



HMP



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Hydraulic Skid Plate



HMP... more safety.

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- HMP is a company with a vast experience in conceptual design, planning and constructing RSTCs incl. all needed technical components such as irrigation, controls, water obstacles, dry obstacles, speed measurement systems, hydraulic skid plates etc.
- HMP via its network is in the position to establish the right contacts for topics like operational concepts, training programs, instructor education, business case planning, marketing activities and much more. HMP can connect you with specialists who have almost 30 years of experience in their field of expertise.
- HMP is your specialist for:
 - looking for an optimal sliding surface (epoxy- or bitumen based
 - new: the LLSC – “Long-Life-Slide-Coating”)
 - cost of ownership optimized and maintenance friendly irrigation systems
 - maintenance-/service of all kind, also for foreign-/competitor systems (incl. refurbishment of out dated technical equipment)



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- Through our contacts to many training providers and also directly to instructors we have been able to further develop the hydraulic skid plate. In paying close attention to cost of ownership and reduced maintenance the skid plate was re-engineered. Now we are able to offer a skid plate for passenger cars and one suitable for trucks. The outcome you will experience in this presentation!
- Visit us at www.hmp-bau.com and get information about our product portfolio, but also about our satisfied customers like Audi, Volvo, Red Bull and many more.



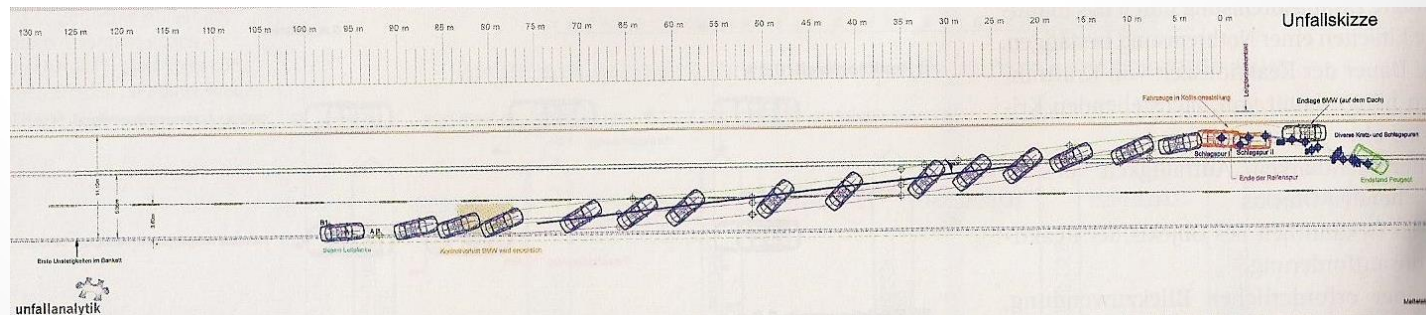
HMP... good to know.

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- Skid accidents are the number one casualty cause for so called self-inflicted accidents.
- Over 60% of out-of-town accidents and even almost 30% of inner-city accidents are caused by „skidding“. Skid accidents very often end tragically, a side impact with an obstacle subsequently causes fatal consequences for the passengers.
- Even in the digital age where vehicles are featured with automated dynamic performance capabilities (ESP, DSC, PSM etc.) skid caused accidents are not uncommon (see picture). Despite ESP the driver remains the most important safety feature, fast and correct reaction will be properly trained to be able to act precise and cool in case of an emergency.
- Source: ZVS 3/2013 – Accident analytics



HMP... good to know.

