

Inline Sputter Tool A 1500V-7

Customer : First Solar Advanced Technologies

street : 1391 Geneva Dr.

place : CA 94089 Sunnyvale

maschine nr. : 011003 (inkl. Upgrade 388) year of manufacture: 2010 (Upgrade 2012)

 94089 Sunnyvale
LEYBOLD OPTICS

Zur Wetterwarte 50/Haus 303 D-01109 Dresden

Internet <http://www.leyboldoptics.com>

comment:

to create - E-CAD System WSCAD 5.5

Anlage gebaut nach : securities off machines - Electrical equipment of machines
Plant built according to : Safety of machinery - Electrical equipment of machines

EN 60 204 (VDE 0113/1)

Date:
17.10.2012

work:
F.Kuchling

cover sheet media projecting
































P/005357

















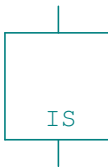

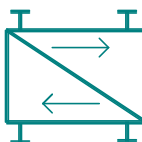

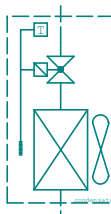

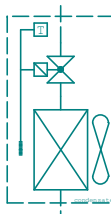










sheet: 1

[illegible]

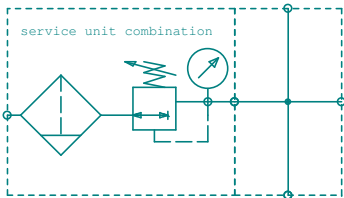
				date	17.10.2012	A1500V-7	 LEYBOLD OPTICS	table of contents		P/005357	
				work	F.Kuchling						
				checked							
Zust.	Änderung	Date	Name	Norm					A1500V-7		Blatt 1 von 46 sh

0	1	2	3	4	5	6	7	8	9
Structure of local marks:			Vacuum Components			Process Measurement			
+XXAAAAYY			single chamber machine LAB			TLM end of target life time monitor			
XX ... place (module)			+V1 high vacuum valve			TCM thickness measurement and control			
AAAA ... part (2-4 digit)			+V2 fore vacuum valve HV pump			XTAL crystals			
YY ... counter			+V3 roughing valve			XRF X-ray fluorescence analysis			
			+V3.1 soft pump valve			OES optical emission spectroscopy			
			+V4 venting valve			ICM ion current monitor			
			+V4.1 soft venting valve			FC faraday cup			
			+V5 gas inlet ion source			RSQ square resistance monitor			
			+V6 gas inlet neutraliser						
			+V7 gas inlet glow discharge unit						
exapmle:			+V8.x process gas inlet			Binary Sensors			
			+V9 shut off valve for residual gas analyser			S... sensor, generic			
+P1VB01			V... valve, generic			SG safety light curtain			
			VG gas valve			SF gas flow switch			
			VB venting valve			SD door switch with and w/out lock			
P1 ... process chamber			VK combination valve			SDH cover switch			
VB ... venting valve			VD throttle valve			SL compressed air switch			
01 ... 1st counter			VM measuring valve			SN emergency stop			
			VO shut-off valve			SC position switch			
			VP purge gas valve			SP pressure switch			
			VS gate valve, high vacuum valve			SW water flow switch			
			VV fore vacuum valve			SWT water flow switch target			
			VW water valve			SWU water flow switch magnetron environment			
			VZ 3 position valve			SWG water flow switch generator			
						SWL water flow switch leakage			
						SWN water flow switch matchbox			
			P... pump, generic			Analogue and Digital Sensors			
			PC cryogenetic pump			G... analog sensor, generic			
			PD oil diffusion pump			GV peed sensor			
			PI ion getter pump			GF force sensor			
			PR roots blower			GH humidity sensor			
			PT turbo molecular pump			GT temperature sensor			
			PV fore vacuum pump			GP pressure sensor			
						GL position sensor			
			M... vacuum gauge, generic			GO oxygen sensor			
			MC capacitance diaphragm gauge			GQ quality analyser			
			MI bayard alpert gauge			GD data sensor, e.g. bar code or RF ID reader			
			MK combi gauge						
			MP penning gauge						
			MS residual gas analysis, mass spectrometer						
			MT pirani gauge						
			Process Components			Drives			
			ETCH etcher			A... drive, generic			
			IS ion source or plasma source			AD rotating drive			
			GLE glow discharge unit			AH lifting drive			
			GEN process power supply			AK carrier drive			
			MAG magnetron			AP drum drive			
			MITCH matchbox			AS shifting drive			
			MFC gas flow controler			AW winding drive			
			MFM gas flow meter			AR control drive			
			MOP process controler			AL locking drive			
			PREG pressure regulator						
			TREG temperature regulator			Other Things			
			TH heating, cooling unit			LMP chamber lamp			
			ESV electron beam evaporator			WAB water supply			
			TV thermal evaporator			HDL substrat load/ unload handler			
			SH evaporator shutter			HMI human machine interface			
			EGC electron beam gun controller						

0		1		2		3		4		5		6		7		8		9	
connection points						valves/actuation						vacuum							
		connection point, vacuum						angle valve						turbomolecular pump					
		connection point, pneumatics						shut off valve						roots pump					
		connection point, cooling water						throttle valve						screw type pump					
		connection point, process gas						manually operated						rotary vane pump					
cathodes								pneumatical						chamber-gate valve					
		tube cathode						electromagnetically						vacuum gauge					
		tube cathode (option)						electropneumatical						vacuum gauge residual gas analysis					
		planar cathode						motor-driven						sorption trap					
		planar cathode (option)												filter, exhaust silencer					
		ion source												pressure source, compressor					
														manometric switch					
														safety valve					
														rupture disc					
				date	17.10.2012		A1500V-7		 LEYBOLD OPTICS		symbols general/vacuum		--		P/005357				
				work	F.Kuchling								media scheme				Blatt 4		
				checked											von 46				
Zust.	Änderung	Date	Name	Norm															

0				1	2	3	4	5	6	7	8	9	
cooling water						magnetron cooling							
	pressure regulator						matchbox						
	check valve						tube magnetron, cathode						
	manometric switch		flange, o-ring cooling				planar magnetron, cathode						
	elec. temperatur sensor		cooling panels				cathode environs						
	temperature measurement		feedthrough, transport				RF/HF connection, electrode						
	pressure sensor		generator				ion source						
	pressure gauge		heat exchanger										
	flow indicator		water cooling										
	flange connection		electrical cabinet										
	fluid coupling		pump										
	threaded adapter		exhaust fan										
	plug connector		filter, mechanical										
	bulkhead union												
	screw joint												
	quick-action coupling												
				date	17.10.2012	A1500V-7		 LEYBOLD OPTICS	symbols cooling water		--	P/005357	
				work	F.Kuchling						media scheme		Blatt 5
				checked									von 46
Zust.	Änderung	Date	Name	Norm									

pneumatic



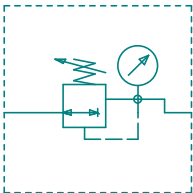
Service unit combination
consisting of
filter regulator
distributor module
with manual condensate drain



