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# **Ozone Instruments**

## List of Products

Valid from 01 March 2025

## Lowest Cost of Ownership Ozone Instruments:

- Warranty 3 years
- UV lamp warranty 5 years
- Preventive Maintenance not required
- Recalibration not required under normal operating conditions
- Certificate of Calibration included at no charge
- Early Warning for soiled cuvette and weakening lamp
- Error and Event Log integrated, with real time clock
- Windows software for diagnostics and logging included
- NRTL safety listing by TUV for North America (BMT 965C/OG, BMT 932)

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#### Order Sheet



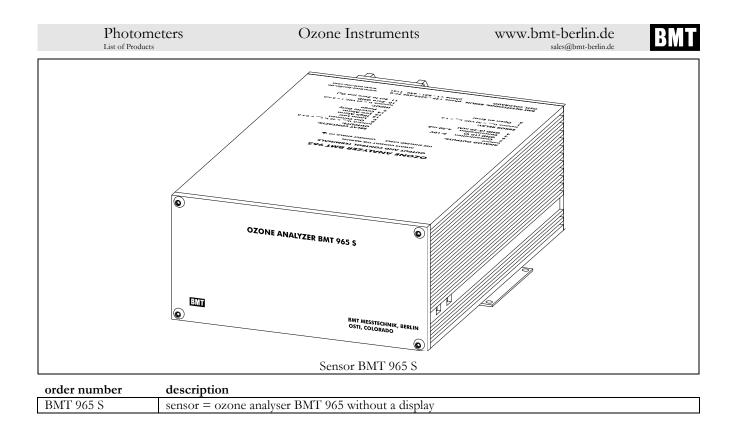
# **Ozone Measurement**

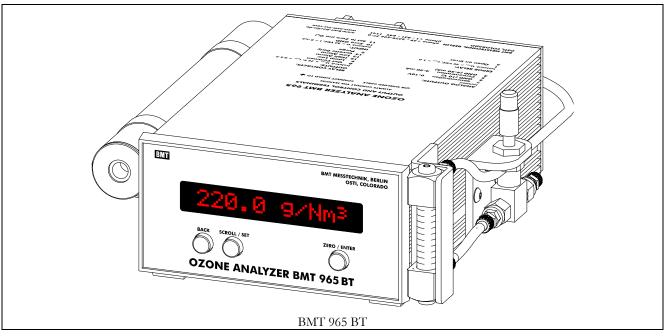
## High Concentration OZONE ANALYZERs

	Marine States and a state and	OZONE ANALYZER BMT 96551 Generation 12346312 Enterna         Enterna         Supply: 100 - 220 W/st.         Supply: 100 - 220 W/st.         Barris Mark 200 //ms.         Supply: 100 - 220 W/st.         Barris Mark 200 //ms.         Supply: 100 - 220 W/st.         Barris Mark 200 //ms.         Barris Mark 200 //ms.
	BMT 965 ST	back panel
order number BMT 965 ST	description standard ozone analyser, with temperature an power input 100-240 VAC, 50/60 Hz (12-36 analog outputs 0-10 VDC and 4-20 mA, isola Go, Device/Host mode, Full Speed), instrum a Windows PC with our software "BMT 965	VDC on request), purge timer, isolated ted serial interface RS-232, USB (On-The- ent control via the interactive display or
		please order only one <b>concentration</b> range:
	standard	50, 100, 200, 300, 400, 500 or 600 g/Nm <sup>3</sup>
LR	low	10 or 20 g/Nm <sup>3</sup>
LLR	lowest instrument is double in he	ight ! 1, 2 or 5 g/Nm <sup>3</sup>
		please order only one <b>pressure</b> range:
	standard	1.15 bar abs
HP	high	1.5, 2.0, 2.5, 3.0, 3.5, or 4.0 bar abs
options		
internal PU	built-in purge unit (solenoid valve & air pump for fully automatic purging and zeroing on pu not available for HP (high pressure) versions	
interface options		

For a complete overview of options and combinations please refer to our Order Sheet!

MODBUS/TCP





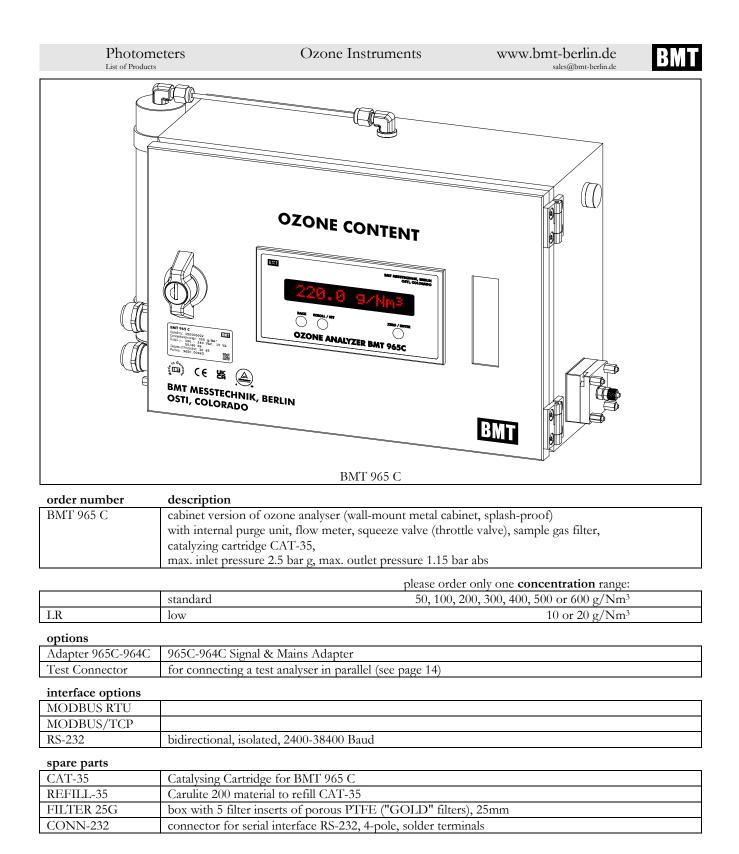
order number	description
BMT 965 BT	bench top version of BMT 965 ST, portable, throttle valve, flow meter, sample gas filter,
	catalysing cartridge, for 24 VDC, wall mount power supply for 100-240 VAC included,
	max. inlet pressure 2.5 bar g, max. outlet pressure 1.15 bar abs,
	other specs and concentration ranges see BMT 965 ST page 2

