Basler & Hofmann

Maintenance handbook for BSL-2 and BSL-3 laboratories In accordance with ContainO and PEMO

Appendix 1

Safety level 2 laboratories

Excel tables are provided as an Appendix to the maintenance handbook. They show the requirements for the maintenance and inspection journals, and give explanations and examples for consistent further development.

Maintenance and inspection journals are given for all safety-relevant systems, structured according to safety level 2 and 3 laboratories. They may be completed with reference to the SWKI guidelines or in collaboration with the specialist companies.

The Excel tables are weighted towards ventilation systems, as experience has shown that these are the priority for maintenance and inspection journals.

	Maintenance and inspection		Name of sys	ite	en	n /	/ c	0	m	p	OI	ne	n	t		
	Company: Person responsible: Place / date:		Location: Facility: Commissioning													
Function			<u> </u>	М	ain	tena	anc	e / i	nsp	oec	tion	pla	an			•
									Tas							Part no.
				C	Chec	ck										
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Lubricate	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks																
Reliability											-					
														4		
														_		
											-			+		
Safety measure														+		
Carety measure														+		
Disposal																
Notes																
			Кеу:	١	N =	Dail We	ekly		H	H = 1	Qua Semi- Annu	-annu		Z	Z =	Biennially As required

		Mai	nt	er	าล	n	се	a	ıno	d	ln	SĮ	Эe	C	tic	or	1 5	Sc	h	e	du	ıle	•																							Yea	ır		
		Compar	nv:																	1	oca	tion																											
		Person	resp	ons	ible:														_	F	acili	itv:		-																		_		-				_	
		Place /	date:	:															_	Ċ	OIII	mis	sion	ın ·																									
Code		Week			3 4	4 5	5 6	7	8	9	10 1	11 1:	2 13	3 14	15	16	17	18	19	20 2	21 2	2 23	3 24	25	26	27	28	29	30 3	31 32	2 33	34	35	36	37	38	39 4	0 4	1 42	43	44	45	46	47	48	49 !	50 5	51 5	52
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																																																	٦
																																													┙		╧	╧	
	d out by / signed:																																																
Date:																																																	

	Maintenance and inspection		Surfaces sur	rro	un	ıdi	ng	g	re	er	nh	οι	IS	es	5
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				N	lain	tena	nce	/ in	spe	ctic	n p	lan			-
Integrity is necess	ary for the surfaces surrounding BSL-2 greenhouses.							T	ask						Part no.
				(Che	ck									
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks			Walls												more detail needed
Check seals, drain	s, wire mesh in greenhouse for pests and for damage.		Ceiling												in work sheets for
			Floor												individual parts
			Doors												
			Windows												
Reliability			Penetrations												
Safety can be ens	ured only if the supplier's instructions are observed.														
Safety measure															
									-	-					
				_											
									-						
Disposal								-	+	-					
•	carried out in a correct and environmentally sound way. Please														
	r advice on correct and environmentally sound disposal.														
	,,			+				+	-						
Notes															
Observe manufact	urer's instructions.		Ke	,		Dail	-	I			uarte	-			Biennially As required
						: Wee : Mor	•				nually				As required

Maintenance and inspection		Isolated uni	t fo	r ł	10	us	in	g a	an	im	a	s		
Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function		<u> </u>	N	lain	tena	nce	/ in	spe	ctio	n p	lan			
Some BSL-2 applications require an isolated animal room.							Т	ask						Part no.
	Code		State	Corrosion		nctioning	Clean	Lublicate	Vent	Empty	Adjust	Special instructions	Official regulations	
	ŏ	Individual part	Sţ	ပိ	ΞĒ	F.	<u>.</u>	R Lu	\ \	П	Ad	Sp	Ď	
Checks		Walls												more detail needed
Check wall surfaces for damage		Ceilings												in work sheets for
Check window seals for damage		Floors												individual parts
		Doors												
		Windows												
Reliability		Penetrations												
Safety can be ensured only if the supplier's instructions are observed.														
Safety measure														
Disposal														
Disposal must be carried out in a correct and environmentally sound way. Please														
consult supplier for advice on correct and environmentally sound disposal.														
Notes														
Observe manufacturer's instructions.		P		W =	Dail Wee	ekly	•	Н :	= Qu = Sen = Anr	ni-ann	ually		Z =	Biennially As required

