Hanovia

PureLine PQ

Complete Range
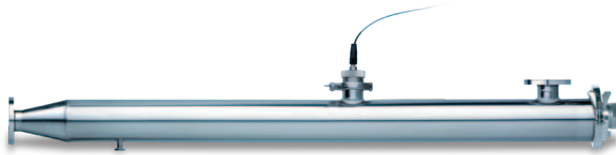
Technical Specification

Model	Maximum Disinfection Capacity * (m³/hr) 32mJ/cm² RED	Maximum Disinfection Capacity ** (m³/hr) 120mJ/cm² RED	Min. T_{10} (%)	Flange Size DN	Approx Weight (kg) Chamber (Empty)	Power Supply	Power (W)
PureLine PQ 0005	5.1	0.9	60	40	9	37	80
PureLine PQ 0008	8.1	1.7	60	50	9	37	140
PureLine PQ 00016	16	3.9	60	50	9	37	270
PureLine PQ 0030	32	5.1	60	80	25	37	270
PureLine PQ 0090	88	16	60	150	46	37	550
PureLine PQ 0200	205	50	50	200	50	135	5400
PureLine PQ 0360	390	98	50	200	50	180	10700
PureLine PQ 1100	910	225	50	350	130	220	17100

*   The maximum disinfection capacity is based on a dose of 32mJ/cm² RED MS2 phage T_{10} 95% fouling factor 0.95 and end of lamp life (EOLL) 0.9

** The maximum disinfection capacity is based on a dose of 120mJ/cm² RED MS2 phage T_{10} 95% fouling factor 0.95 and end of lamp life (EOLL) 0.9
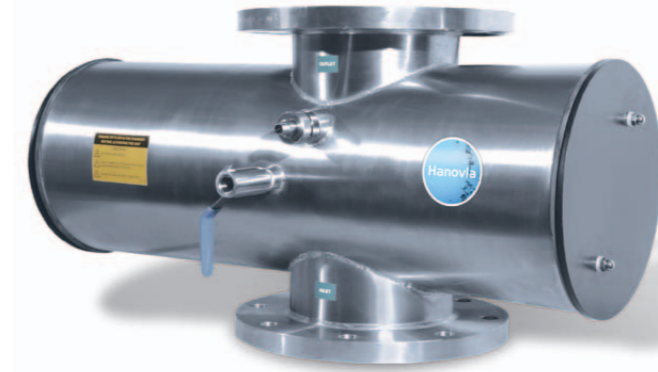
PureLine PQ

PureLine PQ (Disinfection) Models
PQ 0005 - PQ 0090
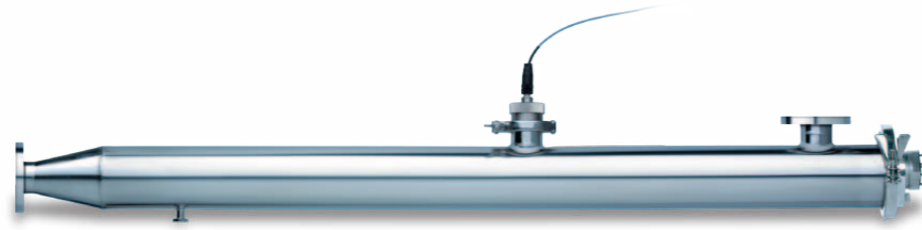
PureLine PQ

PureLine PQ (Disinfection) Models
PQ0200 - PQ 1100

Technical Specification

UV Chamber

Material:	StSt 316L / 1.4404
Internal finish:	As made pipe and tube, welds left as laid electropolished and passivated
External finish:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Flange DN series PN16 rated
Drain connection:	BSPT
End plate:	Removable tri-clamp except PQ 0090 which is a bolted plate
Degree of protection:	IP65 equivalent to NEMA 4 but not suitable for outside use
Arc tube (lamp):	Low pressure amalgam / high purity quartz
Arc tube enclosure:	High purity quartz
Number of lamps:	1
Expected lamp life:	12000-16000 hours
Temperature sensor:	Yes
UV monitor:	Pre calibrated DVGW compliant dry UV monitor
Working fluid temperature:	+5°C to +40°C
Maximum CIP temperature:	95°C with control cabinet electrically isolated
Hydrostatically pressure tested:	Yes to PED requirements EN13445
Operating / Design pressure:	6 bar / 7 bar
Pressure Loss:	Typically < 20 mbar including wiper
Seals:	EPDM FDA approved WQA certified to NSF61 except PQ 0005

