

# Mobile Test Station BGHV 160



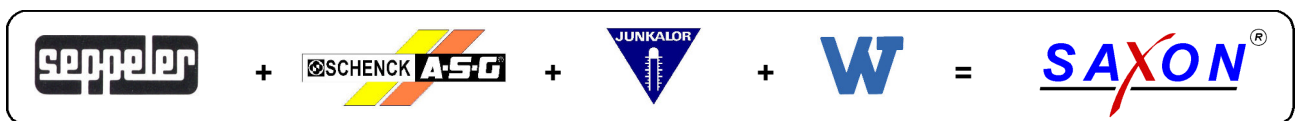
## The SAXON-Group

Are the manufactures of Inspection equipment for vehicle and aircraft safety testing. We have co-ordinated within our world-wide Distribution Network the corporate names such as SEPPELER, SCHENCK-ASG and JUNKALOR and are manufacturing our quality in house products in our German plants, based in Plauen and in Dessau. Our standard range of test products are found within the field of Motorcycles, Cars, Trucks and Busses up to a Testing range of 20 ton axle loads. Amongst others, Workshops, Government Testing Organisations etc. belong to our good references.

Our equipment is suitable for the testing of Brake Forces, Axle weighing, Track and Geometrical Steering angles as well as Suspension and Schockabsorber Testing. Further we supply Taximeter, Speedometer, Odometer test units combined with a strong product scope both for the wheel Balancing and Mounting section, as well as for the Exhaust Gas Testing range.

Saxon as a Project company, offers a complete package when it comes in providing equipment solutions. We use our superior equipment range to achieve a full customer satisfaction around the products supplied plus the connection to our data Network system.

We even go one step further, by offering a complete range for the individual workshop integration, which includes pressure lines and compound tank systems. Saxon is a certified manufacturer of this type of equipment and enjoys a high reputation, which is justified through the delivery of over 1000 individual test and repair bays since the last 30 years.