	Maintenance and inspection		Decentralised plant	l v	va	st	еи	/a	ter	r t	re	at	m	er	nt
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				M	ain	tena	ince	/ ir	spe	ecti	on p	plar	1		
Effluent tanks unde requires)	er showers and washbasins (if necessary for BSL-2, as user			(Chec		ß	T	ask				Special instructions	gulations	Part no.
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Lubricate	Replace	Vent	Adjust	Special in	Official regulations	Note
Checks			Effluent tanks												more detail needed
	orage tanks for damage, corrosion and fastening		Water pipes and accessories												in work sheets for
	ion (on free drains, visual check)		Shut-off device							l			1		individual parts
Check watertightne			Anti-flooding devices												
Check insulation for	r damage		Drainage pump								floor	\mathbb{L}	L		
Reliability										<u>l</u>		<u> </u>			
Safety can be ensu	red only if the supplier's instructions are observed.								\perp	ᆚ		\perp	\perp		
										┸			\perp		
									╙	\perp	\perp	\perp	$oldsymbol{\perp}$		
									┸	┵		\perp	┸		
Safety measure									┵	\bot		╧	┶		
									4	4	\bot	\bot	1		
									4	4	\bot	\bot	╄		
									\bot	4	_	4	\bot		
									+	+	+	\bot	+	-	
Disposal									+	+	+	+	+	-	
Disposal must be o	arried out in a correct and environmentally sound way. Please advice on correct and environmentally sound disposal.								+	+	+	+	+	-	
consult supplier for	advice on correct and environmentally sound disposal.								+	+	+	+	+		
									_	+	_	-	_		
Notes									+	+	+	+	+		
Notes				<u> </u>					Щ	ㅗ	Щ	Щ	Щ		
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Maintenance	e and inspection		Service water	n	et	'w	ork	•							
Company: Person responsible: Place / date:			Location: Facility: Commissioning:											<u> </u>	
Function			<u> </u>	M	ain	tena	nce	/ ins	spe	ctio	n pla	an			
Mains separation using backflow preventer reco service water (BSL-2 laboratory separate from r showers and emergency showers					Chec	ck		Ta	ask			Adjust	structions	regulations	Part no.
		Code	Individual part	State	Corrosion	Tightness	Functioning	Lubricate	Replace	Vent	Empty	Adjust	Special	Official re	Note
Checks			Backflow preventer											n	more detail needed
Check water pipes and accessories for damage			Eye showers											ir	n work sheets for
Check insulation for damage and completeness	;		Emergency showers											ir	ndividual parts
Check for watertightness (visual check)			Water pipes and accessories												
Check sections of pipes for incrustation	correcion		Shut-off device												
Reliability			Service water pump												
Safety can be ensured only if the supplier's inst	ructions are observed.													\perp	
														_	
Safety measure														4	
	_													_	
	_													_	
	_													_	
														4	
Disposal								-					-	+	
Disposal must be carried out in a correct and er consult supplier for advice on correct and environment.								-					-	+	
consult supplier for advice off correct and enviro	Jillientally sound disposal.													+	
	_													+	
Notes								-					+		
Notes				<u> </u>	<u> </u>	Ш				<u> </u>					
			Key:	,						Biennially As required					

Maintenance and inspection		Fire extinguis	hi	ing	g e	qι	ıip	m	en	it			
Company: Person responsible: Place / date:		Location: Facility: Commissioning:											
Function			M	aint	tena	nce	/ ins	pec	tion	pla	n		
National legislation on fire safety requires fire extinguishers to be provided. Sprinkler systems should be avoided if possible because of contamination through extinguishing water. In some cases, coordination with the fire service responsible is necessary.			(Chec		D	Та	sk				or actions lations	Part no.
	Code	Individual part	State	Corrosion	Tightness	Functioning	Lubricate	Replace	Vent	Empty	Adjust	Official actualisations	Note
Checks		Check fire extinguishers											In accordance with
Check fire extinguishers for dirt, damage and corrosion		for damage											manufacturer's instructions
Check label for expiry date		Filling pressure											
		Extinguishing agent											
		Internal check of container											
Reliability		Extinguisher testing set				_						_	
Safety can be ensured only if the supplier's instructions are observed.													
						_						_	
Safety measure						-					-	-	
Salety measure						-			-	-	-	+	+
						+				+	+		
												+	_
						+						\top	
Disposal													
Disposal must be carried out in a correct and environmentally sound way. Please						1							
consult supplier for advice on correct and environmentally sound disposal.													
Notes													
		Key:	W = Weekly H = Semi-annually					l≞ Biennially = As required					
		$M = Monthly \qquad J = Annually \qquad A = \dots$								=			