Cabinet

|	
Material:	Polyester coated carbon steel
Degree of protection:	IP66 / NEMA 4
Supply voltages:	230V (207V to 263V) 50/60Hz
Operating temperature range:	+5°C to +40°C
Relative humidity:	<90%
Cooling fans:	No
cable length:	10m
External contacts:	4-20mA signal for UV dose and UV intensity, 24V dc 10mA max for trip, warning, system available, system remote, lamp running, replace lamp and Modbus for complete remote control

Technical Specification

UV Chamber

Material:	Stainless steel 316L
Internal finish:	<0.8μm Ra max, welds left as laid electropolished and passivated
External finish:	Brushed to K280 electropolished and passivated
Process (mating) connections:	Flange DN series PN10 rated
Drain connection:	BSPT
End plate:	Removable bolted plates
Degree of protection:	IP54 (NEMA 12)
Arc tube (lamp):	Medium pressure / high purity quartz
Arc tube enclosure:	High purity quartz
Number of lamps:	2 to 4
Expected lamp life:	9000 hours
Temperature sensor:	Yes
UV monitor:	4 Pre calibrated DVGW compliant dry UV monitors
Working fluid temperature:	+5°C to +40°C
Maximum CIP temperature:	95°C with electrical cabinet isolated
Hydrostatically pressure tested:	Yes
Operating / Design pressure:	6 bar / 7 bar
Pressure Loss:	Typically < 100 mbar
Seals:	Viton and NBR 90 approved to NSF61

Cabinet

Material:	Painted carbon steel
Degree of protection:	IP54 (NEMA 12)
Supply voltages:	Model PQ 0200 and PQ 0360 200-300V 50/60 Hz Model PQ 1100 400V 50/60 Hz or 480V 50/60 Hz
Operating temperature range:	+5°C to 35°C
Relative humidity:	<90%
Cooling fans:	Yes
cable length:	10m
External contacts:	4-20mA signal for UV dose and UV intensity, Volt free contacts for trip, warning, system available, system remote, UV on, system ready, dose valid, warming, cooling, system OK, wiper fault, ground fault, chamber/cabinet trip, cabinet temperature warning, chamber temperature warning, low UV, lamp failure, Modbus output. Inputs remote start / stop, remote reset, remote wipe cycle.
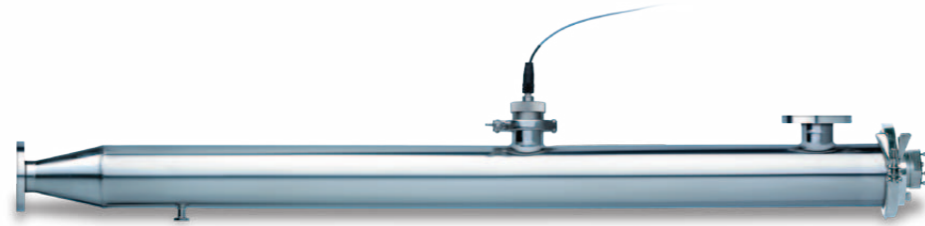
PureLine PQ

PureLine PQ 0005 - PQ 0090

Features

Operational Features:

- Lamp on/off
- Remote / local operation
- Validated dose calculation from fixed or variable flow with or without UVT input
- Option of running with dose algorithm which automatically compensates for changes in UV transmittance
- Selectable auto restart following power failure
- Event log (2000), 3 level operating menu
- Pre calibrated DVGW compliant dry UV monitor
- Dry monitor port with light trap

