dolphin
Vatten vi älskar

aquarens

SELF CLEANING JET FILTER

AUTO
SELF CLEANING FILTER

JET CLEANING SYSTEM

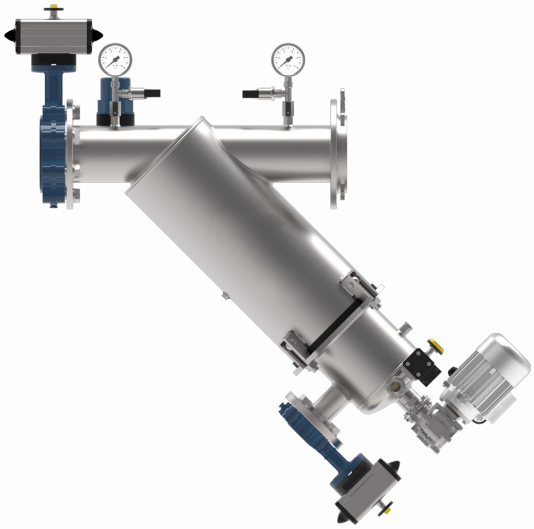
QUICK BOLTS SYSTEM

DRINKING WATER GASKETS

SHOT-PEENING TREATMENT

PASSIVATION TREATMENT

MADE IN ITALY



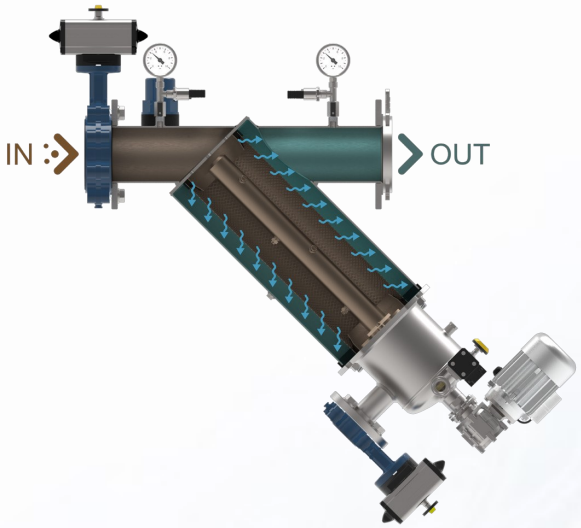
aquarens is a self-cleaning mesh filter, suitable to treat fluids loaded with a medium-high amount of suspended solids, even colloidal.

aquarens, thanks to powerful pressurised water jets, efficiently clean the filtering element in a short time and with reduced water consumption.

aquarens is manufactured in two different constructive shapes, Y and L, to adapt to different system layouts.

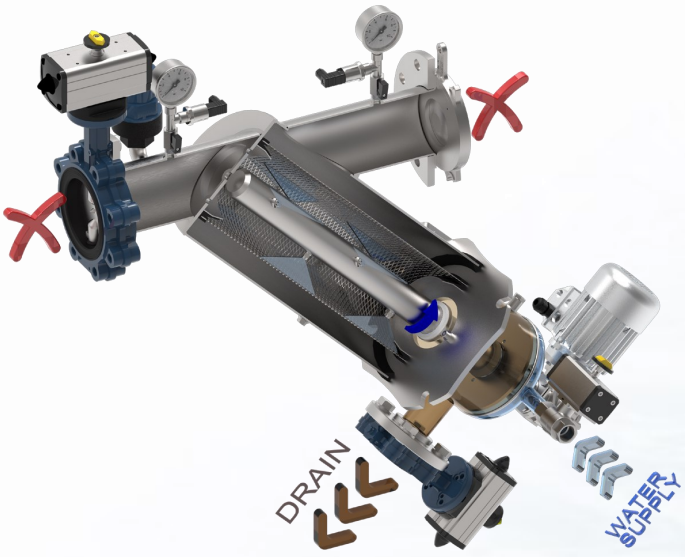
The wide array of FILTERKIT screens, with PES filtering tissue or completely in Stainless Steel AISI 316 for the 2LAY INOX FILTERKIT version, allows the user to choose between different filtration degrees, ranging from 1000µm to 25µm.

aquarens includes valves, pressure gauges and electronic controller at the time of supply.



