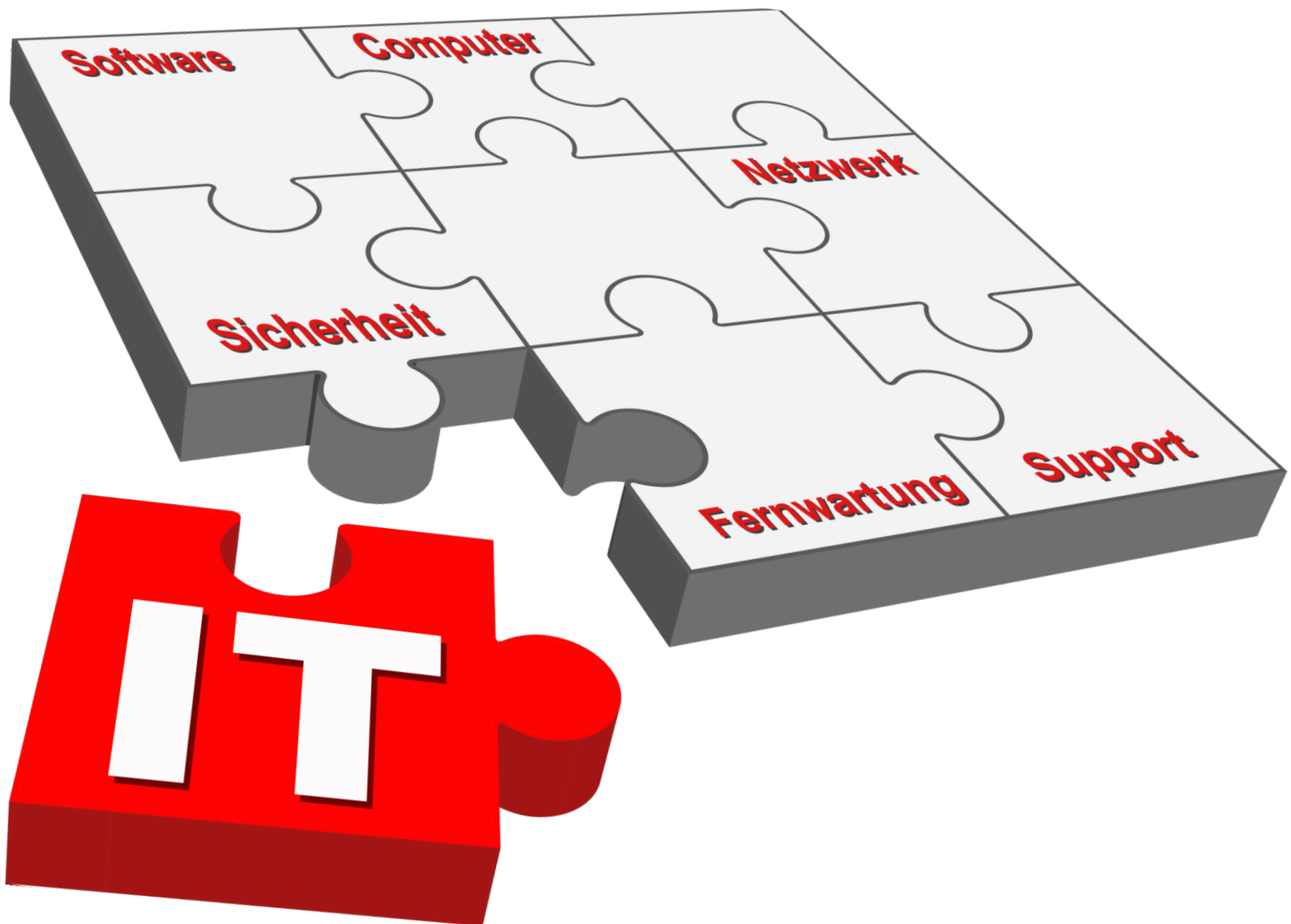


# **HYDAC** INTERNATIONAL

## General minimum IT requirements for the HYDAC production environment

Version: September 2015





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## Personal computers (19", standard enclosure or panel PC)