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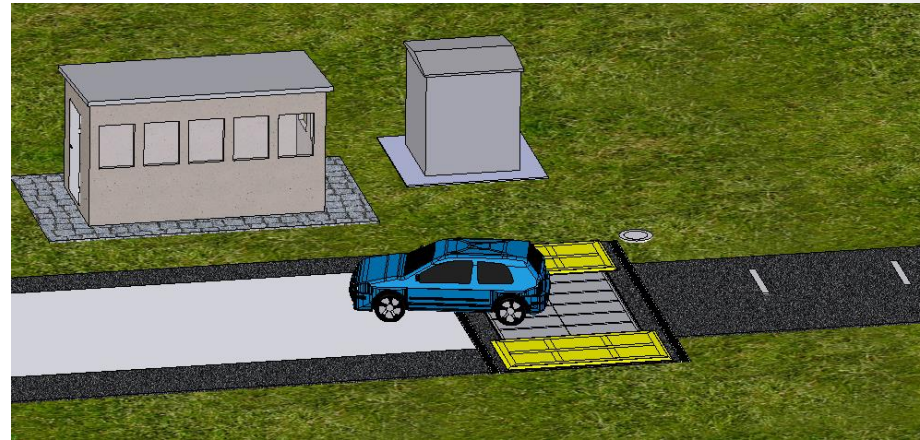
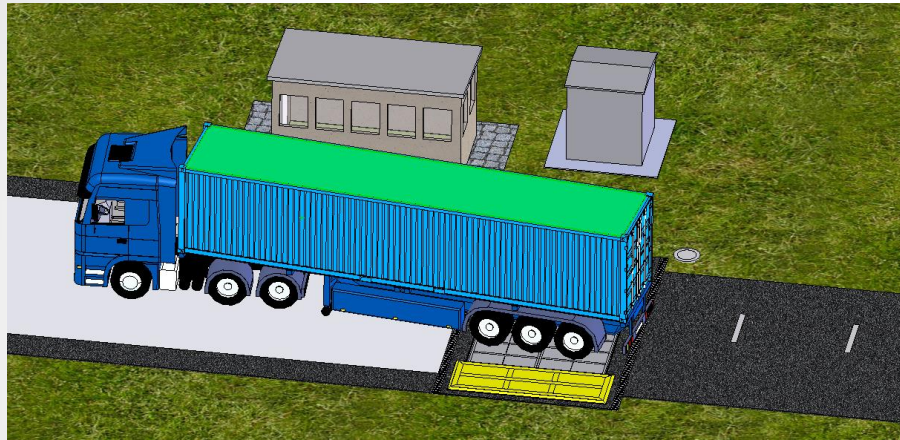


- To catch a car in a skid is a fundamental part of road safety driver training ever since. In the beginning the car was thrown in a skid by jerking on the steering wheel or simply by using the emergency brake. It was the driver who initiated the skid.
- Since approx. 30 years so called skid plates are used. In the beginning it was a rotating disk and since 1994 a hydraulic skid plate. These skid plates possess the capability to bring the car in a skid, suddenly and unexpectedly. The skid intensity is adjustable. The driver does not know how intense and foremost: In which direction the car will skid. Fast reaction is needed to avoid losing control. Thanks to skid plates a much more effective road safety driver training is possible.
- Hydraulic skid plates are, since their introduction to the RSTC Nuerburgring, a fundamental part and an important selling point of a modern Training Center.
- We have further improved hydraulic skid plates with the clear target of longevity, low cost of ownership, service friendliness and low maintenance cost. This all comes combined with a fair purchase price and especially low construction cost.

HMP... first impression.

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HMP hydraulic skid plates come in 2 sizes:

- Model Car: for vehicles up to max. 3t axle load
- Model Truck (Commercial Vehicle): for vehicles up to max. 10t axle load;

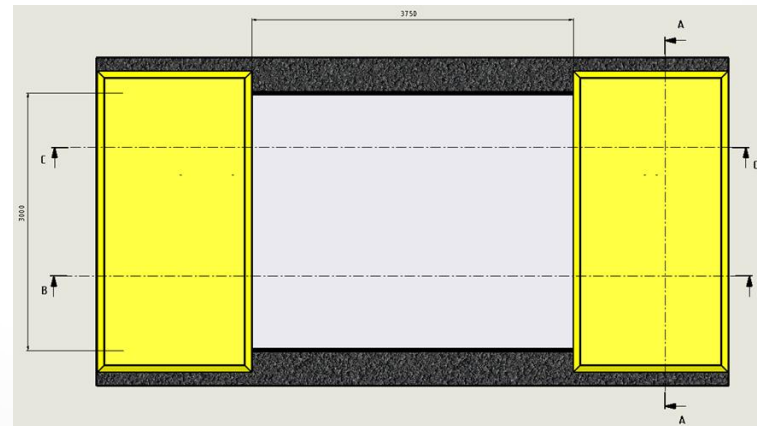
HMP... the facts.



Improve proven, make impractical practical, advantageous purchase, low maintenance and longevity – this was the goal!

