



DG Open House 2024 – Control Upgrades

DG press

service & innovation for you

www.dgpress.nl

Reasons to upgrade your controls

Reasons to upgrade

- ❑ Your DG-Vision or VSOP press is still an important production asset, but it is aging.
- ❑ The mechanical lifetime of DG-Vision and VSOP presses is very long and can be extended for many years.
- ❑ Many of the electrical parts are however now end-of-life and not supported anymore by the original suppliers.
 - Obsolete parts (PLCs, frequency controllers, servo motors, drives) have unreliable availability
 - Unscheduled replacement of obsolete parts, drives and motors requires time-consuming software engineering causing long down-times
 - PC and HMI system running on outdated operating systems cause serious support issues
 - Communication network and safety network is not according latest standards

Solution:

- ❑ DG developed several control upgrade packages for different needs and budgets
- ❑ Smaller packages with a focus on the high-risk obsolescence modules and bigger packages with a full-scale upgrade



Upgrade Packages for VSOP and DG-Vision



Support Package - Keep the press connected to enable remote support

- ✓ New main PC - Replacement of the main PC to actual Windows-version to prevent replacement issues and connectivity issues.



Ensure Package - Ensure that obsolete parts will not cause long downtimes.

- ✓ New main PC
- ✓ New main cabinet PLC
- ✓ New MLC (instead of PPC boxes)
- ✓ Optional upgrade of 1 or more print units



Update Package - Update of all obsolete parts

- ✓ New main PC, main cabinet PLC and MLC
- ✓ New PLCs in all modules
- ✓ New Lenze drives in all modules
- ✓ New safety relays in main cabinet



New Controls - Update of all controls, drives and motors

- ✓ New main PC, PLC's, MLC and Lenze drives
- ✓ New HMI screens in towers and modules
- ✓ New motion system: Bosch Rexroth drives & motors
- ✓ New Ethernet communication network
- ✓ Update to double channel safety

Main console and HMI module upgrade

- Main console upgrade with brand new Windows 10 PC
- Brand new touch screen and fitting symbol plate
- Replacement of the Module HMI screens by direct fitting touch screen panels
- Full programming and rewiring for the units above



New PC & Touchscreen



Old Module HMI



New Module HMI



Main cabinet upgrade

PLC and motion controlling system:

- The old ABB PLC will be replaced by new AC500 PLC
- Rewiring to the new PLC will be done
- PLC will be programmed
- Three PPC-boxes will be replaced by one MLC controller
- Rewiring to the new MLC will be done
- MLC will be programmed
- All servo controllers will get a firmware upgrade
- Press will be prepared to replace existing DIAX-04 drives and motors to M-drive



Old situation



New situation

Print unit upgrade

- PLC controllers of printing unit will be replaced by new current type ABB PLC.
- Frequency ink motor drive and water pan motor drive will be replaced by new type drive
- Rewiring to the new frequency controllers will be done
- Frequency drives will be reprogrammed