internal PU	built-in purge unit (solenoid valve & air pump)
	for fully automatic purging and zeroing on push button command
	not available for HP (high pressure) versions
bag	soft carrying bag (camera bag)

### interface options MODBUS/TCP

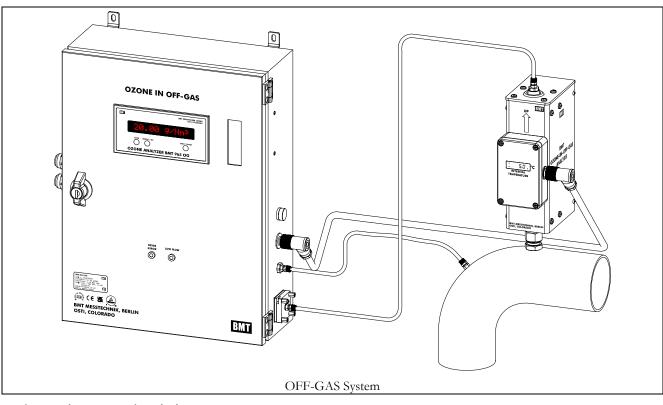
For a complete overview of options and combinations please refer to our Order Sheet!

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For a complete overview of options and combinations please refer to our Order Sheet!

## OFF-GAS System



order number	description
BMT 965 OG	basic cabinet - including:
	OZONE ANALYZER BMT 965 (ranges 50, 100 g/Nm <sup>3</sup> , pressure range 1.15 bar abs),
	purge unit, sample gas filter, sample gas pump SGP5-DC,
	flowmeter FM-82-10 (0.1-1.0 l/min)

		please order only one concentration range:
	standard	$50 \text{ or } 100 \text{ g/Nm}^3$
LR	low	$10 \text{ or } 20 \text{ g/Nm}^3$
LLR	lowest	5 g/Nm <sup>3</sup>

		please order only one <b>pressure</b> range:
	standard	1.15 bar abs
HP	high	1.5 or 2.0 bar abs

options

options	
DH6	sample gas dehumidifier DH6 (to be mounted at the point of sampling)
	cable length 3 m (others on request, max. 10 m)
SOBV	shut-off ball valve, mounting option for DH6 (for other mounting options see page 18)
LFW-2	low flow warning (thermal flow sensor)
CAT-RS	catalyzing cartridge (stainless steel, re-fillable)
DT 100	dirt trap DT 100 (to be mounted near the point of sampling)
Adapter	965OG-964OG Signal & Mains Adapter
965OG-964OG	

#### interface options

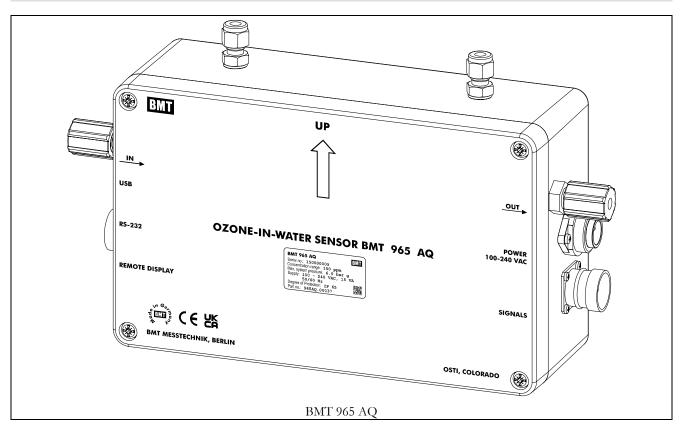
interface options	
MODBUS RTU	
MODBUS/TCP	
RS-232	bidirectional, isolated, 2400-38400 Baud

#### spare parts

opure pure	
FILTER 25G	box with 5 filter inserts of porous PTFE ("GOLD" filters), 25mm
SGP5-SPARE	spare parts for SGP5 (membranes, valves, O-rings)

An OFF-GAS system usually has to be tailored according to individual needs - Do not hesitate to ask!