- **Overview of the most significance – the Car skid plate**

- Max. Axle Load: 3 t
- Pass Through Width: 3,75 m
- Lengths of Plate: 3,00 m
- Max. Lateral Offset (Stroke): 900 mm
- Max. Lateral g: 1,6 g





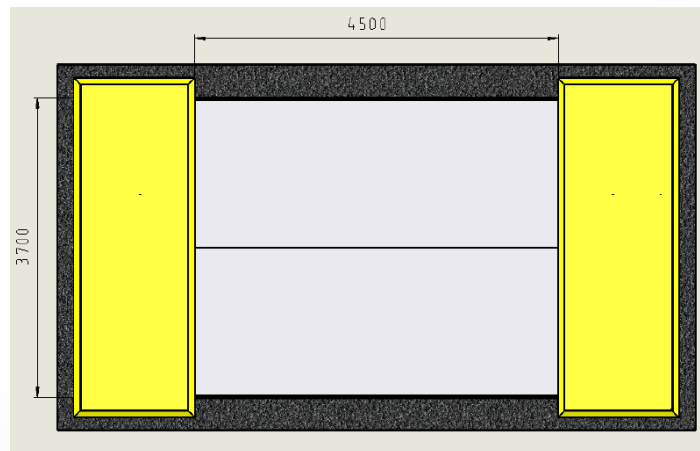
HMP... the facts.

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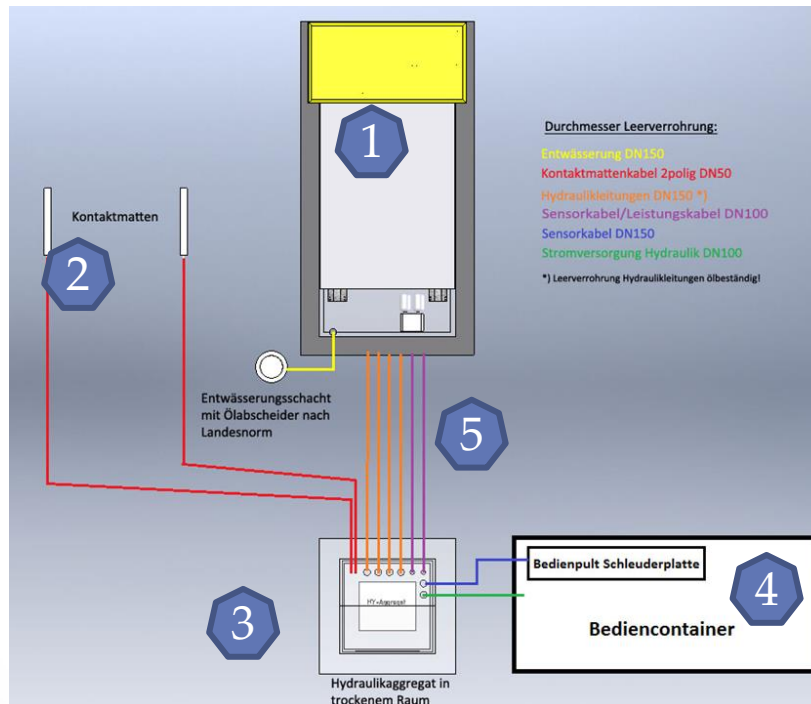
Improve proven, make impractical practical, advantageous purchase, low maintenance and longevity – this was the goal!

- **Overview of the most significance – the Truck skid plate**
- Max. Axle Load: 10 t
- Pass Through Width: 4,50 m
- Lengths of Plate: 3,70 m
- Max. Lateral Offset (Stroke): 900 mm
- Max. Lateral g: 1,3 g





HMP... the facts.



The System Set-up:

1. Skid plate
2. Contacts for vehicle speed measurement
3. Hydraulic plant
4. Control panel for instructors
5. Hydraulic & control lines between hydraulic plant and skid plate

