

FSM

FORMULA STUDENT AUSTRIA

Auto X

Walter:
Reifen?

Auswertung 30% ab 14:00
Google 30% ab 16:20
Wetter.com 10%?

Quelle Regeln FSA
Regelungen checken

Code:
Abbrech
Wegfall

Start 13:30
Ende 16:00
Keine Verlängerung

Einkauf:
Cabanossi 10x
Wassers 10x6
Duct Tape

Schrauben M4x25 20x
bremsfl. 10x5.4







Team Captain's Handbook






Table of Contents



FSA 2021 Officials	4
Participating Teams	7
Event Schedule, Judging Schedule & Scrutineering Schedule	8
General Procedures	9
On-site Registration Process	9
Check-list for the "3G" proof for each team member	9
Check-list for On-site Registration	9
Parking at Red Bull Ring	10
Entering the Event Site / Set-up Say	10
Leaving the Event Site / Closing Day	10
Emergencies	10
Weather Conditions	11
Sunshine	11
Wind and Rain	11
Pits	11
Power Outlets Teampits	12
Bikes, Scooters, etc.	12
Services	13
Tire Changing	13
Event Control	13
Media Passes	14
Results & Announcements	14
Incline to the Dynamic Area	14
Smoking	14
Team Captain's Meeting	14
Scrutineering	15
Hoki's Guide for Scrutineering	15
Weighing, Tilt & Noise	16

Brake Test	16
Static Events	16
Cost and Design	16
Business Presentation	16
Dynamic Events	17
Driver Briefing	17
Engine Testing	17
Event Closing	17
Brake Lights	17
Working on the Cars Inside the Dynamic Area	17
Tire Protection	17
No Help Zone	17
Timing Transponders	17
Team Welcome / Award Ceremonies	18
Campsite	19
Campsite Regulations	19
Campsite Plan	20
The Area Around the Red Bull Ring	20

FSA 2021 Officials

























































	<p>Christoph Hirt Event Manager</p>
	<p>Ralph Moser Timing, IT</p>
	<p>Lukas Raschendorfer Head of Statics, Rules, International Relations</p>
	<p>Paul Mayr-Harting Head of Scrutineering, SES & IAD</p>

	<p>Eugen Hoffelner Head of Electric Scrutineering & ESF</p>
	<p>Manuel Seeböck Head of Dynamics</p>
	<p>Alexander Rauch Head of Dynamics</p>
	<p>Romana Mocnik Head of Media</p>
	<p>Thomas Gerstorfer Head Design Judge, Scoring</p>

	<p>Franz Rabel Head Business Judge</p>
	<p>Sebastian Frager Head of Cost</p>

Participating Teams

You will find the actual list of participating teams on <https://fsaustria.at/fsa-2021/registered-teams/>

Car#	Pit#	Country	Team
3	TENT L		Formula Student Team Weingarten
4	23		AGH Racing
6	28		Baltic Racing
E7	19		Campus Tirol Motorsport
9	14		EUSS Motorsport
10	TENT R		OS.Car Racing Team
E10	26		StarkStrom Augsburg
E11	28		Aristotle University Racing Team Electric
12	TENT L		Infinity Racing - Rennteam der Hochschule Kempten e.V.
E13	18		municH Motorsport
E14	16		BME Formula Racing Team (FSE)
18	TENT L		ARUSc
E20	19		HorsePower Hannover e.V.
21	27		joanneum racing graz
E21	TENT L		KA-Racing Electric
E23	24		Running Snail Racing Team
E24	TENT L		FS Team Tallinn Electric
E26	25		GreenTeam Uni Stuttgart
29	26		Rennteam Uni Stuttgart
E31	15		TUfast Racing Team e-Technology
33	TENT R		MAD Formula Team
E33	18		AMZ Racing Team
E34	20		Schanzer Racing Electric e.V.
35	TENT R		Road Arrow Combustion Team
E35	26		Team wob-racing.
37	19		MoRe Modena Racing
E41	19		TU Wien Racing
43	TENT R		E-Team Squadra Corse
E43	TENT R		Bodensee Racing Team
E44	22		Fast Forest
45	TENT L		Centaurus Racing Team
48	23		RUB Motorsport
49	24		High-Octane Motorsports e.V.
50	TENT R		Seagulls Luebeck
E53	22		TU Graz Racing Team
E54	TENT L		BCN eMotorsport
58	15		UPBracingTeam e.V.
E58	TENT R		Race UP Electric
E59	14		Elbflorace
E60	TENT L		Strohm + Söhne e.V.
E64	TENT L		Kaiserslautern Racing Team
69	17		HAWKS Racing e. V.
E69	27		CURE
70	TENT L		CAT-Racing
E76	23		Racetech Racing Team e.V.
77	22		Cerber MotorSport
78	27		Tampere Formula Student
E78	15		e-ignition Hamburg
79	29		Arrabona Racing Team
81	32		Ecurie Piston Sport Auto
85	23		Race UP Combustion
E85	TENT R		Formula Student Team Delft
94	26		Rennstall Esslingen
95	18		FSUPV Team
E96	TENT R		Superior Engineering FS Ljubljana
99	17		High Speed Karlsruhe
E99	21		Ecurie Aix Formula Student Team RWTH Aachen e.V.