FILTRATION PROCESS

To-be-treated raw liquid enters the filter through the inlet connection (IN), suspended solids are retained inside the filtering element and purified liquid flow out of the outlet connection (OUT).



CLEANING

The continuous build-up of solids, trapped inside the filtering mesh, creates a differential pressure between the filter's Inlet and Outlet connections that can be read on the manometers.

The cleaning of the filtering screen can be performed at regular time intervals or when the progressive build-up of suspended solids, trapped inside the filtering mesh, causes an excessive differential pressure between inlet and outlet (0,8 bar). In this phase, the inlet valve is closed and the drain valve (DRAIN) is open. When the emptying is completed, the cleaning shaft is put in rotation and the nozzles´ feed valve (WATER SUPPLY) is open. Pressurized water -jets spray the internal walls of the filtering screen removing impurities which are then discharged through the drain (DRAIN).

TECHNICAL SPECIFICATION

MATERIAL	
Filter housing	Stainless steel AISI 304 - AISI 316L
Gasket	EPDM*
Drain/Vent valve	Cast Iron Body with AISI 3016L lens Nickel-plated Brass - AISI 316L
Pressure Gauges	Steinless steel AISI 304 - AISI 316L
Surface finish	Microshot Peening and Passivation

* Certified for the following European Drinking Water regulations: UBA, DVGW-standard W-270, WRAS och ACS.

DESIGNDATA	
Flow rate	Up to 260 m^3/h
Design pressure [bar]	PN 10
Max Temperature [°C]	80
Salinity [TDS]	<10.000 ppm
pH range	3-9
Design Code	PED 68/2014/EU Machinery Directive 42/2006/CE LVD Directive 35/2014/EU

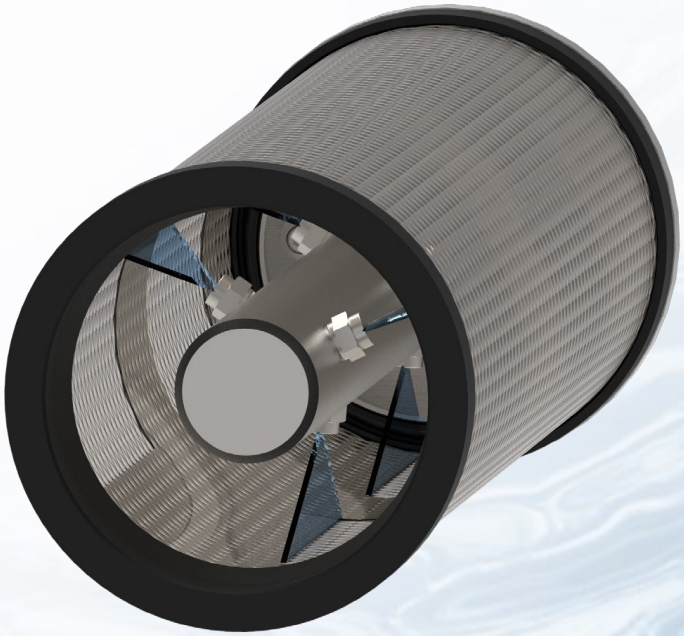
POWER SUPPLY	
Electric Voltage	230Vac 50/60 Hz single phase
Compressed air	6 bar

ACTUATION	
Electric motor	230Vac 0,11 kW
Solenoid Vale	Electropneumatic 24 Vdc

Filter's actuation is powered by the controller

CONTROLLER

POWER SUPPLY	PROTECTION CLASS	MATERIAL	INPUT	OUTPUT	CLEANING CUCPLE MANAGEMENT
230Vac 50/60 Hz single phase	IP65	ABS	2 digital (Pause, DP)	4 SPDT 16A 250Vac	Differential Pressure (0,6-0,8bar)
			3 analogic (Pressure)	4 SPST 1A 24Vdc	Pre-set time intervals
				1 SPST (alarm)	Manual