### **OZONE-IN-WATER SENSORs**



order number	description
BMT 965 AQ	SENSOR BMT 965 AQ, USB (On-The-Go, Device/Host mode, Full Speed),
	range: 10, 50, 100 or 150 ppm <sub>w</sub> (g/m <sup>3</sup> ), please specify
BMT 965 AQ/HF	SENSOR BMT 965 AQ (HF version) for up to 20% hydrofluoric acid (HF)
	range: 10, 20, 50, 100 or 150 ppm <sub>w</sub> (g/m <sup>3</sup> ), please specify

### options

optione	
RD interface	optional connector for Remote Display BMT 965 RD (see page 7)
RD cable	special cable, length $> 10$ m up to 30 m (up to 100 m please contact factory)

#### interface options

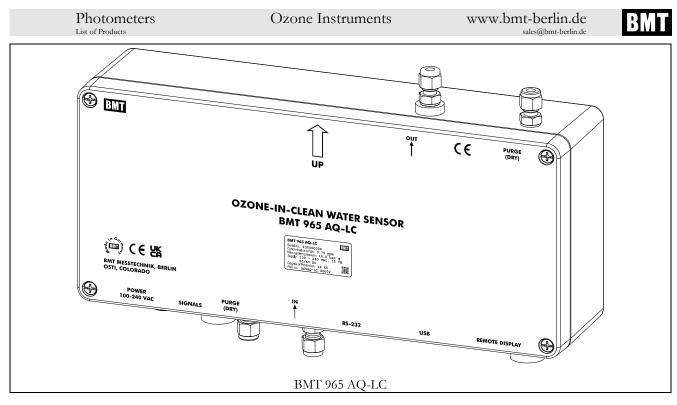
interface options	
MODBUS/TCP	
RS-232	bidirectional, isolated, 2400-38400 Baud

Connectors

CONN-MAINS	connector for mains input, 4-pole, screw terminals
CONN-SIG 16	connector for signals, 16-pole, solder terminals
CONN-232	connector for serial interface RS-232, 4-pole, solder terminals
CONN-TOOL	mounting Tool for Signal Connector CONN-SIG 16

#### Cables

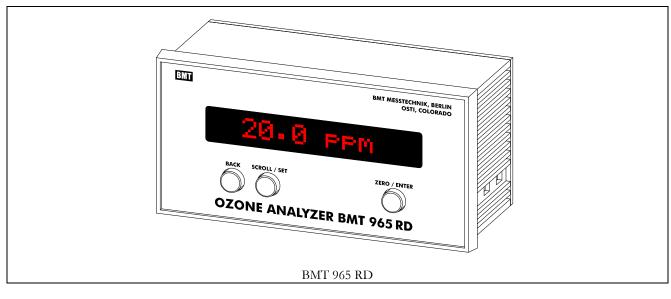
Cables	
AQ Signal Cable	16-pole signal cable, only one connector, standard length 2 m (please specify length)
AQ Power Cable	power cable, only one connector, standard length 2 m (please specify length)
AQ Power Supply	power cable with connectors on both sides,
Cord	NEMA 5-15P (2 m) or Schuko (2 m), please specify



order number	description
BMT 965 AQ-LC	SENSOR BMT 965 AQ-LC, USB (On-The-Go, Device/Host mode, Full Speed),
	range: 0.5, 0.75, 2, 5, 10, or 15 ppm <sub>w</sub> (g/m <sup>3</sup> ), please specify
	fluid ports PVDF for 4x6 mm tubing (1/4" SS Swagelok on request)
L	

interface options	
MODBUS/TCP	
RS-232	bidirectional, isolated, 2400-38400 Baud
options	
RD interface	optional connector for Remote Display BMT 965 RD

For Cables and Connectors see BMT 965 AQ on page 6.



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_	order number	description
	BMT 965 RD	Remote Display with 2.5 m cable (or 5 or 10 m, please specify)
		needs instrument with option "RD interface"

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Photometers List of Products			er Sheet		www.bmt-	berlin.de :s@bmt-berlin.de	ВМТ
<ul> <li>please check options</li> <li>standard version (recommended!)</li> <li>included (no choice)</li> <li>option not available</li> </ul>	BMT 965 ST	BMT 965 BT	BMT 965 C	BMT 965 0G	BMT 965 AQ	вмт 965 АQ/НF	BMT 965 AQ-LC
Basic model →							
Concentration range 1)           0.5 g/Nm³ (or 0.04 %wt/wt)           0.75 g/Nm³ (or 0.06 %wt/wt)           1 g/Nm³ (or 0.08 %wt/wt)           2 g/Nm³ (or 0.15 %wt/wt)           5 g/Nm³ (or 0.15 %wt/wt)           5 g/Nm³ (or 0.7 %wt/wt)           10 g/Nm³ (or 0.7 %wt/wt)           10 g/Nm³ (or 1.1 %wt/wt)           20 g/Nm³ (or 1.5 %wt/wt)           100 g/Nm³ (or 7 %wt/wt)           100 g/Nm³ (or 14 %wt/wt)           300 g/Nm³ (or 20 %wt/wt)           400 g/Nm³ (or 31 %wt/wt)           500 g/Nm³ (or 31 %wt/wt)	 2) 2) 2)	 2) 2) 2)	-	-			0.5 ppm <sub>w</sub> 0.75 ppm <sub>w</sub> 2 ppm <sub>w</sub> 5 ppm <sub>w</sub> 10 ppm <sub>w</sub> 15 ppm <sub>w</sub>     
Pressure range standard, 1.15 bar abs high, 1.50 bar abs high, 2.00 bar abs high, 2.50 bar abs high, 3.00 bar abs high, 3.50 bar abs high, 4.00 bar abs	•	•    	■     	•		_ _ _ _ _ _ _ _ _	_ _ _ _ _ _ _
Fittings for 3x5 mm FEP for 4x6 mm FEP 1/8" Swagelok <sup>3)</sup> 1/4" Swagelok <sup>3)</sup> 6 mm Swagelok <sup>3)</sup> PVDF, for 4x6 mm FEP	•	•	•	•	_ _ _ _ _	- - - - -	- - -
Other built-in options option Internal Purge Unit <sup>4)</sup> Sensor Version (no display) /RD	1.15 bara —	1.15 bara — —	•  	-	-	_	-
Communication Interface Options <sup>5)</sup> RS-232 MODBUS RTU MODBUS/TCP	-	-			_	_	_

#### Selection of a model including its specs and options is mandatory! Minimum specs are: measurement range, pressure range, type of connecting fittings.

