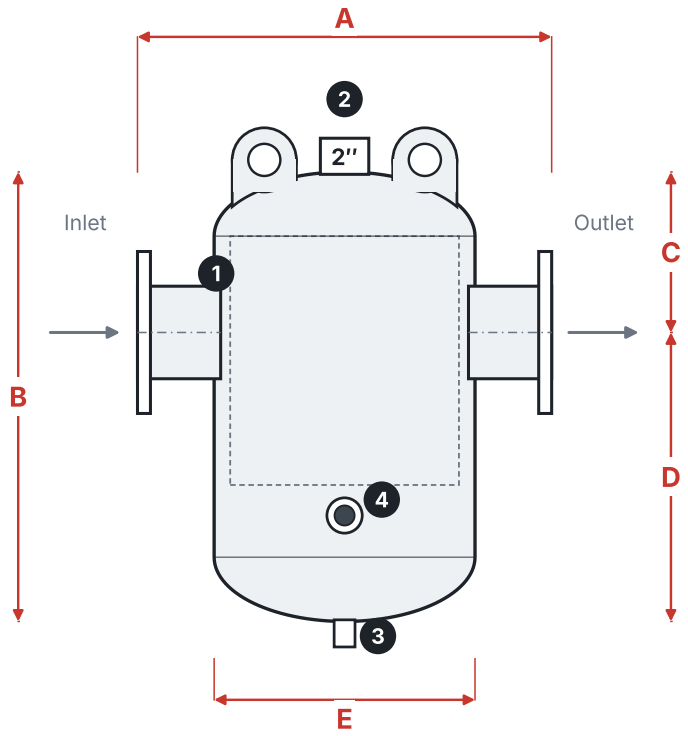
PRODUCT CUT SHEET

AIR400P

Air and dirt separator with dirt magnet

3-in-1: air, dirt and magnetite removal in one 304 stainless steel vessel.

185 gpm	4″	150 psi	210 °F
Flow at 4 ft/s	Connection size	Max. pressure	Max. temperature



CONNECTIONS

#	Port	Size and type
1	Inlet and outlet connections (2)	4″ ASME B16.5 Class 150 flange
2	Air vent port	2″ GF
3	Drain	1″ MNPT
4	Dirt magnet port	dry well with removable rod
–	Purge port	½″ FNPT

FUNCTIONS



Air removal

Pall ring coalescing medium merges micro-bubbles so they rise to the automatic vent.

Dirt removal

Slow water in the body lets dirt settle to the bottom for blowdown through the drain.

Magnetite removal

A 12,000 gauss neodymium rod in a dry well holds ferrous particles; pull the rod to release them.

Service

Purge port for fast venting at start-up; magnet removed without draining the system.

CONSTRUCTION

Vessel	Ø 325 × 3 mm, 304 stainless steel
Coalescing element	A Ø285 × 310 mm stainless steel wire basket filled with Ø25 mm 304 stainless steel Pall rings
Connections	4″ ASME B16.5 Class 150 flange
Dirt magnet	Ø25 mm neodymium rod, M50 grade, 12,000 gauss, in a dry well

DIMENSIONS, MM / IN

	A	B	C	D	E
mm	516	560	200	360	325
in	20.3	22.0	7.9	14.2	12.8

A Width across the connection faces · **B** Overall height of the vessel · **C** Top of vessel to connection centerline · **D** Connection centerline to bottom of vessel · **E** Vessel outside diameter. Heights exclude the air vent, drain valve and fittings.

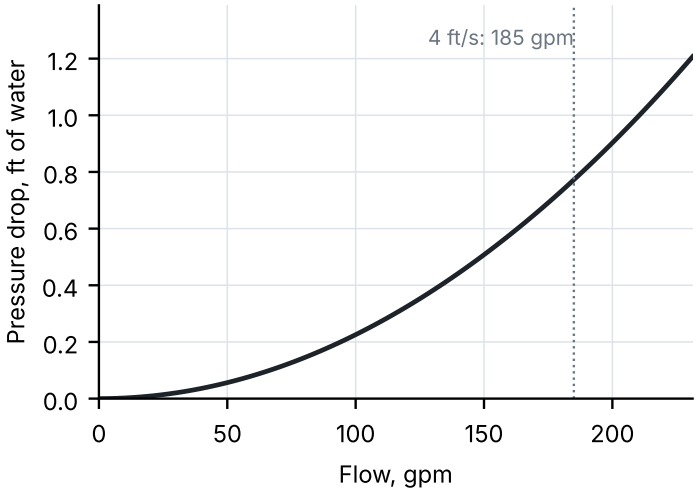
INCLUDED

Separator with two flanges, automatic air vent, drain valve, purge valve, dirt magnet rod in its dry well.

AIR400P

Air and dirt separator with dirt magnet

PRESSURE DROP



Computed with 3D CFD of the vessel and its internals; pressure drop rises with the square of the flow. At 185 gpm: **0.77 ft (0.33 psi)**.

SIZING

Select the separator for the full system flow through it. The listed flow is the flow at 4 ft/s in the connection, a reference point and not a limit: the separator also works at higher flow, with higher pressure drop. At lower flow the water moves more slowly through the body and air and dirt removal improve.

Install on the supply side, after the boiler or chiller and before the pumps' suction where possible, where the water is hottest and pressure lowest, which is where air comes out of solution most readily.

TECHNICAL SPECIFICATIONS

Flow at 4 ft/s	185 gpm (41.9 m³/h) in the 110 mm connection bore
Pressure drop at 4 ft/s	0.77 ft
Max. operating pressure	150 psi (10 bar)
Operating temperature	32–210 °F (0–99 °C)
Fluids	Water, or water with up to 50 % glycol
Body and internals	304 stainless steel
Coalescing element	A Ø285 × 310 mm stainless steel wire basket filled with Ø25 mm 304 stainless steel Pall rings
Dirt magnet	Removable neodymium rod magnet, M50 grade, 12,000 gauss, in a dry well (magnet rated to 194 °F / 90 °C)
Weight	76 lb (34.5 kg)
Water volume	approx. 10.6 US gal
Warranty	2 years

INSTALLATION

Install vertically with the vent at the top and full-size piping. Flow direction can be either way through the separator. Provide isolation valves so the magnet and drain can be serviced; purge at start-up through the purge port.

MAINTENANCE

Open the drain periodically to blow down settled dirt. To release the collected magnetite, pull the rod out of its dry well: the magnetite drops to the bottom and is flushed out at the next blowdown. The automatic air vent needs no routine service.