Screen Display Features:

- 4 line x 20 character backlit LCD with indication of System Status
- Remote / local mode
- UV dose or intensity
- Alarms and warning list
- Date and time
- English language

Alarm Message Features:

- Lamp fail
- Low UV dose or intensity
- Operating outside valdated conditions
- System warning and trip messages

Safety Features:

- Door interlocked cabinet isolator
- Separate door locks
- Ballast thermal cut out
- Resettable circuit breaker
- UV monitor port shutters (light trap)

Options

- Validation support pack
- Stainless steel cabinet (304)
- 30m lead lengths
- Printed operating menu and safety guides in Chinese, French and German
- Auto-wiper pneumatic operation
- ANSI 150 flanges and NPT drain
- Tri-clamp connections to BS 4825 with tri-clamp drain internal finish <0.38µm Ra maximum welds as laid electropolished and passivated
- CIP maximum 130°C with cabinet electrically isolated
- In field reference monitor and intensity meter (LP)

Approvals

- UL 61010-1 and IEC 61010-1
- CE following the low voltage directive and EMC directives conforming to EN61000-3-2,3-3, 4-2, 4-3, 4-4, 4-5, 4-6, 4-8 and 4-11 and 61326-1 class A
- Carollo certified to USEPA / UVDGM (2006)
- UV monitor is DVGW W294-3 approved
- All wetted materials WQA certified to NSF 61 except PQ 0005

Dimensions (mm)

Chamber:

Cabinet:

Model	Maximum Disinfection Capacity* (m³/hr)	Min. T$_{10}$ (%)	Dimensions (mm) unwiped dimensions						230V unwiped			Approx Weight (kg)	Power Supply	Power (W)
			A	B	C	D	E	DN	K**	L**	M**	Chamber (Empty)		
PureLine PQ 0005	5.1	60	1385	1273	150	1300	102	40	260	600	950	9	37	80
PureLine PQ 0008	8.1	60	1385	1273	150	1300	102	50	260	600	950	9	37	140
PureLine PQ 0016	16	60	1385	1273	150	1300	102	50	260	600	950	9	37	270
PureLine PQ 0030	32	60	1437	1300	200	1300	168	80	260	600	950	25	37	270
PureLine PQ 0090	88	60	1985	1825	250	1900	206	150	260	600	950	46	37	550

*   The maximum disinfection capacity is based on a dose of 32mJ/cm² RED MS2 phage T$_{10}$ 95% fouling factor 0.95 and end of lamp life (EOLL) 0.9

** Cabinet dimensions allow for door isolator, cable entry, bracket space. For cooling add 300mm to L and 150mm to M dimension

