

Requirements of viastore SYSTEMS GmbH concerning "Services provided by the customer"

The customer has to provide the following preconditions and services properly and on time.

The listing cannot claim to be complete and refers to the quoted scope of supplies.

The additional expenses resulting from not fulfilled preconditions will be charged separately.

General services provided by the customer

- ❖ Creation of an access road to the building site sufficient to bear the load of trucks and truck-mounted cranes and to bring in the components.
- ❖ Provision of a sufficiently large roof opening to bring in the storage and retrieval machines.
- ❖ Provision of a forklift truck or other mobile lifting device on an hourly basis to assist with unloading and, if required, assembling.
- ❖ Provision of loading aids (pallets, totes etc.) loaded with the maximum weight for adjustment work, tests, and acceptance.
- ❖ Acceptance fees and other authority costs, with the exception of the fees for the initial test of storage and retrieval machines with control consoles in accordance with the (German) Ordinance for the Prevention of Accidents.
- ❖ The acceptance is achieved by the general contractor.
- ❖ Provision of compressed air, if required.
- ❖ Provision of on-site power and water (from the start of assembly), and absorption of the current costs.
- ❖ Use of your sanitary facilities by our assembly personnel, free of charge.
- ❖ Provision of a first-aid kit in accordance with UVV VBG 109 (German Ordinance for the Prevention of Accidents) sections 1-19.

Services provided by the customer concerning the delivery of computer systems

- ❖ Complete cabling of the network for all offered system components in accordance with our specifications.
- ❖ Power supply 220-240 V, 50 Hz for the computer systems and the IT periphery.
- ❖ Connection of host computers provided by the customer to our warehouse management computer.
- ❖ ISDN connection for the ISDN router, and absorption of the current costs.
- ❖ Prerequisites on the host side for connecting to the WMS.
- ❖ Telephone connection for connecting an analog modem.
- ❖ A room suitable for placing the computers at the time of computer installation. The room should not be generally accessible, in order to prevent the unintended removal of cables etc. Air-conditioning in the computer room is not mandatory, but recommended.
- ❖ Furniture for the peripheral devices (PC, printers, and the like) at the respective places of installation.
- ❖ Ambient temperature 16°C to 32°C, relative humidity 8 % to 80 %.
- ❖ In addition to this, the computer system supplier's conditions for installation and operation as well as the warranty apply. The start of the earliest installation applies for warranty purposes.
- ❖ A maintenance contract must be concluded with the computer manufacturer, valid from the date of the first installation.
- ❖ The precondition for commissioning and error elimination that may prove necessary later on is a remote data transmission access to the system on the customer's premises. The customer bears the costs for the installation of the remote data transmission.
- ❖ **viastore SYSTEMS GmbH** reserves the right to have the hardware delivered in advance for the purpose of software development.

Only SAP R/3 LES and SAP R/3 interface

- ❖ Provision of an SAP R/3 test and productive system for ERP and LES (WM) including maintenance contracts.
- ❖ Operating (availability, qualification) by the customer is to be ensured for the SAP R/3 in order to achieve the required availability.
- ❖ A computer connection from viastore SYSTEMS GmbH to the customer's SAP R/3 system is required for the SAP R/3 setup work.
- ❖ The SAP R/3 system landscape (development system, test system, productive system) is maintained by the customer.

- The SAP R/3 basic training is ordered directly from SAP (or another qualified service provider) by the customer.
- All works on the side of the SAP system are carried out by the customer or on the customer's account.
- The SAP R/3 and database licenses are provided by the customer.
- The installation of the OSS messages and HOT packages is carried out by the customer.
- The customer makes an OSS access to SAP available for **viastore** SYSTEMS GmbH.
- The system and customizing settings are tested and accepted by the customer.
- The customer carries out the SAP organization, i.e. the transport and correction for the maintenance of the system landscapes (development, quality system, and productive system).