non-return valve



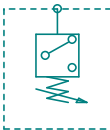
non-return valve
pneumatic piloted



pressure regulator MINI
for blow out air



throttle-check valve



pressure switch
with adjustable switching point
and adjusting scale



pressure sensor



air flow heater

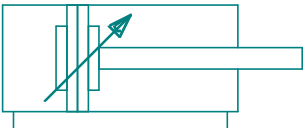


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filter, exhaust silencer
```

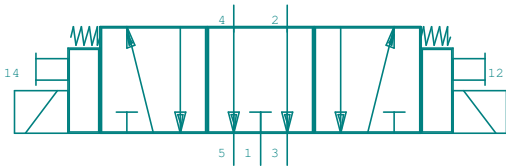


air reservoir

air reservoir

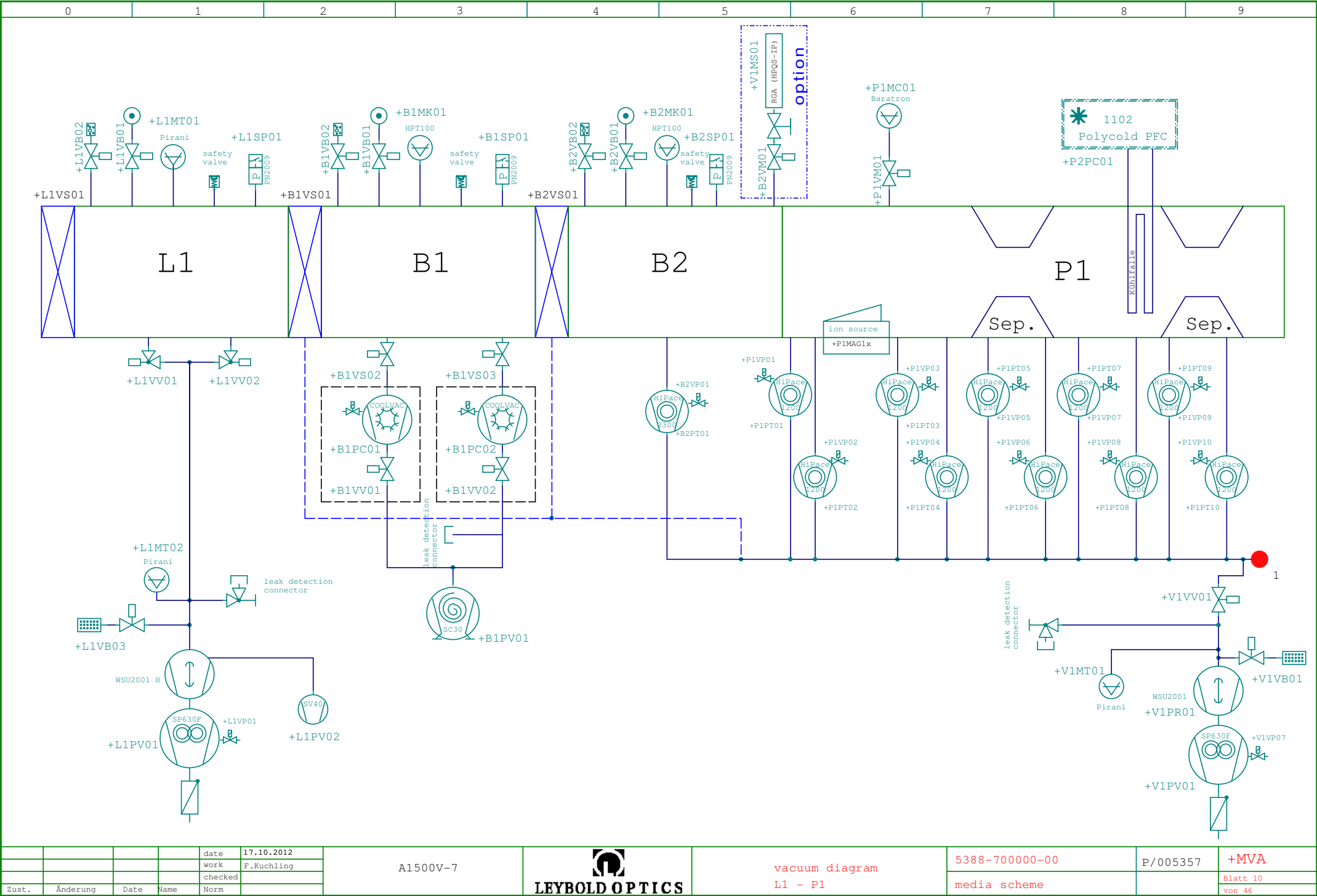


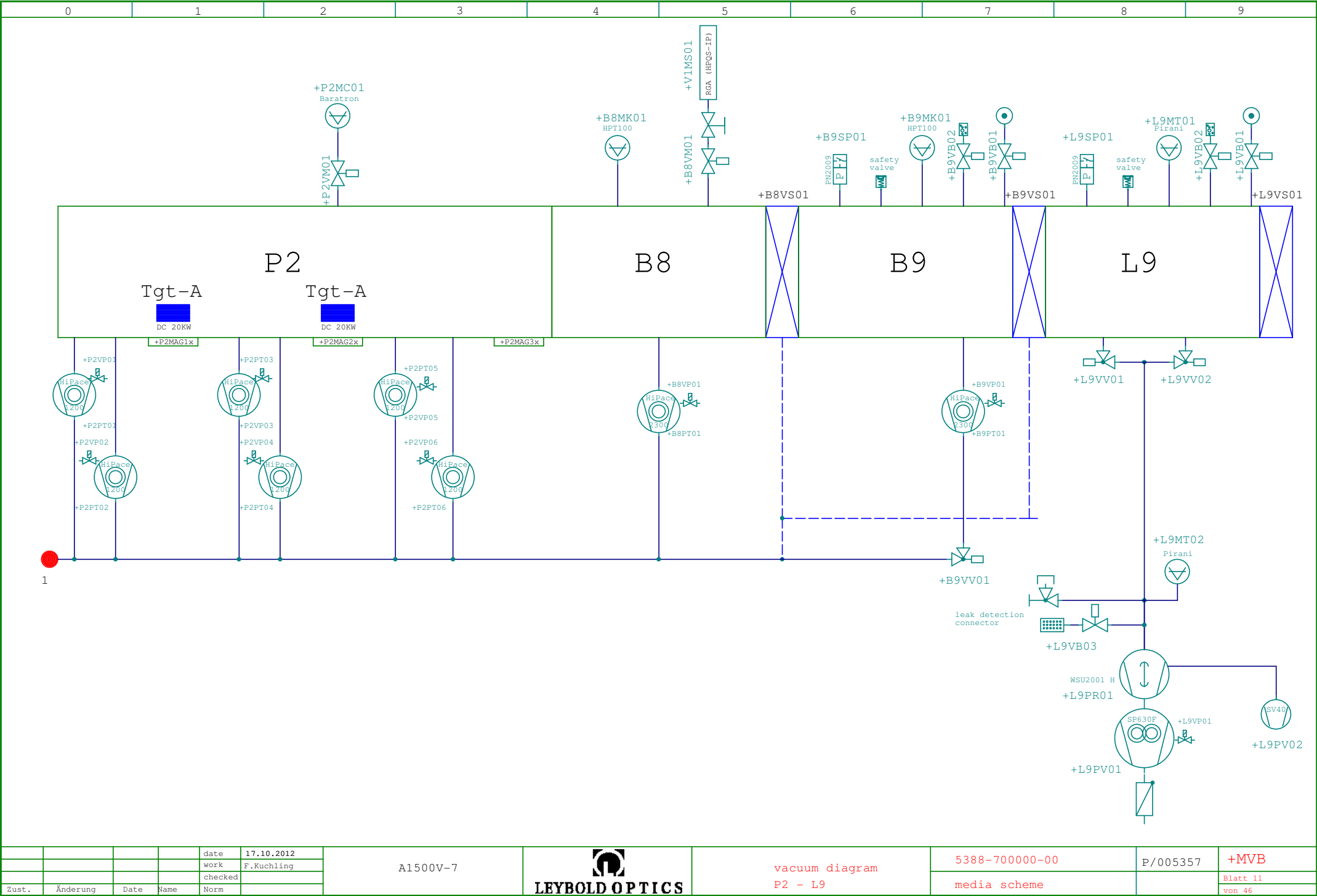
standard cylinder

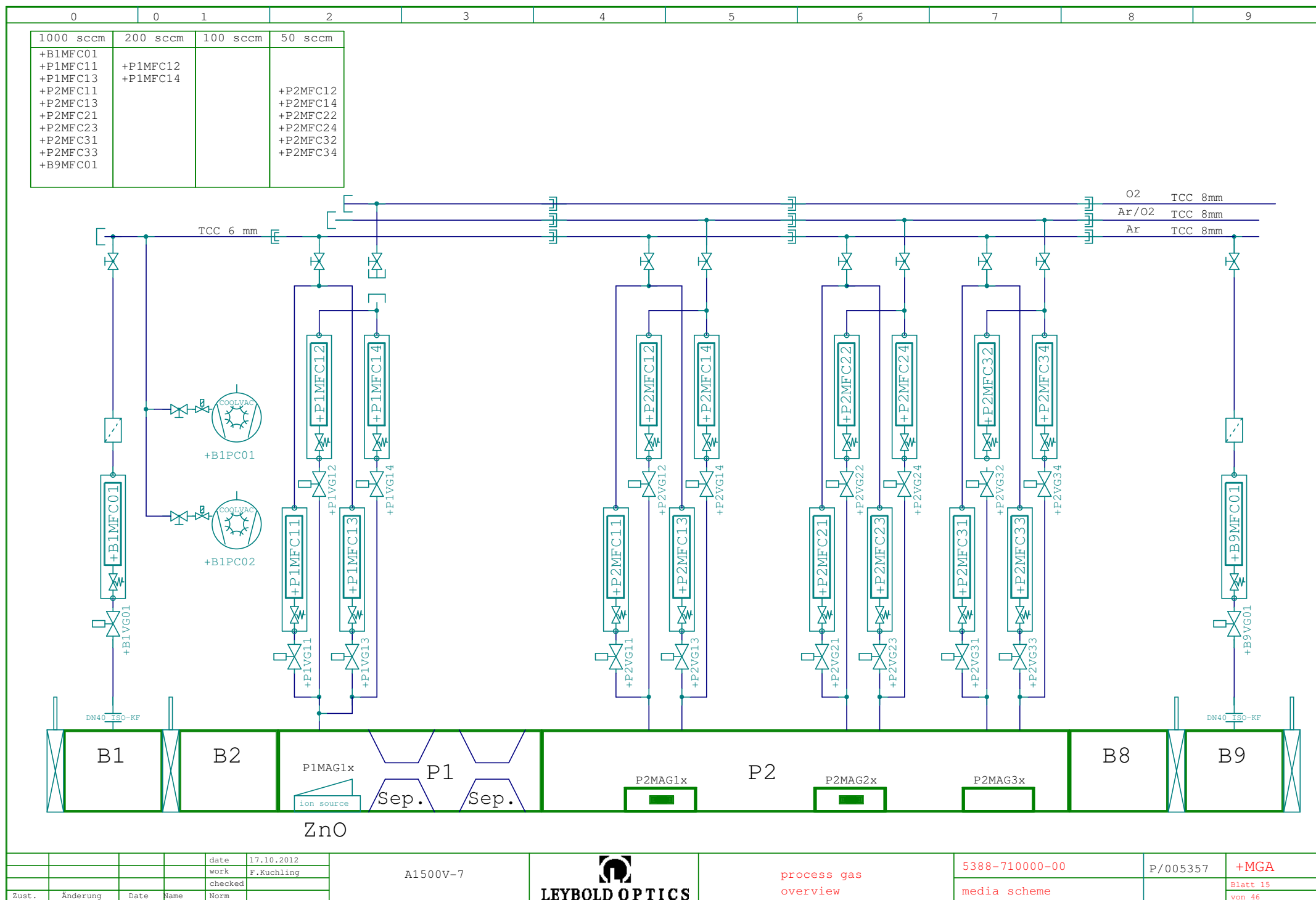


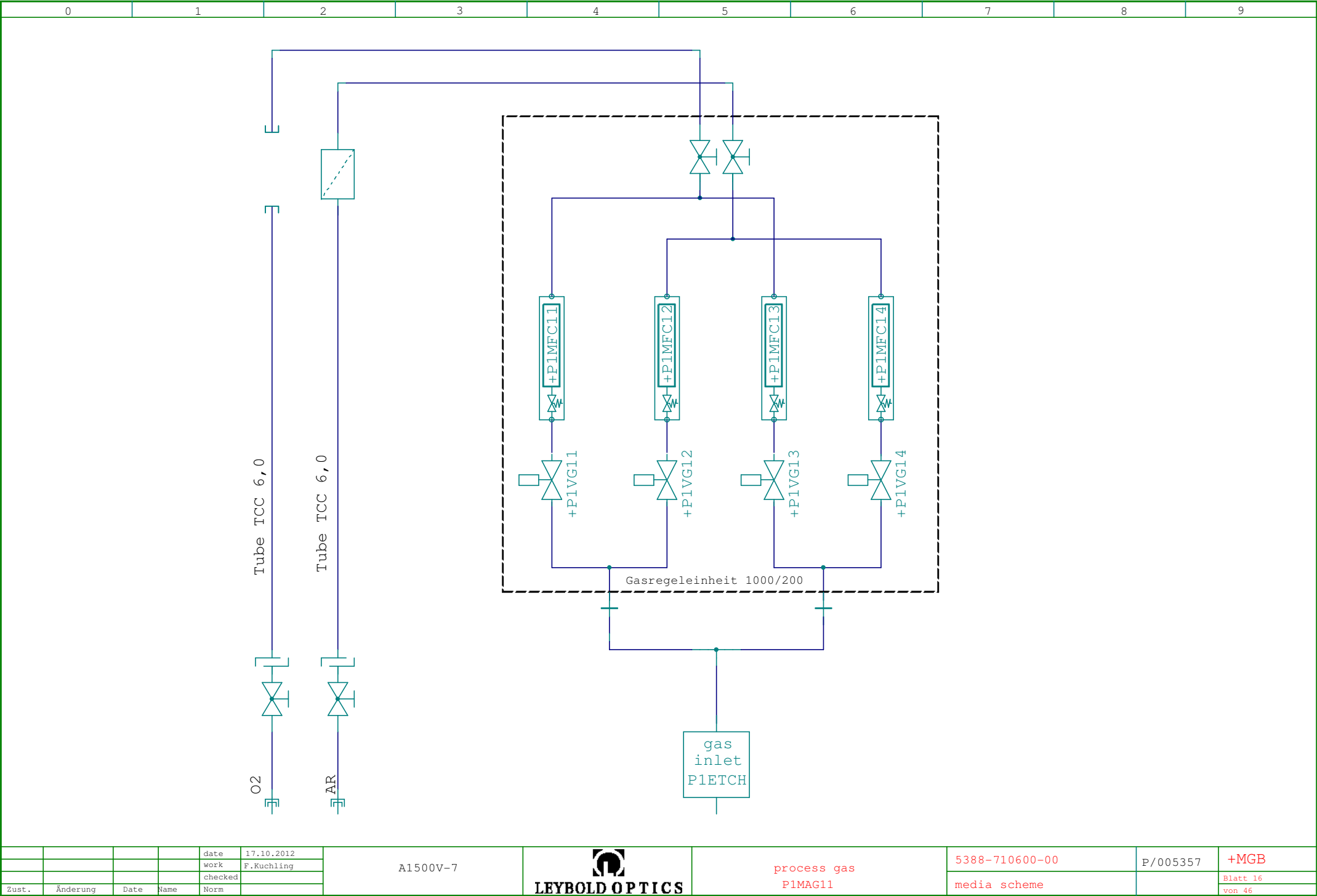
magnetically valve