Additional Information

All dimensions are approximate for clearance purposes only. Hanovia has a policy of continuous product development, exact drawings are available on request. All specifications are subject to change without notification. Your Distributor or Hanovia Account Manager can advise on correct dosage and specific requirements.
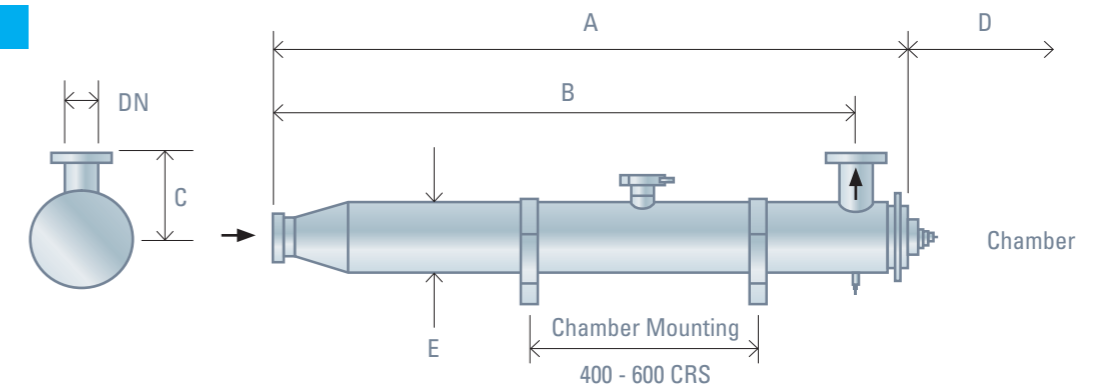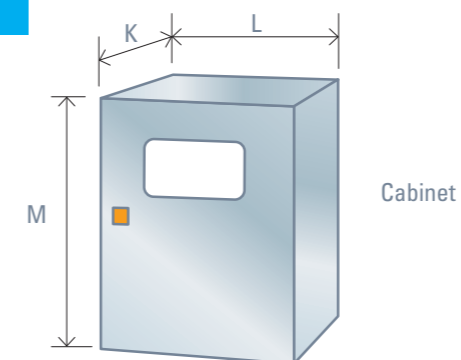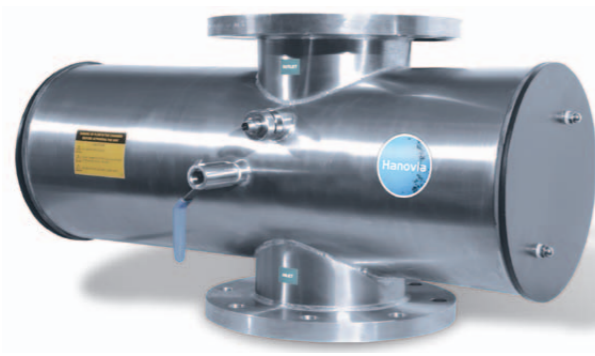
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Certificate No: FM29365

PureLine PQ

PureLine PQ 0200 - PQ 1100

Features

Operational Features:

- Lamp on/off
- Remote / local operation
- Validated dose calculation from fixed or variable flow with or without UVT input
- Auto-wiper electric operation
- Stepless lamp power 33% to 100%
- 4 level operating menu
- Pre calibrated DVGW compliant dry UV monitors one per lamp
- Dry monitor port

Screen Display Features:

- 4 line x 20 character backlit LCD with indication of System Status
- Remote / local mode
- UV dose or intensity
- Alarms and warning list
- Date and time
- English language

Alarm Message Features:

- Lamp fail
- Low UV dose or intensity
- System warning and trip messages

Safety Features:

- Door interlocked cabinet isolator
- Separate door locks
- Ballast thermal cut out
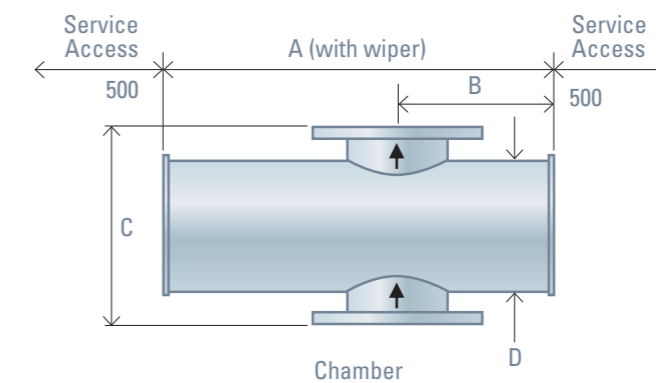- Resettable circuit breaker

Options

- Validation support pack
- Stainless steel cabinet (304)
- 30m lead lengths
- Printed operating, menu and safety guides in Chinese, French and German
- ANSI 150 flanges and NPT drain
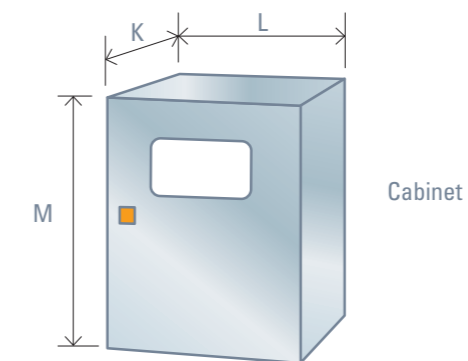- In field reference monitor and intensity meter (MP)