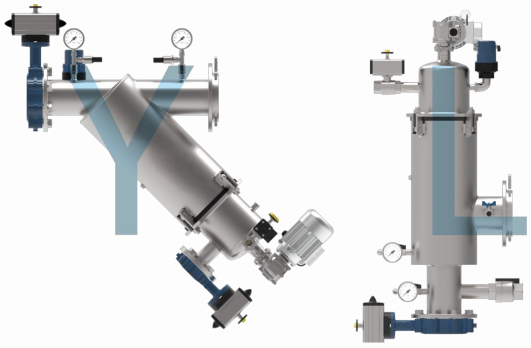


FEATURES

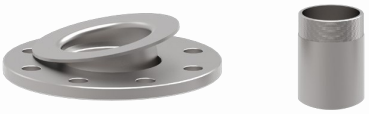
aquarens-filters are manufactured with technical and constructive features suitable for industrial applications and are available in 2 different constructive shapes: Y and L with flanged connection.

The vessel is manufactured in Stainless Steel AISI 304 or in AISI 316 upon request and is available in Y and L constructive shapes. For each shape four different sizes are available: 6, 8, 18 and 30 which differ in the size of the filtering element inside them.

After the welding the component will receive two surface treatments: micro-shot peening and passivation. The former provides a greater surface resistance and removes any manufacturing impurities whereas the latter recreates the passive film on the material protecting against corrosion.



CONNECTIONS

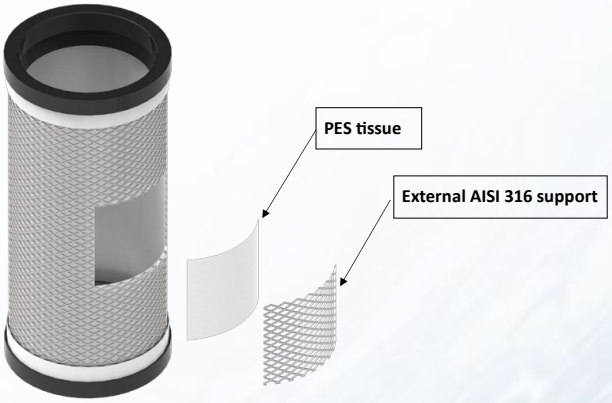


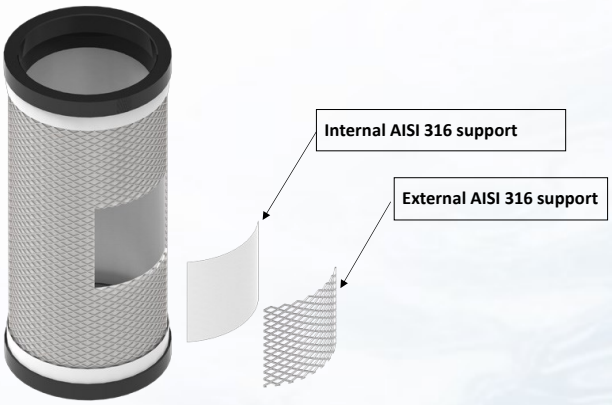
aquarens Inlet and Outlet connections can be BSPP Threaded up to 3" and are ISO PN16 lap-joint flanged from DN80 onwards.

FILTERING ELEMENT

PES FILTER KIT

Composed of an AISI 316 Stainless Steel cylinder within which a polyester (PES) filter tissue in inserted, its wide array of available filtering tissues and allows the customer to choose from various filtration degrees starting from 25µm up to 810µm.





2LAY STEINLESS STEEL FILTER KIT

Composed of a double layer stainless steel AISI 316 mesh, this type of filtering element is very resistant and proves to be an extremely valid alternative to PES FILTERKIT when it comes to harsh operating conditions, especially when sharp or cutting suspended solids might be present inside the liquid.

FLOW RATES

You can select the product you need by identifying the IN/OUT connections and MAX flowrate first, then choosing one of the available constructive shapes and finally the relative size of the filtering element.