The ranges in %wt/wt are not equal to the ranges in g/Nm<sup>3</sup> - the unit may be switched by the user at any time. The instrument is double in height (front 144 x 144 mm). Note 1):

Note 2):

LET-LOK fitting, Swagelok interchangeable. Note 3:)

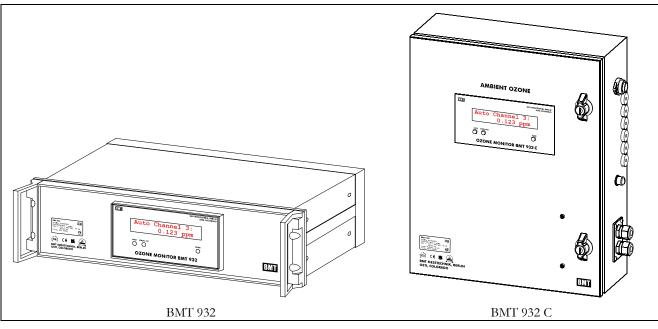
An internal purge unit is only available for a pressure range of 1.15 bar abs, in general. Only one out of three communication interface options is allowed. Note 4):

Note 5)

To find out more about the above models and their options, please refer to our data sheets (www.bmt-berlin.de).

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## Ambient OZONE MONITOR



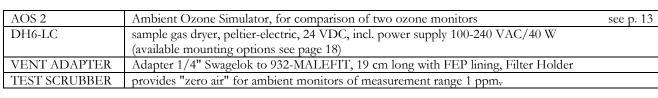
order number	description	
BMT 932-1	19" monitor,	1-channel, please specify range: 1, 2, 5, 10, 20, 50, 100, or 250 ppm <sub>v</sub>
BMT 932-3	19" monitor,	3-channel
BMT 932-6	19" monitor,	6-channel
BMT 932 C-1	cabinet monitor,	1-channel
BMT 932 C-3	cabinet monitor,	3-channel
BMT 932 C-6	cabinet monitor,	6-channel
	accessories included:	···· ·································
		per channel
		• 200 filter inserts

### options

932-24VDC	main power input 18-36 VDC (instead of 100 – 240 VAC)
932-RELAY	relay box, 50 pin D-Sub connector, fully compatible with BMT 930 relay box, available only for 19" monitor
932-MPA	second display for ozone partial pressure (mPa), available only for 19" monitor according to DIN ISO 1431-1 and ANSI D 1149-07

## spare parts

<u></u>			
932-SPARE	pare parts kit (UV lamp, scrubber, additional set of filter holders)		
932-LAMP	UV lamp (please specify serial number)		
932-SCRUBBER	scrubber for 1 ppm <sub>v</sub>		
932-PERMSCRUB	permanent scrubber for ranges $> 1 \text{ ppm}_v$		
932-HOLDER	filter holder		
932-INSERTS	box with filter inserts (200 pcs.)		
932-MALEFIT	mounting fitting (male) for filter holder, mounting hole 13mm		
932-ADAPT	set of fittings (male & female) for both sides of filter holder		
932-FIT	fitting for 4x6 mm FEP tubing (1/4" on request), mounting thread G 1/8"		
932-WATERTRAP	for evaluation of condensation risk		
TU 1/4x5/32	tubing, 1/4" x 5/32", transparent FEP		

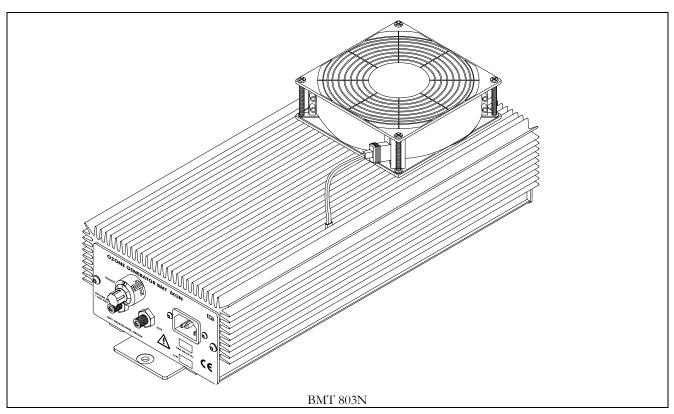


If you have any further questions, do not hesitate to contact us – we will find a solution to your problem.