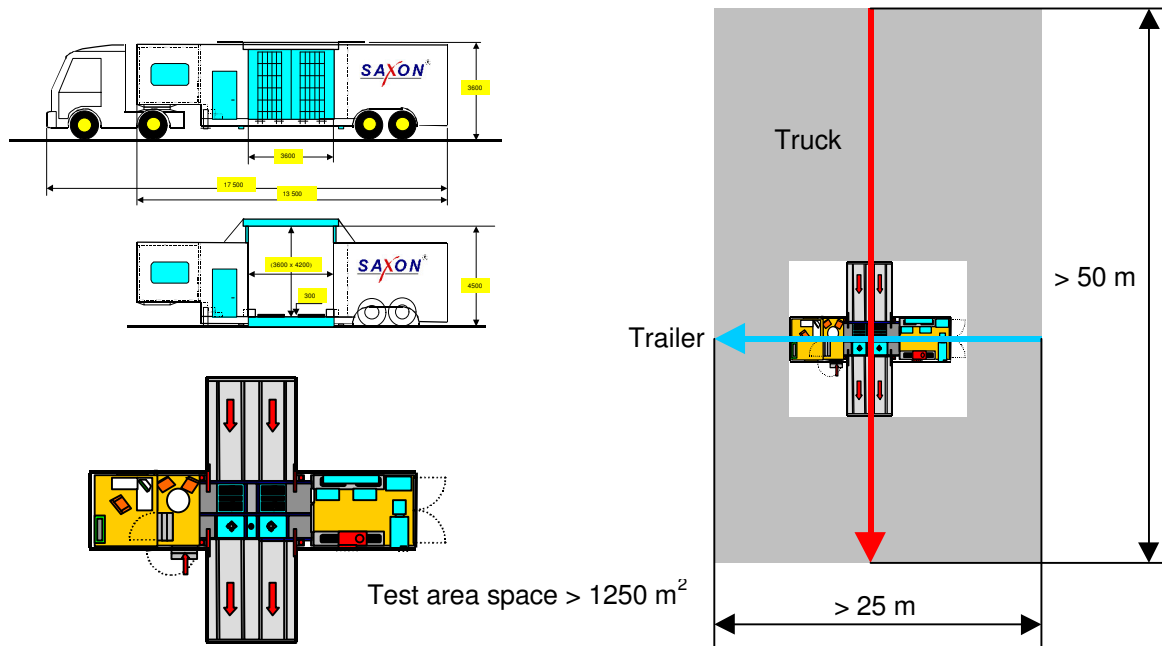


### Complete Test Equipment Programm by one Manufacturer

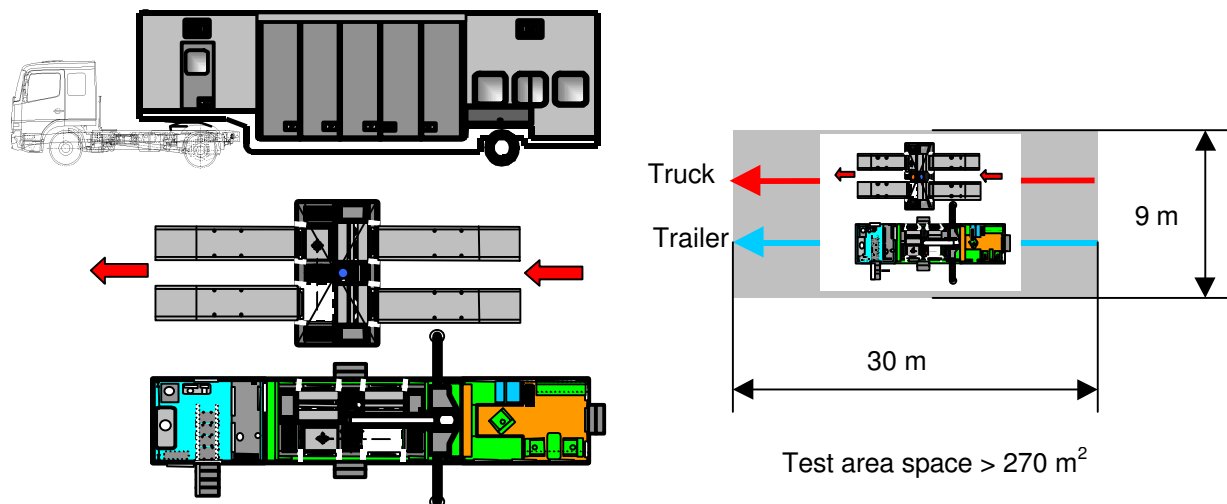
- Brake Test Stands
- Dynamometers
- Tachograph Testers
- Gas Analyzer Test Equipment for Petrol, Diesel and Industrial and Enviromental Purposes
- Wheel Balancing Machinery, horizontal and vertical
- Complete Brake Test lanes with network
- Mobile Test Stations

### Mobile Test Stations

are being built since 1985 for various operational requirements and are usually built to customer specifications. The construction vary in many ways, and depends if the customer requires just a standard Brake Testing unit, or full integration of a complete system into a test container package, which can be also designed as a vehicle trailer type. The use of articulated truck systems offer again a variation within this field. A drive through system ( type BGH 180 ) or a side build on type ( BGHV 160 ) can be offered as a trailer version, whereas SAXON offers also extensive options for various types of vehicle combinations.



Pic. 1: Shows the required area space for the drive through unit Type BGH 180



Pic. 2: The required Test area for the off side version Type BGHV 160

Taking into account the space ratio of  $1250 \text{ m}^2$  and  $270 \text{ m}^2$ , then one can easily see the advantage between the two unit types. The 160 unit definitely has the better advantage if you also take into account the possible vehicle width of 3000 mm and that any vehicle length or height can be tested on this system.

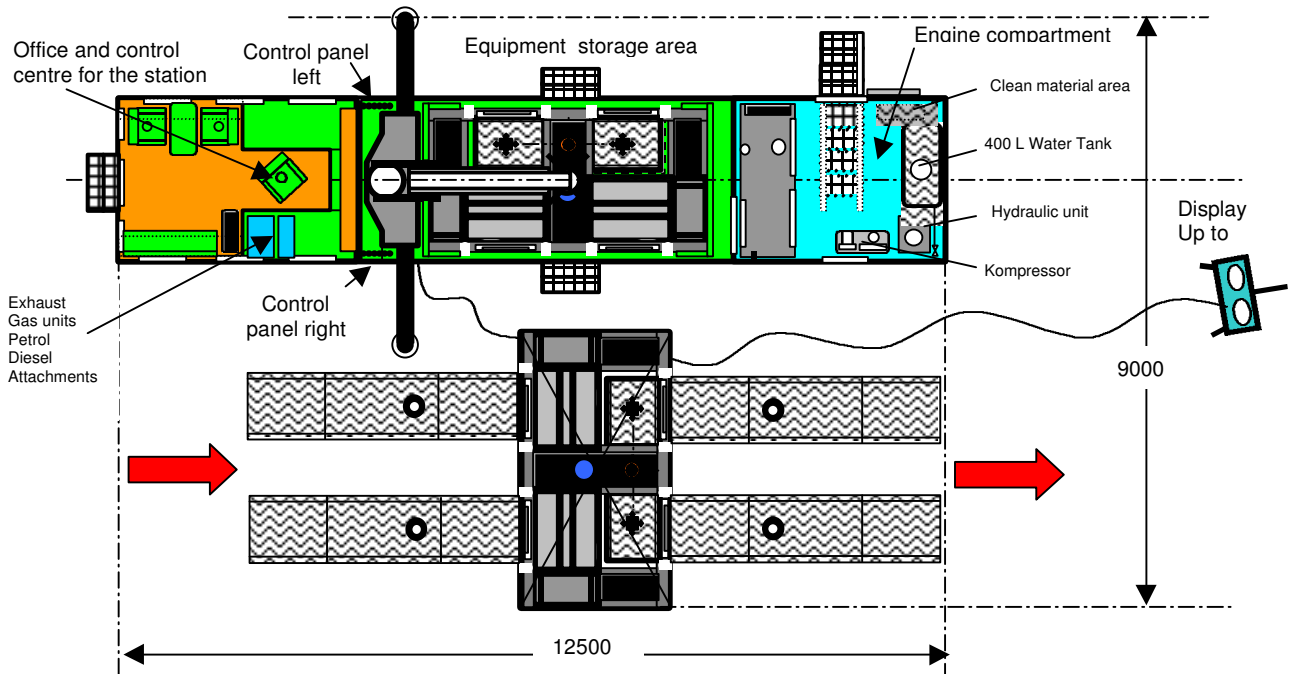
**The main features of the 160 series.**

