



RSP Suction Excavators.

ESE series.



Our ideas create new technologies.

The daily practice.

Manual excavation is a very inefficient and time-consuming process. Progress with pneumatic hammers and hand spades through the ground is excruciatingly slow. To achieve higher output rates, some contractors decide to use dredgers at sites where hand digging would be required. The annual costs of remedying and re-instating the excavation damage caused in this way run into several millions.

We offer the alternatives: Suction Excavators for a wealth of applications.

RSP Suction Excavators are the economical, fast and safe solution for the most varied applications. Powerful suction removes soil, gravel and mud, ballast of tracks, water, debris and solid materials of larger diameters, without touching pipes or cables always showing sensitivity in excavation. Our high-powered multi-function construction machines operate reliably and efficiently even under the most exacting conditions.

RSP Suction Excavators ensure smooth and dust-free operation while simultaneously eliminating damage to underground utilities, roots or plants. With RSP suction excavators you can quickly excavate in sensitive intra-urban areas without causing damage. Substantially shorter construction periods less traffic interference and CO² emissions are other particularly noteworthy features. Cities and municipalities use our excavators for cleaning shafts and ducts, wells and gullies. RSP suction excavators also prove their worth in industrial applications where safety is the highest priority. Further uses include refurbishment and cleaning work, track construction, as well as garden and landscape construction.





Suction excavators – for any excavation task.

BUILDING SECTOR



EMERGENCY SERVICE



TREE RENOVATION



BUILDING RENOVATION



OPEN CAST MINING



CHEMICAL PLANTS



TRACK LAYING



CIVIL ENGINEERING



DISPOSAL



CLEANING OF FLAT ROOFS



PIPE REFURBISHMENT



TUNNEL BUILDING



DISASTERS



ESE 4 RS 4000 The compact one.

A small machine with full power.

This machine can be installed on 2-axle chassis from all established manufacturers. The single fans mounted allow material to be removed over a distance of up to 70 meters, depending on the nature of the material.

The combination of small dimensions and installed suction capacity makes the ESE 4 RS the ideal solution for intra-urban excavations in confined spaces.

The overall width of only 2.30 m enables narrow streets and small building sites to be negotiated without any problems. The articulated hose carrier has a reach of 4.10 m and is the perfect choice for this compact workhorse. Which has a capacity of 4 m³ and a tipping axis height of 2.10 m.

32,000 m³/h*

max. volume flow

21,000 Pa*

max. vacuum

15 m**

max. suction depth

70 m**

max. suction distance

* data refers to fan, not to machine

** depending on material and installed suction capacity





ESE 6 RD 8000 The all-rounder.

The perfect combination.

ESE 6 RD is the ideal vehicle for daily excavation and disposal work. This machine can be installed on 3-axle chassis from all established manufacturers.

The single or double fans installed allow material to be removed over distances of up to 120 meters, depending on the nature of the material.

The combination of high suction capacity and compact dimensions makes this model an all-rounder for daily use on construction sites.

All tasks encountered can be efficiently accomplished thanks to the comprehensive level of equipment comprising a 6.10 m long articulated hose carrier and a collection tank of up to 8 m³. Pressure or high-pressure systems are also available as an option on the ESE 6 RD.

42.000 m³/h*
max. volume flow
40.000 Pa*
max. vacuum
45 m**
max. suction depth
120 m**
max. suction distance

* data refer to fan, not to machine

** depending on material and installed suction capacity





ESE 6 RT 10000 The powerful one.

When maximum power is required.

ESE 6 RT is your powerful partner for all applications ranging from special excavations to the industrial sector. This machine can be installed on 4-axle and 5-axle chassis from all established manufacturers.

The single, double, triple or even quadruple fans installed allow material to be removed over a distance of up to 150 meters, depending on the nature of the material.

Equipped with maximum suction capacity and the largest possible container volume of up to 10 m³, this machine can cope with all excavation tasks. Safety and industrial equipment allows for effective and risk-free working.

43.000 m³/h*

max. volume flow

47.000 Pa*

max. vacuum

50 m**

max. suction depth

150 m**

max. suction distance

* data refers to fan, not to machine

** depending on material and installed suction capacity





The perfect level of equipment.

For optimal working conditions.

Time-tested, high-end, sophisticated technical features and solutions make the new suction excavator a great construction machine for the present and the future.

Fine-mesh filters

Highly active filters which eliminate even the finest residual dust particles from the air flow are our contribution for a cleaner environment. Filter cleaning occurs automatically by means of compressed air.



Sound absorbing system

The frequency optimised sound absorbing system reduces noise pollution.

Fan

All fans have been specially developed for use in RSP suction excavators. Conventional solutions can in no way compete: our fans have much higher capacities and much longer service lives.

Compressor

Operated by hydraulic power, proportional control with monitoring system and requiring low maintenance. Compressors of higher performance classes are also available in addition to the standard model.