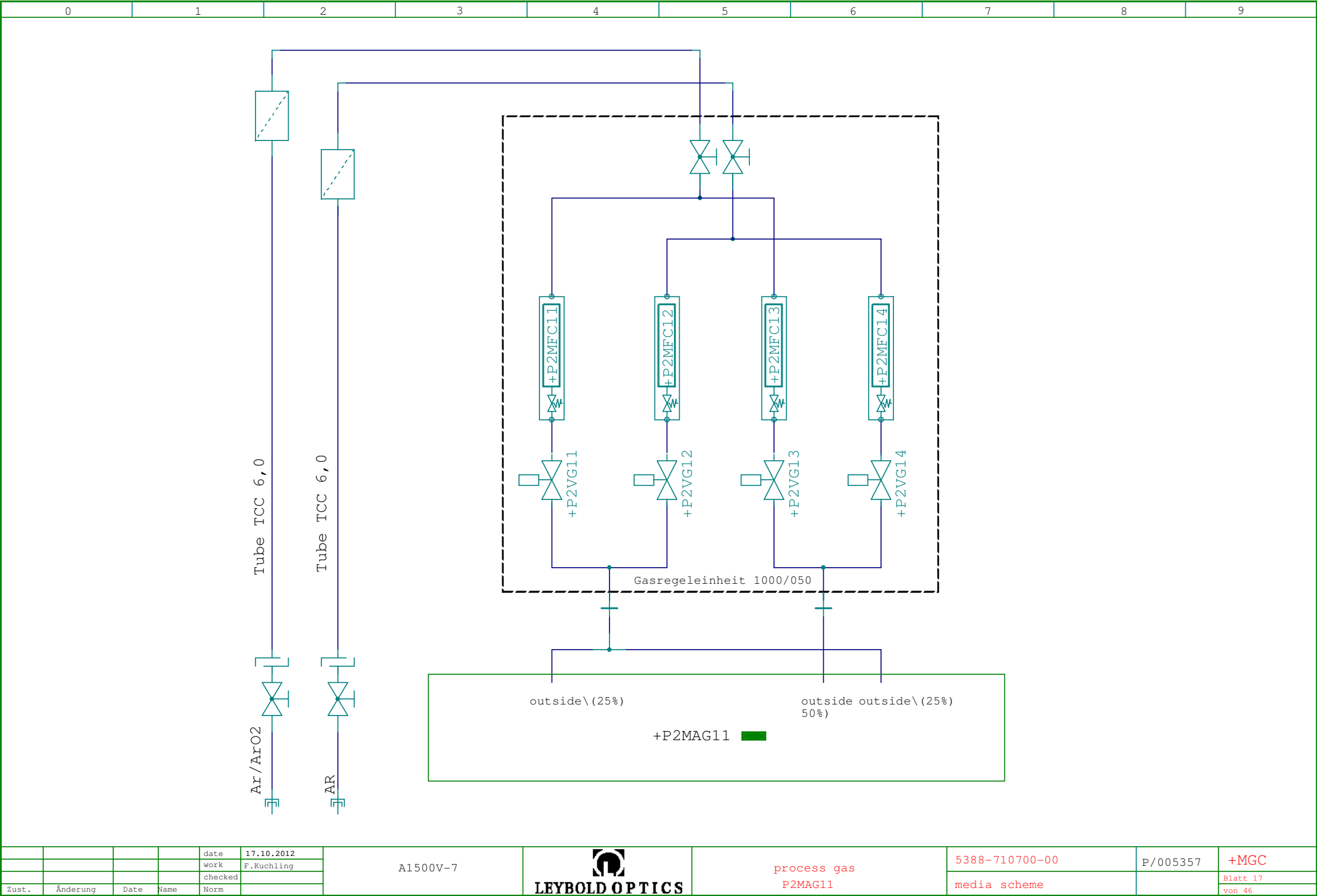
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				work	F.Kuchling							
				checked								
Zust.	Änderung	Date	Name	Norm					media scheme		Blatt 6 von 46	

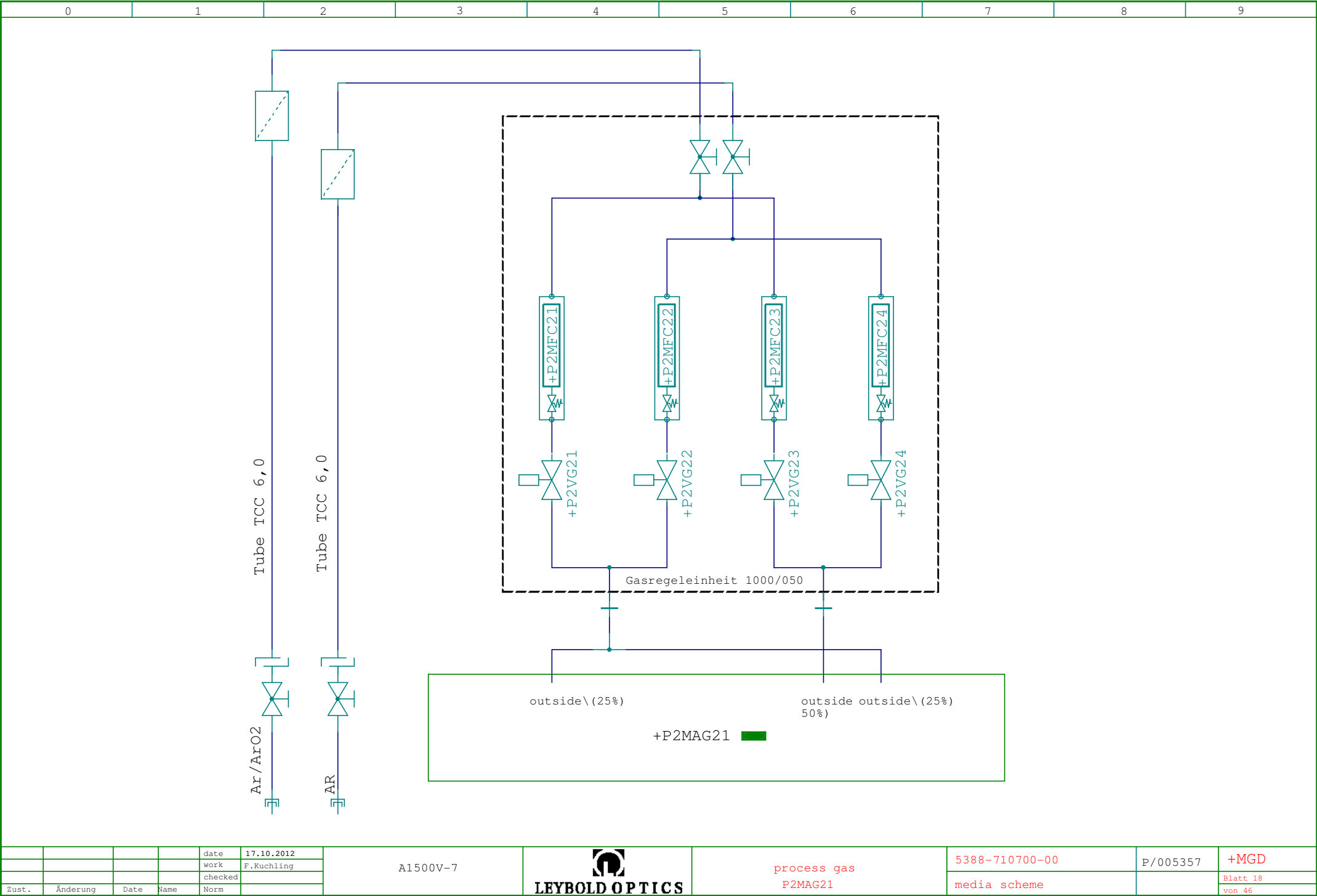


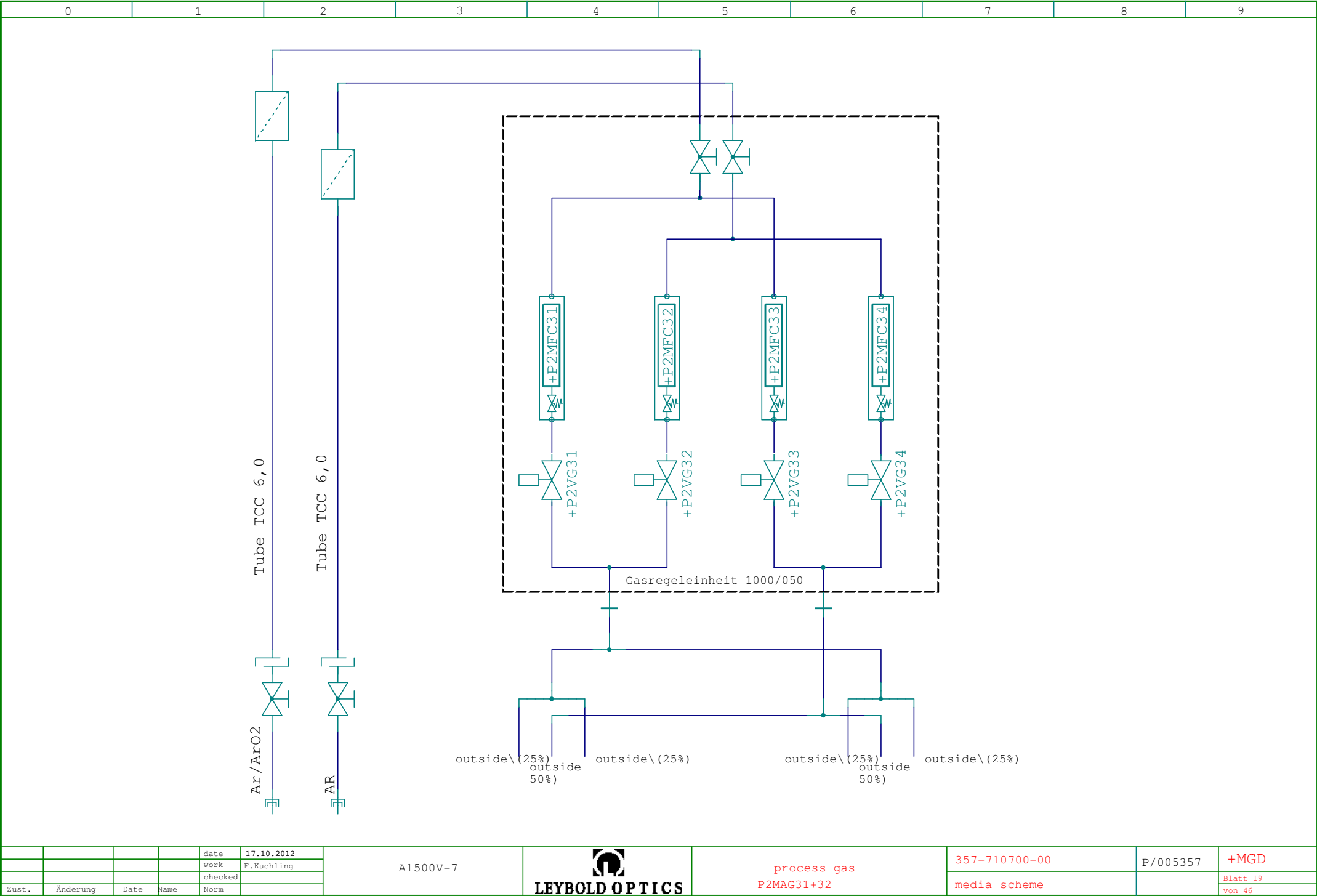






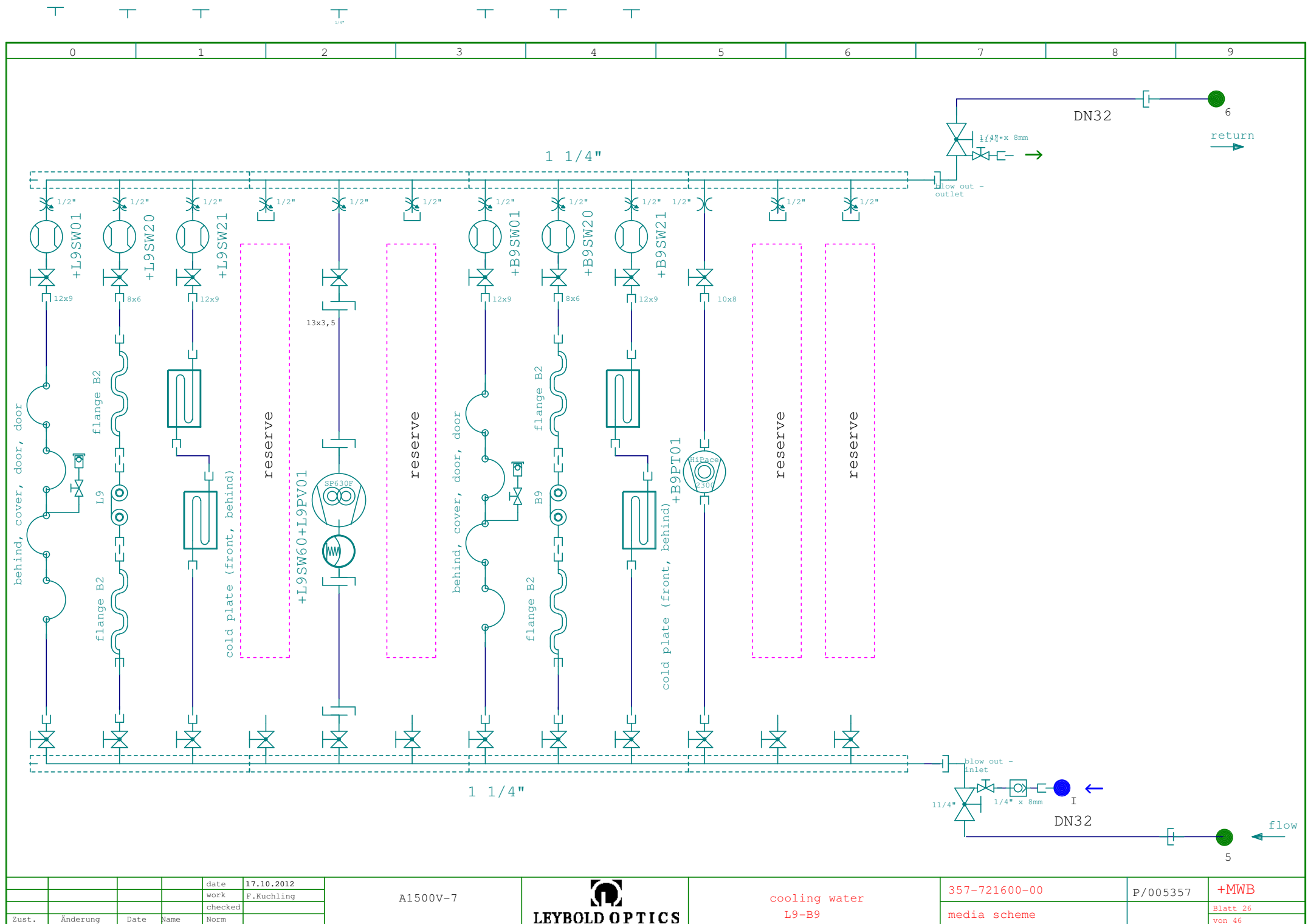