Old situation



New situation



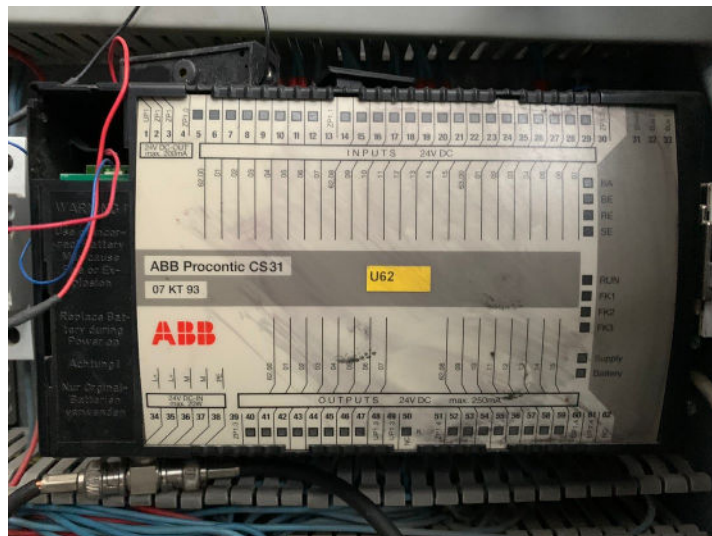
Old situation



New situation

Infeed, outfeed or other modules

- PLC controllers of infeed, outfeed or other modules will be replaced by new ABB PLC
- Frequency drives will be replaced by new type drive
- Rewiring to the new frequency controllers will be done
- Frequency drives will be reprogrammed.



Old PLC



New PLC

Servo drives and motors

- Old Diac03 or Diac04 system will be replaced by the new M-Drive series.
- All drive controller power supplies will be replaced
- All drive controllers will be replaced
- All motors will be replaced
- All motor and encoder cables will be replaced
- Software will be fully updated towards newest standard



