SWISS TIMING Service catalogue
FIS Ski Jumping World Cup Men 2022/2023
FIS Ski Flying World Cup 2022/2023

1. Equipment
Scoring System Ski Jumping
- UPS backed up[1] computer network (main and backup network)
- 5 judging terminals
- Speed measurement (main and backup speed measurement)
- FIS certified HD video distance measurement
- 3 Phases start time control system with time display and lights (red, yellow, green) at the start gate, in the Jury room and at the coaches platform
- Trainer scoreboard (BIB number, speed, distance, points)
- 7 wind measuring devices with analysing Software for the Jury, Display in Jury and at Coaches Stand and possible TV insert
- 10 wind measuring systems for Ski Flying World Cups
- Evaluation system with 2 laser printers for all lists required by FIS in English (printers located in the graphics container and at the judges tower)
- Pan, tilde, zoom camera including video replay system to observe starting gate
- Additional display at the starting gate to indicate current gate and change of gate
- Real time interfaces to the video distance measuring system, in run speed measurement, judges scores, wind speed measurement[2], start time control system, MIS and TV graphics
- Real time interface to live results of the FIS homepage (XML interface)
- Interface for PDF and XML result upload to FIS homepage
- Full screen graphic feed for local videoboards or data feed to local scoreboard if technical requirements are provided two months prior to the event
- Judges Replay for NH/LH based on landing pictures

HD TV Graphics System
For the production of online TV graphics for the world feed in English
- Start lists, intermediate and final results
- Information of the current jumper
- FIS World Cup ranking, special results (i.e. different scoring)
- Other languages upon request

"to beat" Laser Line
For the projection of reference mark line on the hill
- Live updated individual to beat line (green color)
- May be impacted in case of precipitation (snow, rain, fog) or direct sunlight
- The parallel use of virtual to beat line for TV insert is recommended in order to ensure top-level TV production quality

Media Information System (MIS) with 15 MIS terminals
Following information is displayed:
- General competition information (delays, rescheduling, cancellations)
- Live Start lists, intermediate results, final results, distances, points, score, speed
- World Cup Standing, Biographies and historical data of current season

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[1] Backup Power allows to finish the current athlete and to shut down computers to avoid permanent damage of computers.
[2] Due to certain weather conditions the anemometer might freeze. In this case gathering correct wind data is obstructed.

Locations:
- 1 MIS terminal for the Competition Management / Jury
- 1 MIS terminal for the announcer located in Judges tower or commentator cabins
- 1 MIS terminal at the start gate area / FIS
- 1 MIS terminal at the exit gate / FIS and athletes
- 1 MIS terminal at the exit gate / Coaches
- 1 MIS terminal at the open mixed zone
- 1 MIS terminal at the coaches platform
- 1 MIS terminal at the coaches stand on Judges Tower (if available)
- 2 MIS terminals TV Host OB Van (national and international feed)
- 5 MIS terminals for the TV commentator

All MIS terminals are assigned only to above locations. Please contact us if you wish to use them at different locations.

2. Staff
- Up to 10 sport experts for Ski Jumping World Cup
- Up to 12 sport experts for Ski Flying World Cup

3. Obligations of the organizer
The organizers shall provide the following:

Board, Lodging, Transport, Accreditation, Equipment Loading

The accommodation of the FIS service team has to be arranged in the same hotel as the FIS Jury / Competition Management. Accommodation in a different hotel has to be confirmed by SWISS TIMING.

- Accommodation (single rooms, international standard) with full board for all staff members up to 3 nights before 1st training until one night after event. If required, lunch has to be provided at the venue
- Accommodation for a separate pre installation team (4 persons), if the FIS Calendar schedule requires this (SWISS TIMING will inform the Organizers on time)
- On site shuttle service for all staff members on request
- parking permits close to SWISS TIMING working space, number of permits will be given close to event
- **Full Access** accreditation for all SWISS TIMING team members
- The OC is responsible for unloading and loading the equipment before and after the event if delivery is made by a forwarding agent. Details will be sent in good time. If you have any questions, please contact David.Krebs@swisstiming.com and Srdja.Boskovic@swisstiming.com.

Volunteers
6 volunteers are required for transport purposes, setup and dismantling. Date and time of their availability will be submitted by SWISS TIMING prior to the event. If not informed differently the following things need to be considered regarding this.

