

Specifications

Laboratory fume cupboards
with worktop height 900 mm
Type 2-401



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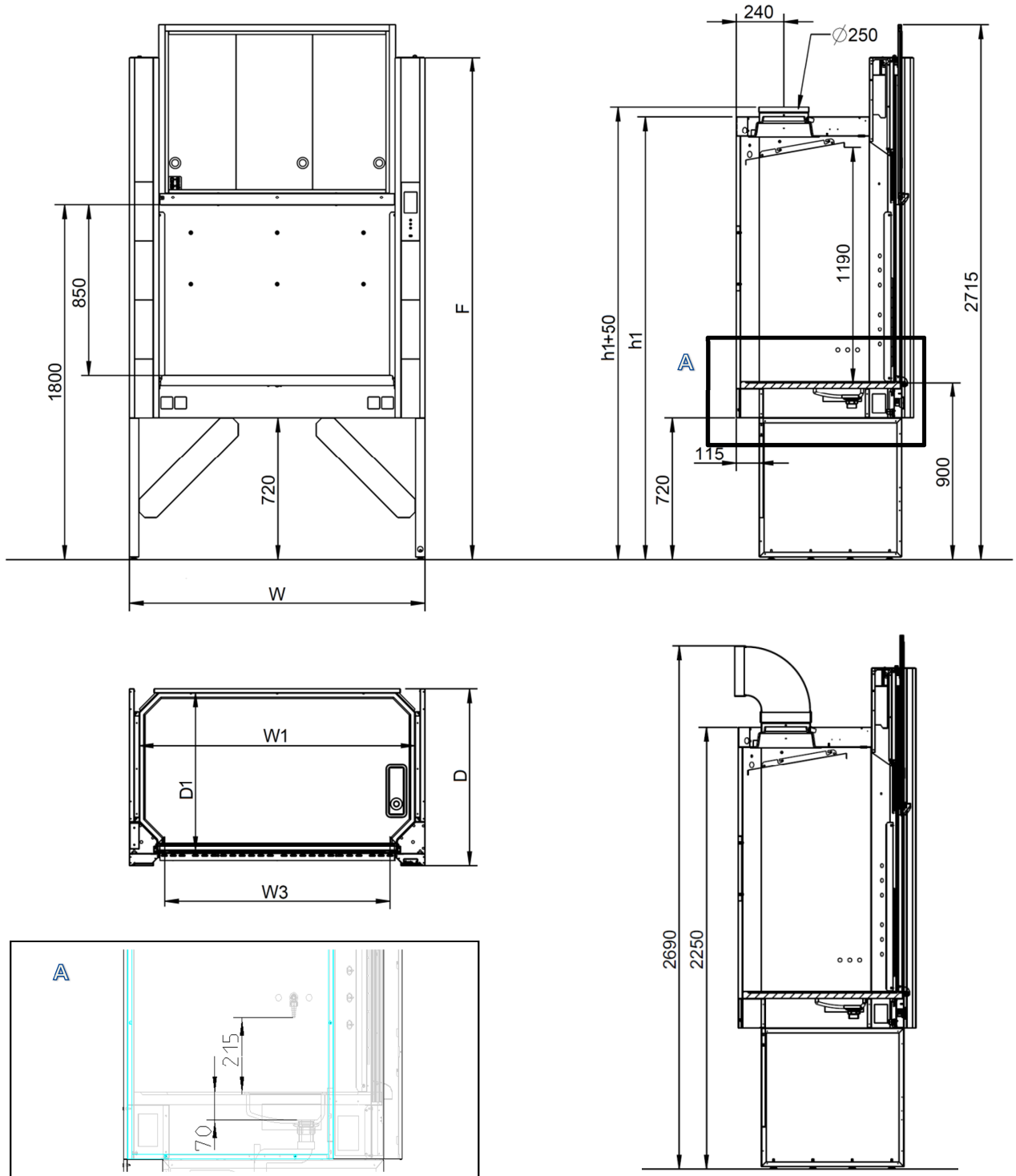
Dimensions and weights