Separation system

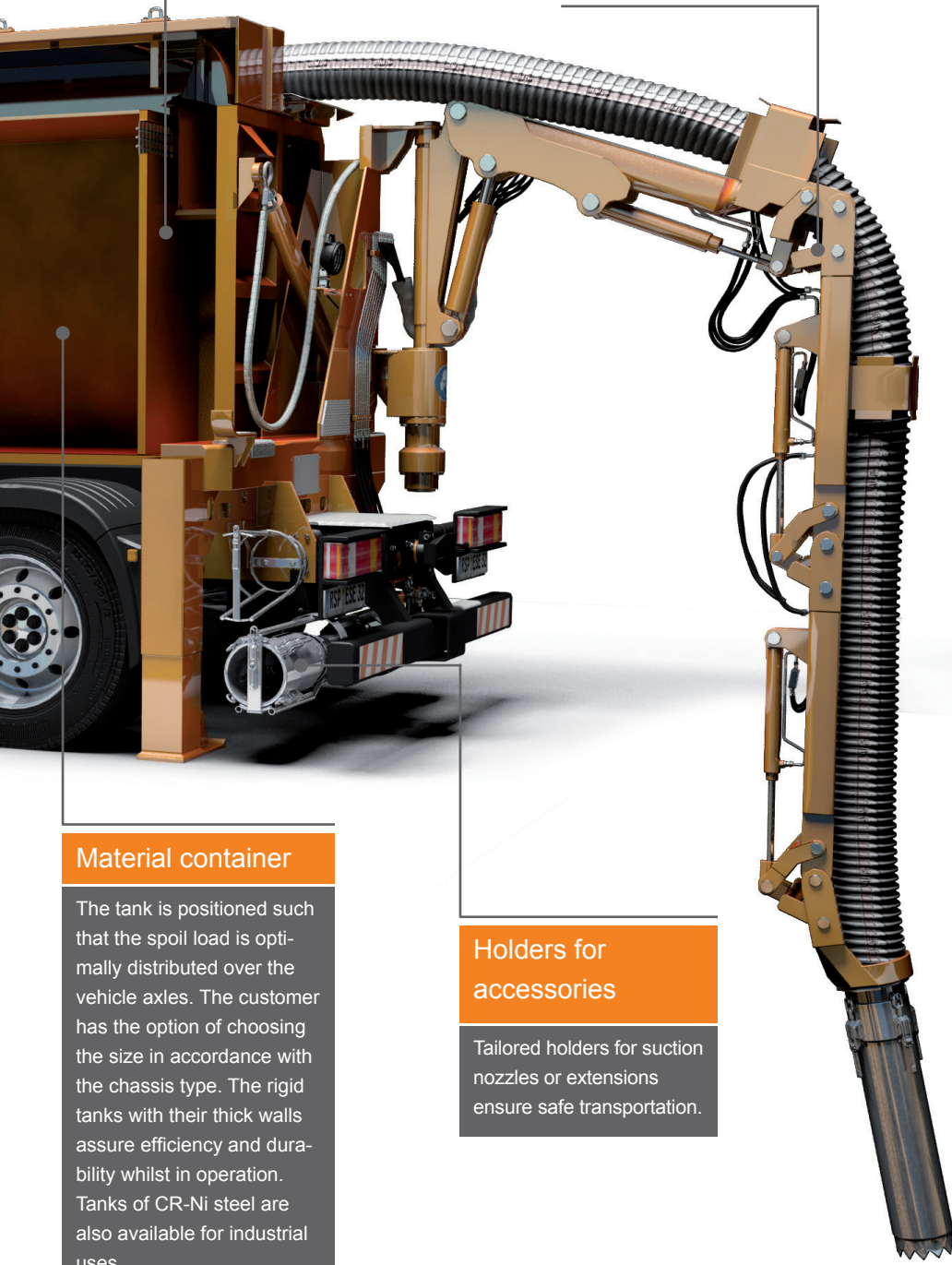
The patented ESE air guidance system guarantees the highest degree of gravity separation and consistently high suction performance with all currently available suction excavator models. All major elements of the intake are collected in the collection tank.

Hose carriers

The fully hydraulically operated articulated hose carrier comes with up to four joints. Its movements are controlled all the way up to the suction crown. There are two models available and the swivel range on all models is 180 degrees.

Radio remote control

It is an ergonomic & lightweight unit that comes standard with charger and two chargeable batteries. The operator has easy access to all elements that control all hose carrier movements, the emptying, suction and filter cleaning operations as well as the travelling modus.



Material container

The tank is positioned such that the spoil load is optimally distributed over the vehicle axles. The customer has the option of choosing the size in accordance with the chassis type. The rigid tanks with their thick walls assure efficiency and durability whilst in operation. Tanks of CR-Ni steel are also available for industrial uses.

Holders for accessories

Tailored holders for suction nozzles or extensions ensure safe transportation.

The patented suction principle.



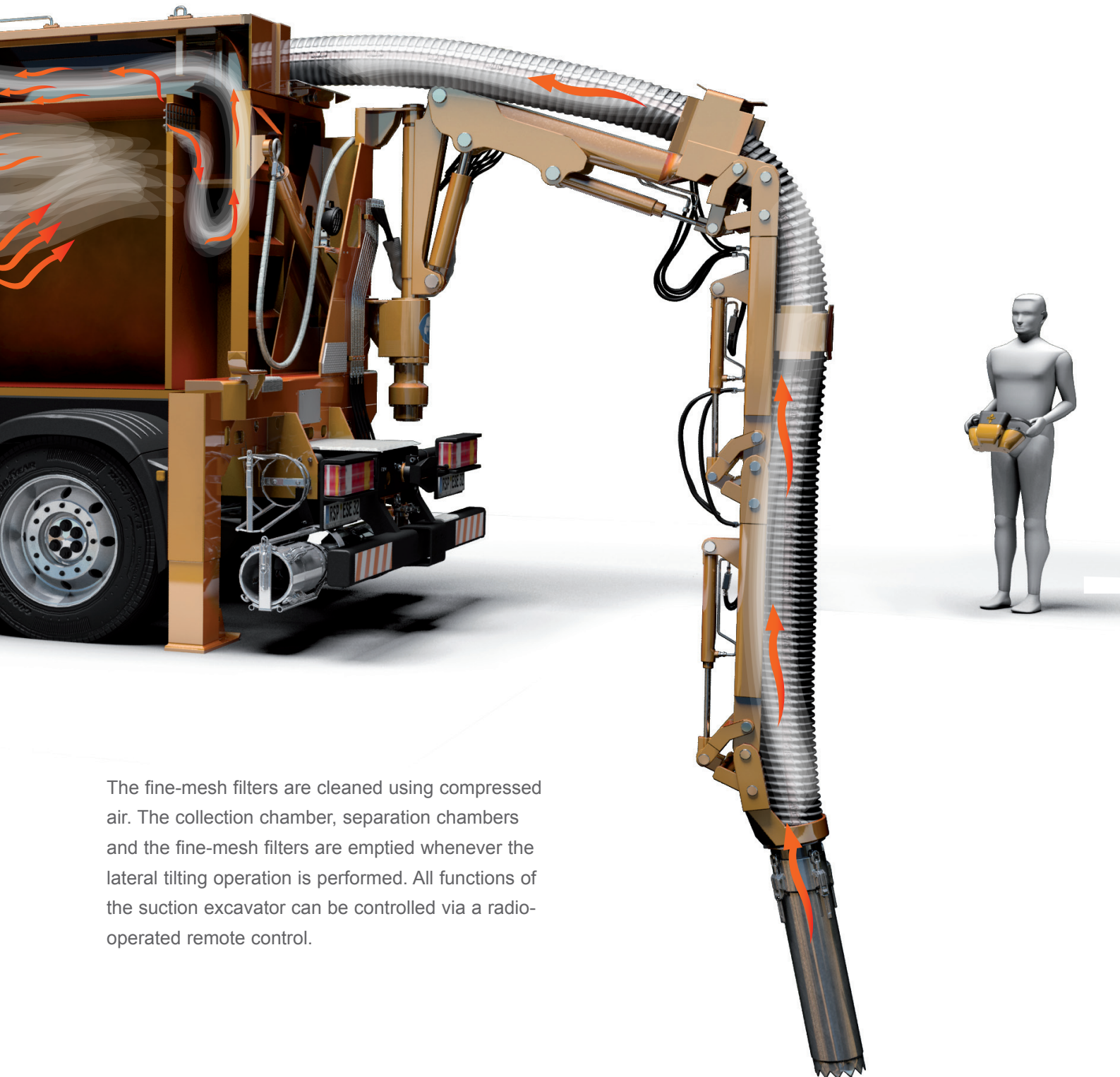
Patented technology.