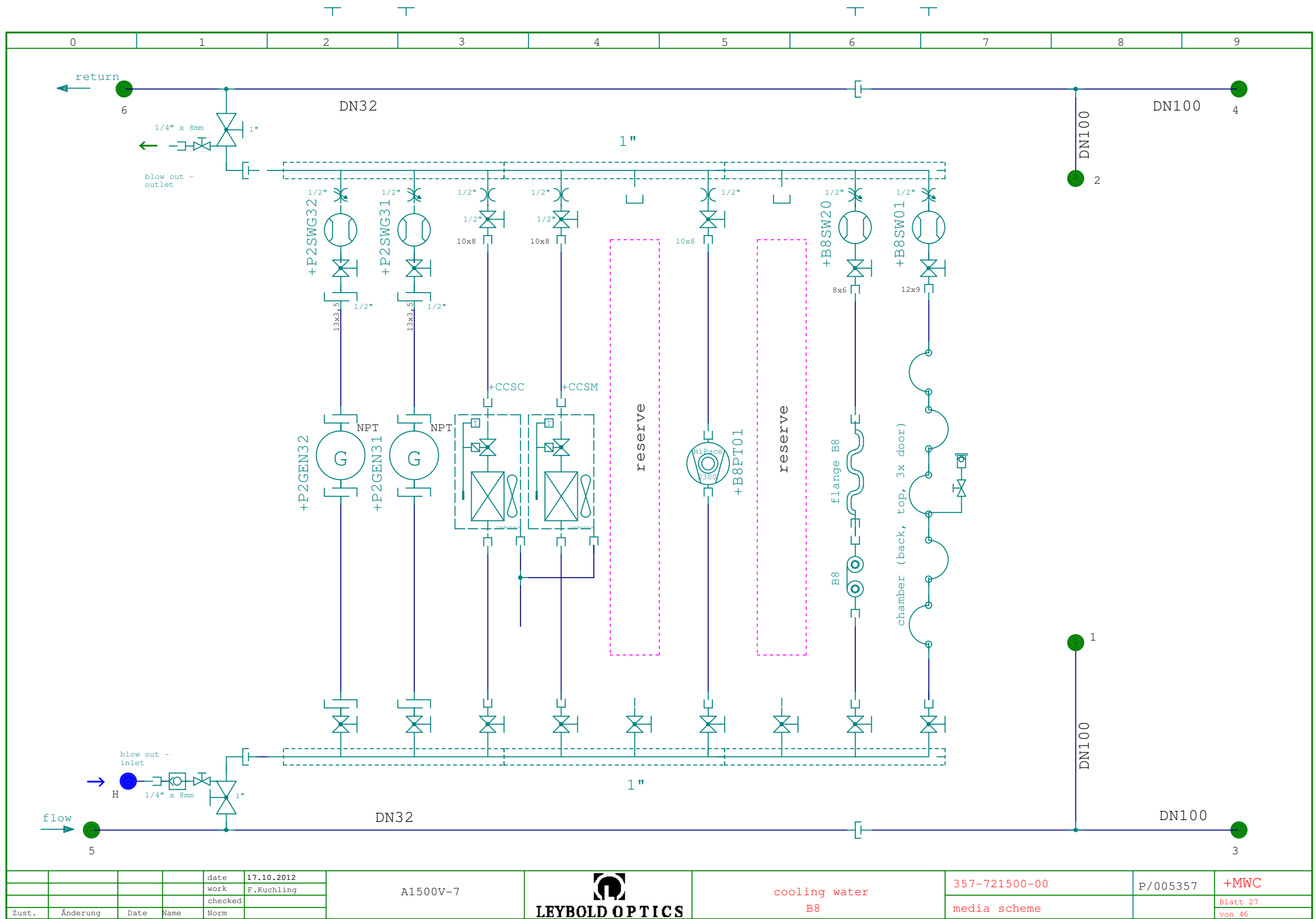




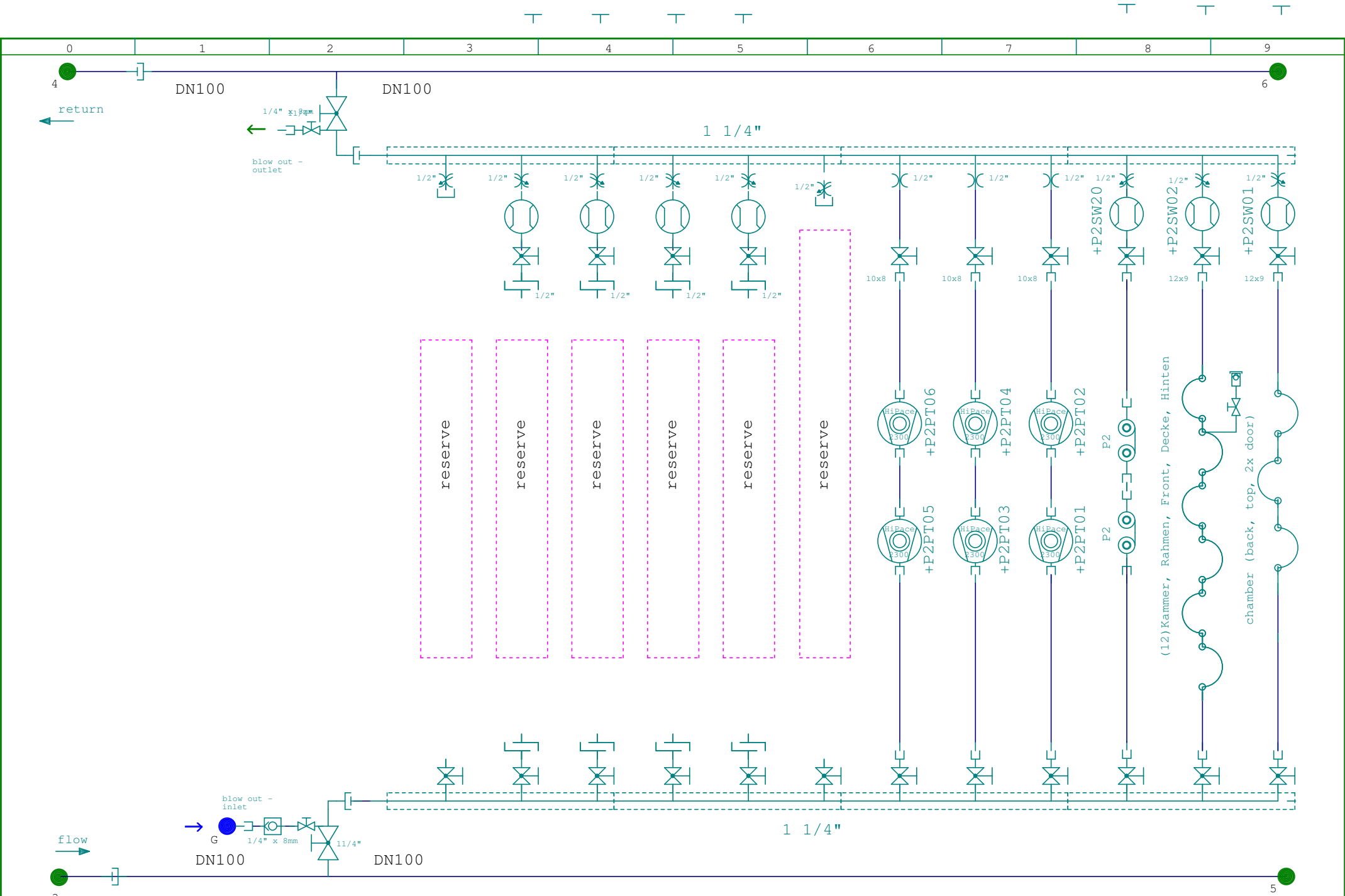




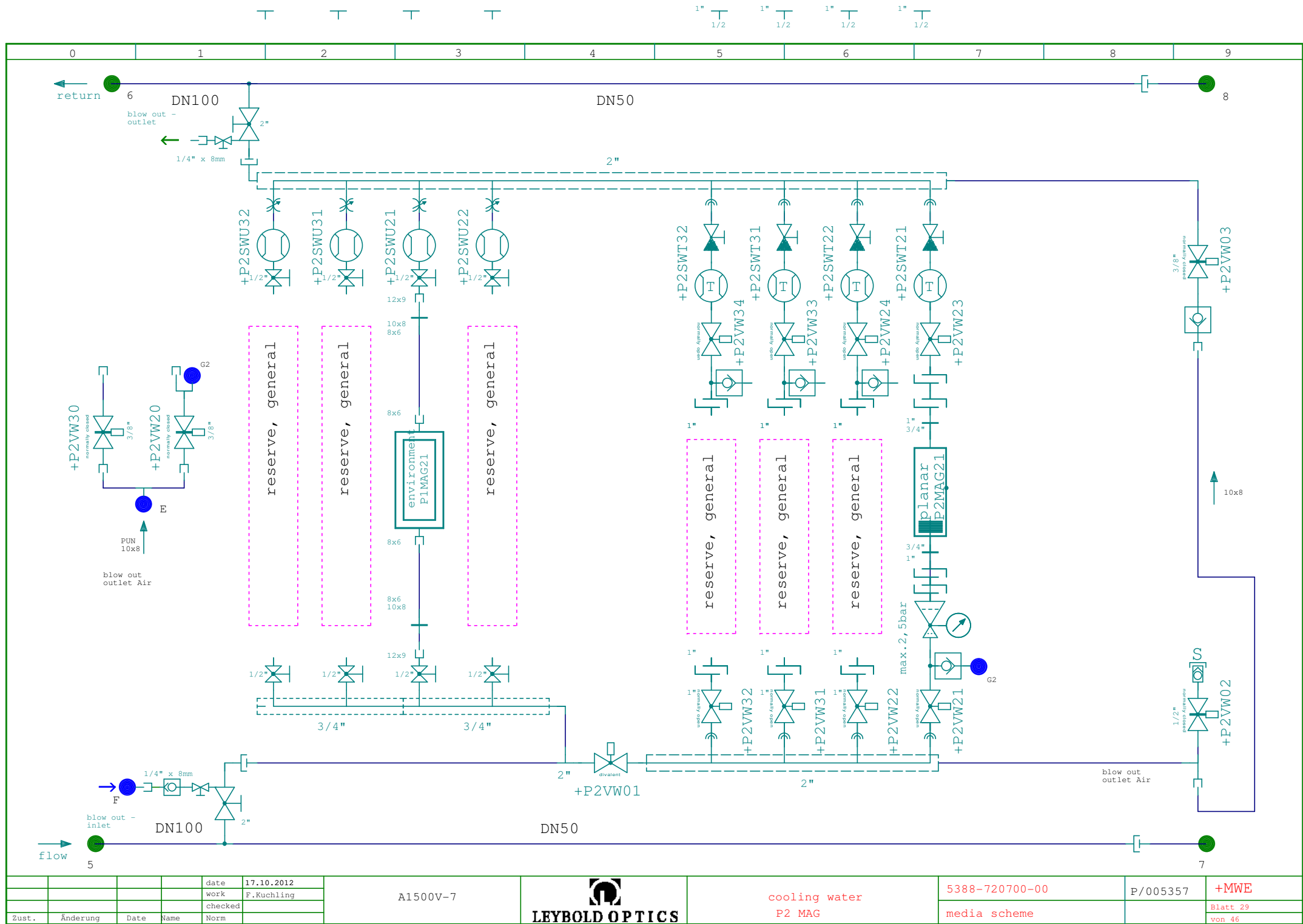


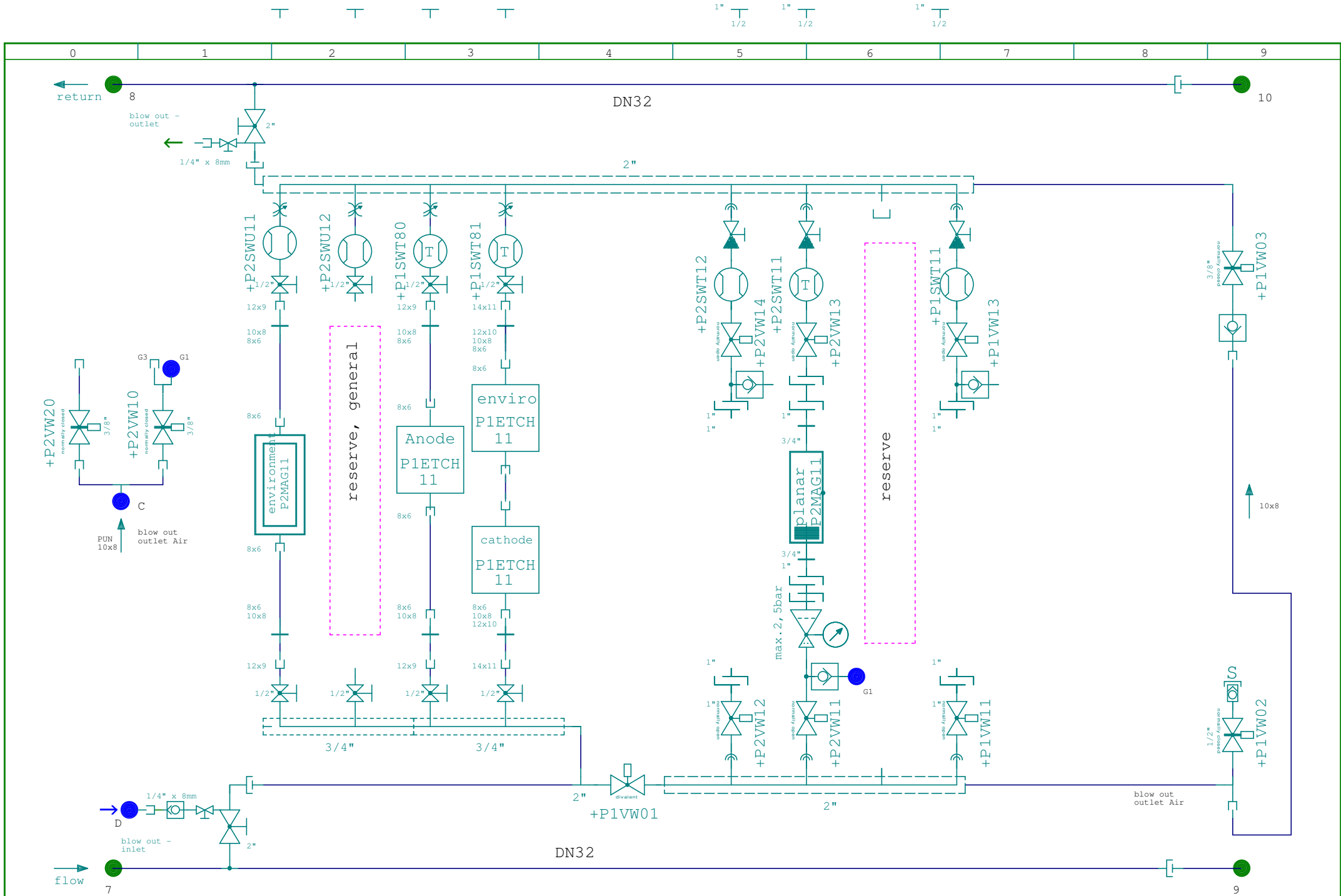


				date	17.10.2012	A1500V-7		cooling water B8	357-721500-00	P/005357	+MWC
				work	F.Kuchling						Blatt 27
				checked					media scheme		von 46