	Maintenance and inspection		Air-conditioni	'n	g s	sy:	ste	em	()	40	;);	Su	p	pΙ	y air
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				M	aint	tena	nce	/ ins	spe	ction	ı pla	ın			
regulating humidity o Supply air systems p systems (heating, co	nal air, temperature regulation of supply air to room conditions, is supply air to room conditions, filtering supply air to room conditions, filtering supply air conditioning possibly with redundancy (if user requires); air-conditioning poling, humidifying, dehumidifying); heat recovery; silencing; supply soure monitoring for filters and ducts; cooling pipes; volume flow air	Code	Individual part	State	Corrosion		Functioning	ate	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Part no. Note
Checks		L01	Device / monobloc housing	(0)				1=	-			1	,,		more detail needed
Check underpressure	in lab area	L11	Coarse dust filter											_	in work sheets for
	ay and droplet separator for dirt, corrosion and functioning	L12	Fine dust filter											_	individual parts
Check directed air cu		L21	PWW fan heater											<u> </u>	Harvidaa parto
Check fan for dirt, da	mage and corrosion	L24	Air cooler											1	In accordance with
Reliability	troine that are in contact with our to present a function	L33	Heat recovery grid system											ı	manufacturer's instructions
Safety can be ensure	d only if the supplier's instructions are observed.	L42	Radial fan												In accordance with Swiss
		L44	Motor											,	Standard
		L45	Belt drive												
		L46	Fan/motor bearings												
Safety measure		L47	Frequency converter												
		L57	Steam humidifier												
		L74	Volume flow controller												
		L81	Air duct system												
		L82	Air intake opening												
Disposal		L83	Weatherproofing												
	ried out in a correct and environmentally sound way. Please	L84	Air outlet												
consult supplier for a	dvice on correct and environmentally sound disposal.	L88	Fire damper												
		L92	Electrical controls												
		L93	Measurement/control peripherals												
Notes		L94	Switchgear combination												
			Key:	W = Weekly H = Semi-annually Z = As I					As required						
					M =	Mon	thly		J =	Annı	ually		Α	١ = .	

	Maintenance and inspection		Air-conditioni	in	g s	sy.	ste	em	(40	;)	Εx	(h	aı	ust
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:		_										
Function				M	lain	tena	nce	/ in	spe	ctio	n pl	an			
Exhaust air systen silencing; exhaust	ns possibly with redundancy (if user requires); heat recovery; air filter to protect heat recovery; pressure monitoring for filters and es; volume flow controller for exhaust air	Code	Individual part		Corrosion	ck	oning		ask				Special instructions	Official regulations	Part no.
Checks		L01	Device / monobloc housing	S	O		Щ	_ ر	1 82	>	Ш	⋖	ഗ	_	more detail needed
	nger for dirt, damage and corrosion	L11	Coarse dust filter												in work sheets for
	rinadmissible dirt and damage (leakage); replace the air filter in	L33	Heat recovery grid system												individual parts
	ige was last replaced less than 6 months ago; otherwise replace the	L42	Radial fan				-					<u></u>			individual parts
entire filter stage		L44	Motor												In accordance with
Reliability	productor if necessary replace filter stage	L45	Belt drive												manufacturer's instructions
•	ured only if the supplier's instructions are observed.	L46	Fan/motor bearings												In accordance with Swiss
		L47	Frequency converter												Standard
		L74	Volume flow controller												
		L81	Air duct system												
Safety measure		L83	Weatherproofing												
		L84	Air outlet												
		L88	Fire damper												
		L92	Electrical controls												
		L93	Measurement/control peripherals												
Disposal		L94	Switchgear combination												
Disposal must be	carried out in a correct and environmentally sound way. Please														
consult supplier fo	r advice on correct and environmentally sound disposal.														
Notes															
			Key:	١	W =	Dail Wee	ekly		H =		arter	-	2	Z =	Biennially As required