The internationally patented RSP suction principle guarantees the highest degree of gravity separation, lowest level of contamination of the filters and thus consistently high suction performance

The fan generates an air current of up to 44,000 m³/h and a maximum vacuum of 55,000 Pa. The suction hose is moved three-dimensionally via the hose carrier. The air stream removes all materials through the suction basket.

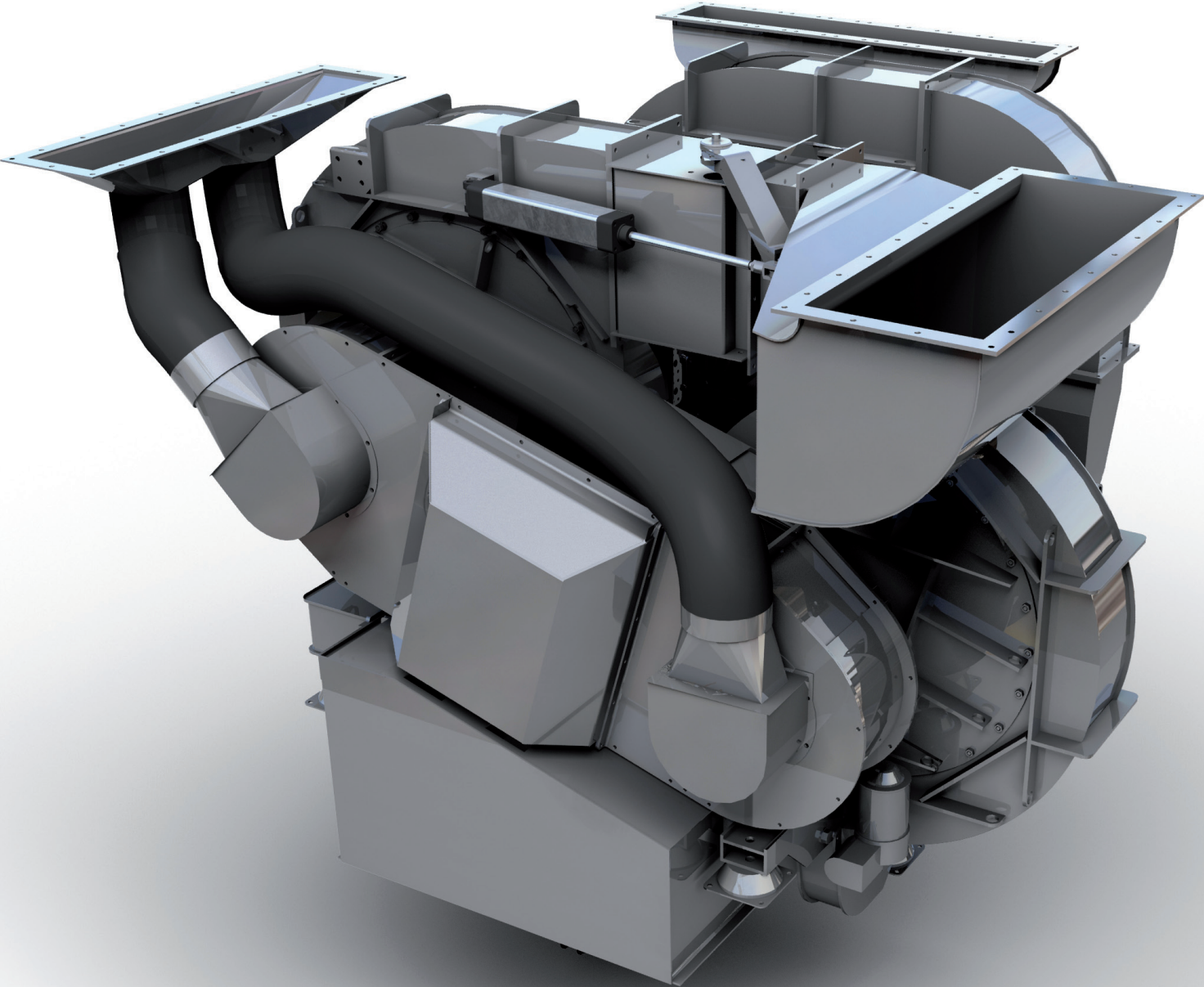
All mediums can be sucked through the hose, including solid materials of up to 250 mm in diameter.

The air flow is slowed and deflected in the collection chamber so that the main material elements of the intake are eliminated. Separation chambers provide further cleaning and drying of the air current. The collection tank is positioned such that the spoil load is optimally distributed over the vehicle's axles. The superfine filter unit separates even the finest dust particles from the air flow, and the purified air is discharged from the top via a silencer unit.



The fine-mesh filters are cleaned using compressed air. The collection chamber, separation chambers and the fine-mesh filters are emptied whenever the lateral tilting operation is performed. All functions of the suction excavator can be controlled via a radio-operated remote control.

Fan. Reduced weight. Reduced consumption.



Designed with you in mind.

All the fans, compressors and hydraulic systems of RSP's suction excavators have been specially designed with fuel efficiency in mind to boost your profit margins.

Full control.

Each machine comes equipped with a compressor, controls unload the compressor during the suction operation, matching the pressurised air supply with the demand of the system with Compressor capacities are in the range from 3.0 - 4.5 m³/min. The hydraulic system of your machine has been customised to best suit the needs of your specific applications. Savings on operating costs are an added bonus.

Optimal Partnerships.