Approvals

- UL 508A Shop Approval (except PQ 1100)
- CE following the machine directive 2006/42/EC, EMC directive 2004/108/EC, low voltage directive 2006/95/EC and 93/68/EEC including NEN-EN-ISO 12100-1:2003, 12100-2:2003, 13857:2008, 13850:2006, NEN-EN 349+A1:2008, EN 61000-6-3:2007 and 61000-6-2:2005
- Carollo tested in accordance with USEPA
- UV monitor is DVGW W294-3 approved
- All wetted materials WQA certified to NSF 61

Dimensions (mm)

Chamber:

Cabinet:

Model	Maximum Disinfection Capacity * (m³/hr)	Min. T₁₀ (%)	Dimensions (mm)								Approx Weight (kg)	Power Supply	Power (W)
			A	B	C	D	DN	K**	L**	M**	Chamber (Empty)		
PureLine PQ 0200	205	50	780	310	400	273	200	400	800	1000	50	135	5400
PureLine PQ 0360	390	50	780	310	400	273	200	400	1200	1200	50	180	10700
PureLine PQ 1100	910	50	896	368	550	406	350	400	1200	1200	130	220	17100

* The maximum disinfection capacity is based on a dose of 32mJ/cm² RED MS2 phage T₁₀ 95%

** Cabinet dimensions do not allow for door isolator, cable entry and bracket space. For cooling add 600mm to L and M dimensions (300mm each side)

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Certificate No: FM29365

Hanovia

Eight decades of continuous development has put Hanovia
at the forefront of UV science and technology.

Working with the biggest names in food, beverage, electronics, pharmaceutical, aquaculture,
pools and leisure, and many other industries, we have gained valuable insights into our
customers' requirements and this enables us to offer you not only the finest UV systems, but
a full UV solution for your industrial or leisure water treatment problems – all backed by first
class technical and service support, available wherever you are around the World.
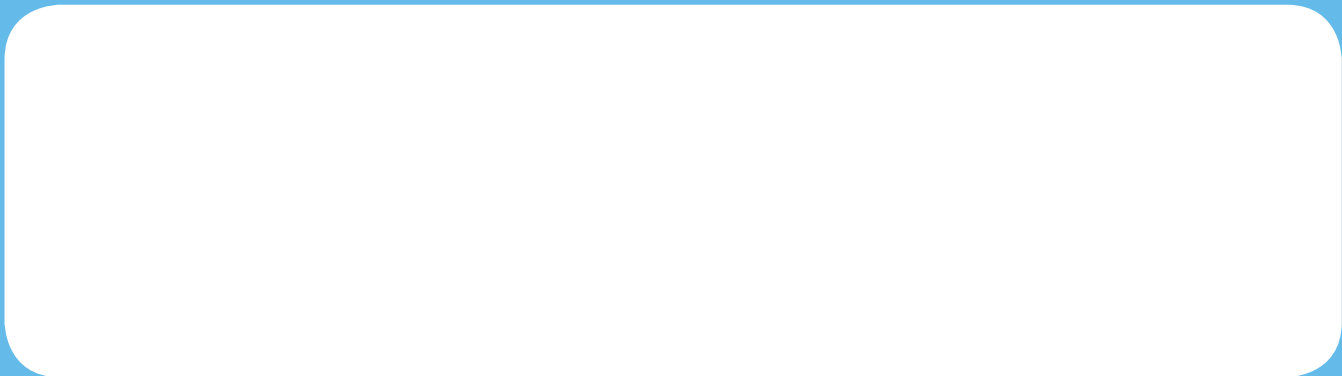
BREWING

FOOD+DAIRY

BOTTLED WATER+SOFT DRINKS