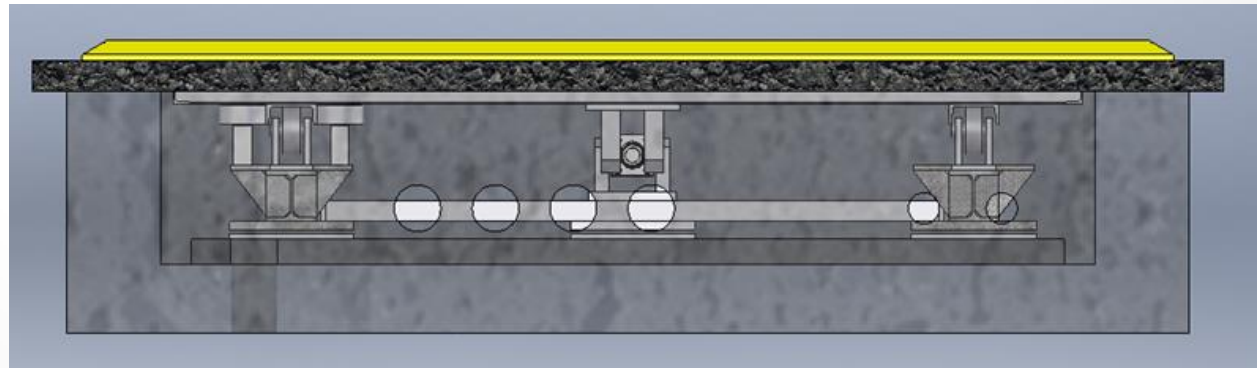


HMP... the facts.

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- **NEW:** Our skid plate does not need a collection sag, only a concrete pan is needed to accommodate the skid plate, this saves money!
- Low depth of the skid plate (approx. 60 cm = 23 inches) results in considerable reduction of construction costs (concrete, steel) and a greatly reduced installation effort. These advantages are applicable for new installations as well as for retrofitting it into an existing Training Center.
- Significantly reduced shipping and handling cost.
- All components are fully galvanized to protect the system against corrosion.



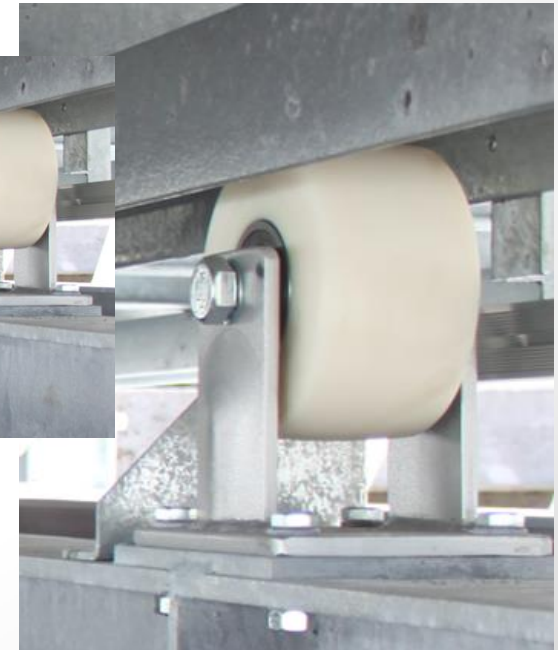
HMP... the facts.

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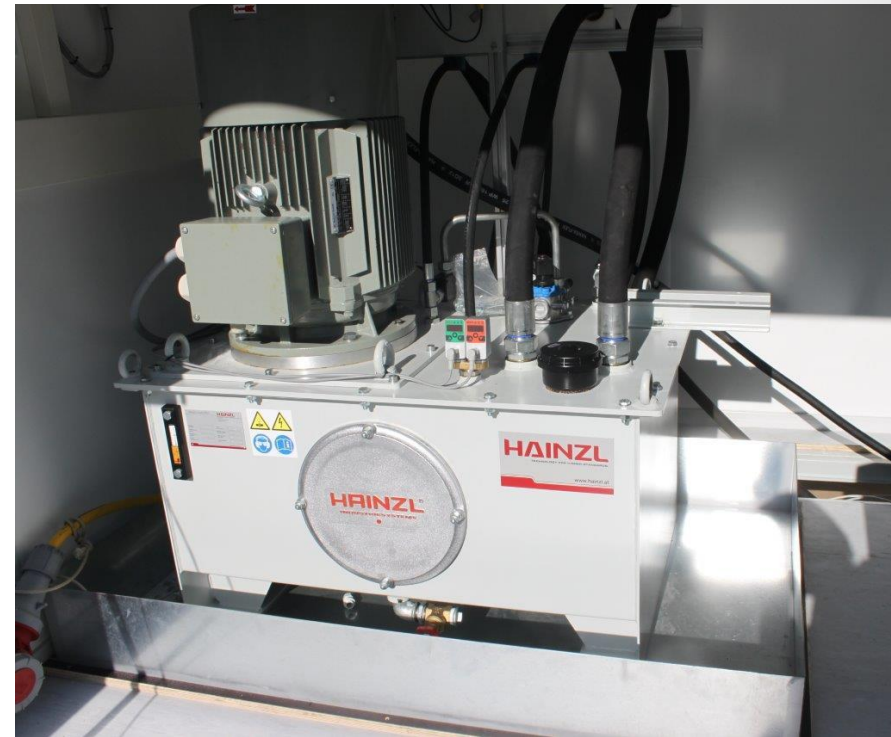
- Only necessary components are located under the cover plate. These components are practically maintenance-free and foremost protected against corrosion.
- E.g. the moveable part of the cover plate is suspended on roller blocks and designed in a way that dirt build-up is virtually impossible. This results in lesser maintenance effort, hence reduced cost, no need to lubricate any of the moving parts subsequently no hazardous waste.



