SABRE
AUTONOMOUS SOLUTIONS

FAQ SHEET

What is the robot doing? Recommended applications?

The Sabre system is built compact in dimensions and lightweight. It is able to operate in small and narrow, difficult and risky environments - particularly where there is a need for repetitious work. The system is not suitable for blasting small objects. It is primarily to improve safety.

It is fed with object data? Which type?

Dimensions and/or 3D data of each task is needed in all cases. The following 3D mesh file formats are supported:

• STereoLithography File Format (.stl)

• Stanford Polygon File Format (.ply)

• Alias Wavefront Object (.obj)

• Object File Format (.off)

Solid Works or STEP files are able to be converted to .stl by the system. The system models the environment for the robot and makes a blast simulation before application. Before a mounting solution is designed, the system calculates first the best reference positions for the system for each task. These services are included in the package price for the initial project.

3D scanner / camera needed for what?

The Sabre system uses the scanner for matching with the stored models. It scans the object first, and checks the scans match its stored models in reference to its current position. If the models are found in the scan data, the trajectory (positioning and velocity) planning process can start. After a brief time, the blasting process is ready to start. The system cannot scan without some preparation.

Is a fixed position needed? Fixed installation by operator?

Yes. It needs to be mounted on a frame or on a moving device. By the scan function, the system can compensate position deviations up to a certain limit.

Maximum reach is approx. like in 3 x 3 x 3m box

Correct. The system can determine the optimal reference position for the robot for each task.

Are there any fastening or mobility options existing? Rail system, etc.

No, we need to purchase it ourselves. The system can be installed on a moving device which the system can communicate with.

How about safety equipment?

The system is not delivered with additional safety equipment. Every room must be secured against personal access and abrasive blowout during operation, like any other blast job and robot applicated area. The system has support for a client provided door interlock switch and one additional emergency stop.

Is there an operator control unit?

The robot control unit (with embedded touch screen monitor) is included in the package price. On the panel, the operator can setup all parameters of the stored programs. It is a very flexible and compact designed component of the whole system.

Weight?

The robot arm is only 25kg, which is quite lightweight for a robot. The control unit including the panel weighs in at 17kg, and the safety control unit is 27kg.

Requirements for blast equipment?

No special requirements. The blast system should be equipped with an electric deadman system with double function. Operates with the classic blast equipment.

Pot size? Silo?

No special requirements. Operates with the classic blast equipment. Sizes depend on the blast application itself, but are independent from the robot.

Special couplings for rotation?

No, not necessary. You can use the standard couplings. The only rotating device is the fixture of the nozzle on the robot, which is included in the package.

Media flow control?

Not included, but advantageous.

Communication robot – blast pot?

Yes. The system controls the blast pot. ON/OFF blast function.

What is included in the basic package?

Budget price is incl. complete robot hardware, control unit with control panel, base socket for fixed installations, arm protection, preparation and programming by Sabre. Without moving devices, rail systems, etc.

Programming? Must every task have its own program?

Yes, every different type of task must be prepared by the system. Therefore, 3D data are necessary from each task. The preparation from the system side is included in the package price. How many different types, must be clarified before order.

Service, start up?

Start-up and training by Sabre staff is not included in the package price.

Is there a customer qualification form existing? What info is needed from customer side to process for an inquiry?

A special Sabre document is not existing so far. Please contact the responsible sales staff for your territory.

Connecting point existing for remote maintenance?

It can be equipped with a remote interface.

What happens when parameters have changed during the blast process (e.g. person enters room)?

There is an input for a door interlock function. When the process has been interrupted operator has the option to rewind, abort or resume the process.

But the robot operation area has to be secured against access and abrasive blowout like any other robotic or blast application.

Delivery time incl. programming?

Approx. 3-4 months.

Certificates existing?

CE certificate included. Sabre has no ATEX certification yet.

FOR MORE INFORMATION OR FOR A QUOTATION:

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