PCM 91
Lexicon PCM 300
Playout
3x CD-player Denon DN-961 FA
THS (Software-playout; 4x Stereo + 2x 8-track)
Ableton Live 6, 7, 8 and 9
If requested:
MD
DAT

Mikrophones
AKG SE 300 B with: AKG CK 91
AKG CK 93
AKG CK 98
1x AKG C 414 B-TL II
1x AKG C 562 BL PZM
3x Crown PCC 170
6x Crown PCC 160
2x Neumann U 87
1x Neumann U 89
2x Neumann U 47
1x Neumann KM 84
8x Shure SM 58
2x Shure SM 58 beta
1x Shure 55 SH
2x Shure PG 56
6x Shure Beta 91
2x Shure Beta 98
1x Sennheiser MD 441
2x Sennheiser E 604
2x Sennheiser MKH 416
various DI-boxes

Wireless / Mikroports
16 channel Sennheiser 5000 series receivers with:
16 Belt Packs SK 50 UHF
with DPA 4061 BM/FM capsules
2 Sennheiser SKM 5000 UHF handheld transmitters, 6 SKM 5200 with Neumann capsulel
2 channel InEar – Monitoring Sennheiser EW 300 G2
2 channel InEar – Monitoring Sennheiser EW 2000

Cabling
Nexus optic fibres with 2 mobile Base-devices, various connections on stage
Microphone, line, intercom, 100 Volt, speakon, optical fibre and power outlets on various patchpanels on stage.
(seperate powerline for audio, isolated transformator)
**Video**

**Projection**
- 1x Panasonic PT-RZ21, 21.000 7000 ANSI Lumens, Silent Case, fixed installation in auditorium
- 1x Panasonic PT-RZ970, 10.000 ANSI Lumens
- 2x Panasonic PT-RZ670, 6.000 ANSI Lumens
- 2x Panasonic PT-DZ6710, 6.000 ANSI Lumens

Various lenses and rigging frames for all projectors.
- AV Stumpfl Monoblox 5,0x3,0 - Opera white, black frame
- AV Stumpfl Monoblox 2,8x1,7m - Opera white or Optitrans
- AV Stumpfl Monoblox 3,8x2,2m - Opera white or Optitrans
- AV Stumpfl mobile screen 6x4/5x3,8/4x3m - Opera white, Optitrans (only 4x3m)

**Connections**
- BNC Patchbays (CVBS, SDI/HD-SDI possible depending on distance)
- HDMI/DVI over Lightware HDBaseT-Extender
- HDMI/DVI over Lightware LWL-Extender.
- Lightware 32x32 Video matrix with HDMI/DVI In and HDMI/DVI, fiber & HDBaseT Out
- AJA 16x16 Video matrix with 3G-SDI

**Playout**
No video-FOH inside the auditorium, control Room located stage left, at the height of the 2nd gallery with monitor image of stage manager’s CCTV camera and audio. Setting up a FOH inside the auditorium (“Loge 5”) is possible but needs to be planned in advance.
- Pandoras Box Quad Server Pro R3, V6, SSD, 8x 3G-SDI Inputs
- PC with Pandoras Box Manager, Widget Designer PRO* (w/ current Rev. each)
- MacMini (2014), Intel i7, OSX, 16GB RAM, Intel Iris 1536MB
- Qlab 4, Modul8, Isadora 2, MadMapper

**Mixer/Scaler**
- Analog Way Pulse LE PLS 200
- TVOne C2-2855

various analog matrices/distributors
digital and analog Converters
consumer/professional BD-, DVD- and VHS-Players

*Your equipment can be controlled by this setup in most cases.

**Surtitles**
LED-Panel in bar V4, 3m x 0,5m, Pixel Pitch 3.9 mm, Playout via Powerpoint from „Loge 5“
Stage management system

**Intercom**
Motorola GP 340
2-way wired intercom RTS
mobile and fixed intercom panels with 13 possible destinations

**Cuelights**
Cuelightmatrix with 32 channels, programmable for performances
Fixed Cuelights for light, sound, machinery and video

**Stage managing console**
Measurements: 1,39m x 1,67m x 0,81m (h x w x d)

**House announcement system**
Separate announcements for dressing rooms and technical staff
All house speakers can give out the live onstage sound.

**Video**
Colour-, B/W-zoom, as well as infrared CCTV - cameras available on all stages.
Various 14”-B/W and colour monitors available.