General Procedures

On-site Registration Process

After arriving at FSA, the whole Team first has to visit the registration booth at the parking lot P1 in front of the Red Bull Ring and getting the COV-19 "3G" Proof done (further information in the FSA COV-19 document). After this the Teamcaptain has to come to the registration booth and check the camping wristbands and complete the team registration. Only afterward will you be allowed to enter the paddock area and the campsite. However, the campsite can be set up without the camping wristband until Sunday 3 pm - the COV-19 wristband is mandatory to come into the campsite and into the event site at any time.

To avoid a rush and waiting times on Monday morning, you can also register on Sunday 14:00-20:00 at the registration booth.

Camping wristbands are available on Sunday from 12:00 at the registration booth.

The registration has to be done by the team captain. Please do not bring more than two or three team members to the registration.

Check-list for the "3G" proof for each team member

- filled out and signed COVID19-participation sheet
- official "3G" with QR code
- Identity document

Check-list for On-site Registration

To streamline the registration process and ensure short waiting times for everyone, please only come to the registration booth if you have all of the following items ready:

- Cash for additional team members and the campsite fee, please have the exact amount ready if possible; large banknotes are appreciated (200€)
- The knowledge of who your Safety Responsible (E-Cars only) / Team Captain is
- The signed liability waiver

If you do not have these entire things ready, you will have to re-queue (no shortcuts). So please be prepared!

At the end of the registration process, you will get the following things among others. You will also be asked to sign for them, so please check if you got all of them.

- Vehicle pass for a campsite (1 pcs)
- Campsite wristbands (please count them!)
- Team member badges + covers + lanyards
- Invoice
- ESO Sticker for Badge
- Team Captain Sticker or Badge
- Scrutineering Sheet
- Event T-shirts

- 4 Dynamic “pass” safety vests
- 2 Press vests
- Garbage bags
- Poster & FSA magazine
- FSA timetable helper guide folded A6

Parking at Red Bull Ring

No parking for any vehicle is available at the event site. Please use the gravel car park at the entrance road of Red Bull Ring for parking. This parking space is free of charge and can be used for any number of vehicles.

Entering the Event Site / Set-up Say

On Monday you will be able to enter the event site with your truck and unload your race car and your equipment. Each team gets assigned a time slot, based on the results of this year's event registration quiz, during which you will be able to enter the event site. At the end of your time slot, your truck and any other vehicles have to leave the event site.

The official entrance list will be published on <https://fsaustria.at/fsa-2021/rules-2/>

Please queue up at the gravel parking lot and do not proceed to the event site until you are given the OK by an FSA official.

If two teams arrive with / share the same vehicle (e.g. universities attending with both combustion and electric team), both teams will be allowed to enter the event site during the earlier slot.

If you miss your time slot or are not able to finish unloading in time, get in touch with an FSA official.

Leaving the Event Site / Closing Day

After the endurance event, cars are locked up in parc fermé. As soon as your car is cleared to leave parc fermé, have two hours to pack up your equipment and leave the pit. Your team truck may enter the event site as soon as your car is released from parc fermé.

As soon as your pit is clear, please inform the event control @ the helpdesk, as an FSA official will need to check your pit.

In any case, all pits must be cleared and clean by 18:30.

We will try to start the award ceremony at the campsite as punctually as possible – so please start packing up as early as possible to help us in this endeavor.

Emergencies

In case of injuries, please go to the ambulance stationed at the event site. The location of the ambulance is marked on the site plan.

On Wednesday and Thursday, the ambulance is situated in the dynamic area.

For off-site accidents, call the European emergency number **112**.

