

# EQUIPMENT FOR ROAD SAFETY TRAINING CENTRES

System Solutions for Industry

**HP Pneumatics**

**Water- and Special- Fluid Hydraulics**

**Equipment for Road Safety Training Centres**

**Fire Fighting Systems for Transformers**

**Live Line Washing Systems for Insulators**

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### *HP Pneumatic (Drucklufttechnik)*

VDEW empfohlene Druckluftsysteme und Komponenten bis 350 bar

### *HP Pneumatic*

Electrical Industry (VDEW) recommended systems and components up to 350 bar



### *Wasser- und Sonderhydraulik*

Edelstahl-Cartridgeventile und Vorsteuerungen bis 350 bar (800 bar), Nennweiten 2 bis 250 mm Entzunderungsventile, Druck- und Wegeventile, Sprühventile zur partiellen Walzenkühlung.



### *Water- and Special-Fluid Hydraulics*

Stainless steel cartridges and pilot valves up to 350 bar (optional 800 bar), size 2 to 250 mm (08-10 inch).

Descaling valves, directional, check, flow and pressure control functions, spray valves for roll coolant systems.





## *Technik für Fahrsicherheitszentren*

Innovative Technik zur Simulation kritischer Situationen im Straßenverkehr: Schleuderplatten, Fahrbahnbewässerungen, Wasserhindernissysteme

## *Equipment for Road Safety Training Centers*

To simulate critical traffic situations.  
Vehicle skidding devices, water film systems, water obstacles

## *Feuerlöschsysteme für Transformatoren*

Fremdenergie-unabhängige Wassersprühsysteme

## *Fire Fighting Systems for Transformers*

Water spraying systems for operation independent from an external power supply



## *Isolatorenreinigungssysteme*

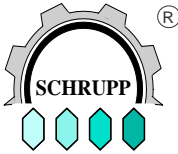
Stationäre Wassersprühsysteme zur Reinigung unter Spannung

## *Insulator Cleaning Systems*

Water spraying systems for stationary live electrical line cleaning







## DRIVING CENTER EQUIPMENT



The HL Hydraulik water technology enables road safety training centers to simulate critical situations encountered by drivers during various realistic street and weather conditions. The training helps teach the driver to handle these situations.

A combination of event center and safety driving center have the flexibility to test and demonstrate the newest functions of assistance systems, to familiarize the driver with the car's technology, learn safety and have fun testing and driving a car like you have no chance on a normal road.

We supply individual components for planners and operators, that can be combined as needed for the requirements and size of the exercise area.

We assist in planning of water technology and advise on the design of the training surface.

Some aspects of our water technology suit especially small applications because the products can also be installed by the operator or a local company.

During product development special attention has been placed on high reliability at low operational costs.

The entire water technology is designed for use in a closed water cycle.

Since large volumes of water are distributed into the air (water obstacles) or onto the road surface (roadway irrigation), this approach is in most cases the more economic option for future operating costs.

Our delivery program contains:

**WATER OBSTACLES**

**ROADWAY IRRIGATION SYSTEMS**

**VEHICLE SKIDDING DEVICES**





## DRIVING CENTER EQUIPMENT

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## DRIVING CENTER EQUIPMENT

### 2. Roadway irrigation

#### 2.1 General advantages of low-pressure technique

- Running water will not freeze – winter usage is supported that way
- The flexibility to choose between different irrigation directions.
- cross irrigation  
water is applied crossways the driving direction and is flowing along or against direction of drive
- longitudinal irrigation  
water is applied parallel to the driving direction, at the edge of the road or near the dynamic surface, and crosses the dynamic surface at a 90° angle.
- The irrigation outlets can be driven over without any driving disturbances.
- Insensitive against dirt, due to large (8mm) irrigation outlets.
- With consideration of a required down-grade the irrigation can be settled at each point of the track. (outskirts, in the asphalt, curved, alongside, etc.)
- Expandable, if the center “grows“
- Winterproofed without trace heating system or other technical utilities.
- Working pressure of the irrigations: 0.2 - 0.5 bar
- Insensitive to de-icing salt.
- Easy to clean.
- Resistent to breakdown (except total electric blackout)
- Easy to operate and maintain.





## DRIVING CENTER EQUIPMENT

### 2.3 Irrigation out of Water Obstacles

The water supply is carried out by our own pump, directly out of the water obstacle case..

The desired water amount is adjusted by a flow restrictor.



Mounted roadway irrigation – distinct stream only



The water distribution gets optimized continuously





## DRIVING CENTER EQUIPMENT

### 2.3.1 Operation of Post-Irrigation

A clear waterstream is generated by nozzles. This stream enables a very thorough roadway irrigation. The water is distributed to the complete road surface (if desired and needed) by nozzles divided in approx. 25 cm gaps.

### 2.4 Road-circle irrigation

The aim was to irrigate a circle from the outside inwards.  
Robust, efficient and without visual disability.

Installed warm-, or cold-grouted  
in the bearing layer until 2005

Since 2006 installed under the asphalt with  
a homogeneous asphalt surface.



Since 2006 the irrigation-system may be installed in segments, which can be controlled individually (1/4-, 1/2- or full-circle-irrigation).

Inner- and outer-lane-irrigation enables a diverse usage, in that motorcycles can use the dry outer-lane e.g. for curve exercises, even though cars had practiced braking in wet and slippery curves in the inner-lane shortly before.

The subdivision into segments also enables the system to alternate between wet and dry surfaces in the inner- or outer-lane circle.

The asphalt covered technique enables a road-circle irrigation, which is winterproofed and insensitive against the driving operation. Inspection chambers allow the cleaning of the irrigation system.

## DRIVING CENTER EQUIPMENT

### 3. Skidding devices for every application and claim

We offer vehicle skidding devices for passenger cars, middle size trucks and heavy trucks. We entered a cooperation, to provide this technique as mature and professional as our other products. Our partner has built up a good reputation over several years in the automotive industry. He has introduced his experience in the production of inspection and testing devices into the development of skidding devices.

#### 4 sizes of skidding devices are available

- Car - skidding device, axel load 3.0 to (metric), active dim. 2.96 x 3.75m.
- Car(+) - skidding device, axel load 8.0 to (metric), active dim. 3.56 x 4.50m.
- Truck 1 - skidding device, axel load 10.0 to (metric), active dim. 4.42 x 5.20m.
- Truck 2 - skidding device, axel load 30.0 to (metric), active dim. 4.76 x 5.70m.
- External speed indicator, 2 digits, 25cm height

Depending of the model frame, plate and hydraulics are delivered completely assembled. The switch box and the speed indicator are assembled separately at site. The installation requires one day. The initiation after the pit-filling requires only a few hours.

Installation of the device



The sensors and the lateral coverage



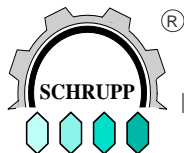
Complete hydraulics under the plate



Operator panel

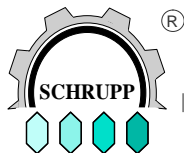






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