IN/OUT	MAX FLOW RATE*		SHAPE		FILTERING SURFACE		
Ø	[m^3/h]	[l/min]	Y	L	SIZE	[cm^2]	[in^2]
DN50	30	500	✓	✓	6	1500	233
DN80	70	1166	✓	✓	8	2200	341
DN100	110	1833	✓	✓			
DN100	120	2000	✓	✓	18	3300	512
DN100	120	2000	✓	✓	30	5400	837
DN150	260	4333	✓	✓			

*Max flow rates are calculated based on clean water with a filtration degree of 120µm

With the same IN/OUT connection and the same MAX flowrate, the larger filter will require less cleaning than the smaller one.

CLEANING CYCLE

	SIZE 6	SIZE 8	SIZE 18	SIZE 30
Min. cleaning flowrate	3 m^3/h	4,5 m^3/h	4,5 m^3/h	8,5 m^3/h
Min. pressure during cleaning cycle	5 bar	5 bar	5 bar	5 bar
Water consumption full cleaning cycle	30 L	44 L	52 L	94 L
Cleaning cycle's length	60 s	60 s	60 s	60 s

HEAD LOSS

Head losses are referred to filters with 120 µm clean filtering mesh.

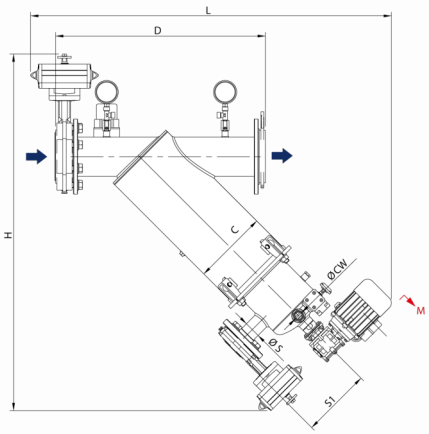
MODEL COMPOSITION

The model that identifies the filter is composed as follows:

