

# ABS Nopon disc diffuser system HKL 215

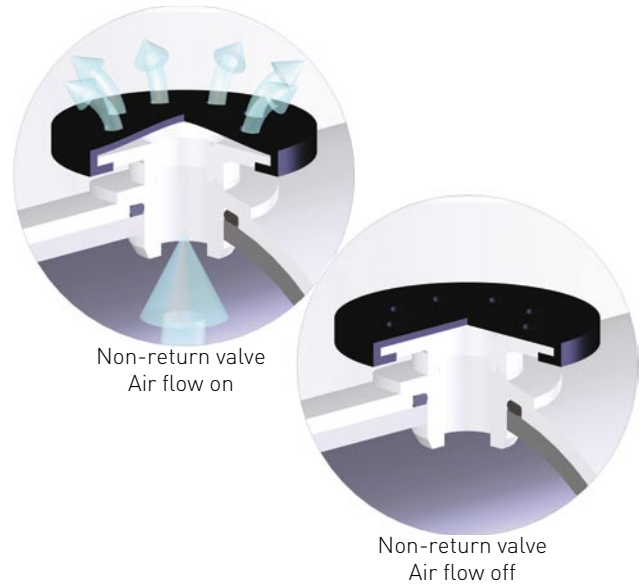
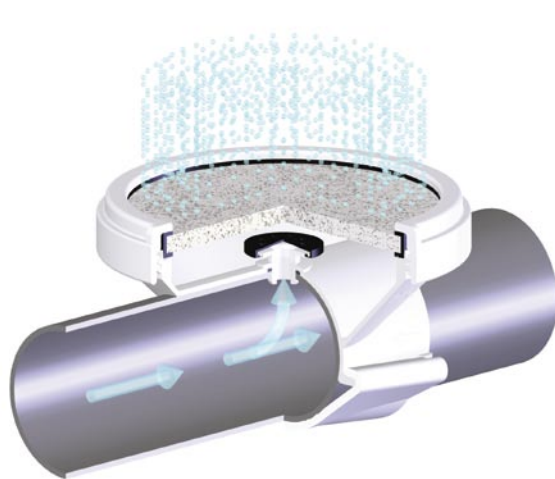
Porous disc diffusers for reliable and energy-efficient fine-bubble aeration of tanks in wastewater treatment plants. Suitable for continuous aeration systems even in aggressive types of wastewater.

## Features

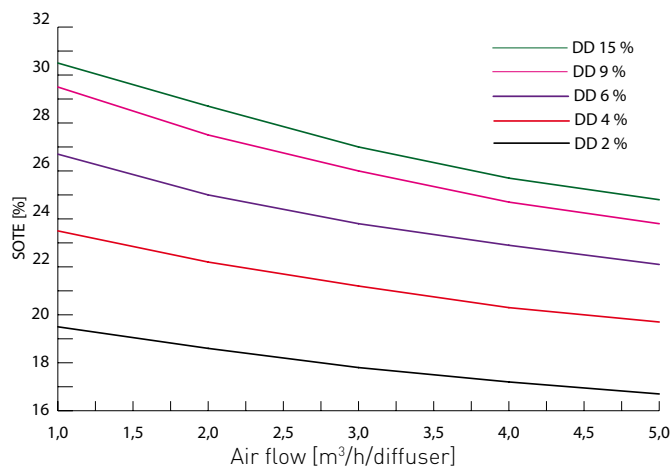
- Low loss high density poly-ethylene porous disc
- Porous disc is fixed by a threaded screw-on ring
- Elastic non-return valve
- ABS Nopon wedge piece fixing to the pipe means that no glue, solvent or welding is needed in assembly
- Thread based fixing available as an option
- Wedge piece fixing makes it easy to increase, decrease or relocate diffusers when process requirements change
- Applicable to various pipe materials and dimensions
- Suitable for deep basins
- Inlet air temperature is up to 80°C
- Possibility for future increase of aeration capacity by installing 300 mm PRF retrofit discs on existing HKL bodies.