To enable you to take full advantage of the technical potential of RSP suction excavators, we favour the networking between truck, suction excavator and service offerings such as the standard **SIM CARD SOLUTION** for faster failure analysis, comprehensive **RSP CARE** service agreements and our assistance in leasing and financing options with your partners. The benefits are obvious: better, cleaner performance, lower overall costs and greater profitability.

Fans that set new benchmarks.

Fans are the heart of the suction excavators and all fans have been engineered to RSP's high specifications with a view to delivering the highest performance and outstanding durability.

Highly accurate balancing and optimum connection and start-up conditions are important factors for the life span of a fan. RSP fans are started up slowly by means of clutches, this soft start substantially reduces the loading on the drive motor which in turn enables a longer service life.

We set new standards in terms of fuel economy.

Our fans have been continually developed, put on test stands and subjected to performance tunings to achieve and maintain their extremely low levels of emission. The fans' capability of being operated at three power stages with gear ratios tailored to chassis specifications offers another opportunity to enormously reduce fuel consumption.

RSP makes a clear pledge to use new high-quality materials for the fans, always with a view to considerably reducing weight and maximising efficiency. Our fans currently available are the most economical, most reliable and most durable fans we have ever built.

Containers. One patent four sizes.

Storage volume when it counts.

There are four different sizes of containers which can steel offer you the best basis for achieving outstanding results.

4 m³-volume tanks have been specially developed for use on two-axle vehicles with an overall width of 2,30 m. Their compact dimensions and tilting axis height of 2.10 m enable emptying onto small transport vehicles. 6 m³ tanks are especially suitable for chassis having short wheel bases. More volume and more efficient operation are the benefits of the 8 m³ container this size fits optimally onto all 3-axle and 4-axle vehicles. It is the tank most commonly used in underground excavation work. 10 m³ containers are the tanks of choice for suction tasks in industrial plants.

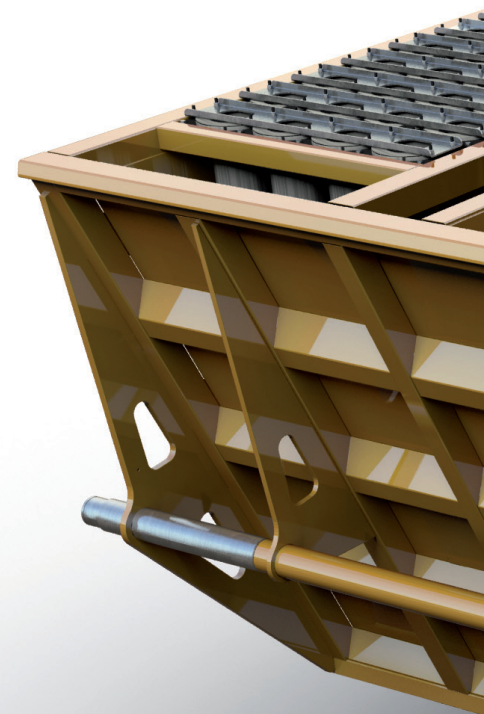
Patented separation technology.

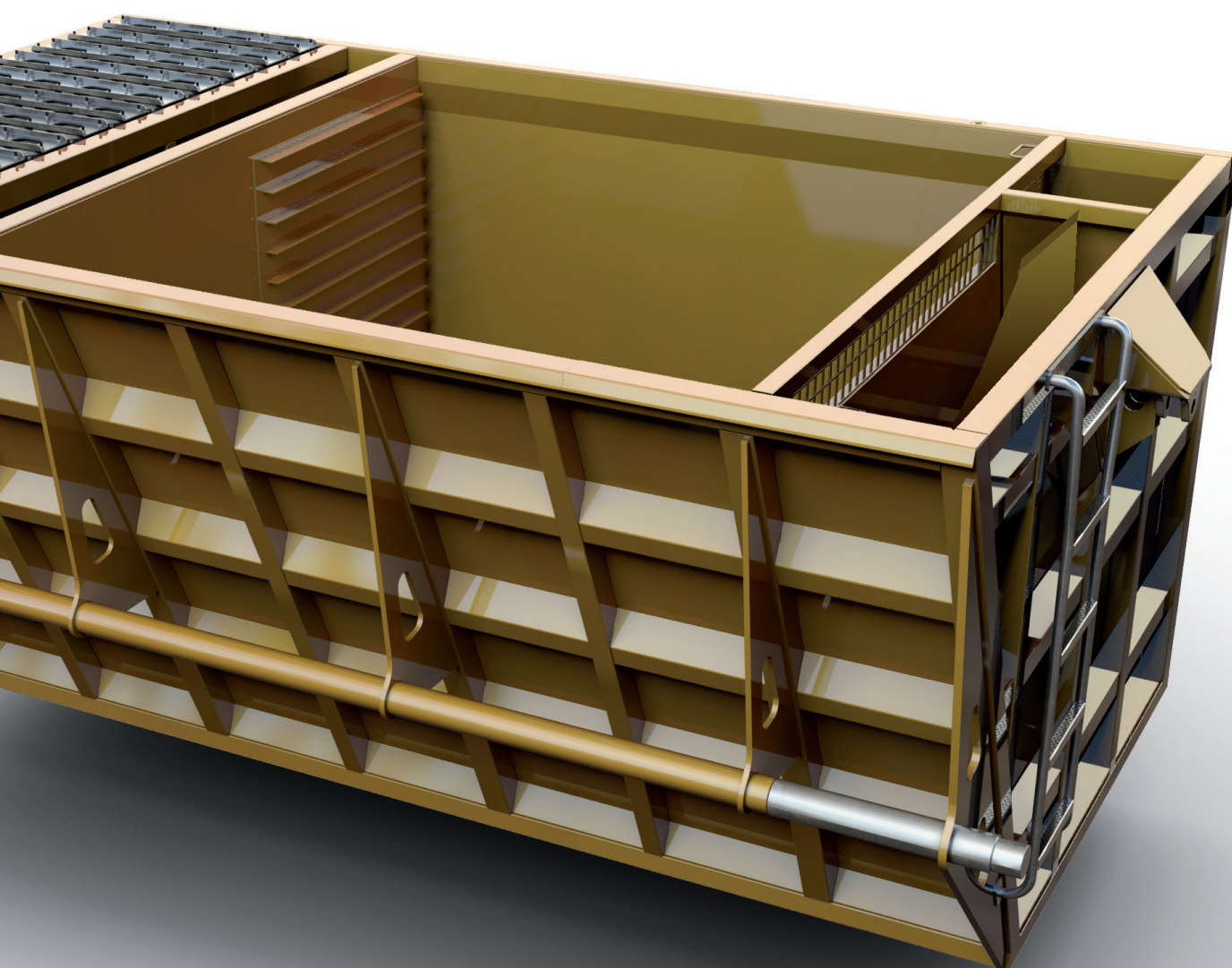
In our efforts to increase the efficiency of all available sizes of the suction excavator, we decided to maximise the fan's capacity and change the air routing inside the tank. The redesigned and **patented separation chamber** ensures an optimal degree of pre-separation of the material, while travelling the long distance to the fine filter units, the air stream has enough time to dry.