DIN designation					TA1200x 900-900	TA1500x 900-900	TA1800x 900-900	TA2000x 900-900	TA2100x 900-900	
Type designation					2-401					
Exterior dimensions										
Width			W	[mm]	1200	1500	1800	2000	2100	
Depth			D		900					
Front heights			F		2550					
			F1		2300					
Chamber heights			h		2550					
			h1		2250					
Two-piece sash opening height						2300				
One-piece sash opening height						2715				
Required room height (FRH) with exhaust air port Ø... and chamber height.. (with exhaust duct bend fitted directly on top)	Port	Chamber/ Front								
	Ø250	h / F	FRH			3000				
		h1 / F	FRH1			2800				
		h1 / F1	FRH2			2750				
Interior dimensions										
Width			W	[mm]	1100	1400	1700	1900	2000	
Free width below fume cupboard			W1		1100	1400	1700	1900	2000	
Free width below floor mounted fume cupboard			W2		900	1200	1500	1700	1800	
Clear sash opening / access width			W3		840	1140	1440	1640	1740	
Depth			D1		800					
Height	with chamber height h				1490					
	with chamber height h1				1190					
Worktop height			HW		900					
Weights										
Weight without worktop	for chamber height h			[kg]	217	242	268	283	292	
	for chamber height h1				210	234	259	274	281	
Worktop weight (with sink basin)	Ceramic				50	65	80	90	95	
	Epoxy				32	41	50	57	60	
	Trespa				22	27	32	36	38	
	Stainless steel				28	34				
	Polypropylene				15	20	25	28	30	
Permissible worktop load	on 120x120 mm area				200					
	distributed over worktop				200	224	272	304	320	
Required ceiling load capacity without sub-structure, with heaviest worktop and maximum worktop load			C			475	550	650	720	750

Drawings

Standard fume cupboard with chamber height $h_1=2250$

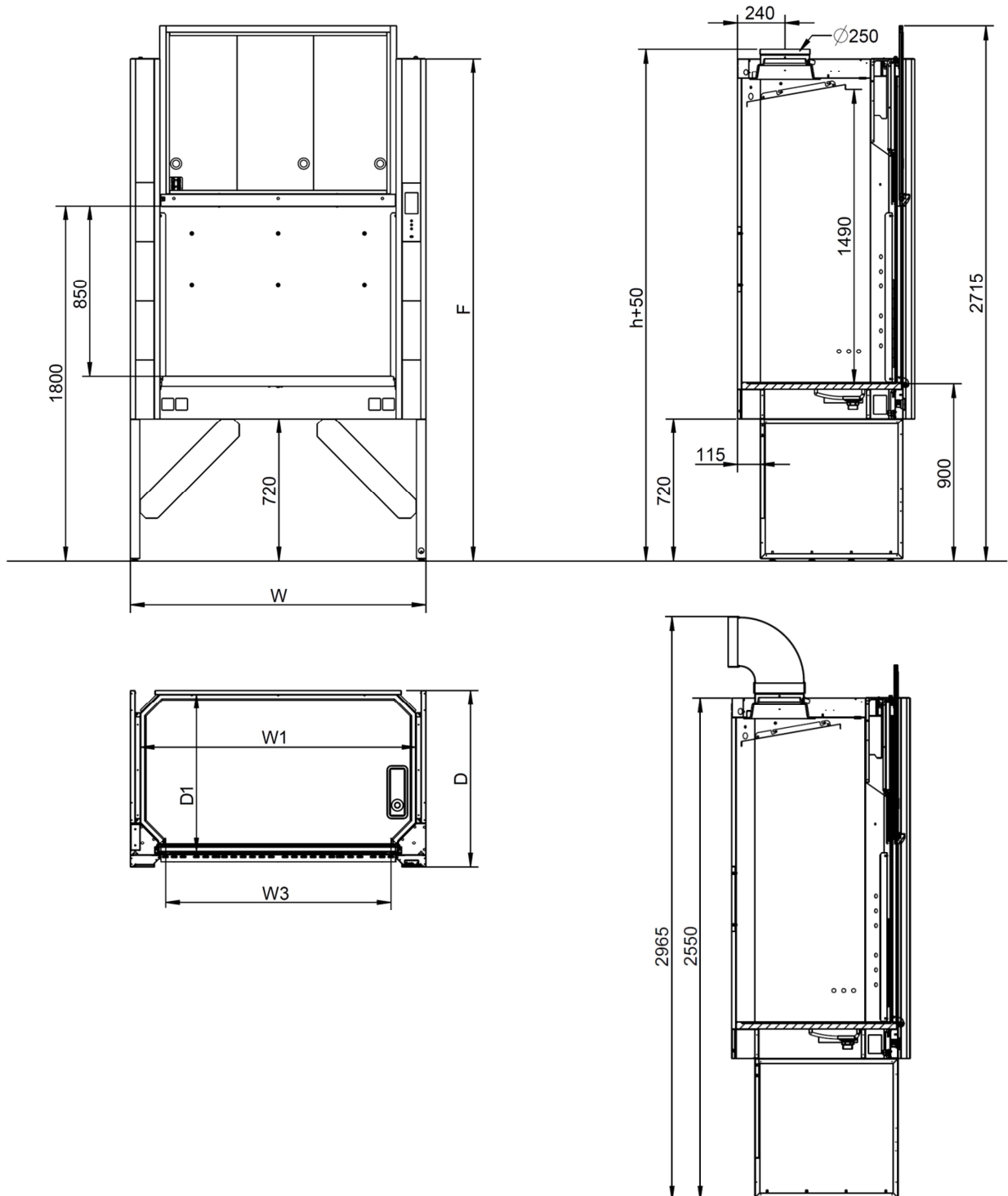
Front height $F=2550$ and one-piece sash