For COV-19 related issues follow the instructions in the FSA COV-19 document

Weather Conditions

Red Bull Ring in mid-summer can bring any weather conditions. By experience, we recommend the following actions:

Sunshine

!!! Don't forget to drink a lot of water !!!

Please equip yourselves with sufficient sun protection (sun cream, sunglasses, sun hat).

Unfortunately, wasps also enjoy the sunny weather. Fly swats to prevent and cooling gels to cure wasp stings are recommended.

Wind and Rain

Wind and rain tend to be very intense in this region. Remember to secure tents at the campsite accordingly. Personal rain equipment (jackets, umbrellas, etc.) is strongly recommended.

Pits

The Teampits are splitted up into those in the Red Bull Ring Building and those in the extra tents.

After you enter the paddock area with your team vehicle, please follow the instructions of the Pit Marshalls about vehicle parking.

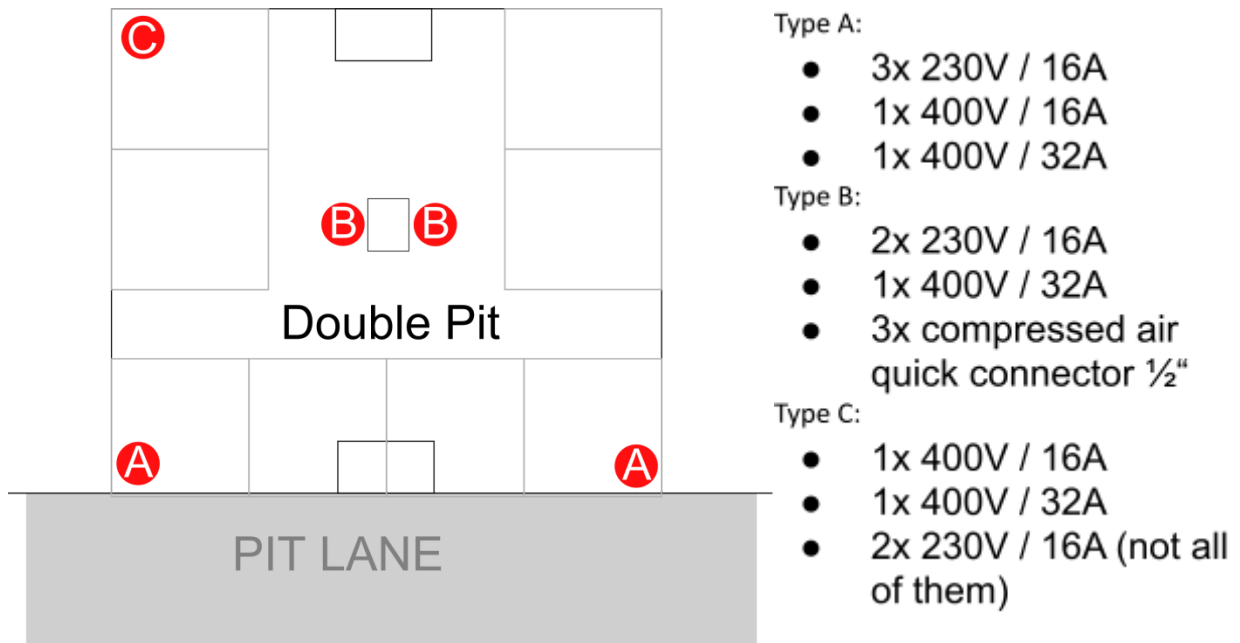
You can identify your pit either by the plan in this document or the sign with your team name above it. The doors to the pit lane must always remain closed – breaking this rule will lead to immediate penalties up to disqualification.

Usage of tools that are noisy or represent a fire hazard (angle grinder, welder, ...) is prohibited. Please work outside the pits at the mechanical tool area. Repeat offenders will be penalized.

Power Outlets Teampits

Inside Red Bull Ring

In the pits, there are numerous power outlets of different types. The plan below will give you a rough idea of the type and position of the outlets, so that you can bring matching adapters.



Inside the Tents

There will be provided several power outlets with 230V / 16A in the pits.

Bikes, Scooters, etc.

We understand the need for quick personal transport on and around the event site – therefore bikes, scooters, etc. are NOT forbidden.

However, there are some rules so that we can continue to make this concession:

- Drive responsibly, do not endanger or scare any people
- If your vehicle is very noisy (IC engine), do not operate it during the "no engine running" times.