- Support by 6 volunteers for 2 hours on the first installation day and the dismantling day (about 1 hour after the last competitor)

Additional working hours incurred and any further delays resulting from this, which result from the non-provision of the requested volunteers, will be charged to the OC.

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Internet connection

The FIS World Cup organizer shall provide a separate and wired DSL connection (or LAN) and an additional international telephone line including telephone free-of-charge in the judges' tower and in the requested container. The lines need to be available from the arrival day on

In addition to that, an internet connection (DSL or LAN) has to be available on the working table at the location of the team captain's meeting in order to be able to email start lists.

- The following ports must be unblocked at the provided internet connection before arriving of the Team:
  - 1650-1653 livewc.fisski.com / live.fisski.com for live upload to FIS SJ → INBOUND and OUTBOUND
  - 1643 live upload to FIS NC SJ → INBOUND and OUTBOUND
  - 1753 live upload to FIS NC CC → INBOUND and OUTBOUND
  - UPD 500 (IKE) Connection VPN → INBOUND and OUTBOUND
  - UDP 4500 (IPSEC) VPN encryption → INBOUND and OUTBOUND
  - 3306 db.fisski.com connection to FIS Database → INBOUND and OUTBOUND
  - 11195 connection for MIS → INBOUND and OUTBOUND
  - 80 http / MIS → INBOUND and OUTBOUND
  - 443 https → INBOUND and OUTBOUND
  - 587 secured Mail → OUTBOUND
  - 143 secured Mail → INBOUND
  - UDP 1139 VPN → INBOUND and OUTBOUND

Do not provide IP range of 10.1.0.0 to 10.1.31.255 for internet connection

Radio Frequencies

The FIS World Cup organizer shall provide exclusive radio frequencies for the duration of the world cup event.

- For the competition week: valid permission for the use of wireless frequencies for on-site transmission -> tuning range (833 MHz - 928 MHz); requested frequency (874.0000, 879.0000); bandwidth (1 MHz); output power ERP (0.5W); antenna (2dBi); antenna over ground (2m); reason: collecting real time wind data; connection: ground - ground; number of devices: 10; Manufacturer: ANSolution ANY900 STIN
- For the competition week: valid permission for the use of radio frequencies: 160,090 MHz; 160,110 MHz; 160,130 MHz

Print Distribution
- The organizer is responsible for the print distribution service and to make sure that printed reports are distributed within the required time to the specific location

Technical Requirements

We advise the organizer to provide the required installations in conformity with international working safety standards. This includes access paths by stairs, climbing ropes, mountings, removable poles and safe access to video distance installations.

The local organizer shall be responsible for the provision of the following:

Container
- Office or double office container in the TV compound, max. distance to the OB Van 20m, information about container size will be send prior event
- Heated/air-conditioned and even with ground
- Minimum Dimensions Graphics Only: Length x Width x Height - 6m x 2.4m x 2.5m
- Minimum Dimensions Graphics and Data: Length x Width x Height - 6m x 4.8m x 2.5m
- Main power supply (3x 220V, 16 A, separately fused); official technical power which is used by TV
- 6 meters of table working space and a minimum of 5 chairs

Location of the team captains Meeting
- Working space of 2x1m including table and chair as well as power supply and internet

Judges Tower
- Power supply (220V, 16 A, separately fused) in Jury room
- Heated room for office use with a working space of about 5 x1 m including power supply (220V, 16 A, separately fused)
- Suitable location for Laser operator and Laser equipment (room with window to hill or 3m x 3m space at rooftop)
- DSL or LAN (cable) connection
- International telephone line including telephone