One of the specific features of the 160 unit is its capability to swing the test equipment to both sides of the test station, therefore realising various advantages, which are definitely, a small operational area for maximum testing a low ramp height, or if a pit construction is available then even surface parallel operation is possible.

This unit is ideal for all vehicles up to 160 kN (16 Tons) per axle and can be exceeded if required to an axle weight of maximum 20 tons

**The universal usage**

Mobile Testing Stations of the 160 series can be deployed on every flat and hard surface, provided that two parallel truck lanes are possible. Even small roads or motorway lay-bys can be used and this without having to close them down during test operation. But also in nearly every area which includes petrol stations or test organisations or even in remote geographical areas, will find its test place. Because of its design, the mobile station offers all kinds of vehicle sizes the ideal test conditions, without having to bother about vehicle height or other dimensions.



Pic. 3: Independent set-up as seen on right hand side (Standard version), the left hand set-up is symmetrically the same as the right side.



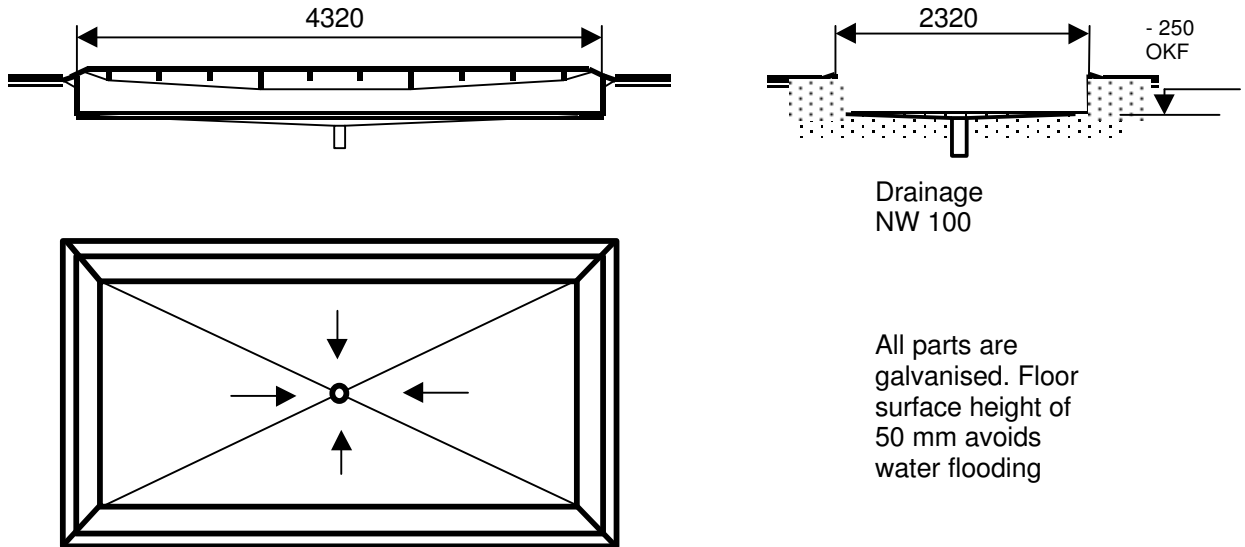
Pic. 4: Set-up either with or without The tractor unit