Services

Tire Changing

The tire changing area is located in the scrutineering area near the tilt test. Please ask an Official at the scrutineering area for access. You will have to operate the tire changing machine on your own, FSA will provide no help.

Event Control

The Event control is restricted to FSA officials, any requests to the officials shall be done via the “Help Desk”



Dynamic Passes/ Safety Vests

The safety vest is your dynamic passes. You will NOT need to return them at the end of the event.

The dynamic passes are needed to enter

- all dynamic areas
- the scrutineering area
- the charging tents (electric teams)

Media Passes

Two media passes will be handed to you during registration. You will NOT need to return them at the end of the event.

Results & Announcements

Results and Announcements will be posted to the website <https://fsaustria2021.slack.com>.

Incline to the Dynamic Area

The incline to the dynamic area is quite steep – so make sure that you have a driver properly seated in the car so that he is able to brake.

Like on the rest of the site it is only allowed to move the car at a walking pace.

Smoking

Smoking is only allowed next to the provided ashtrays on the site.

Team Captain's Meeting

As in previous years, we will again host a meeting between the event officials and team representatives to gather feedback and discuss the event and Formula Student in general. Please check the event schedule for time and place.

To increase the quality of the discussion, please make up your mind (e.g. discussing it with your teams' expert) about the following topics:

- What do you like/dislike about this event – how can it be improved?
- Rules Related topics
- Documents: They take a lot of time to make write and to review; do you feel something needs to change here?
- Did you have any trouble with diverging rulings between the events? A allows it, B not?
- Anything else you want to bring to our attention.

Scrutineering

Hoki's Guide for Scrutineering

As always, this year's edition of Formula Student Austria will start with scrutineering. To make the whole process as efficient as possible and get all cars inspected as soon as possible here is some advice about the process. Please make sure you are on time where you are expected to be and to bring everything which is necessary to avoid unnecessary delays.

You can download a sample of the scrutineering sheet on our homepage. Please try to prepare yourselves as well as possible with that in hand, maybe even do a test-scrutineering before the event with older or former team members. Your actual inspection sheet will be handed to you at registration, you must have it ready for all stages of scrutineering!

Scrutineering will start on Monday at 10 am. The first 14 teams are asked to come to the scrutineering pits on time to make sure there is no delay (6 teams for mech scrutineering, 4 teams for battery scrutineering and 6 teams for E-Scrutineering). If you miss your slot you will be set back to the end of the scrutineering order! Electric cars must pass E-scrutineering first. Electric cars that pass E-Scrutineering will get their designated time slot for mechanical scrutineering or if that slot is already in the past, they will get the next free slot.

For the inspection, you have to bring all driver's equipment you want to use, all drivers with their driving licenses, all tires and rims, your push bar and quick jack device including the fire extinguishers, and some tools to be able to remove covers, wheels, etc. quickly if scrutineers ask you to do so. You will also have to present your IAD and SES test specimens and have these documents and all the communication around them ready (digital is fine, no need to print everything). In case you need to fix something quickly, also have some various materials ready like lockwire, tape or zip-ties.

The inspection will start with the check of your driver equipment and the egress tests in front of the scrutineering pits (all drivers have to do the egress test before they are allowed to drive). After the egress test and a check of their driver's license, the driver will be issued a "driver" wristband. After this, you will be asked to come to the next free scrutineering pit where the inspection will take place.

There are only four team members allowed in the scrutineering pits at the same time! It is, of course, possible to change team members during scrutineering.

If you don't pass the scrutineering on the first try, you have to take your car back to your pit and fix the issues which were pointed out by your scrutineers. As soon as you think everything is ok, come back to the scrutineering pits. Only small issues can be fixed quickly during the Scrutineering. Inform the scrutineer you have been with that you are ready for re-scrutineering. The re-inspection will always be done by the scrutineer who inspected the car or by the chief scrutineer if he/she should not be available.

Last but not least: Scrutineers don't like discussions! Be aware that you might just make things worse by not accepting that you need to change something ;-)

Weighing, Tilt & Noise

To make sure that the car is in the ready-to-run configuration (fueled up!) for the official weighing at the tilt table, you will be required to do the noise test (C-car only) immediately after the tilt test. Also, you need to mount the tire & rim combination that you intend to run in dry conditions. If you are not able to do the noise test (no fuel, missing parts, etc.), you will be required to re-do tilt & weighing before the next attempt.