Required room height $FRH1=2800$ with $\varnothing 250$ exhaust duct bend

Standard fume cupboard with chamber height $h=2550$

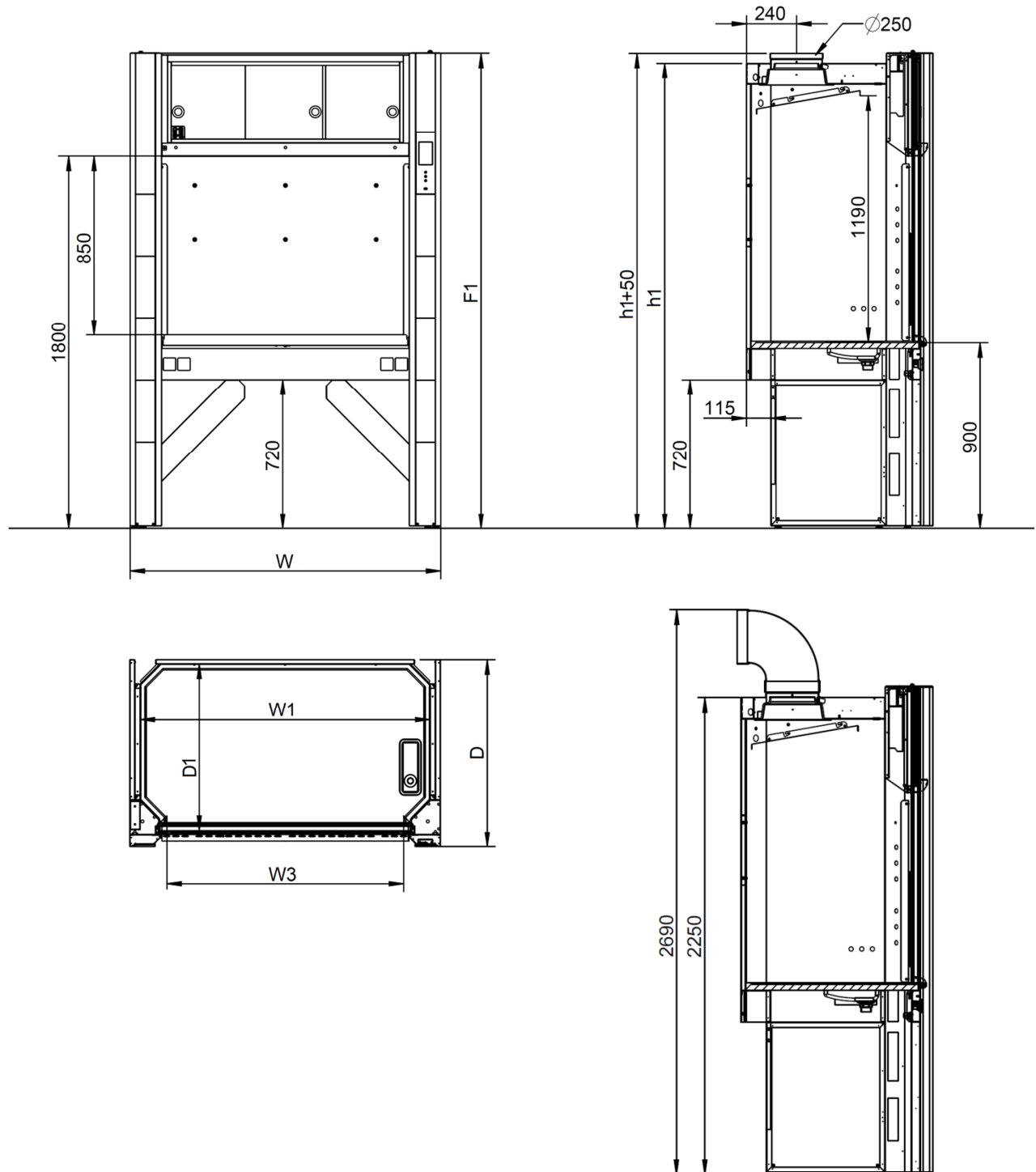
Front height $F=2550$ and one-piece sash