Jumping Hill – to be done before team arrival. An overview about required installations will be sent close to the event
- Installation of mounting fixtures for the speed measurement
- Installation of 7 removable poles and 14 mountings for the poles (diameter 4 - 5cm) for the wind measurement according to the FIS rules; height similar to the athletes' flight trajectory. These poles must be located on both sides at 10%, 30%, 45%, 60%, 75%, 90% and 105% of the k point. The positions change with the use of 10 measuring systems (see appendix)
- Power supply is mandatory at each wind measurement position (110 to 230V, 10A, separately fused) in order to ensure that up to 10 wind measurement systems can be used (see appendix)
- Installation of mounting fixtures for the start time control at the start, close to the lowest Start gates, according to FIS regulations, including power supply (220V, 16A)
- Power supply (220V, 10A) for the MIS at startgate area (aling with FIS control box)
- Power supply (220V, 10A) for the trainer scoreboard at the take off and at the coaches stand
- Provision of camera towers for the video distance measurement that need to comply with the industrial safety regulations including power supply (220V, 16A)
- A cable tray at the exit gate area at the point where athletes cross the gate
- Power supply (220V, 16 A, separately fused) at the exit gate area
- Provision of power supply (220 V, 16 A) in commentator cabins

4. Host broadcaster requirements

The local organizer is requested to inform the Host broadcaster about:

- SWISS TIMING graphics working place is located in the SWISS TIMING container in the TV compound close to the OB van
- Main power supply for the SWISS TIMING graphics (220V, 16 A, separately fused); same power circuit as the OB van
- Provision of a black burst signal from the OB van to the graphics location
- Provision of 10 HD BNC cables between OB Van and graphics location
- Provision of a broadcast feed and the necessary camera pictures to the graphics location
- Installation of an Intercom connection between OB van and the graphics operator in the graphics location
- Undelayed HD SDI program (BNC) shall be available in the Ski Jumping timing room in the judges tower for recording and reviewing purposes of the FIS

Following services must be provided by Host broadcaster for the virtual to beat line if ordered:
- Installation of a data cable (XLR or CAT5) from the virtual camera to the SWISS TIMING graphics location
- The distance from camera to OB van must not exceed 1000 meters
- "XLR / CAT5" is a shielded twisted pair copper cable with a female XLR connector on the camera side and a male connector on SWISS TIMING side
- If distances longer than 1000 meters, a single mode fibre optic cable is to provide
- Fibre optics is a single mode 9μ fibre optics cable pair (SC connector) on both ends
- The Host broadcaster is responsible for the provision of a broadcast camera
  Please forward the detailed lens specification
- SWISS TIMING will provide the modified tripod head (Vinten Vector 700)

5. Optional SWISS TIMING Services

Media Information System (MIS)
- Additional MIS terminals are available
- Additional MIS terminals need to be ordered in writing 1 month prior to the event
- If more than 10 MIS terminals are ordered, an additional SWISS TIMING technician is necessary
- **Price**: upon request

World Wide (Internet) Commentator Information System (wwMIS)
- Additional SWISS TIMING wwMIS logins are available
- Additional wwMIS logins need to be ordered in writing 2 weeks prior to the event
- **Price**: upon request

Virtual to beat line
- To ensure high-quality international TV signals, FIS strongly recommends the use of the virtual to beat line. This service is provided by SWISS TIMING and should be ordered and paid by the Host Broadcaster
- **Price:** upon request

Additional printers
- Additional printers are available
- Additional printers need to be ordered in writing 1 month prior to the event
- A position outside the stadium area is possible which will require an additional ISDN or DSL line
- **Price**: upon request

Additional TV graphics feeds for optional language
- Additional graphics systems need to be ordered in writing 1 month prior to the event, an additional SWISS TIMING technician is necessary.
- **Price:** upon request

Operated Online Graphics for interaction with stadium TV
- Additional graphics feed for a video wall is available
- Additional graphics feed needs to be ordered in writing 1 month prior to the event
- A volunteer (good computer knowledge and stress-resilient) or an additional SWISS TIMING technician is necessary
- **Price:** upon request

Additional wind measuring systems
- additional wind measuring systems are available upon request
- An additional SWISS TIMING technician is necessary if more then 2 are ordered
- Additional wind measuring systems need to be ordered at SWISS TIMING in writing 1 month prior to the event
- **Price:** upon request

Additional judges landing video loop system – recommended for Ski Flying competitions
- 1 additional and FIS requested video loop of athletes landing for ski flying competitions
- 5 monitors for the judges
- An additional SWISS TIMING technician is necessary
- Additional loop systems need to be ordered at SWISS TIMING in writing 1 month prior to the event
- **Price:** upon request

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Examples for Wind Poles and Power Installations (for 7 positions)	Examples for Wind Poles and Power Installations (for 10 positions)