# **Ozone Sources**

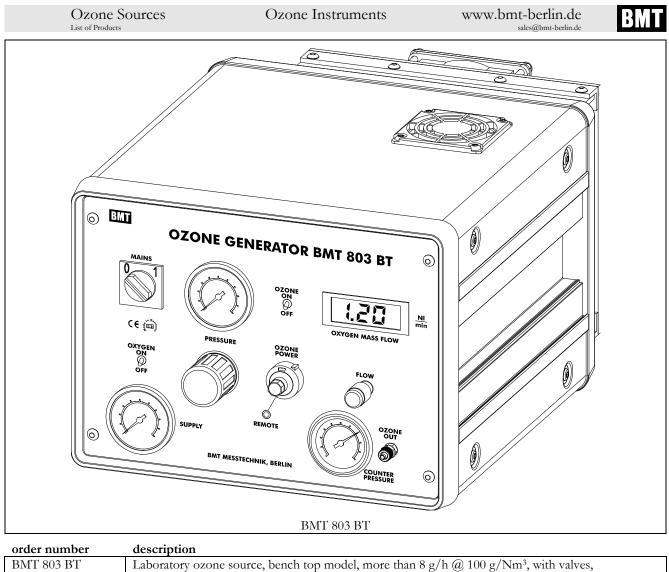
## Ozone Generators



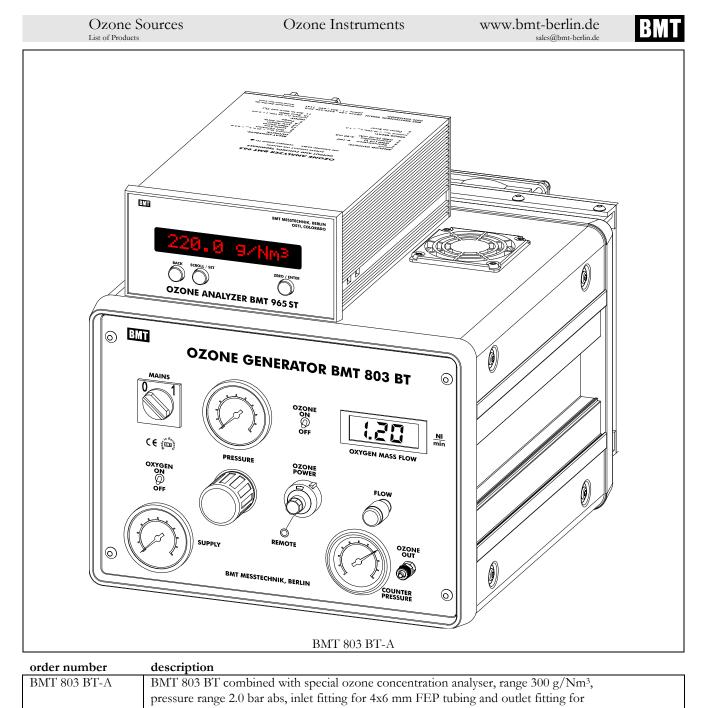
order number	description			
BMT 802 N	ozone generator, about 4 g/h @ 100 g/Nm <sup>3</sup> (length 311 mm),			
	fittings for 4x6 mm FEP tubing (3x5 mm on request)			
BMT 803 N	ozone generator, about 8 g/h @ 100 g/Nm <sup>3</sup> (length 391 mm),			
	fittings for 4x6 mm FEP tubing (3x5 mm on request)			
BMT 803 N-HP	ozone generator, about 8 g/h @ 100 g/Nm <sup>3</sup> , high pressure version 2 to 3 bar abs,			
	fittings for 4x6 mm FEP tubing (3x5 mm on request)			
options				
RC	remote control with $0-5$ VDC or remote potentiometer (instead of built-in			
	potentiometer)			
RCS	remote control with $0 - 5$ VDC or remote potentiometer (instead of built-in			
	$r_{\rm ext}$			

RCS	remote control with 0 – 5 VDC or remote potentiometer (instead of built-in			
	potentiometer), plus ON/OFF control (24 VDC)			
SWAGE	generator with 1/4" or 1/8" LET-LOK (Swagelok interchangeable), inlet & outlet			
VCR	generator with 1/4" VCR (inlet & outlet, male body)			
CHECK	check valve 4x6 mm (3x5 mm or 1/8" on request) at the outlet (mounted externally)			

For the operation of the above generators, please see the accessories on the following pages!



order number	description
BMT 803 BT	Laboratory ozone source, bench top model, more than 8 g/h @ 100 g/Nm <sup>3</sup> , with valves,
	gauges and controls for immediate operation, oxygen mass flow meter 0-2 Nl/min or
	0-4 Nl/min (please specify), flow rate 0.1 to 4 l/min,
	ozone resistant pressure gauge for outlet pressure, inlet fitting for 4x6 mm FEP tubing
	and outlet fitting for 4x6 mm (3x5 mm on request) FEP tubing,
	mains voltage 230 or 115 VAC, 155 W, 255 x 200 x 385 mm, 10kg
options	
SWAGE	generator with 1/8" LET-LOK (Swagelok interchangeable), outlet only



	4x6 mm (3x5 mm on request) FEP tubing
options	
SWAGE	generator with 1/8" LET-LOK (Swagelok interchangeable), outlet only

Ozone S List of Products		Ozone Instruments	www.bmt-berlin.de	BMT
		O O O O O O O O O O O O O O		
order number	description			

AOS 2	Ambient Ozone Simulator with flow independent concentration, up to 3 1/min,
	for comparison of 2 ozone monitors, 24 VDC/450 mA (wall mount power supply incl.)