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Personal computers must meet the following requirements for use in the HYDAC production environment:

1. Filtration of incoming cooling air using suitable, replaceable fine filters.
2. If high availability is required: RAID 1 hardware with certified 24/7 hard drives.
3. If high availability is required: redundant power supply.
4. Intel chip set and processor (i3/i5/i7, 2.5 GHz and higher).
5. At least 4 GB of main memory.
6. Optical disc drive (DVD)
7. At least two PCI and three PCIe (1x, 4x, 16x) slots
8. Windows 7, x64 operating system.
9. Automatic system backup (full, incremental and differential) with freely selectable intervals and backup destinations. For database systems with appropriate backup routines for database backups.
10. Initial backup to a suitable data storage device after successful implementation of the system
11. Siemens Panel PCs must be used. Alternate products must be approved directly by HYDAC IT with sufficient advance notice.
12. All enclosure/hard drive keys must be provided to HYDAC IT.

## Application programs

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Software installed on a HYDAC production PC must meet the following requirements:

1. Software provided by the supplier must:
  - Run on Windows 7 x64.
  - Run with installed security software.
  - The source code, including the development environment, of any software developed under a service contract must be available. (saved on a data storage device, deposited with an independent notary, etc.).
2. Licence certificates and original data storage devices (if available) for any software provided by the supplier must be provided to HYDAC IT.
3. The complete documentation (description of documentation??) of the IT components and software used must be provided to HYDAC IT.
4. The use of standard programs and their program versions (MS-Office, graphics software, etc.) must be approved by HYDAC IT in advance.
5. The supplier must disclose its use of interfaces with other systems (e.g.: SAP, databases, etc.).
6. The software delivered must be fully functional without the need for administrator rights.
7. The software structure (PLC, NC, robotic programs, etc.) and the programming style must be approved by the customer.



## Security and remote access

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Software/PCs used in the HYDAC production environment must meet the following requirements:

1. IT systems in the HYDAC production environment **do not have** Internet access.
2. The software and systems of the supplier are not permitted to establish VPN connections in the HYDAC network.
3. Only HYDAC will provide functions and systems with which the supplier can establish a remote connection (usually VNC and RDP via HYDAC SSL Gateway) to the supplied systems for purposes of maintenance.
4. Access methods such as modem, ISDN, GSM, UMTS and DSL are prohibited.
5. Any interfaces, such as serial, parallel, USB etc., must be disabled in the BIOS, and the BIOS must be protected by a HYDAC password.
6. If Windows operating systems are used, they must be protected by HYDAC IT using the standard HYDAC security software.
7. Any login credentials and passwords must be fully documented and provided to HYDAC IT.

## Network components

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Passive/active network components in a production system delivered to HYDAC must meet the following requirements:

1. Only active network components from Cisco are permitted in the system delivered by the supplier. Any alternate products must be approved by HYDAC prior to award of contract.
2. The documentation as well the configuration of the network components must be provided to HYDAC in a suitable format (PDF file, configuration file of network components, etc.).
3. The supplier must provide HYDAC with detailed documentation of the network functions and structures within the system.
4. In the event of a network failure, data must be saved locally and synchronized once the network is functioning again.



## **Warranty, support and maintenance**

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The supplier must provide the following documents and information for all IT systems and components belonging to the production system.

1. The supplier must notify HYDAC IT of the warranty conditions, periods and terms for all IT components.
2. All warranty certificates, SLAs and service agreements belonging to the system must be provided to HYDAC IT.
3. If a maintenance agreement is concluded, HYDAC IT must be notified of the SLA terms for response times and recovery times as well as operational times.
4. The supplier must appoint in-house points of contact for HYDAC IT for the IT systems and programs delivered.
5. Acceptance tests (partial or complete) must be documented using the HYDAC check list for IT systems in the production environment.
6. A final acceptance test must be conducted in cooperation with HYDAC IT before the system is commissioned.
7. Partial acceptance tests are desired during the implementation process.