Required room height $FRH=3000$ with $\varnothing 250$ exhaust bend

Standard fume cupboard / low fume cupboard, floor mounted columns with chamber height $h_1=2250$

Front height $F_1=2300$ and multi-piece sash



Required room height $FRH_2=2750$ with $\varnothing 250$ exhaust duct bend

Air handling specifications of laboratory fume cupboards with worktop height 900 mm

Continuous air volume flow rate according to EN 14175

Fume cupboard width		W [mm]	1200	1500	1800	2000	2100
Minimal permissible volume flow rate (alarm level)		V [m³/h]	450	530	680	800	800
Specified volume flow rate		V [m³/h]	480	600	720	840	840
Maximum permissible volume flow rate		V [m³/h]	1500	1500	1500	1500	1500
Exhaust air port Ø250 (socket Æ252):							
Values at specified volume flow rate Note: sash closed	Pressure drop	ΔP_{drop} [Pa]	27	35	43	61	61

Continuous air volume flow rate according to EN 14175 for ECOPlus fume cupboards

Fume cupboard width		W [mm]	1200	1500	1800	2000	2100
Minimal permissible volume flow rate (alarm level)		V [m³/h]	300	380	450	530	530
Specified volume flow rate		V [m³/h]	360	450	540	630	630
Maximum permissible volume flow rate		V [m³/h]	1500	1500	1500	1500	1500
Exhaust air port Ø250 (socket Æ252):							
Values at specified volume flow rate Note: sash closed	Pressure drop	ΔP_{drop} [Pa]	34	36	41	46	46

Minimum target volume flow rate with sash closed

Fume cupboard width		W [mm]	1200	1500	1800	2000	2100
Fume cupboard height	H [mm]	2250					
Minimal permissible volume flow rate (alarm level)	V [m³/h]	250	310	380	410	440	
Fume cupboard height	H [mm]	2550					
Minimal permissible volume flow rate (alarm level)	V [m³/h]	300	380	460	500	540	