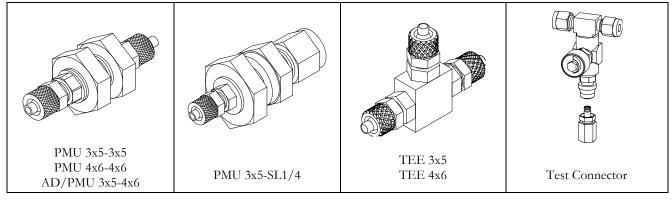
# **Ozone Accessories**

Our standard fitting size is for 4x6 mm flexible tubing (FEP, PTFE, etc.). Other fitting types and sizes on request.

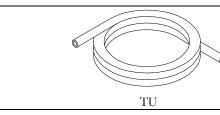
# Fittings, Reducers, Tubing

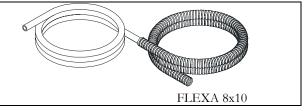
6 AA	6 De	6		6770	6
F 3x5-M5	F 3x5-M5-OR	F 4x6-M5	F 3x5-1/8	F 4x6-1/8	F 4x6-1/8-SS

order number	description
F 3x5-M5	fitting for 3x5 mm (or 1/8" x 3/16" resp.) FEP tubing, M5 thread, SS
F 3x5-M5-OR	same as F 3x5-M5, with KALREZ <sup>®</sup> O-ring on mounting side
F 4x6-M5	fitting for 4x6 mm FEP tubing, M5 thread, SS
F 3x5-1/8	fitting for 3x5 mm (or 1/8" x 3/16" resp.) FEP tubing, G1/8 thread, aluminum, black
	anodised
F 4x6-1/8	fitting for 4x6 mm FEP tubing, G1/8 thread, aluminum, black anodised
F 4x6-1/8-SS	fitting for 4x6 mm FEP tubing, G1/8 thread, SS
nut 3x5	additional nuts for the above fittings may be ordered separately
nut 4x6	additional nuts for the above fittings may be ordered separately



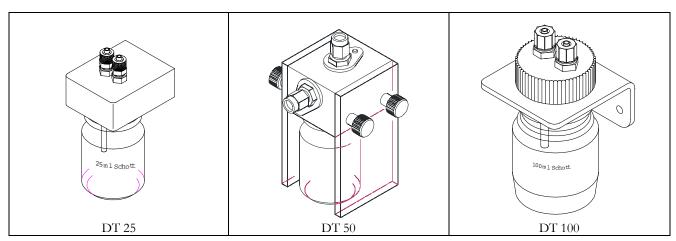
order number	description	
PMU 3x5-3x5	panel mount union for 3x5 FEP tubing, hole 10 mm, max. wall thickness 5 mm, SS	
PMU 4x6-4x6	panel mount union for 4x6 FEP tubing, hole 10 mm, max. wall thickness 5 mm, SS	
AD/PMU 3x5-4x6	same as above, panel mount reducer	
PMU 3x5-SL1/4	panel mount reducer union, 1/4" LET-LOK (Swagelok interchangeable) to 3x5 mm	
	FEP tubing, hole 10 mm, max. wall thickness 5 mm, SS	
TEE 3x5	Tee connection with fittings for 3x5 mm FEP tubing, AL, SS	
TEE 4x6	Tee connection with fittings for 4x6 mm FEP tubing, AL, SS	
Test Connector	for connecting a test analyser in parallel, different fitting types and sizes on request	



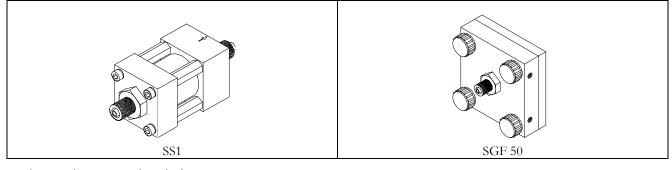


order number	description
TU 2.5x4	FEP tubing, 2.5x4 mm, transparent
TU 3x5	FEP tubing, 3x5 mm (1/8" x 3/16"), transparent
TU 4x6	FEP tubing, 4x6 mm, transparent
TU 1/4x5/32	FEP tubing, 1/4" x 5/32", transparent
FLEXA 8x10	flexible SS tubing ID 7.5 mm, for protecting FEP tubing

# Sample Gas Filters, Ozone Destructs



order number	description
DT 25	DIRT TRAP 25 ml, fittings 3x5 mm, glass / PTFE
DT 50	DIRT TRAP 50 ml, fittings 6 mm or 1/4" LET-LOK (Swagelok interchangeable),
	glass / PTFE, acrylic protection on two sides
DT 100	DIRT TRAP 100 ml, fittings 4x6 mm (3x5 mm on request), glass / PTFE