## Working principle

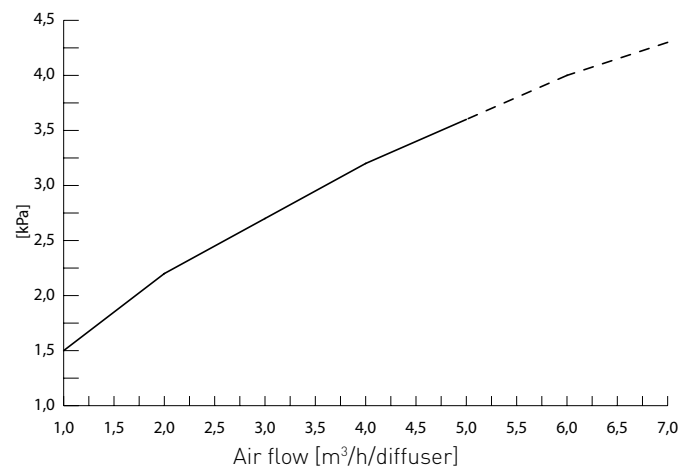
The two layer porous disc contains small pores. The main body distributes the air evenly over the entire surface of the disc. The air forms small bubbles, when released through the disc surface. When the air flow is turned off, the non-return valve closes and makes sure that no water enters the pipeline.



Standard oxygen transfer efficiency, SOTE

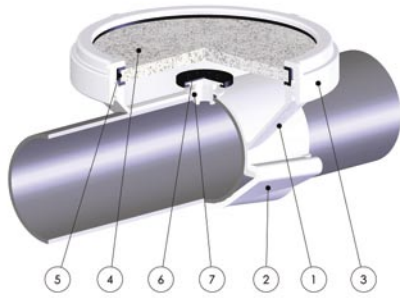


Wet pressure loss



Clean tap water, standard conditions (+ 20 °C, 101,3 kPa), TDS level 1000 mg/l, submersion depth 4 m, diffuser density, DD = total diffuser area / total bottom area

## Components and materials



	Description	Material
1	Main body	uPVC
2	Wedge piece	uPVC
3	Screw-on ring	uPVC
4	Porous Disc	HDPE (High Density PolyEthylene) sintered
5	Circular gasket	IIR (butyl rubber)
6	Non-return valve	EPDM
7	O-Ring	NBR



Wedge attachment

Thread attachment

### Model range (wedge attachment)

	HKL 215 D90	HKL 215 D88,9	HKL 215 4"
Pipe	90mm PVC	88,9mm SS	NS4" PVC
Main body	HSA 215	HSA 215	HSA 4
Wedge piece	HSK 215	HSK 215	HSK 4
Screw-on ring	HKR 215	HKR 215	HKR 215
Porous disc	HIL 210	HIL 210	HIL 210
Circular gasket	HUR 210	HUR 210	HUR 210
Non-return valve	HVK 215	HVK 215	HVK 215
O-Ring	HOR 19	HOR 18	HOR 19

### Model range (thread attachment)

	HKL 215 R½	HKL 215 R½K	HKL 215 BSF½
Fitting	R½ cylindrical thread (ISO 228/1)	R½ taper thread (ISO 7/1)	BSF½ thread (½" - 16 BSF)
Main body	HSA 215 R½	HSA 215 R½K	HSA 215 BSF½
Screw-on ring	HKR 215	HKR 215	HKR 215
Porous disc	HIL 210	HIL 210	HIL 210
Circular gasket	HUR 210	HUR 210	HUR 210
Non-return valve	HVK 215	HVK 215	HVK 215
O-Ring	HOR 19	HOR 19	HOR 19

### Diffuser data

Design air flow range	1,0-5,0 m <sup>3</sup> /h/diffuser <sup>ix</sup> (+20 °C; 1 013 mbar)
Diffuser level	250 mm <sup>lxx</sup>
Air temperature, max	+ 80°C
Max/min assembly depth	3 - 8 m (optimal) <sup>lxxx</sup>
Diffuser diameter	215 mm
Disc surface area	0,025 m <sup>2</sup>
Size of bubbles	1 - 3 mm
Diffuser weight	0,830 kg
Max/min interval, c/c	1,0 / 0,35 m

x) The maximum air flow is based on the pressure loss and energy consumption. A peak value of 7 m<sup>3</sup>/h can only be used for at most 15 min e.g. for cleaning the porous disc.

xx) Recommended measure from basin bottom to diffuser top

xxx) Consult ABS on depths outside the range