Construction preconditions

The following preconditions are required:

- Separation and scrapping of disassembled old material.
- Adaptation works on tangential sections as well as in the pre-zone, only if this is necessary and not listed separately in the scope of delivery and services.
- Cabling from the voltage distributor (400 VAC) provided by the customer to our infeed control cabinets in the system, according to our specifications.
- Separate power supply for electrically operated fire protection systems.
- Possibly required potential equalization for the floor crane rail and the rack system.
- Fire protection devices of all kinds and emergency power generators.
- Provision of a fire protection guard during welding and grinding works, if necessary.
- Masonry, mortising and earth works
- Appropriate floor coverings must be provided if hydraulic installations (e.g. scissor lift platform) and diesel units for sprinkler systems are delivered.
- Dome lights in the roof must not cause light bundling which would affect the light sensors on the SRM (toned or non-reflecting implementation).
- Flawless composition of the substrate (concrete foundation) – concrete quality at least BN 250 according to DIN 1045 – in the area of the rails and racks, and the necessary load capacity.
- The substrate condition must be such that flawless bonding between the substrate and the grouting is ensured.
- Minimum foundation or ceiling thickness for the corresponding required dowel lengths (intermediate ceilings, cellar ceilings).
- Sufficient reinforcement of the base plates or ceilings for technical installations such as vertical conveyors or sprinkler storage tanks.
- Loose and fixed parts such as screed – regardless of the type –, concrete, and mortar must be removed.
- In order not to make it impossible to drill holes to fix dowels in the area of the rail sections and rack columns or not to damage them by drilling, the following prerequisites are necessary:
 - No main reinforcing steel
 - Reinforcing steel meshes with a maximum wire thickness of 6 mm
 - If the reinforcing steel meshes are laid in several layers, a minimum distance of 150 mm is required between the layers
 - The horizontal distance between the wires is at least 80 mm, double wires are not permitted.
- Exact details of unalterable height marks and axis points for each individual aisle.
- Manufacturing tolerances of the base plate: max. ± 10 mm, related to 15 m rack length, but max. ± 15 mm, related to the overall length.

- Manufacturing tolerance of the base plate in accordance with FEM 9.831 (in item 4.1, the following values are recommended):
 The following values are considered technically and economically feasible with an unloaded base plate at the start of assembly:
 Evenness in the longitudinal and transverse direction, in relation to an ideal horizontal plane for a plate length and width

- ◆ up to 50 m ± 10 mm
 - ◆ up to 150 m ± 15 mm
 - ◆ over 150 m ± 20 mm
- ◆ The base plate must be free of snow, ice, and water for grouting work. We recommend to provide pump sumps or sink boxes in the base plate at several spots. Grouting works with cement-based materials can generally only be carried out at temperatures above +5 °C.

If the rack construction is not included in our scope of supplies as a general contractor, the following services have to be provided by the customer:

- ◆ Guide rails for the SRM according to our specifications.
- ◆ Upper guide rails for the SRM according to our specifications.
- ◆ Drilled holes in the transverse connectors of the rack for the guide rails.
- ◆ Drilled holes in the rack supports for reflectors, power rails, rope pull switches (incl. substructures for them).
- ◆ Service and maintenance platform for the mast top range. Based on the regulations of the employers' liability insurance association, we take it for granted that the customer provides an approved maintenance platform on both sides of the rack aisle, on the top rack support at the end of each aisle. The clear height must be adaptable to approx. 1,800 mm for service and maintenance. Outside the times of maintenance and repair works, the rack locations can be used as storage locations for pallets. In its uppermost position, the lift carriage of the SRM can be used as a passage from one side of the aisle to the other.
- ◆ Mechanical protection such as fencing, doors, barriers, warning signs according to the EC Machinery Directive or prEN 528, prEN 619 (prerequisite for the manufacturer's declaration/declaration of conformity).
- ◆ Electrical protection such as photo sensors, electrically monitored access door.
- ◆ Substructures on the aisle access doors for the electrical switches.
- ◆ The orderer, or customer respectively, has to take the measures required to ensure that the existing machine or system complies with the requirements of the applicable directive on operational safety.