HMP... the facts.

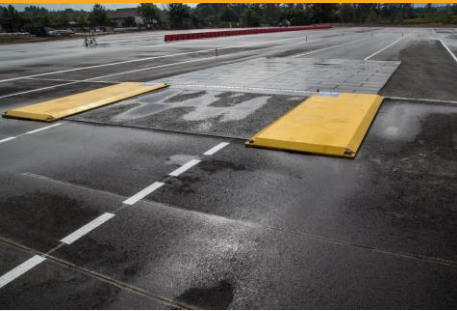


- The hydraulic plant is mounted on the side next to the skid plate (e.g. enclosure is optional – see picture below)
- This design allows for a compact system and at the same time it is protected against the elements and dirt.
- All components are easy accessible and easy to maintain. An ongoing training does not have to be interrupted.
- 90% of all required maintenance can be done by oneself (after instruction course)

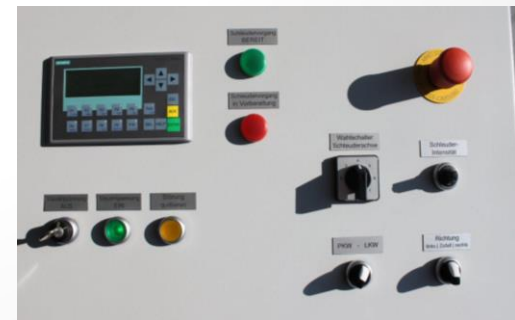
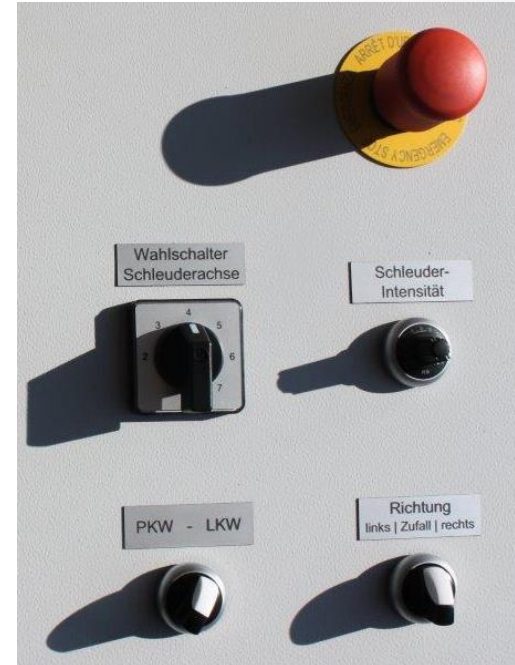




HMP... the facts.



- The control panel is a stand-alone part and can be installed in the instructor shelter.
- Simple and fast operation, vehicle pass over speed display incl.
- The following options are selectable by the instructor (depending on the model):
 - Car or truck
 - Skid intensity
 - Skid direction (le/ri/random)
 - For trucks: On which axle the skid plate activates.



HMP... Your Advantages.

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- Improved basic design, reduced freight-, construction- and maintenance- cost.
- Improved technics: Simplification and reduction of maintenance - thus reduced cost. Elimination for lubrication – thus reduced operating cost, no hazardous material/waste. Improved durability – hence extended life expectancy.
- Reduced energy consumption during operation (e.g. also reduced heat-up time during winter)

HMP – we know what you need to be successful!



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For all of our products the following applies:

We are open for your specific needs, tailored designs to meet your expectations are possible at all times.

Contact us – together we will find a solution for all challenges!

Contact.

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