AQPH	50	Y	6
FILTER ACRONYM	CONNECTION	VESSEL SHAPE	SIZE

DIMENSIONS

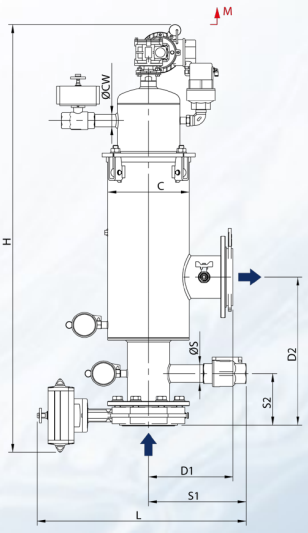
Y SHAPE



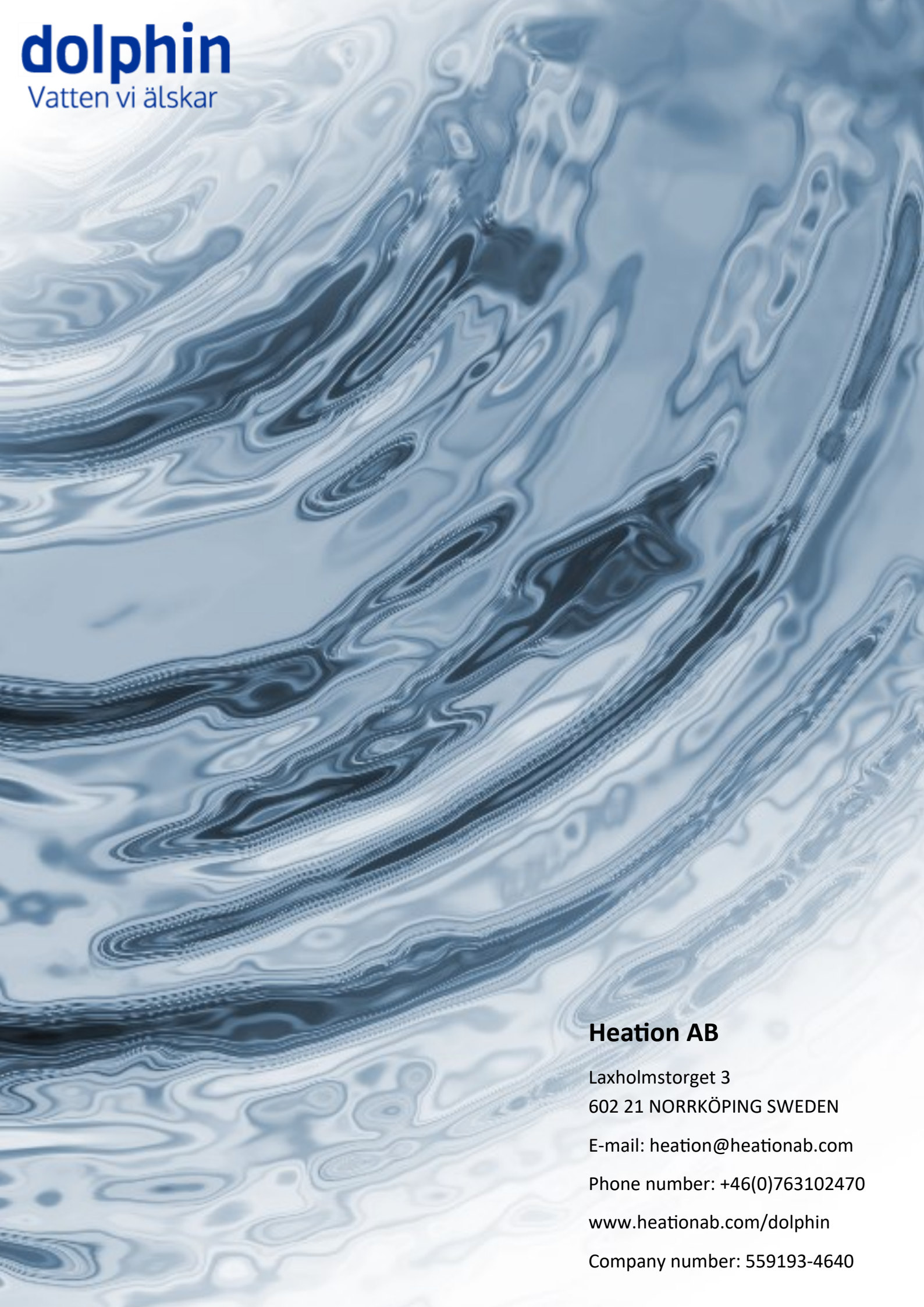
MODEL	IN/OUT	D [mm]	L [mm]	H [mm]	C [mm]	S1 [mm]	ØS [mm]	ØCW [mm]	M* [mm]	WEIGHT
AQPH 50 Y 6	DN50	540	900	887	219	204	1" ½ BSPP	¾ BSPP	500	45
AQPH 80 Y 8	DN80	548	1009	953	219	204	1" ½ BSPP	¾ BSPP	700	51
AQPH 100 Y 8	DN100	617	1056	1043	219	204	1" ½ BSPP	¾ BSPP	700	55
AQPH 100 Y 18	DN100	655	1056	1043	273	204	1" ½ BSPP	¾ BSPP	700	61
AQPH 100 Y 30	DN100	655	1272	1259	273	204	1" ½ BSPP	¾ BSPP	1000	70
AQPH 150 Y 30	DN150	737	1329	1300	273	204	1" ½ BSPP	¾ BSPP	1000	82

L SHAPE

MODEL	IN/UT	D1 [mm]	D2 [mm]	L [mm]	H [mm]	C [mm]	S1 [mm]	S1 [mm]	ØS [mm]	ØCW [mm]	M* [mm]	WEIGHT [Kg]
AQPH 50 L 6	DN50	210	358	497	949	219	230	118	1" BSPP	1" BSPP	500	39
AQPH 80 L 8	DN80	225	356	523	1107	219	234	116	1" BSPP	1" BSPP	700	45
AQPH 100 L 8	DN100	228	402	562	1152	219	228	142	1" ½ BSPP	1" BSPP	700	50
AQPH 100 L 18	DN100	264	402	564	1152	273	262	142	1" ½ BSPP	1" BSPP	700	57
AQPH 100 L 30	DN100	264	402	564	1458	273	262	142	1" ½ BSPP	1" BSPP	1000	66
AQPH 150 L 30	DN150	266	406	621	1492	273	279	146	1" ½ BSPP	1" BSPP	1000	77



*M = Minimum free space required for maintenance.



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