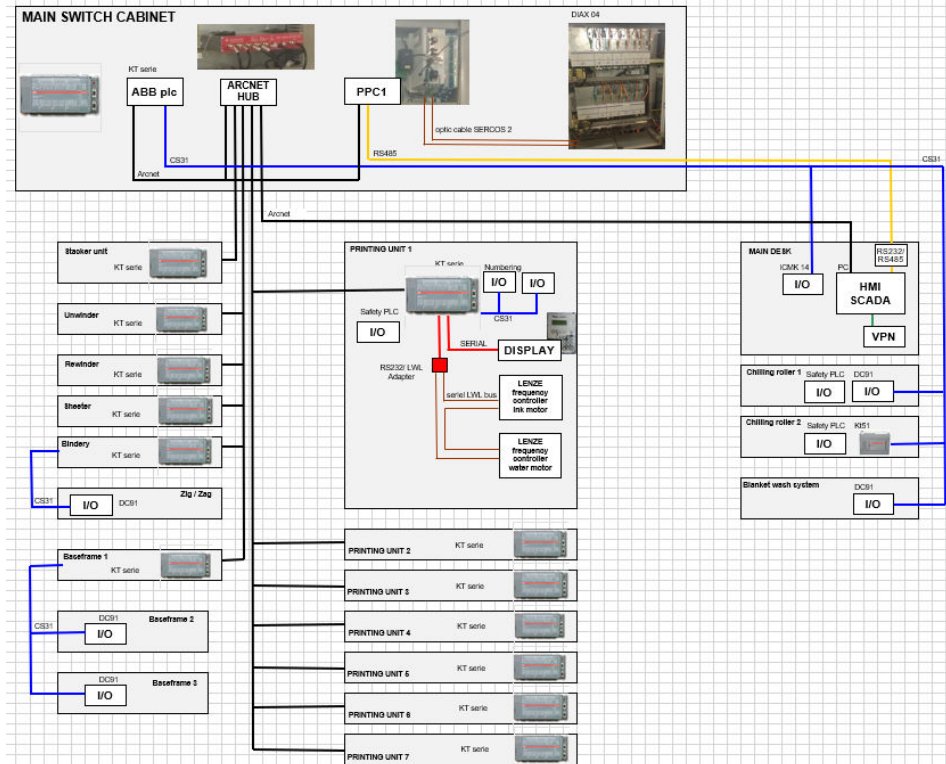
Old servo system



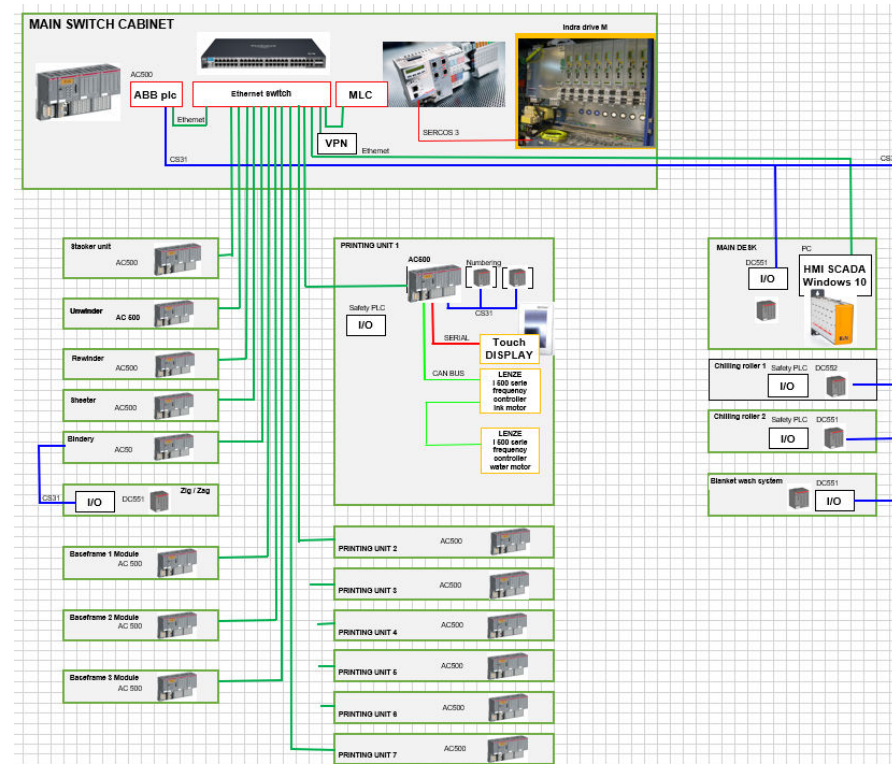
New servo system

Communication and safety network

- Replace all Arcnet communication lines with Ethernet
- If all upgrades are done the 2-channel safety and servo drive system with safety will complete a safety upgrade towards performance level D as mentioned in EN-ISO 13849-1



Old communication network



New communication network

Possible control upgrade packages

Control Upgrade DG-Vision or VSOP DIAX-04	Support	Ensure	Update	New	Description
HMI					
PC console update	Yes	Yes	Yes	Yes	Update to Windows-10
HMI screens in towers and modules		Optional	Optional	Yes	Update with Lauer touchscreens
PLC and I/O control					
PLC in main cabinet		Yes	Incl	Incl	Exchange of KT PLC to AC500 and MLC
PLC in one printing unit or module		Optional	Incl	Incl	Exchange of KT PLC to AC500 and MLC
PLC in main cabinet, all printing units and modules			Yes	Yes	Exchange of KT PLC to AC500 and MLC
Servo drives and motors					
New motion control interface		Yes	Yes	Yes	Replace DIAX-04 PPC/CCD for MLC
New motion system on all modules			Optional	Yes	Replace DIAX-04 to Indradrive M
Frequency drives and motors					
New frequency drives and motors			Optional	Yes	New Lenze drives
New sidelay motors			Optional	Yes	Replace Astro to Animatics
Communication network and safety					
Update to new VPN	NA	NA	NA	NA	Press already has latest VPN
Update to Ethernet		Partially	Partially	Yes	Arcnet to Ethernet
New safety relays in main cabinet			Yes	Yes	New DOLT safety relays
New safety system				Yes	New safety PLC's and relays
Software					
Latest version software		Yes	Yes	Yes	
Warranty					
Warranty period in months on replaced parts	12	12	12	12	
Budget Pricing					
Budget range	15-20 k€	55-65k€	150-250k€	350k€ - 900k€	Price depends on customer specification





Get connected!

ADDRESS

Hallseweg 21, Hall
The Netherlands

PHONE

+31 313 671911

WEBSITE

EMAIL

info@dgpress.nl