	Maintananae and inapaction		Refrigeration	fc	r	air	C	00	le	rs	in	A	C	,	
	Maintenance and inspection		system												
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:		_									_	
Function			<u> </u>	M	ain	tena	ince	/ in:	spe	ctio	n pla	an		_	
	ion with a recooling plant (and possibly (split units) should be rature control in the laboratory; possibly also with redundancy if user				Chec		$\overline{\top}$		ask	T				-	Part no.
lequiles.		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean Lubricate	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks		K01	Alarm system	<u> </u>	L	Ш	\perp		<u> </u>	<u> </u>	Ш				more detail needed
	w and turbo compressors for external dirt, damage and corrosion	K02	Energy meter	<u> </u>		Ш			<u> </u>		Ш				in work sheets for
Check fastening and		K12	Piping / fittings						<u> </u>		\Box				individual parts
Measure suction pro		K21	Expansion devices	T_{-}				L	T_{-}	T_{-}					
Measure final comp	as temperature before compressor pression pressure	K24	Pressure expansion tank												In accordance with
Reliability		K41	Frequency converter				\perp						\perp		manufacturer's instructions
Safety can be ensu	red only if the supplier's instructions are observed.	K45	Wet rotor pump	L						<u> </u>					In accordance with Swiss
		K67	Dry heat exchanger					l	L			1	1		Standard
		K92	Compressor piston												
<u></u> _								\top				\Box	\top	T	
Safety measure								\top							
					†				1	†	\Box		\top	\exists	
				T	t	H	\top	十	\dagger	T	Ħ	\top	T	寸	
				T	T	\Box	\top	\top	\dagger	T	\Box	\top	T	┪	
Disposal			†	†	\dagger	\Box	\top	\top	†		\dagger	\top	\top	寸	
	arried out in a correct and environmentally sound way. Please			T	\vdash	T	\top	\top	+	T	T	\top	\top	寸	
	advice on correct and environmentally sound disposal.			T	\vdash	T	\top	\top	+	T	T	\top	\top	寸	
			+	+	H	$\dagger \dagger$	+	+	+	t	$\dagger \dagger$	\top	\top	\dashv	
				t	H	t	\dashv	_	+	t	tt		+	\dashv	
Notes				†	<u> </u>	Ħ	\dashv	1	+	1	Ħ	_	\top	\exists	
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	Maintenance and inspection		UPS / battery	SJ	/\$	te	m	if	u	Se	er	re	q	ui	ire	es
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:													
Function			- 3	M	ain	tena	ance	e/i	nsp	Эес	tior	ı pla	an			•
	A UPS / battery system may be planned if user requires. UPS is not / for BSL-2 laboratories.			(Chec	:k			Tas	k						Part no.
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Lubricate	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks			Accumulator													more detail needed
	and charging device for dirt, damage, corrosion and functioning,		Charging device													in work sheets for
and check environn	nental conditions		Cables, pipes, rails													individual parts
Clean Check electrolyte			Electrical protective measures													
Measure cell or blo Top up or replace e																In accordance with
Reliability																manufacturer's instructions
•	red only if the supplier's instructions are observed.															mandiacturer s matructions
	, , , , , , , , , , , , , , , , , , , ,															
Safety measure																
							_	_	_			_				
Disposal							_		_			_				
	arried out in a correct and environmentally sound way. Please advice on correct and environmentally sound disposal.						_									
consuit supplier for	advice on correct and environmentally sound disposal.						-	_	4			4				
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	Maintenance and inspection		Power supply	,											
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				M	ain	tena	nce	/ in	spe	ctio	n p	lan			
Where applicable, a	user-specific safety power supply should be planned.							Ta	ask						Part no.
					Chec	ck									
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks		1	Generator	S	O	-	ш	기 -	1 14	. >	Ш	٩	0)	U	more detail needed
	functioning, dirt, damage and corrosion		Accumulators												in work sheets for
Clean	.a.i.a.ia.ia.ii.ig, a.i.i, aaiiiaga a.i.a aaiiaaa		Low-voltage switchgear												individual parts
Lubricate bearings			Reactive current compensation system					\top							marvada parts
	ngs, carbon brushes and brush holders														1 1 20
	or dirt, damage and corrosion		Electrical subdistributors	-											In accordance with
Reliability				-			_	-							manufacturer's instructions
Safety can be ensure	ed only if the supplier's instructions are observed.							-							In accordance with Swiss
				-				_							Standard
				_				-							
Safety measure				-											
				-			_	-							
				-			_	-							
				-											
D:				-											
Disposal								-							
	rried out in a correct and environmentally sound way. Please dvice on correct and environmentally sound disposal.							-							
consult supplier for a	divice on correct and environmentally sound disposal.			-				_							
				-				_							
Notes															
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Maintenance and inspection		Lighting / en lighting	ner	ge	enc	Эy	lig	jh	tir	ng .	/ \$	sa	fe	ty
Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function			N	lain	tena	ince	/ in	spe	ctio	n pl	an			•
Central battery for safety lighting Individual or group batteries for safety lighting Uninterruptible power supply (UPS)				Che				ask						Part no.
Normal use (e.g. management, active components)	Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Renlace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks		Central battery												more detail needed
Check work safety installation for completeness, damage and if necessary for		UPS												in work sheets for
functioning (e.g. voltmeter, actuating rods, replacement fuses, earthing components,		Emergency lighting												individual parts
warning signs) Check functioning of room lighting and safety lighting		Safety lighting												
Chook that algetrical connections including connections of bushers are machanically														In accordance with
Reliability														manufacturer's instructions
Safety can be ensured only if the supplier's instructions are observed.														In accordance with Swiss
														Standard
Safety measure														
Disposal														
Disposal must be carried out in a correct and environmentally sound way. Please														
consult supplier for advice on correct and environmentally sound disposal.														
Notes														
		Ke	,		Dail	-				ıarteı	-			Biennially
					Wee Mon	,				ni-ann nually				As required