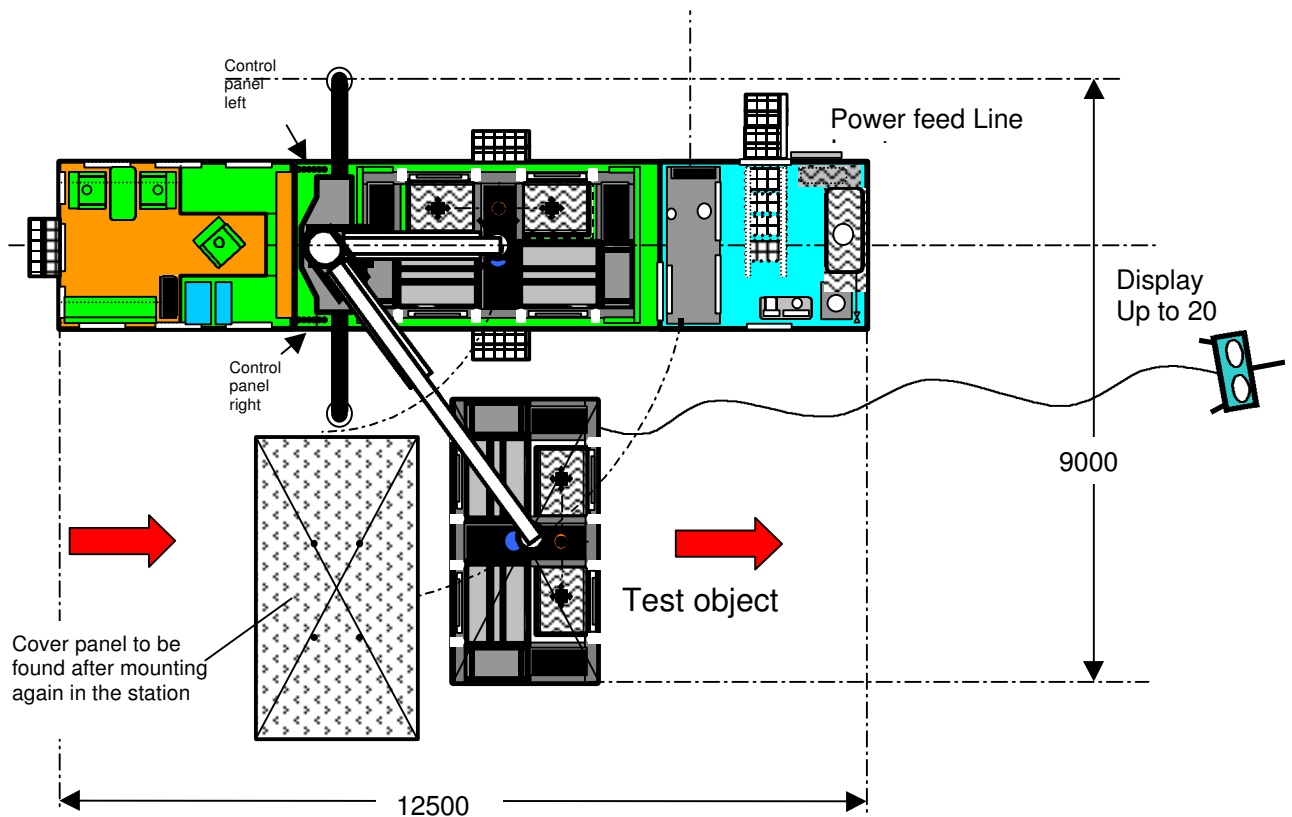
Pic. 5: Closing off the test area for other traffic movements

### The so called stationary usage

For test locations which are visited regularly, one can integrate a unit pit where the test equipment is simply dropped into. This means that testing can be done on street level and is therefore similar to that of fixed equipment locations. One can even provide a fixed power supply. The test units obviously are moved according to the movement of the mobile test station with all it's features. For the above mentioned pits, SAXON can make complete with covers the steel unit compartments.



Pic. 6: Pre manufactured pit basin with cover plate.