Brake Test

The max number of attempts per run is 3. After that, you will have to re-queue for the brake test.

Static Events

Cost and Design

The Schedule for Cost and Design has been made so that

- Design & Cost are back-to-back (with very few exceptions) so you have more continuous time to tackle scrutineering
- You do not have to leave the judging Bay between Cost and Design
- Teams from the same university are in the same time slot to avoid “leaking” expertise
- You have 1-hour time slot before and after your Design/Cost event to use the forklift to bring your car up/down from the Design/Cost area. Please queue up early so that you don't get in any trouble at the forklift.

To be more consistent and efficient, the judging will be started/stopped by an external audio signal (horn), so be sure to be there on time.

Business Presentation

The Business presentation rooms are all near the event control. Please also make sure to bring a device capable of VGA and HDMI and consider a spare laptop, just to be on the safe side. On Tuesday morning and noon, the Business presentation rooms will be open for equipment testing for the morning and afternoon sessions respectively.

Dynamic Events

Driver Briefing

There will be no on-site driver briefings. Instead, a video with all instructions will be provided at <https://fsaustria.at/fsa-2021/rules/>. Also, any dynamic event-related information (Running order, Course layout, etc) will be published at <https://fsaustria2021.slack.com>

Engine Testing

If you need to run your engine, you can do that next to the practice area. The driven wheels must be jacked up and the driver must wear full safety gear.

Event Closing

The Events will terminate at the time indicated in the schedule unless announced otherwise.

No cars may run after the official end of the event, so please be sure to queue on time!

Brake Lights

Please note that a non-functioning brake light (never/always on) is considered a safety issue and that a car with problems may be black-flagged during the endurance.

Working on the Cars Inside the Dynamic Area

Working on the car is not allowed in the lanes leading up to the starting line of any dynamic event. If you need to adjust your wings/pedals etc. between the runs, you must leave the lane and go back to the staging area (the area where you can warm up your engine, etc.)

Tire Protection

Inside the dynamic area, no tire protection is allowed. It must be taken off at the entrance to the warm-up area and may only be re-applied when leaving the dynamic area.

No Help Zone

Using external batteries to start the car is acceptable inside the dynamic Area but is prohibited as soon as the car has crossed the "no help zone" line. If you encounter problems preventing you from running after crossing the line, the run counts as DNF. The position of the no help zone will be announced in the driver briefings and is visually indicated.

Timing Transponders

Please remove all UHF-Band transponders (especially those from FSG) from your car before the event.

If you have no use for your used FSG Transponders, bring them to the FSA event control, so they can have a second life as FSA transponder ;-)

Team Welcome / Award Ceremonies

Team Welcome is online-only, please check the schedule for the time and <https://fsaustria2021.slack.com> for the link to the stream.

Award ceremonies 1 & 2 are restricted to two members per team to receive the awards. The awardcermony will be held in the Design/cost area. We will provide a live stream, please check <https://fsaustria2021.slack.com> for the link.

There is no Wifi at the campsite, please use your own data connection. (check [The Area Around the Red Bull Ring](#) for further information) Mobile Internet in Austria is cheap and you will get a prepaid card at for example: Hofer or Lidl.

Campsite

Please conform to the camping rules stated also in this document. Misbehavior and problems with the neighbors and law enforcement could have serious implications for FSA's future. Disregarding the camping rules will therefore be counted as "unsportsmanlike behavior" and penalized accordingly.