Highly productive fine-mesh filters provide for continuous and efficient cleaning of the exhaust air. The fine filters are emptied whenever a tilting operation is performed. The filter cleaning system comes as standard and guarantees optimum cleaning results. Longer life spans of the filters and positive impacts on machine performance are the result.

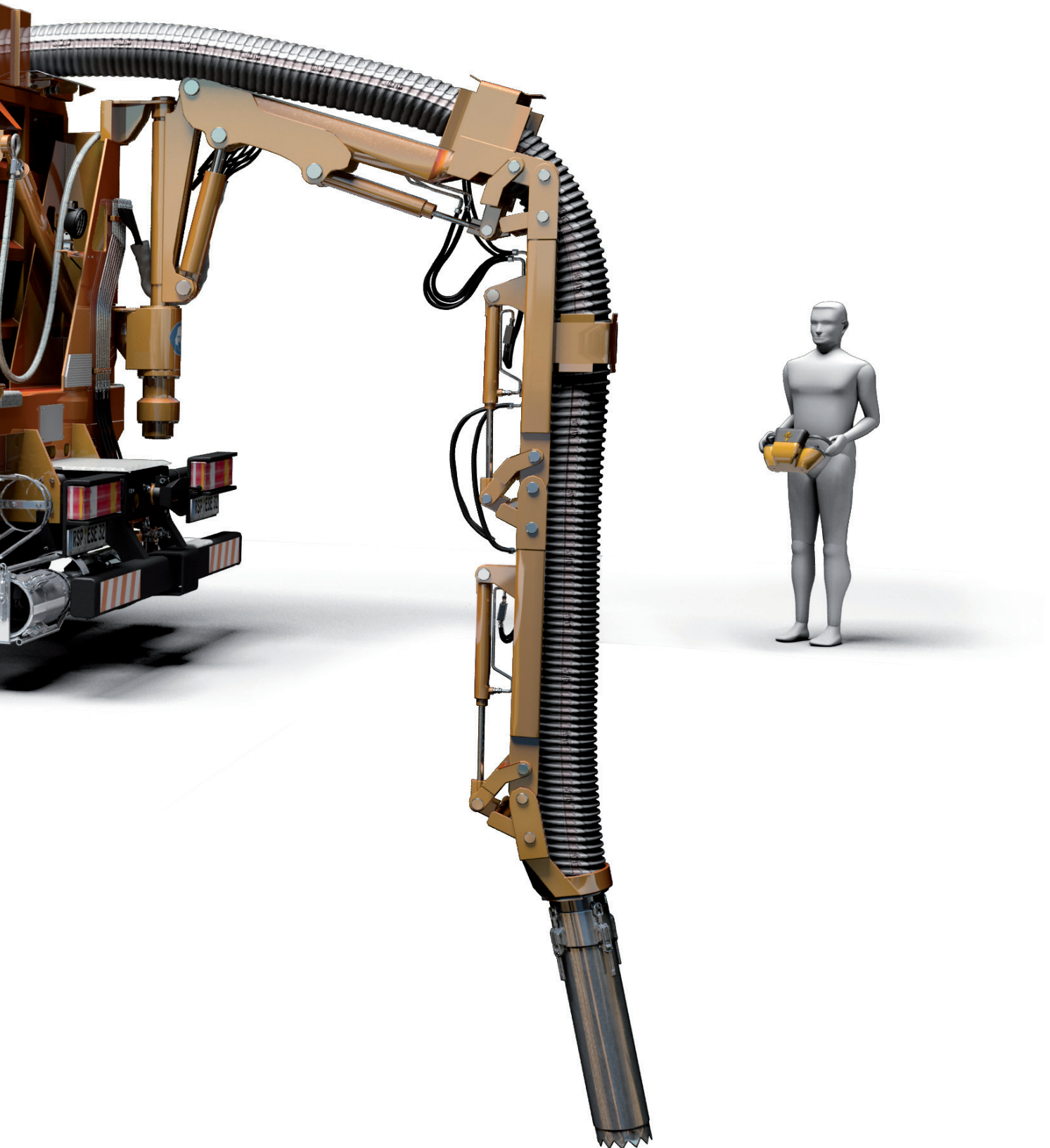
Advantages at a glance:

- High-quality, rigid steel tanks
- Patented air guidance system
- Automatic filter cleaning
- Various tank sizes
- Less noise pollution
- Lower loading on the filters





Hose carriers. Perfectly suited to your requirements whatever the conditions are.



Der optimale Arbeitsbereich.