	Maintenance and inspection		Fire alarm sys	ste	en	n										
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:													
Function				M	lain	tena	ince	/ in	spe	ectio	on p	lan	1			
	dings should be equipped with a fire alarm system throughout. It A system for all lab areas, so that instructions can be given in the			_ (Chec	ck		Т	ask						Part no.	
eveni oi an evacua	uon.	Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Poplace	Neplace	Empty	Adjust	Special instructions	Official regulations	Note	
Checks			Switch elements												more detail needed	
	lisplay elements for dirt, damage and corrosion		Trigger elements												in work sheets for	
	of trigger and display elements in the fire alarm system		Display elements												individual parts	
Check message tra	nsfer settings in the fire alarm system		Smoke and fire detectors													
															In accordance with	
Reliability															manufacturer's instruct	tions
Safety can be ensu	red only if the supplier's instructions are observed.														In accordance with Sw	viss
															Standard	
Safety measure																
,																
Disposal																
•	arried out in a correct and environmentally sound way. Please															
	advice on correct and environmentally sound disposal.															
Notes																
			Key:	•											Biennially	
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	Maintenance and inspection		Access cont	trol	S	ys	te	m							
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				N	lain	ten	anc	e / iı	nsp	ect	ion	pla	n		•
vandalism, sabotage	enerally be taken to counter hazards caused by third parties, e.g. e or theft. Building security systems (intrusion and hold-up intercoms, CCTV, and access control systems cover these	Code			Chec	ck	oning	7	Γasl	k			Aujust Special instructions	Official regulations	Part no.
Checks		0	Individual part	Ñ	Ŏ	ΙΈ	Ē	O	그	2	>	Ш <	(v	0	
	f control panel, check for dirt, damage, corrosion and		Scanners Coder												more detail needed in work sheets for
environmental condi			Codei												
Check functioning of												-	-		individual parts
Check functioning of	f electrical door openers											+	+		In accordance with
Chook pard reader for Reliability	or dist domase correction and an ironmental conditions														manufacturer's instructions
	ed only if the supplier's instructions are observed.														In accordance with Swiss
															Standard
Safety measure															
Disposal															
	rried out in a correct and environmentally sound way. Please														
consult supplier for a	advice on correct and environmentally sound disposal.														
Notes															
			K		W =	: Dai : We : Mo	ekly		H	l = 5		rterly annual			= Biennially = As required