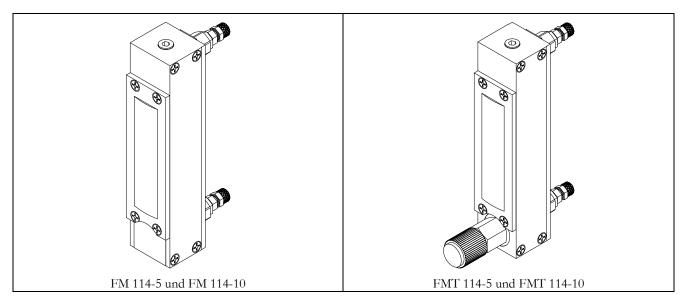
order number		description	
SS1		sample system, gas filter + flow resistance, fittings for 4x6 mm (3x5 mm) FEP tubing	
FILTER-SS1		filter insert for SS1 (two pieces), PTFE	
SGF 50	*	sample gas filter, diameter 50 mm, fittings for 3x5 mm or 4x6 mm PTFE tubing,	
		mounting holes M4, anodised aluminum, comes with 20 filter inserts (pure glass fibre)	
SGF 50G	*	same as above, golden anodized, for filter inserts of porous PTFE ("GOLD" filters),	
		5 spare filter inserts	
SGF 50G/W	*	same as above, with window for easy inspection	
SGF 50G		filter holder replacement (removable part, black or grey) for upgrade of	
UPGRADE KIT		BMT 964C / OG with 50 mm glass fibre filter insert to porous PTFE	
FILTER 50		box with 20 filter inserts, 50 mm, for SGF 50 (as used in older BMT 964C & OG)	
FILTER 50G		box with 5 filter inserts of porous PTFE ("GOLD" filters), 50 mm, for SGF 50G	
FILTER 25		box with 20 filter inserts of pure glass fibre, 25 mm (as used in older BMT 964)	
FILTER 25G		box with 5 filter inserts of porous PTFE ("GOLD" filters), 25mm	

\*These filter holders are not suitable as spare parts in BMT instruments! Please ask.

Accessories	Ozone Inst	truments	www.bmt-berlin.de	BMT
	Cates contridge to a		HEATED-CAT	
order number des	scription		-	]
CAT-RS * cat	alyzing cartridge, OD 30 x 200 mm,			
	ng for 4x6 mm FEP tubing (3x5 m	m or 1/8" or 1/4" Swa	agelok on request), outlet	
G1 inte	/8, ernal dust filters, clips; REFILL-RS :	included		
	ention: warranty is restricted to $O_3$ i			
	rulite 200 material to refill CAT-RS			
REFILL-35 (see	e page 4, BMT 965 C)			
HEATED-CAT CA	T-RS as above, electrically heated to	o 60°C		
for	24 VDC, wall mount power supply	for 100-240 VAC incl	uded	
fitti	ng for 4x6 mm FEP tubing (3x5 m	m on request)		

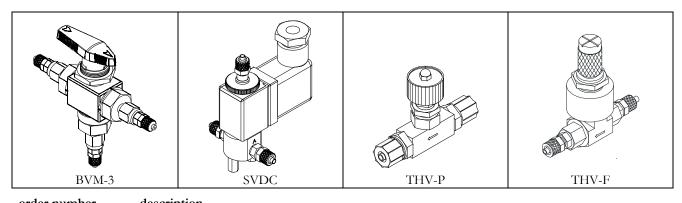
\*The above CAT-RS is not suitable as spare part in BMT instruments! Please ask.

## Flow Meters



order number	description		
FM 114-5	flow meter 0.04 to 0.5 ml/min, glass, SS, FFKM, fittings for 4x6 mm FEP tubing		
	(3x5 mm on request)		
FM 114-10	flow meter 0.1 to 1.0 ml/min, glass, SS, FFKM, fittings for 4x6 mm FEP tubing		
	(3x5 mm on request)		
FMT 114-5	flow meter 0.04 to 0.5 l/min, glass, SS, FFKM, fittings for 4x6 mm FEP tubing (3x5 mm		
	on request)		
FMT 114-10	flow meter 0.1 to 1.0 l/min, with throttle valve, fittings for 4x6 mm FEP tubing (3x5 mm		
	on request)		

# Valves

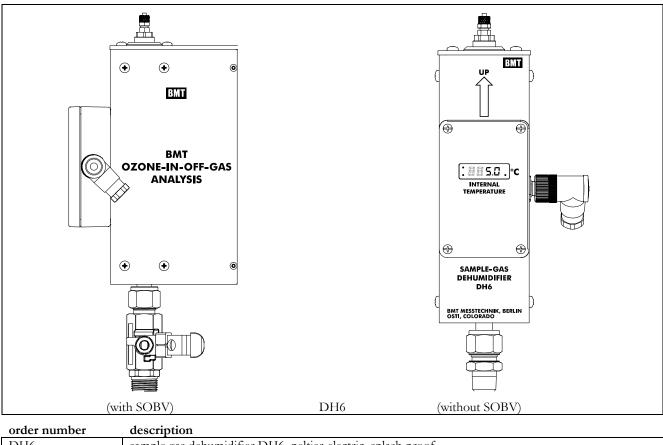


order number	description
BVM-3	3-way ball valve, manually operated, SS, fittings for 4x6 mm FEP tubing (3x5 mm on
	request)
SVDC 24 *	3-way solenoid valve, fittings for 4x6 mm FEP tubing (3x5 mm on request), SS, 24V DC
	/ 6W, with plug
SVDC Plug	electric connector
SVAC-PWR	24 VDC power supply, to operate SVDC 24 at 100-240 VAC, 15 W, screw terminals
THV-P	throttle valve, for PRESS (bypass) configuration, fittings for 4x6 mm FEP tubing
	(3x5 mm on request)
THV-F	throttle valve, fine tuning, fittings for 4x6 mm FEP tubing (3x5 mm on request)

\*The above solenoid valve is not suitable as spare part in BMT instruments! Please ask.