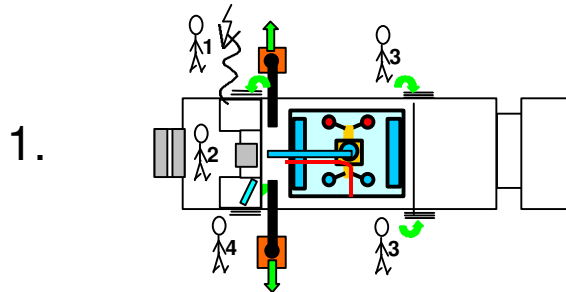


Pic. 7: Mobile usage as seen on the right hand side operation

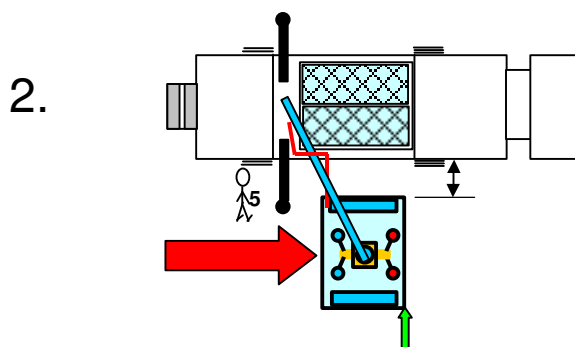


### The change from Transit to working position and vice versa

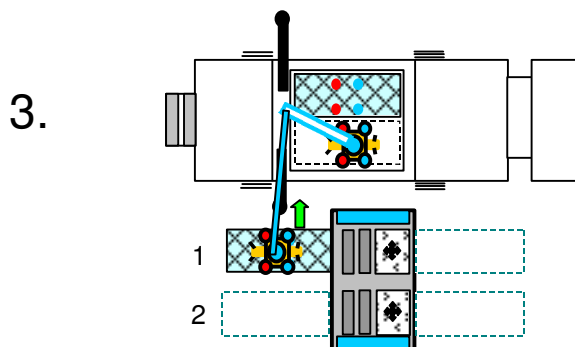
The change from Transit to working position and vice versa, can be completed through one operator by using the integrated crane system, within 30 minutes. This work is very easy and can be done without physical strain. All components are systematically connected together to enable a logical mounting and dismounting of the same.



- 1- Pin earthing connector
- 2- Power generator, switch on lighting system
- 3- Open side panel doors
- 4- Set crane support

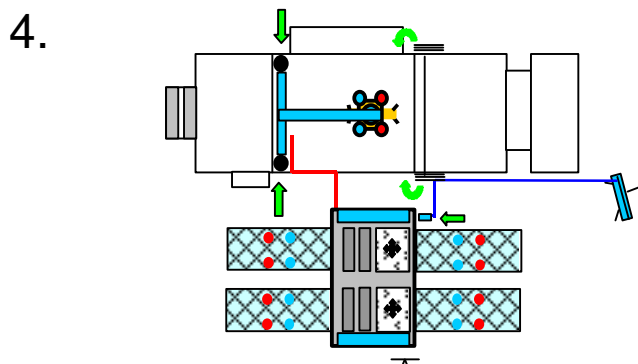


- 5- Mount test bay in a 90 degree angle to the station. Take into account vehicle width and test direction!



- 6- Pull crane support by 1/2 back. Ramps are automatically connected, lift-out and swing into position

If axle jacking unit is required, then lift also this out



- 7- Check if system is in level,
- 8- Take out Display units and connect these,
- 9- Power up test area as well as the computer system

Leave or close the side doors as you may require.

Pic. 8: A serial description of how the station is mounted and again dismounted!