	Maintenance and inspection		Class II safet	ty (ca	biı	ne	t							
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:		_			<u> </u>	_				_		
Function			<u> </u>	N	lair	ntena	ance	e / ir	ispe	ectio	on p	olan	ı		-
or discharge into lab	; ISO 14644-1; depending on type, fixed connection to duct network boratory; locking / control through AC system; locking sliding ht; type with HEPA filter				Che				ask		T	$\frac{}{\top}$			Part no.
	hecks heck fan for dirt, damage and corrosion,		Individual part	State	Corrosion	Tightness	Functioning	Clean	Lubricate	Keplace Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks			Body of safety cabinet							Ţ					more detail needed
Check fan for dirt, d	lamage and corrosion,		HEPA filter												in work sheets for
	ressure in HEPA filter; replace filter if necessary, observing safety		Fan												individual parts
guidelines			UV lighting						\top						·
Check locking of sile	ding windows under UV light				Ť			\Box					T		In accordance with
Reliability	A STATE OF THE STA				1					T			1	1	manufacturer's instructions
	red only if the supplier's instructions are observed.		1		1	\prod	П		T						
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Safety measure							\Box		\top						
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Disposal															
Disposal must be ca	arried out in a correct and environmentally sound way. Please														
consult supplier for	advice on correct and environmentally sound disposal.								\top					T	
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Notes															
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	Maintenance and inspection		Autoclave													
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:		_											
Function			<u>. </u>	ı	Mai	ntei	nand	ce/	ins	рес	tior	ı pla	an			
Steam or electric s Where applicable, Door lock Filter for steam and	sterilisation of condensate in BSL-2				Che		gu		Tas	sk				Special instructions	Official regulations	Part no.
		Code	Individual part	Ototo	State	Tightness	Functioning	Clean	Lubricate	Replace	Vent	Empty	Adjust	Special ir	Official re	Note
Checks			Body of autoclave													more detail needed
Check sterilisation			Steam steriliser													in work sheets for
Check drainage of			Door lock													individual parts
Check door locking																
Check temperature	m and exhaust air (type)															In accordance with
Reliability																manufacturer's instructions
Safety can be ensu	red only if the supplier's instructions are observed.															
Safety measure																
Disposal																
	arried out in a correct and environmentally sound way. Please															
consult supplier for	advice on correct and environmentally sound disposal.															
Notes																
			ŀ	Key:		= Da	aily 'eekly	у	1	H =	Semi	arterl -annu	-			Biennially As required
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Maintenance and ins	pection		IVC (individ	dual	ly	VE	n	tila	ate	ea	l c	ag	es	s)	
Company: Person responsible: Place / date:			Location: Facility: Commissioning:		_										
Function					Maiı	nten	anc	e / i	nsp	ect	tion	pla	n		
Racks of IVC (individually ventilated cages) with ventilation system	ns .				Che	eck			Tas	k					Part no.
		Code	Individual part	9090	Corrosion	Tightness	Functioning	Clean	Lubricate	Replace	Vent	Empty	Adjust Special instructions	Official regulations	Note
Checks			Supply air system												more detail needed
Check fan for dirt, damage and corrosion			Exhaust air system												in work sheets for
Check air filters for inadmissible dirt and damage (leakage); replace	e the air filter in		Air filters												individual parts
question if necessary															
Check differential pressure in air filters															In accordance with
Reliability															manufacturer's instructions
Safety can be ensured only if the supplier's instructions are observ	/ed.														
Safety measure															
Disposal															
Disposal must be carried out in a correct and environmentally sou	nd way. Please														
consult supplier for advice on correct and environmentally sound o															
Notes															
				Key:	W =	= Da = We	ekly		H	H = 3	Qua Semi-	annua			= Biennially = As required

	Maintenance and inspection		Decontamina	tic	n	de	vi	ce	S						
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				M	aint	tena	nce.	/ ins	spec	ction	ı pla	an			
Generally, separate	devices adapted to IVC racks and their ventilation systems.							Та	sk						Part no.
	sidered individually. Please refer to the instructions for use and the rmity supplied with the equipment.	Code	Individual part	State	Corrosion	Tightness ×	Functioning	Lubricate	Replace	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks			maividuai part	0)	O			1 -	<u> </u>		ш	1	0)	_	In accordance with
															manufacturer's instructions
Reliability															
Safety measure								-				_			
	•							-							
								-							
Disposal								-							
Disposai															
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Notes															
			Key	,	W =	Daily Wee Mont	kly	1	H =	Qua Semi Annu	-annu		Z	Z =	Biennially As required