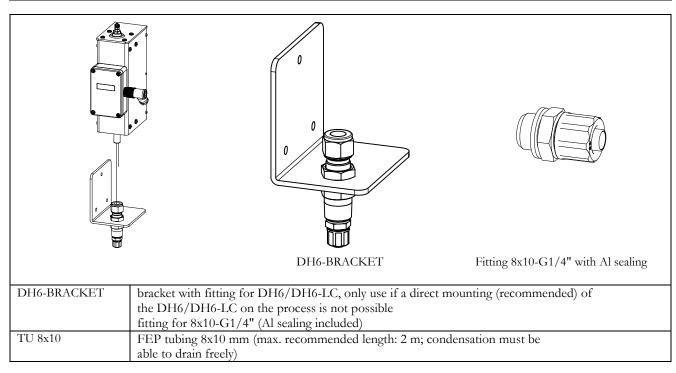
## Sample Gas Dryers, Pumps

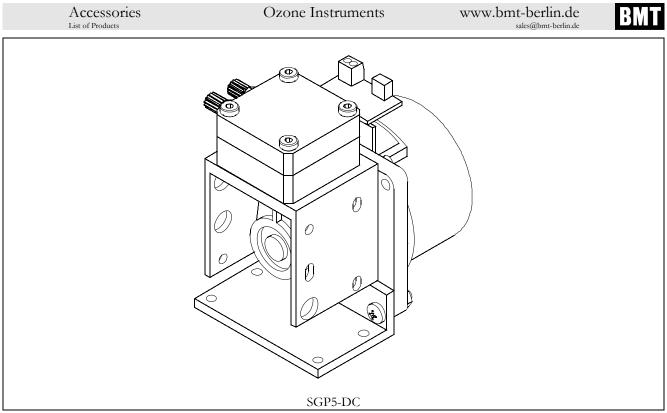


	sample gas dehumidifier DH6, peltier-electric, splash proof including power supply, 100-240 VAC to 24 V DC, 40 W
DH6-LC	version to be used at very low (ambient) ozone concentration, internal PTFE lining

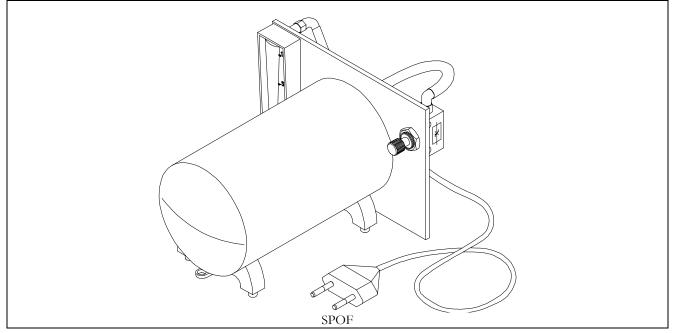
#### options SOBV

SOBV shut-off ball valve, mounting option for DH6 and DH6-	·LC
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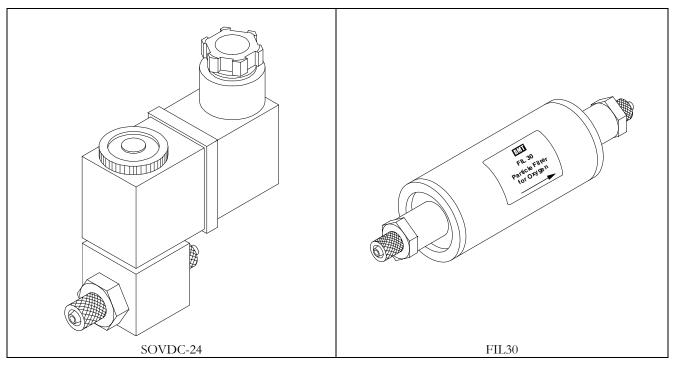


order number	description
SGP5-DC	sample gas pump, ozone resistant, fittings for 4x6 mm FEP tubing (3x5 mm on request), 24 VDC, 1A
	performance: 0.5 l/min at $\Delta P = 0$ and 0.35 l/min at $\Delta P = 100$ mbar
SGP5-SPARE	spare parts kit for SGP5 (membrane, valves, O-rings)
SGP5-DC-POWER	24 VDC wall mount power supply for 100-240 VAC



order number	description
SPOF	sample pump (suction pump) for ozone-free sample gas, 0-1 l/min, 100-240 VAC,
	fittings for 4x6 mm FEP tubing (3x5 mm on request)

## Ozone Generator Accessories



order number	description
SOVDC-24	oxygen safety off valve NC for 4x6 mm FEP tubing (3x5 mm on request), coil
	24 VDC/5W, others on request
FIL30	oxygen filter (specify tubing)

OPR

order number	description
OPR10	oxygen pressure regulator 0-1.0 bar g
OPR25	oxygen pressure regulator 0-2.5 bar g

	Accessories List of Products	Ozone Inst	ruments	www.bmt-berlin.de	BMT
PG CHV		PG		CHV	
order number description					
PG10 oxygen pressure gauge, 50 mm OD, 0-1.0 bar g, with 2 fittings for 4x6 mm FEP tubing (3x5 mm on request), clamp	(3x5	mm on request), clamp			

	(3x5 mm on request), clamp
PG25	oxygen pressure gauge, 50 mm OD, 0-2.5 bar g, with 2 fittings for 4x6 mm FEP tubing
	(3x5 mm on request), clamp
CHV	check valve, approx. 25 mbar, ozone resistant, fittings for 4x6 mm FEP tubing (3x5 mm
	or 1/8" Swagelok on request)

If you have any further question, do not hesitate to contact us.

We will find a solution to your problem.

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