## The Set-up in picture form



Pic. 9: Closed for transportation



Pic 10: Open ready for set-up



Pic. 11: Swinging out the test units



Pic 12: Positioning the test units



Pic. 13: Ramps are auto connected



Pic. 14: Positioning of the ramps



Pic. 15: System levelling with Display



Pic. 16: System start up with auto calibration

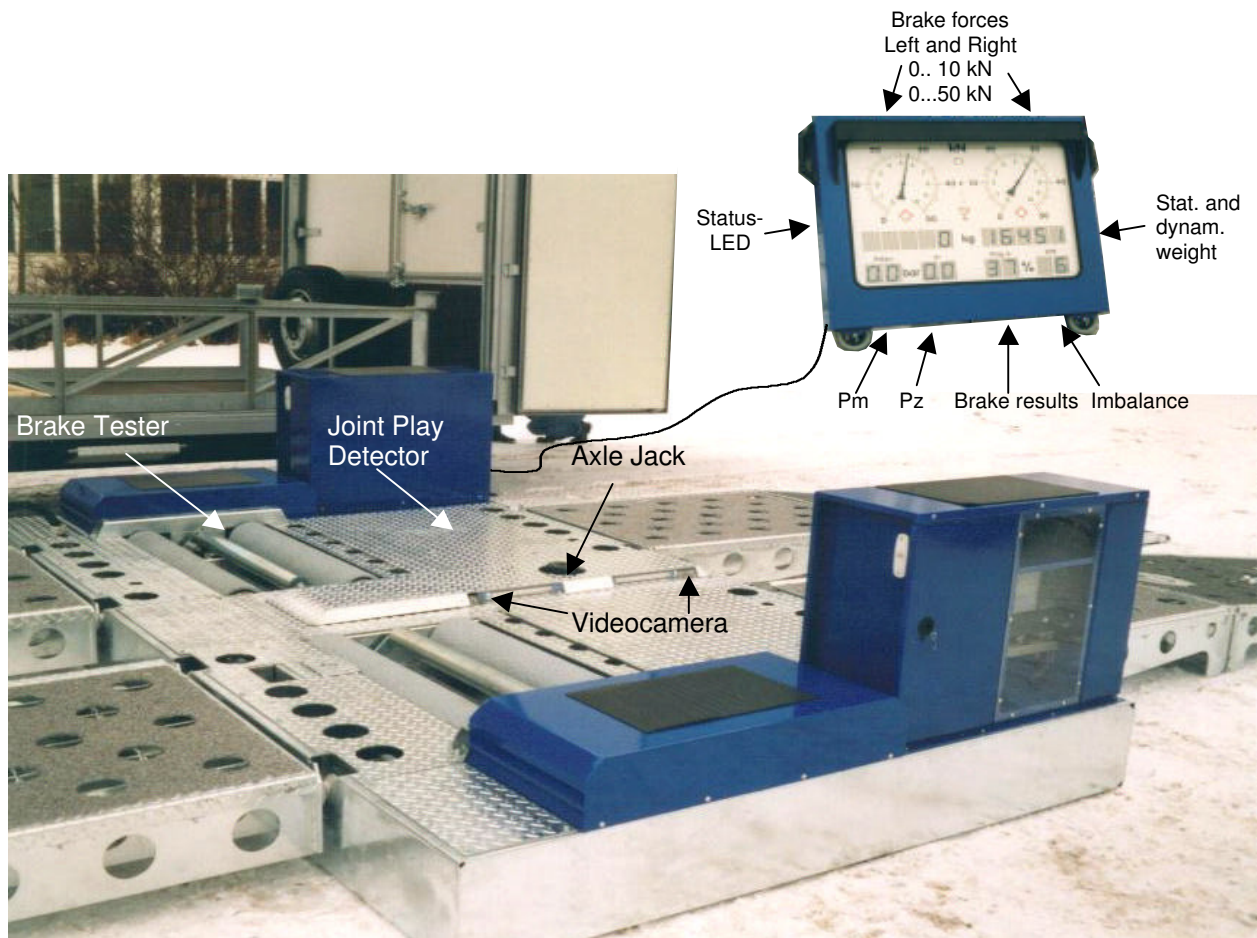
### Brake and Suspension System testing

The mechanical parts have a min. height of 280 mm as seen from floor level. For straight levelling there is a hydraulic system which enables you to compensate deviations up to 100 mm in forward and side directions. The ramps are self fitting to it's surrounding uneven surface area. The standard test width is 700 mm on the inside and 3000 mm on the outside. Due to the special design of the ramps, vehicles with a chassis ground height of 150 mm as well as wheel diameters between 12" and 44" with even thick profiled tyres, can be tested.

Brake Tester:                               SAXON B 101M  
 Axle test weight up to 16000 kg, 50 KN Brakeforce  
 2 Test speeds, Motor Brake system,  
 2 measuring directions with 4 x 4 test mode integration

Joint Play Detector                         SAXON GST 160  
 Hydraulic, 16 000 kg, ± 50mm movement, 2500 kg force  
 Manual and automated operation with 8 test functions

Axle Jack:                                     SAXON AH 140  
 hydraulic-pneumatic, 14 000 kg, movement 250/500 mm  
 Universal jacking beam for driven axles.



Pic. 17: The set-up of the Brake and Suspension Test units.

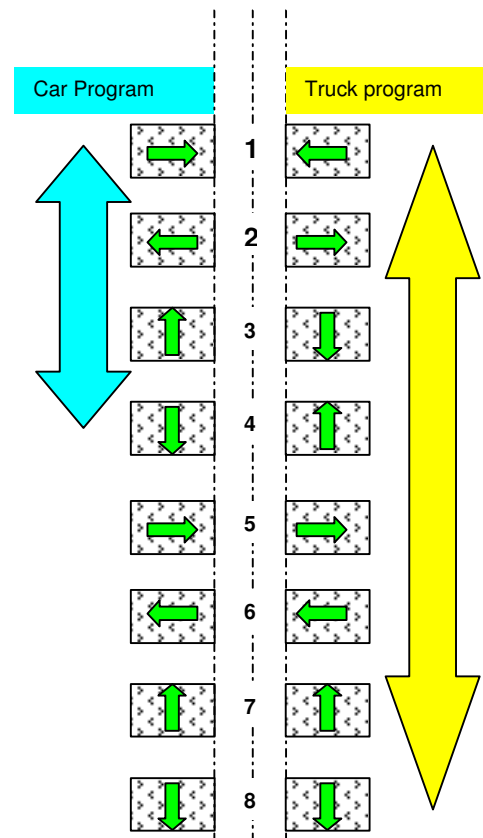
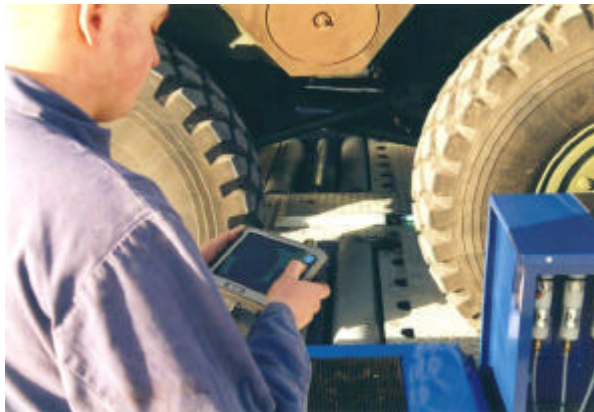
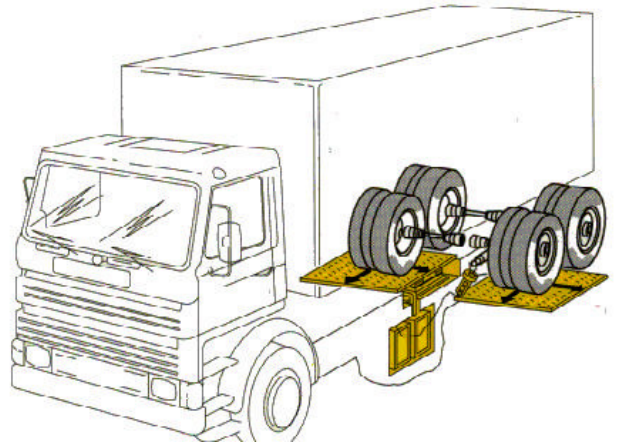
Pic. 18: Mobile Outside Display with integrated cooling system and Illumination