Zust.	Änderung	Date	Name	Norm							



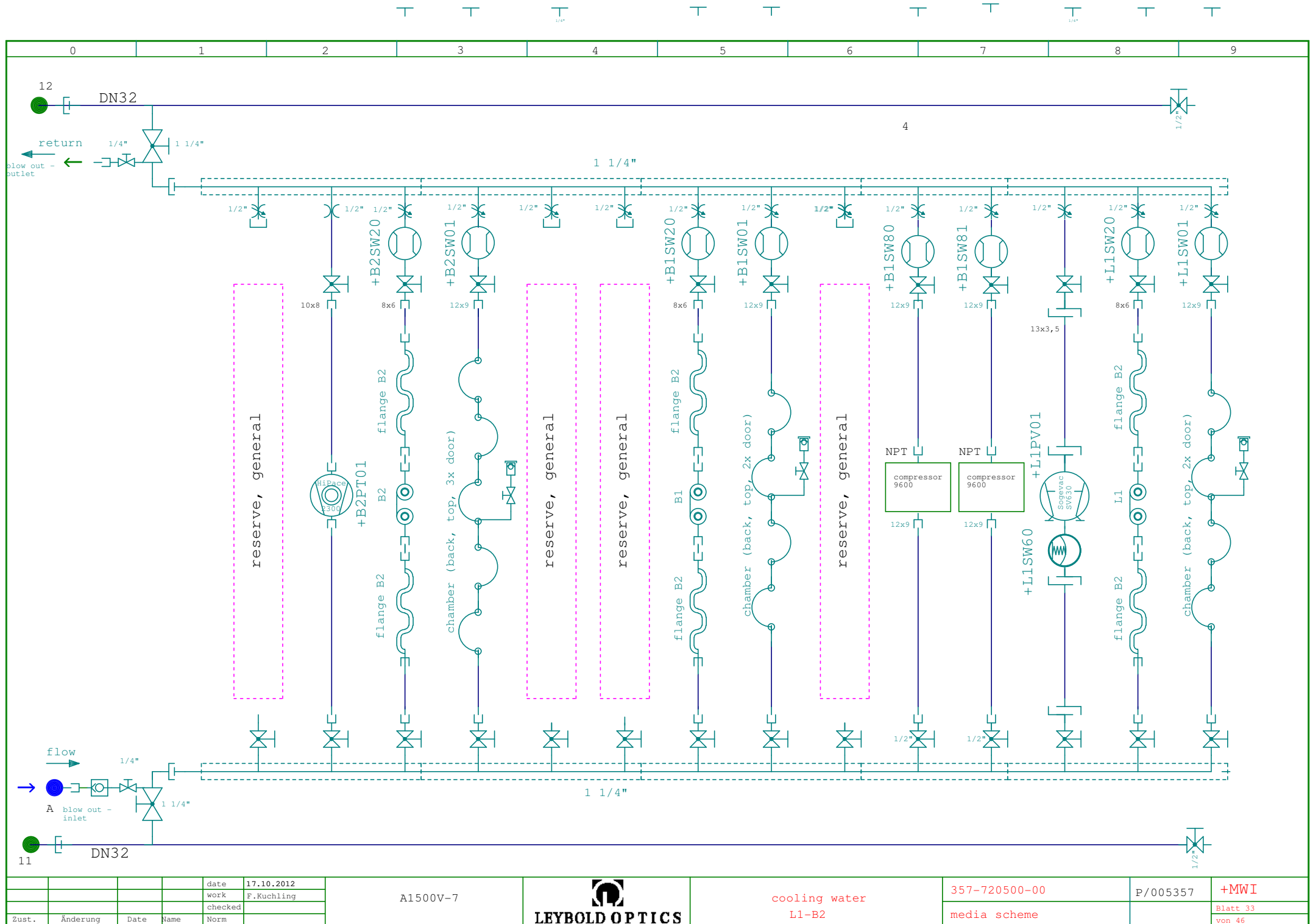
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				checked							
Zust.	Änderung	Date	Name	Norm		LEYBOLD OPTICS		P2	media scheme		Blatt 28 von 46

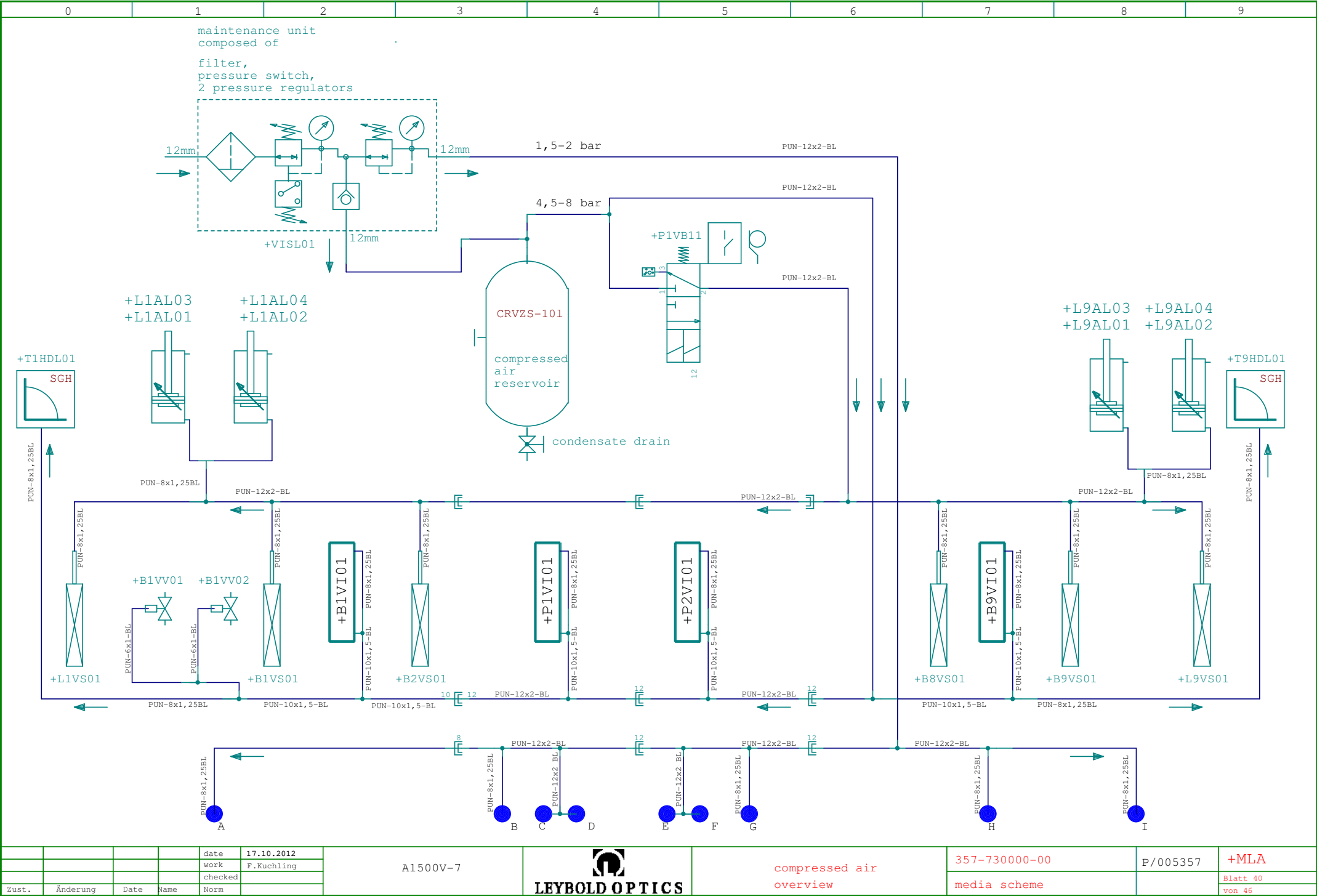




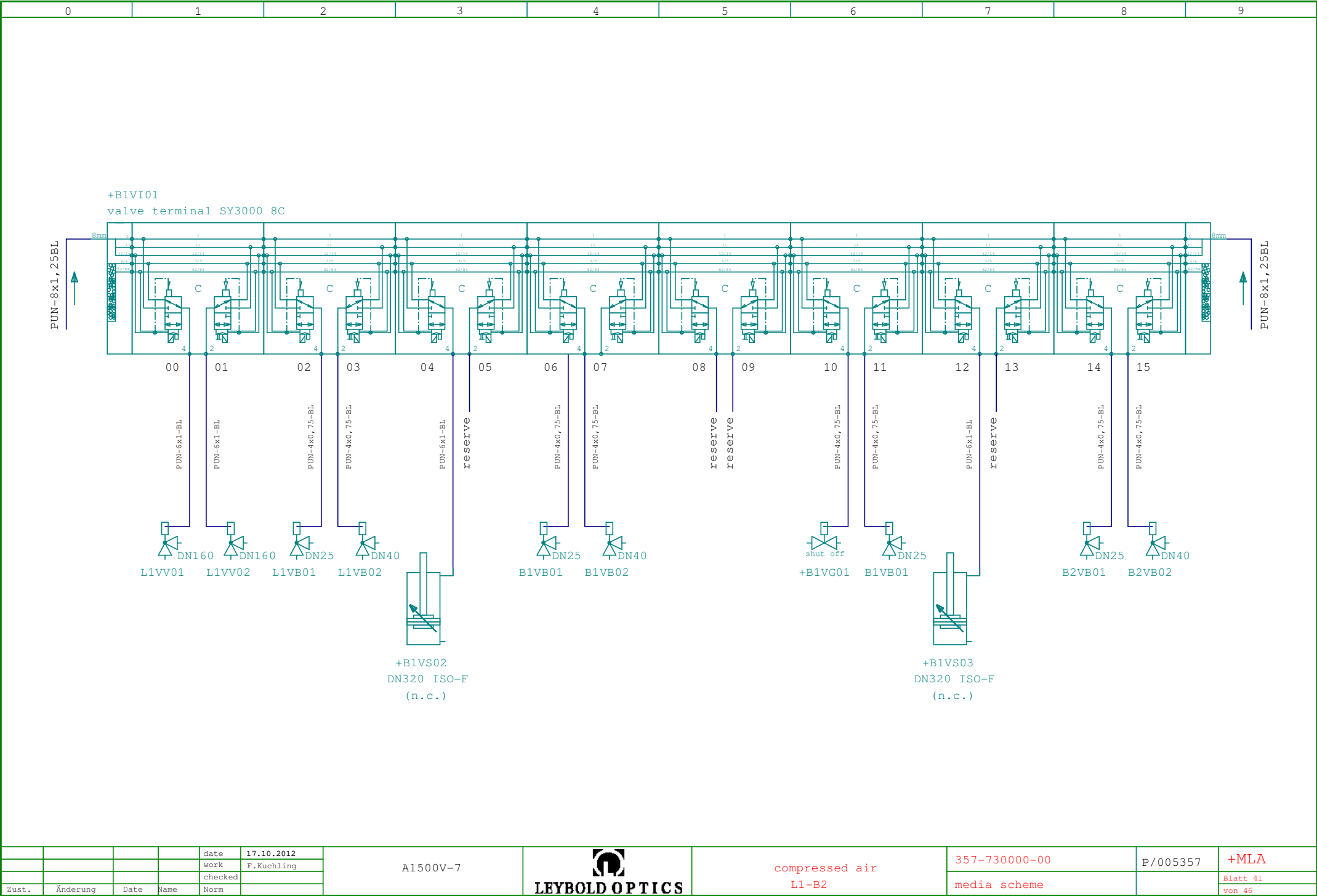