Electrical connection data

For fume cupboards without MCBs with CEE socket and/or more than one electrical circuit			400 V, 50-60 Hz, 3/N/PE, 0.4 A max. MCB rating: 3x 16 A (customer provided)
For fume cupboards without MCBs without CEE socket and just one electrical circuit			230 V, 50-60 Hz, L/N/PE, 0.4 A max. MCB rating: 16 A (customer provided)
For fume cupboards with MCBs			400 V, 50-60 Hz, 3/N/PE, 0.4 A max. MCB rating: 3x 35 A (customer provided)
None controller	Connector for external visual and acoustic alarm (not present on fume cupboards without air flow monitoring)		Floating changeover contact for 230 VAC. Load: max. 250 VAC, max. 5 A, 150 VA inductive
	Connector for fan control	Fume cupboards with air flow monitoring	Floating normally-open contact for 230 VAC. Load: max. 250 VAC, max. 5 A, 150 VA inductive
		Fume cupboards without air flow monitoring	Floating normally-open contact for 230 VAC. Load: max. 250 VAC, max. 16 (10) A
With controller		Connector for external visual or acoustic alarm	Floating changeover contact for 230 VAC. Load: max. 250 VAC, max. 5 A, 150 VA inductive
Interior illumination level			> 500 lux

Services supply and disposal

This information refers to Köttermann fittings of FAR Company.

Taps and fittings	Taps/fittings configuration	Connection data	Pressure
Potable water Process water Cooling water feed Well water	Valve with fine adjustment EN 13792 designation Outlet: threaded laboratory fitting Taps for demineralised water are nickel plated	Flexible hose with union nut G 3/8	PN=10 bar
Demineralised water (conductivity > 0.1 µs)			
Demineralised water (conductivity <0.1 µs)	Polypropylene valve EN 13792 designation Outlet: threaded laboratory fitting	Polyamide plastic tubing 8x6 Connection: ½" plastic external thread	PN=6 bar
Cooling water return	Check valve in return line Opening pressure: 0.05 bar Inlet: threaded laboratory fitting	corrugated stainless steel tubing Ø12 with union nut G ½"	PN=10 bar
Flammable gases	Ceramic seal, 90° right-hand closing, push handle EN 13792 designation Outlet: fixed laboratory hose nipple	corrugated stainless steel tubing Ø12 with union nut G ½"	PN=0.2 bar
Non-flammable gases	Fine adjustment valve EN 13792 designation Outlet: fixed laboratory hose nipple	corrugated stainless steel tubing Ø12 with union nut G ½"	PN=10 bar
Low vacuum			1000 – 1 mbar
Sink basin with odour trap and port for condensate hose	Polypropylene, ceramic Stainless steel, epoxy	Polypropylene tubing, outside diameter 40 mm	None
Condensate drain	Hose	Ø 20 mm (inside)	None

This information refers to Köttermann fittings of BROEN Company.

Fittings	Fitting design	Connection information	Pressure
Drinking water Industrial water Cooling water supply Well water	Valve with fine adjustment or ceramic head Coding DIN-EN 13792 Outlet: laboratory screw joint	Flexible hose with union nut G ½"	PN=10bar
Demineralised water (conductivity <0,1µs)	Valve made of polypropylene Coding DIN-EN 13792 Outlet: laboratory screw joints	PE plastic hose 10x7 Connection: ½" Plastic male thread	PN=10bar
Cooling water return	Return with non-return (check) valve Inlet: laboratory screw joints	Flexible hose with union nut G ½"	PN=10bar
Burnable gases	Ceramic sealing, 90° right locking, Press-in fuse Coding DIN-EN 13792 Outlet: fixed hose nozzle	Flexible hose with union nut G ½"	PN=7bar
Non-burnable gases	Fine adjustment valve Coding DIN-EN 13792 Outlet: laboratory screw joint	Flexible hose with union nut G ½"	PN=16bar
Sink with odour trap and connection for condensation hose	Polypropylene, ceramic Stainless steel; epoxy	PP pipe Outside diameter 40mm	without
Condensate drain	Hose	Ø 9mm (inside)	without

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