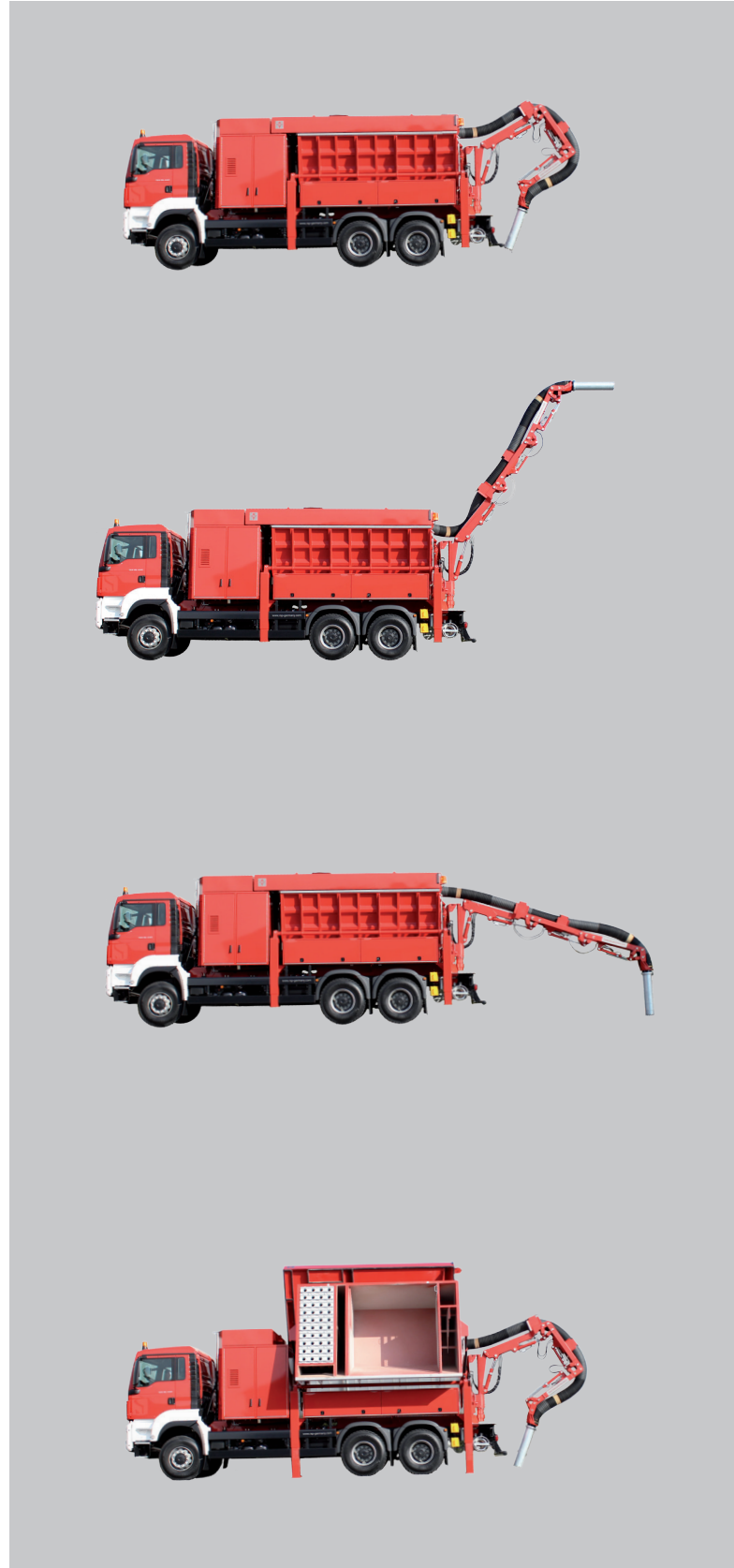
RSP has four different hose carriers available. Each hose comes equipped with the RSP clamp system, extensions allow for modifications in length. An arsenal of accessories allows the owner to cope with the most varied excavation tasks.

Four joints and a reach of six meters enable the operator to conveniently move the hose from his safe location exactly to the excavation hole.

The movements of the suction hose are controlled all the way from the lid to the suction crown to enable accurate placement. Its properties make the fully hydraulically operated articulated hose carrier well suited for problem-free operations without the need for extensions over suction distances from 0 to 6 meters.

The hose carrier swivel range is 180°, which makes it ideal for safe use in confined spaces of construction sites.

RSP suction hoses have been specially designed to resist high loading. A high degree of flexibility in every-day use and the wide hose diameter of 250 mm allow for the efficient removal of coarse and heavy-weight materials.



Commitment to operators.

More support for operators of Suction Excavators.

A standard accessory with each machine is the radio remote control, an ergonomic and light-weight unit that comes with a charger and two re-chargeable batteries. All functions of the machine can be smoothly performed, and easily accessible controls help reduce operator fatigue. Operators will enjoy the enormous comfort of the controls when it comes to handling jobs at sites which are difficult to access.

And the solution for larger construction sites where several radio remote controls are operated: if another unit is already active on the same frequency, the radio signal is immediately interrupted and switched to an unoccupied channel.

The following features can be controlled via radio:

- Vehicle motor
- Suction operation
- Filter cleaning
- Handling the hose carrier
- Compressor
- Working speed
- Emptying the container
- Automatic change in frequency
- Driving & steering*
- External hydraulic components*
- High-pressure water pump*

* optional equipment





Safe driving and steering via radio.

The comfortable travel drive.

The hydraulically powered drive system enables the machine to be moved while the suction operation is taking place. This is a particularly useful feature when it comes to removing material over long distances or from larger areas. RSP offers its customers various possibilities for implementation of this in practice. All maneuvers are controlled by means of a joystick featuring a safety operation system.

Placed on the steering wheel and secured in place by quick release catches, RSP's RSS steering system enables to safely operate the optionally available travel drive via radio remote control. The ergonomic joystick commands the speed at which the steering wheel is turned, this depends on how much force is applied to operate the joystick. When the joystick is released, the wheels remain in the position selected last. In addition to allowing for only minor steering corrections, this sensitive system provides a very good feel of where the vehicle is moving to at the construction site.

RSS - the safe steering system.

RSP's R&D department is continuously striving to make all systems of the suction excavator even safer, more reliable and efficient. However, as the chassis manufacturers are legally responsible for the safety of their vehicles, they prohibit all users from actively accessing the steering system of the vehicles.

That is why RSP has developed the RSS steering system. This universally adaptable and safe system permits all vehicles to be operated by remote control. The steering forces applied correspond to the driver's steering movements.





RSS

RSP
SAFETY
STEERING

Safer operations.



On site Safety.

Law requires that machines operating in larger industrial facilities be equipped with safety packages suitable for the existing hazards. Our optionally available grounding and/or gas warning system are the accessories of choice if the suction excavator is intended to run in a potentially explosive environment.

The benefits of the grounding system at a glance:

- The grounding system prevents electrostatic charge from accumulating
- Continuous monitoring during machine operation
- Visual and acoustic warning signals

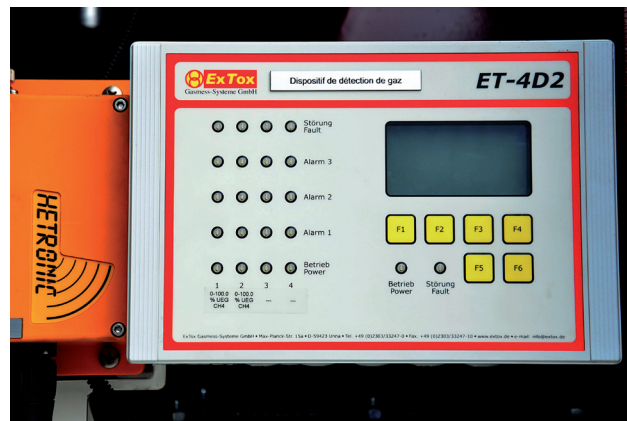


Safer operation with the grounding system.