## The Suspension Test with video controlling

Between the Joint Play Detector you will find the Axle Jack, a lighting system and 4 video cameras.

Through an external TFT monitor the operator can observe the vehicles axle joint movements and record the same on an integrated video recording system.



Pic. 19: Camera installation with lights (top left)

Pic. 20: Detecting faults. ( left centre)

Pic. 21: Selecting camera 1-4 (bottom left)

Pic 22: Operational movement of the Joint Play Detector, either manually or Automated controlled (right side)

## Engine and Exhaust Gas Diagnostic

You will also find in the test station, units for the testing of both vehicle engine and exhaust systems. Further instruments for the control of the stations transportation and operation are included. Roll Blind Covers open up to pull out compartments in which the test equipment can be found already wired up and ready for use. Cable and supply lines are long enough so that the units can be removed and used outside there compartments. Should individual testing be required then this is also possible. If climate temperatures call for testing under +5°C then these compartments can be climatized.

Unit Types:            Engine tester with code diagnostic in a Universal Set-up.  
                              Infralyt 2- Gas, 4-Gas or 5-Gasanalyser for Petrol engines,  
                              Opacimetric Diesel Test unit for Cars and Trucks  
                              Open Inductive RPM counter, Cables and attachments

Pic. 23: Test compartment right side

SAXON Junkalor Gas Tester,  
all units pre wired with Network connec  
INFRALYT - CL  
CO, CO<sub>2</sub>, HC, O<sub>2</sub>  
OIML class 1

OPACILYT 1020  
k.value 0-10,  
0-844 mg/m<sup>3</sup>

DAB 5000  
Open Inductive  
PM measurement

VISION 3800  
Engine tester  
Engine code reader

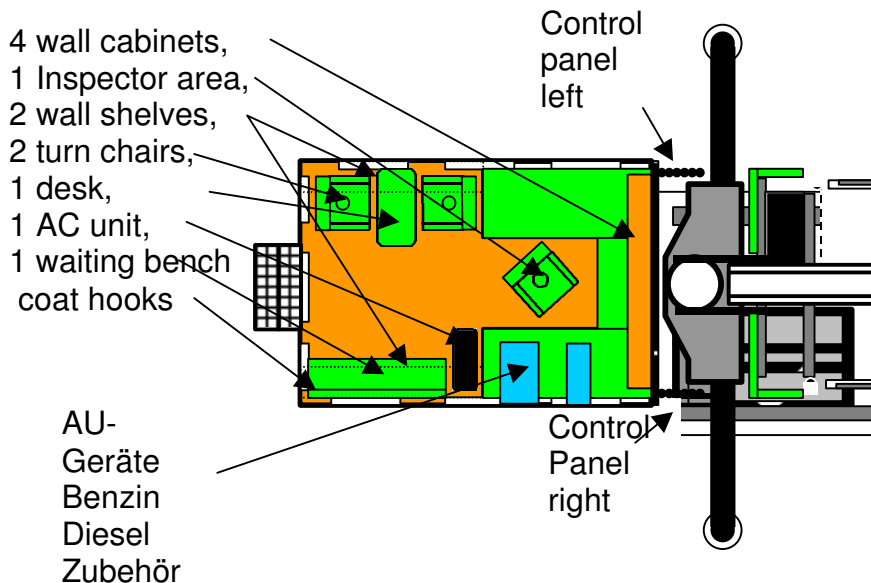


Pic. 24: Attachments compartment left

Earthing Pin for Power System  
Trailer attachments  
Axle Jack attachments  
Area seal OFF materials  
Tools  
First Aid Kit

## Office and Control Station area

A very open and spacious climatized office for ambient temperatures between -20 to +40°C with dimensions 2,5 x 3,6 m is included for 6 persons including seating area and can be accessed easily from the rear. From this area the whole station is controlled. This includes control of the power, air, lighting and hydraulic systems. Here vehicles are booked in and recorded in the data terminals. Through a three sided open window constellation one has a very good overview of arriving vehicles. Also through an easy docking system the computer can be taken in and out of the test station for external data transmission, should this be required.