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				checked							
Zust.	Änderung	Date	Name	Norm						media scheme	

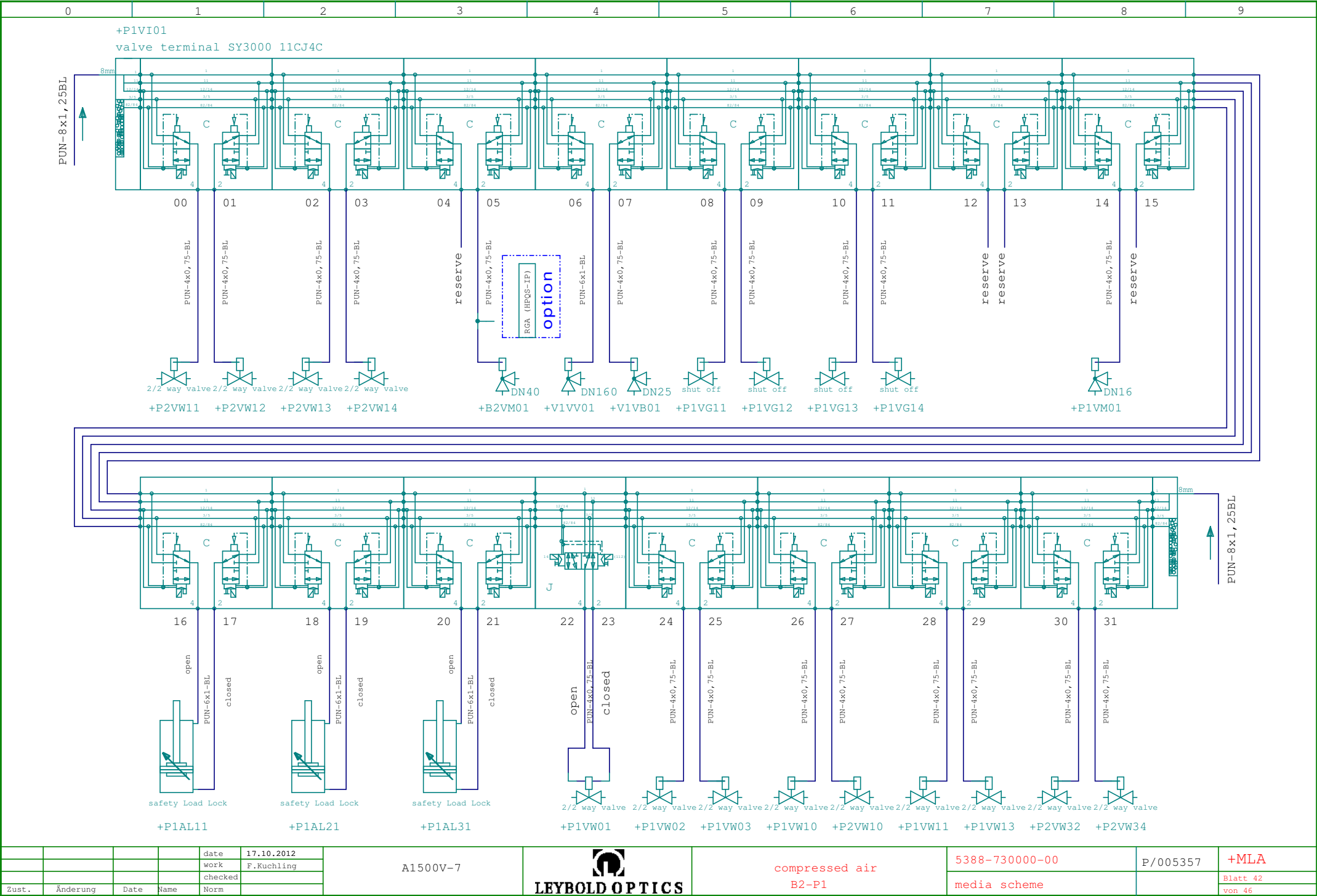


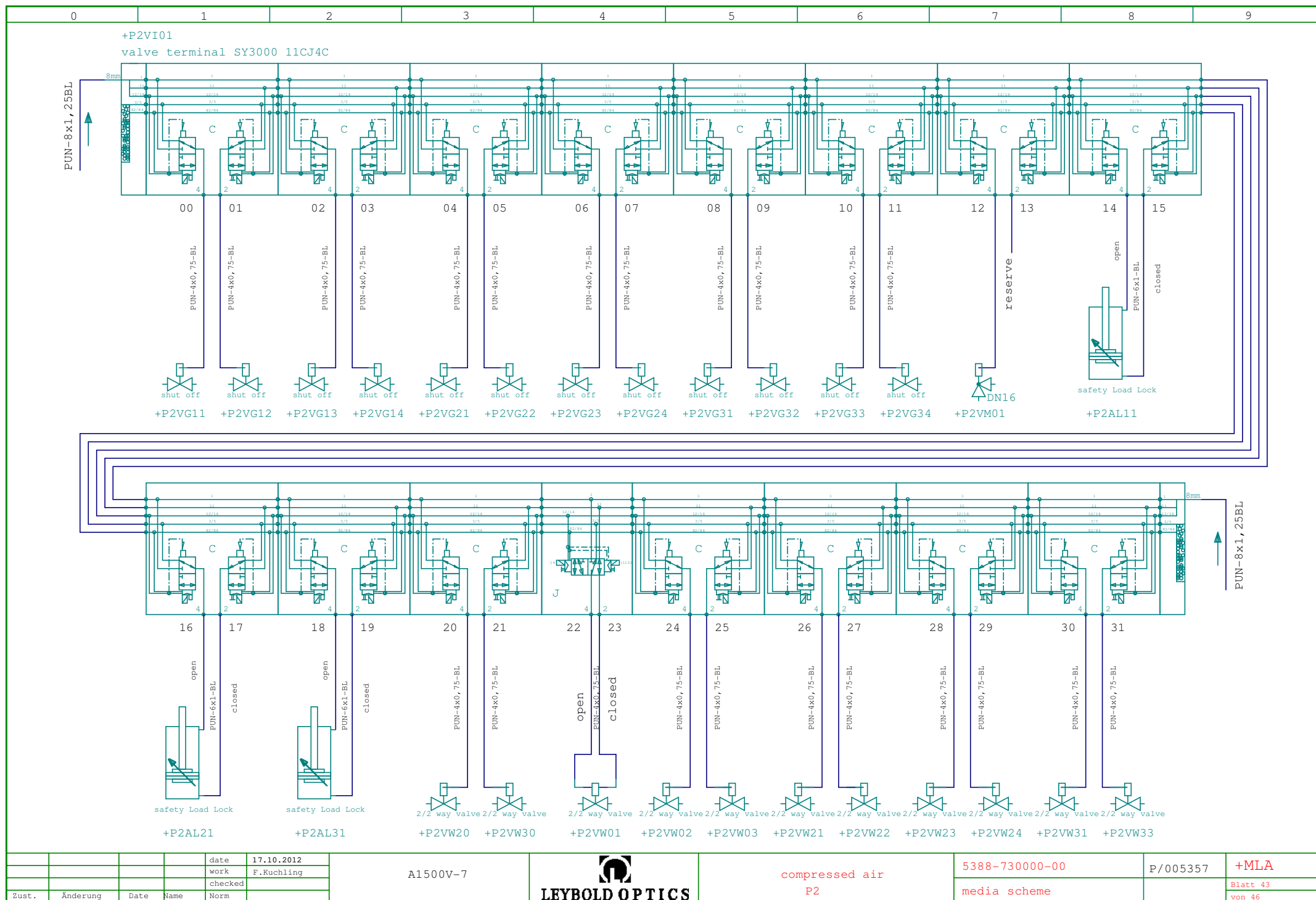


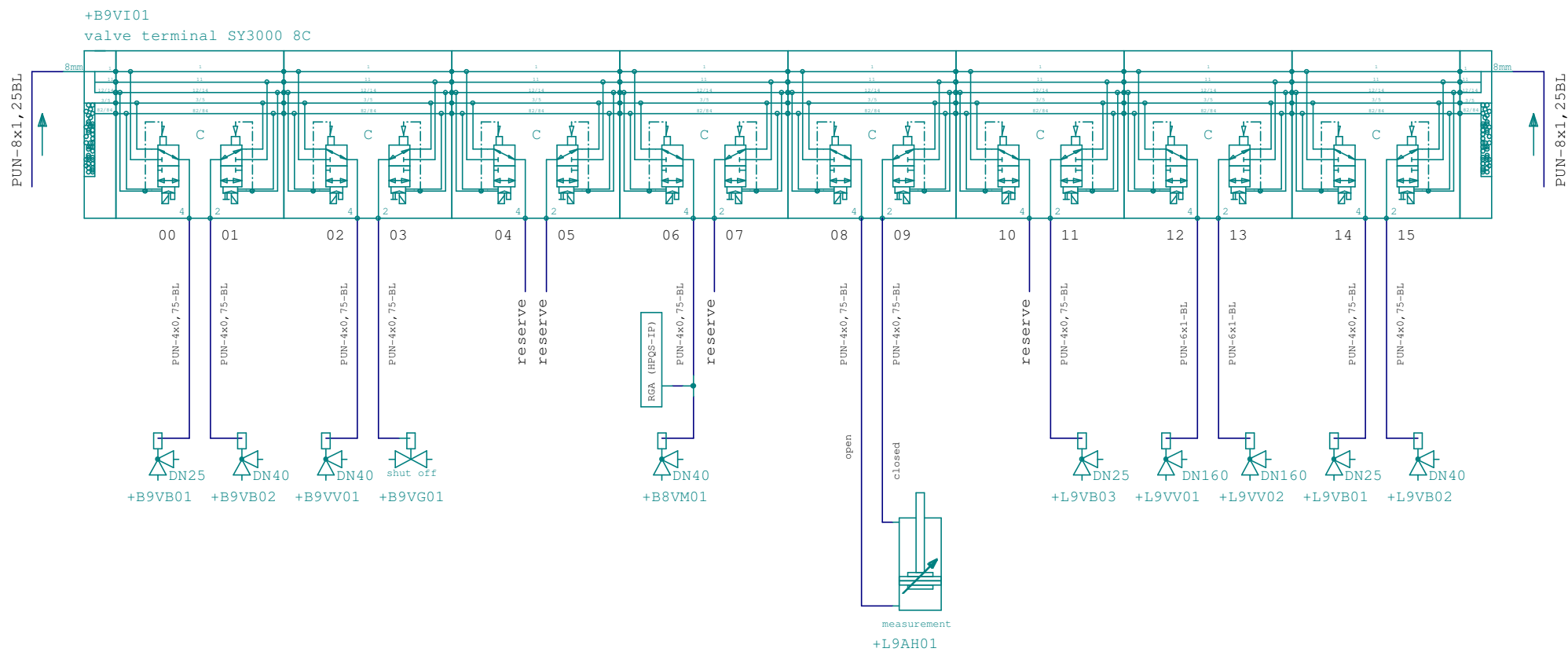


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				work	F.Kuchling						Blatt 40
				checked					media scheme		von 46
Zust.	Änderung	Date	Name	Norm							









				date	17.10.2012	A1500V-7	 LEYBOLD OPTICS	compressed air B9-L9	357-730000-00	P/005357	+MLA
				work	F.Kuchling				media scheme		Blatt 44
				checked							von 46
Zust.	Änderung	Date	Name	Norm							

0123456789

pneum. accessory gate valves
XXVSYY
SAP-No.: 102150883 (6x)