Suction excavators as well as hose lines and hose connections tend to accumulate electrostatic charges whenever flammable media are loaded into and/or out of the tank. Any such accumulation is equivalent to a hidden source of ignition. Spark discharge resulting in ignition of the atmosphere inside the tank or in the area surrounding the suction excavator creates a serious hazard to workers.

The grounding control system has the task of carrying out and monitoring potential equalisation and so automatically confirming correct ground connection.

With continuous electronic monitoring of correct grounding, faulty conditions are indicated by visual and audible signals. The anti-static suction hose that comes as standard is also very important in preventing static build up in your applications.



The 3-sensor gas detection system.

The gas warning system serves to detect concentrations of flammable gases and oxygen. Its graphical interface helps the user with configuration.

Separate sensors measure the concentration of gases in the suction air and in the ambient air and warn at pre-set levels, i.e. at 20 % LEL and at 40 % LEL. Dangerous conditions can be reliably averted.

Acoustic and visual alarms are triggered when the sensor response surpasses pre-set safety levels. Once the highest threshold has been reached, the vehicle is shut down completely. Our gas detection system gives you peace of mind in knowing that you are kept safe even in highly sensitive areas of work.

Complex monitoring and control.



Efficient steering, monitoring and control of the suction excavator.

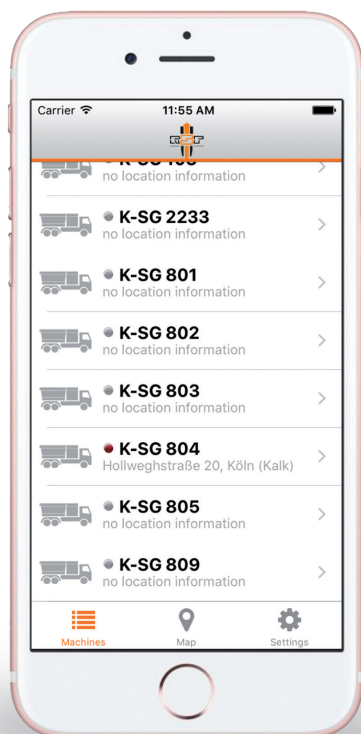
Operating a suction excavator is a highly complex task: up to 50 adjustable parameters are influencing the suction result. Operators are required to monitor and evaluate about a dozen of the process variables on an ongoing basis, but hardly anyone is able to keep track of everything in order to fully utilise the machine's potential. Our modern PLC stands to control fan speeds, temperatures and hydraulic pressures of the suction excavator.

RSP's PLC continually makes adjustments for optimal operation, informs on forthcoming service intervals and signals possible failures. All fault codes are transmitted to RSP's service team who will either start remote diagnostics in cooperation with the operator or schedule a repair appointment. The benefits to you: particularly low costs and an even higher level of machine functionality.

RSP TELEMATICS SYSTEM.

Online documentation and service.

RSP's new **TELEMATICS SYSTEM** is linked to the PLC. Downloaded from the web or accessed by app, you are presented with detailed data on the current status of your vehicle, anytime and anywhere in the world. Through using GPS vehicle tracking, it opens up potentials for streamlining routing, reducing fuel consumption, preventing theft and misuse of your machine – these are only a few of the advantages.



Optimised operational workflow.

The system allows you to view and analyse the exact data from the previous day before beginning your work, and to evaluate how efficiently your machine has operated. In addition, vehicle movement data can be retrieved along with an event log which enables the transport logistics processes to be optimised.

RSP TELEMATICS permits enables systematic fleet management, avoiding unprofitable downtimes. Also a report specifying the operating hour analysis as well as other crucial evaluation data is mailed to you on a monthly basis.

Saving servicing time with RSP remote diagnostics.

With RSP's **TELEMATICS SYSTEM** the service employee is able to perform remote diagnostics, and so pinpoint the cause of any possible trouble more swiftly, and prepare for assisting you at your site as quickly as possible.

Benefits at a glance:

- Quick service information
- Streamlined routing
- Current vehicle status information
- Reduced fuel consumption
- Lower risk of machine misuse
- Lower service costs

We support you for your success.

Service you can rely on around the clock.

Both the long service life of many components as well as the repair and maintenance friendly design of our suction excavators helps to keep costs low. The standard SIM-CARD and the alternatively available RSP TELEMATICS SYSTEM enable RSP 's service team to give online diagnostic support even before the technician is on his way to you with any spare parts needed. Fast delivery and uninterrupted machine uptime have very positive impacts on overall costs.

Painstaking care and maintenance work ensures that your machine will function reliably over many years – a very important aspect for high-value assets such as the suction excavator. Regular maintenance and machine inspections are crucial for the safe function of your machine and can greatly reduce the risk of downtimes. With an RSP CARE Maintenance Agreement you know both the costs and maintenance or repair duration throughout the agreement. It gives you budgetary control, helping you to keep track of your financial resources.

RSP suction excavators are best-quality machines, that is why it is so essential to procure all spare parts directly from the manufacturer. Only genuine spare parts, accessories and consumables guarantee the excellent functional reliability of your suction excavator.

The benefits at a glance

- Competent partner for maintenance at your site
- Optimised machine reliability
- Genuine RSP spare parts and operating materials
- Budgeted and transparent maintenance costs
- Service documentation
- higher re-sale value of your RSP machine





Become an expert suction excavator operator.





Step by Step.

When you come to us to take possession of your new suction excavator, our service technician will take all the time you need to get familiar with your machine. This step-by-step instruction tells you how to get the most out of your machine right from the beginning.

Suction excavator operator training.