Pic. 25: The spacious office area with furniture and equipment.



Pic. 26: The meeting area with a good overall view



Pic 27: The Inspectors work place with PC area including docking station and Printer

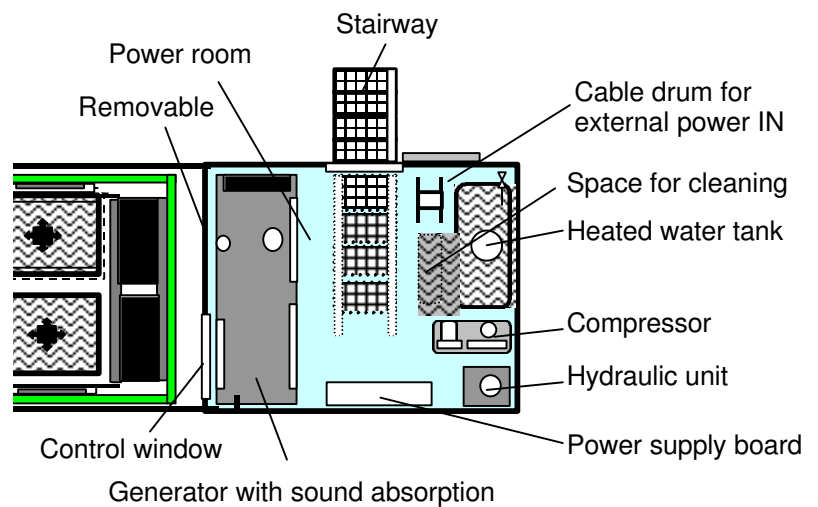


### The Power Plant

The power plant which is situated on top of the tractor saddle hook, incorporates the sound proof generator ( 35 or 50kW as required) with a fuel tank capacity for 24 hr. operation. A full time operation of the hydraulic and compressor system with it's storage tanks are on board. If needed a power unit for stabilised power supply for use of the PC and other test equipment via the main power board, which includes the main feed line Input. Again selective a large 400 l heated water tank can also be installed. Further a high pressure cleaner, extra power feed cable plus various attachments are possible. The Power area is controlled through external sensors and can be easily accessed through the side door. Should repair work be necessary, then the side panel to the transport area of the station can be removed and the crane can be used to lift out the units.



Pic. 28: Stairway for inspection



Pic. 29: Power room equipment set-up



Pic. 30: Hydraulic, Compressor, Water tank

Pic. 31: Main Power board, Generator



## Use and operations

The mobile Test Station is variable, robust and designed for all normal vehicle types. The main features are distinguished through its low ramp height which combined with the parabolic formed ramps offer also customised vehicles with low body's to be tested. Special constructional makes are also available depending on the customer requirements. Five various test solutions are available within our mobile test system.



Pic 33: Program 1 – CAR ( $v_{pr} = 5 \text{ km/h}$ )



Pic 34: Program 2 – TRUCK with/without trailer



Pic 35: Program 3 – Tractor (also flatbed type)



Pic 36: Program 4 – Buses (also flatbed type)



Pic 37: Program 5 – Special vehicles (high type)



Pic 38: Program 5 – Special vehicles (wide type)

## Your requirements

The 160 series is a modular system. You can always style to your individual needs your suitable set-up. We of SAXON offer a design to meet the service required. The following checklists allows us to meet your personal situation.

### Required Units.

- Brake Tester
- Joint Play Detector
- Exhaust Gas Checking for Petrol and Diesel engines
- Jack for axle lifting of the vehicle
- Speedometer checking
- Video observation system

### Tractor Unit

- Engine power 170 kW  205 kW
- Cabin seating 3 Persons  5 Persons

### Office Equipment

- Inspector operation area
- Wall cabinets for files etc.
- Work area with table and two swivel chairs
- Seating area for vehicle owners
- AC unit
- Electrical room heating
- Mini refrigerator
- Shower cubicle

### Equipment Test Bay

- One side hook out  Two sided hook out
- Remote controlled crane

### Equipment Power Bay

- Power from Mains supply only
- Generator 35 kVA  50 kVA
- Sound proof
- Water container for 20 l  400l Tank
- Compressor
- Gas Heating system
- Test area Illumination system for 10m area coverage

### EDP-Equipment

- Fixed PC System  Notebook with Dockingstation
- Laserprinter  Inkjet Printer
- Input Terminal for Visual checks
- Chip card reader for Test Personnel Identification

We look forward to your requests and requirements.

With Kind Regards  
Your SAXON Team