



**R&D and Services**

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**LAM Rainbow Pneumatic upgrade**

Information contained in this presentation is confidential

# Issue / Problem statement



- LAM Rainbow systems, configured with old, obsolete SMC solenoid valves, may be getting reliability issues.
- The pneumatic lines may start to leak, partly due to the substance of the tubing

# Solution

- SOS has identified a solution by replacing all tubing and fittings for metric equivalents.
- Additionally, SOS developed an upgrade, comprising 6 Festo new Smart Cubic valve terminals, with D-sub connectivity.



# Advantages of the upgrade



- Increase machine-uptime due to reliable, state of the art pneumatic installation.
- Reduce production costs by reducing the usage of compressed air (no leakage).
- Improved environment with reduction of energy.



# Examples



Original situation



Upgraded situation

# Example leakage costs

Hole-diameter of tubing	Leakrate per minute	Compressor capacity	
3 mm	600 l/min	4,5 KW	€ 2.365,=
5 mm	1620 l/min	12 KW	€ 6.386,=
10 mm	6300 l/min	47,3 KW	€ 24.834,=

1kW = € 0,06

6 bar operational pressure, 24 hrs per day, 365 days per year

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