	Maintenance and inspection		Filter for iso	lato	ors	S									
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				N	lain	tena	nce	/ in	spe	ectio	on p	olan			
Filter for supply a	nd / or exhaust air							T	ask						Part no.
					Chec	ck									
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Lublicate	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks			Filter for isolators												more detail needed
	or inadmissible dirt and damage (leakage); replace the air filter in		Filter housing												in work sheets for
question if neces															individual parts
Check differentia	pressure in air filter.														
															In accordance with
Reliability															manufacturer's instructions
Safety can be en	sured only if the supplier's instructions are observed.														
Safety measure															
Disposal															
	carried out in a correct and environmentally sound way. Please														
consult supplier f	or advice on correct and environmentally sound disposal.														
Notes															
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	Maintenance and inspection		Work benches	S											
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function				M	lain	tena	ance	e/in	spe	ctic	n p	lan			
Work benches are r	necessary for general work within BSL-2 laboratories.				Che	1	\overline{T}		ask		 T			\prod	Part no.
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Lublicate	Vent	Empty	Adjust	Special instructions	Official regulations	Note
Checks			Work surface												more detail needed
	surface for wear or damage, depending on material. Replace putty		Connections for technical gases												in work sheets for
if necessary.			Water connection				\square	I	\mathbb{L}						individual parts
Check functioning of								$ label{lemma}$	L	\mathbb{L}					
Check functioning of	r gas connection														In accordance with
Reliability							\square	I	\mathbb{L}						manufacturer's instructions
Safety can be ensu	red only if the supplier's instructions are observed.									$ label{lem}$					
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Safety measure								╙		\perp	<u> </u>				
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Disposal				$oldsymbol{ol}}}}}}}}}}}}}}}}}}$	$oldsymbol{ol}}}}}}}}}}}}}}}}}}$	\sqcup	\dashv	\perp	\perp	\perp	<u> </u>	Ш	<u></u>	<u> </u>	
	arried out in a correct and environmentally sound way. Please			<u> </u>	Ļ	igsquare		_		\perp	$oldsymbol{ol}}}}}}}}}}}}}}}}}}$		<u> </u>		
consult supplier for	advice on correct and environmentally sound disposal.			L	L	igspace	_		╧	丄	╙				
				┖	lacksquare	$oxed{oxed}$			\perp	╧	<u> </u>				
				L	_	Ш	_		╧	1	$oldsymbol{ol}}}}}}}}}}}}}}}}}}$		$\bigsqcup^!$	\bigsqcup	
Notes				丄	丄	Ш	\perp	\bot		\perp	<u>L</u>				
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	Maintenance and inspection		Building autor	m	at	io!	n								
	Company: Person responsible: Place / date:		Location: Facility: Commissioning:												
Function			-	M	lain	tena	ance	e/ir	ısp	ecti	on	pla	n		
	chnology should have, at least, interfaces to fire alarm and access easurement and control technology, and AC systems.				Chec	ck		T	ask		 T	$\frac{1}{1}$	$\overline{\top}$	$\overline{\top}$	Part no.
		Code	Individual part	State	Corrosion	Tightness	Functioning	Clean	Lubricate	Replace	Vent	Empty	Adjust Special instructions	Official regulations	Note
Checks			Master computer							I	I	\mathbf{I}	I		more detail needed
	nets, control panels and controls for correct and appropriate		Control cabinet						\prod						in work sheets for
	eck environmental conditions		Manual operating control											$ lap{}$	individual parts
Check for dirt, dam													floor	\mathbb{L}	
Ol	overs for completeness and fastening					Ш			<u>_</u>			Ī	l	ightharpoonup	In accordance with
Reliability						Ш					\perp		\perp		manufacturer's instructions
Safety can be ensu	ured only if the supplier's instructions are observed.			L	╙	Ш			\perp	┵	\perp	\perp	\perp	\downarrow	In accordance with Swiss
				L	╙	Ш			\perp		\perp	\perp	╙	$oldsymbol{\perp}$	Standard
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Safety measure		ļ		ــــــ	—	Ш		_	\perp	4	\downarrow	\bot	\bot	\bot	
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Disposal must be a	The state of the s	 		₩	╄	\dashv		+	+	+	+	+	+	+	
	carried out in a correct and environmentally sound way. Please advice on correct and environmentally sound disposal.			\vdash	₩	\dashv	\dashv	+	+	+	+	+	+	+	1
COnsult Supplier for	advice off correct and environmentally sound disposal.			⊬	⊬	\dashv	-	+	+	+	+	+	+	+	1
				\vdash	⊬	\dashv	_	+	+	+	+	+	+	+	1
Notes			+	\vdash	\vdash	\vdash	-	-	+	+	+	+	+	+	+
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