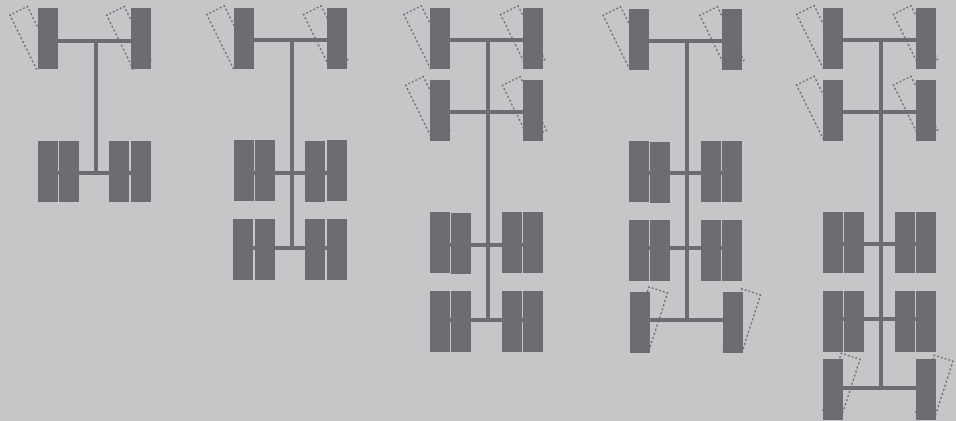
Our courses include a basic and thorough introduction as well as more specialised training. These courses are designed to impart knowledge and skills that enable you to operate your machine economically, including how to reduce fuel consumption. The agenda also includes training on how to operate the hydraulic travel drive and the hydraulically controlled articulated hose carriers, as well as instructions on how to put the fan into operation.

Benefits to you:

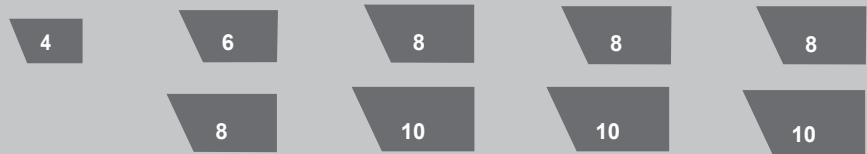
- Practice-oriented, hands-on training
- Theory and translation into practice
- Detailed training documents
- Certificate of competence issued upon completion

RSP Suction excavators committed to diversity. The arguments.

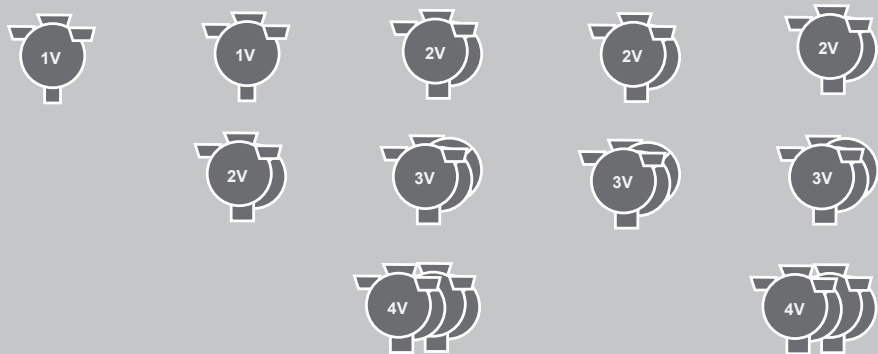
Chassis



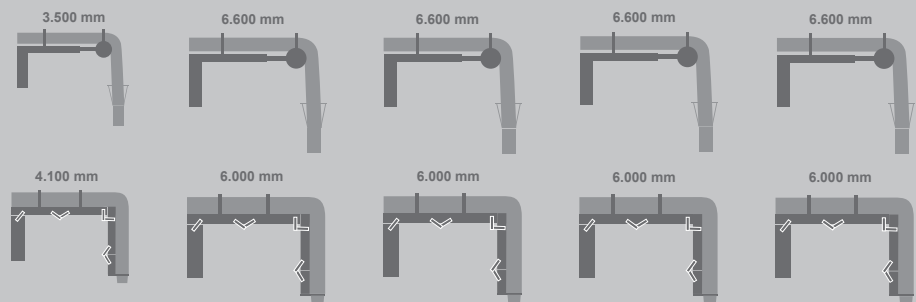
Containers



Fans



Hose carriers



Your customised suction excavator.

We have the right level of equipment for every need. Thanks to the flexible chassis designs from renowned manufacturers, RSP is able to showcase many possible solutions. Our wide variety of containers, fans, and hose carriers etc. expands your suction excavator's applications. Our sales staff will be pleased to assist you in shaping your perfect suction excavator.

Suction Excavator superstructure.

- Choose from a variety of chassis
- Choose from four different container sizes
- Choose from a number of powerful and reliable fan configurations
- Benefit from the different properties of our articulated hose carriers
- The reliable hydraulic travel drive is ideal for every application
- Use the water system for cleaning the construction site and/or your suction excavator
- For your safety, a gas detection and/or grounding system is recommended
- RSP Telematics lets you enjoy a truly unique steering and control experience

Accessories.

- A number of additional pneumatically operated tools for a wealth of applications
- Take advantage of the benefits of our rotary module to complete the task more quickly
- Suction Worm & Suction Digger ease operation in areas which are difficult to access

Strong performance. Strong partners.

Working in close co-operation with our professional and reliable partners we are in a position to offer you the perfect procurement solution. Allow us to advise you to help you make the right decisions on the machine that suits you best. In times of tighter budgets it is all the more important in the long term not to tie up your valuable resources. We offer you:

- Detailed consultations at your site or in our company
- Demonstration of our machines in practical settings
- A detailed proposal
- Comprehensive review of your order prior to beginning production
- Financing support
- Competent project management
- Perfect service

To keep overall costs low, we recommend that you sign a maintenance agreement at the time of purchase. So that you always have a clear view of the maintenance and repair costs as well as the maximum uptime of your machine.

RSP CARE AND COMMITMENT.

- High level of spare parts availability
- Competent partner for maintenance at your site
- Optimised machine reliability
- Genuine RSP spare parts and operating materials
- Budgeted and transparent maintenance costs
- Service documentation
- Higher re-sale value of your RSP machine suction excavator

The contact partner in your area:



Reschwitzer Saugbagger Telefon +49 3671 5721-0
Produktions GmbH Telefax +49 3671 5721-21
Zum Silberstollen 10 E-Mail info@rsp-germany.com
07318 Saalfeld Internet www.rsp-germany.com