Campsite Regulations

1. The night hours are from 10 pm to 6 am. During this time, all activities which are likely to disturb night sleep are strictly prohibited.
2. The campsite may be entered only after registration and payment, except on Sunday until 1 pm.
You are required to wear the provided bracelets during the whole stay on the campground.
3. It's not allowed to dig holes or channels into the ground.
4. Open fire, such as bonfires and pyrotechnics are not allowed.
5. Damage to the campsite grounds, caused e.g. by tents, caravans, trailers or group activities are charged with monetary fines.
6. Keep the campsite clean. Please collect the waste in trash bags.
7. Please keep the sanitary installations clean.
8. Defined areas such as streets must not be used for camping. Teams may set up their tents and equipment in the designated areas; defined/marked areas such as streets must remain clear at all times.
9. The campsite closes on Friday, 12 am (noon).
10. Traffic rules (Straßenverkehrsordnung, StVO) apply to the whole campsite. The speed limit is 10 km/h.
11. Parking next to the campsite is only permitted for vehicles with a maximum permissible weight of 7.5 metric tons. (including trailers and semi-trailers)
12. To support your logistics, a maximum of two vehicles may enter or leave the campsite repeatedly during the event. Only cars with the special sticker handed out at on-site registration can pass the campsite entrance. The stickers are self-destructive labels and can only be applied to a vehicle once; interchanging of these taxi vehicles is not permitted.
13. Caravans, trailers, and other vehicles which will remain on the campsite may enter the area on setup day and must not be moved throughout the course of the event.
14. In any case, vehicles with a permissible maximum weight, including any trailer or semi-trailer, exceeding 7.5 tonnes are strictly forbidden to enter the campsite at any time. These vehicles must be parked at the designated spot at Red Bull Ring (see diagram above).
15. Parking on country roads (especially L544 - next to the campsite) is strictly prohibited.
16. Drones or other flying equipment are strictly prohibited both on the campsite as well as on the event grounds.
17. FSA may expel you from the campsite or charge your team with penalty points and/or monetary fines after significant or repeated violations of the camping regulations. In that case, you are not entitled to any refunds.

Campsite Plan



The Area Around the Red Bull Ring

If you visit Austria or even Europe for the first time, the following hints and tips might be interesting for you. (information is spiced up with fun facts)

1. Austria is Called the “Heart of Europe”

It's not an island, it's really located in the center of Europe; the -al- (i.e. AustrALia) makes the difference.

2. The Official Language in Austria is German

In some regions (including also Spielberg where the competition takes place), it may sound a little different. That's called 'Mundart', 'Dialekt' or 'Steirisch' or simply 'higher level German'. The official language at FSA is English, which most people at stores and everybody at Red Bull Ring speak.

3. We Use the Metric System and only the Metric System

Hint for visitors from Germany:

- 100 g = 10 dag
- Sahne = Schlagobers
- Apfelschorle = Apfelsaft g'spritzt
- Tüte = Sackerl
- Brötchen = Semmel oder Weckerl
- Weinschorle = Spritzer
- Wiener Würstchen = Frankfurter

5. We Use 230V AC with Type C and Type F Power Plugs. Make Sure to Bring Adapters

Type C: <https://en.wikipedia.org/wiki/Europlug>

Type F: <https://en.wikipedia.org/wiki/Schuko>

6. Water in Austria is one of the Best in the World

You can drink water directly from the pipe unless it's explicitly prohibited ("Kein Trinkwasser").

7. Credit Card vs. Cash

Paying cash is best practice in Austria. Euro is the currency to use, USD or any other currency will not be accepted.

Big stores and hotels also accept major credit cards.

Maestro / Cirrus will work at all major retail stores; V-pay may work as well.

8. Emergency Calls (free of charge)

- European emergency call: 112
- Fire brigade: 122
- Police: 133
- Ambulance: 144

9. Internet Access / Mobile Phone

Apart from the cheap roaming options inside the EU (as of June 2017), there are free WiFi hotspots available at FSA. However, you might consider getting yourself a mobile internet SIM card, to use at the campsite or such. We recommend getting a HoT package, available at Hofer (<https://www.hot.at/tarife>).

10. Shops / Points of Interest

ATMs

are called '**Bankomat**' and can be found **near Red Bull Ring and at the Red Bull Ring**. Watch out for the blue-green sign.



Gas Station

Shell
Hauptstraße 2
8740 Zeltweg

Steiermärkische Bank und Sparkasse
SB-Zone
Red-Bull-Ring-Straße 1
8724 Spielberg bei Knittelfeld
Distance - directly at the Red Bull Ring

Steiermärkische Bank und Sparkasse
Marktpassage 1
8724 Spielberg bei Knittelfeld
Distance 3,4 km

Raiffeisenbank Knittelfeld
8724 Spielberg bei Knittelfeld
Distance 3,3 km

Car Spare Parts & Fluids

Forstinger
Ingeringweg 2
8720 Knittelfeld
Distance 4,0 km

Hardware Store

OBI Bau- u Heimwerkermärkte
Arena am Waldfeld 31
8753 Fohnsdorf
Distance 7,8 km

Office Stationery (Paper etc)

Pagro Diskont
Wienerstrasse 23
8720 Knittelfeld
Distance 6km

Pharmacy

Marktpassage 6
8724 Spielberg
Mo - Fr 8:00 - 12:30, 14:30 - 18:00
Sa 08:00 - 12:00