



ANKA AR

AIR RECEIVERS



Pressure Vessels & Pressurized Equipments

Air Receivers

Air receivers play a crucial role in compressed air systems by improving efficiency, stabilizing pressure, and ensuring reliable air supply



1. Pressure Stabilization

Compressed air demand fluctuates during operation. Air receivers act as buffers, reducing pressure drops and ensuring a steady supply of compressed air to downstream equipment. This helps maintain consistent system performance, especially during peak demands.

2. Energy Efficiency & Reduced Compressor Cycling

By storing compressed air, the air receiver allows the compressor to operate more efficiently. It reduces frequent start-stop cycles, which minimizes energy consumption, wear and tear, and maintenance costs. Larger receivers further optimize efficiency by allowing the compressor to run at full load for longer periods.

3. Condensate Removal & Air Quality Improvement

As compressed air cools inside the receiver, moisture condenses, which can then be drained from the tank. This reduces the amount of water reaching downstream equipment, helping to prevent corrosion and damage to pneumatic tools, valves, and machinery.

4. Emergency Backup Supply

In case of compressor failure or sudden high air demand, the stored air in the receiver provides a temporary backup, preventing disruptions in operations until the compressor restarts or additional capacity is available.

5. Pressure Regulation & Peak Load Handling

During peak demand, an air receiver provides additional airflow, preventing excessive pressure drops and ensuring the system maintains the required operating pressure. This is especially useful in systems where air consumption varies throughout the production process.

6. Reducing Pulsation in Piston Compressors

In reciprocating (piston) compressors, airflow is delivered in pulses, which can cause vibration and pressure fluctuations. An air receiver smooths out these pulsations, providing a more uniform and steady air supply to downstream equipment.



Selecting Air Receiver Capacity Based on Compressor Power

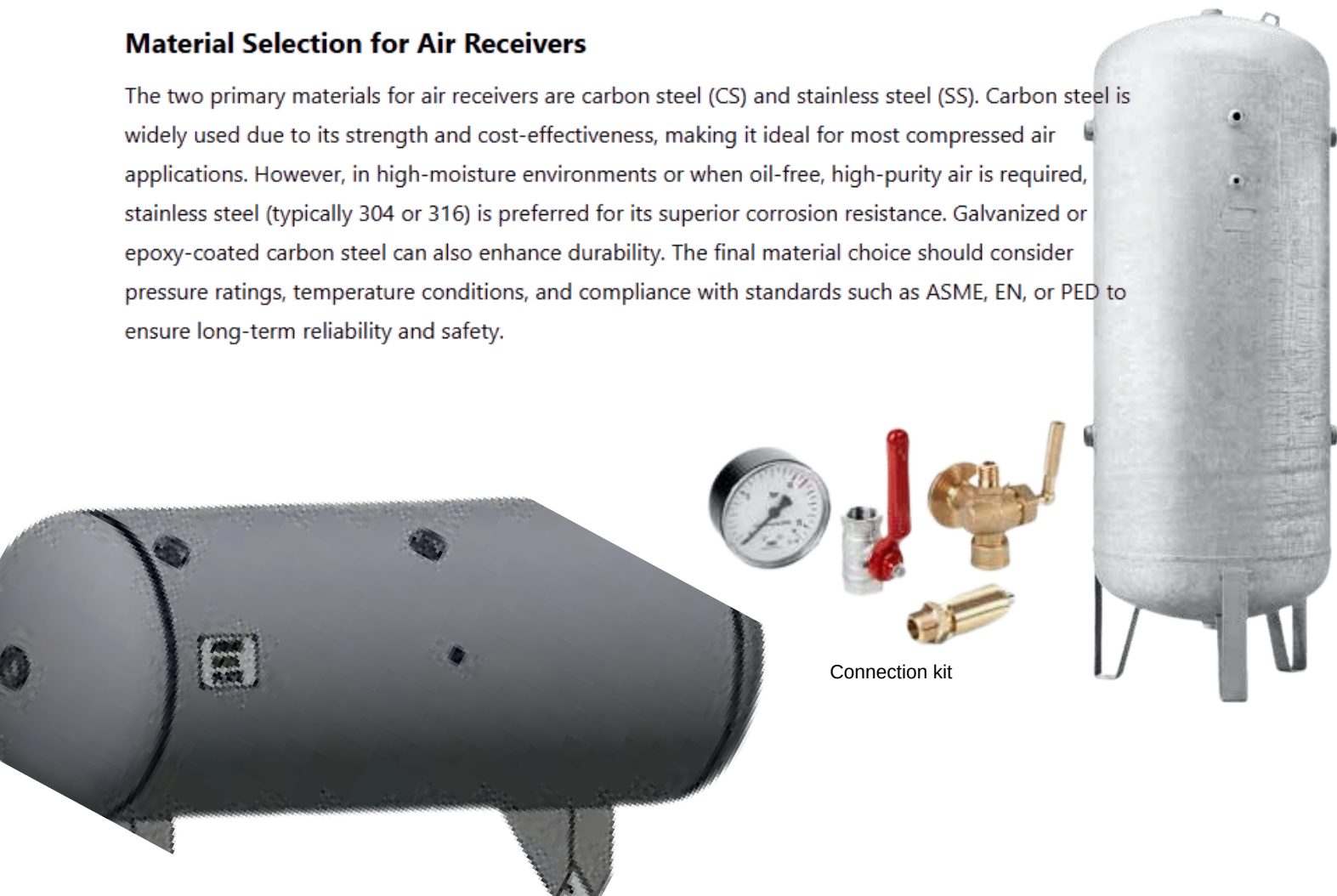
Air receiver sizing can also be estimated based on compressor power. While the exact relationship depends on system efficiency, pressure requirements, and usage patterns, the following guideline provides a general reference:

Compressor Power (kW)	Estimated Flow Rate (L/s)	Recommended Air Receiver Capacity (L)
5	10–15	100–250
7.5	15–25	150–400
11	25–40	250–600
15	40–60	400–800
22	60–90	600–1200
30	90–130	900–1800
45	130–200	1300–2500
75	200–300	2000–4000
110	300–450	3000–6000

These values assume a system pressure of around **7–10 bar** and typical industrial usage. In high-demand systems with frequent peaks, selecting a larger air receiver is recommended to improve pressure stability and reduce compressor cycling. If precise sizing is required, additional factors such as load/unload cycles, piping layout, and specific process demands should be considered.

Material Selection for Air Receivers

The two primary materials for air receivers are carbon steel (CS) and stainless steel (SS). Carbon steel is widely used due to its strength and cost-effectiveness, making it ideal for most compressed air applications. However, in high-moisture environments or when oil-free, high-purity air is required, stainless steel (typically 304 or 316) is preferred for its superior corrosion resistance. Galvanized or epoxy-coated carbon steel can also enhance durability. The final material choice should consider pressure ratings, temperature conditions, and compliance with standards such as ASME, EN, or PED to ensure long-term reliability and safety.



Connection kit

Technical specifications

Painted standard vessels

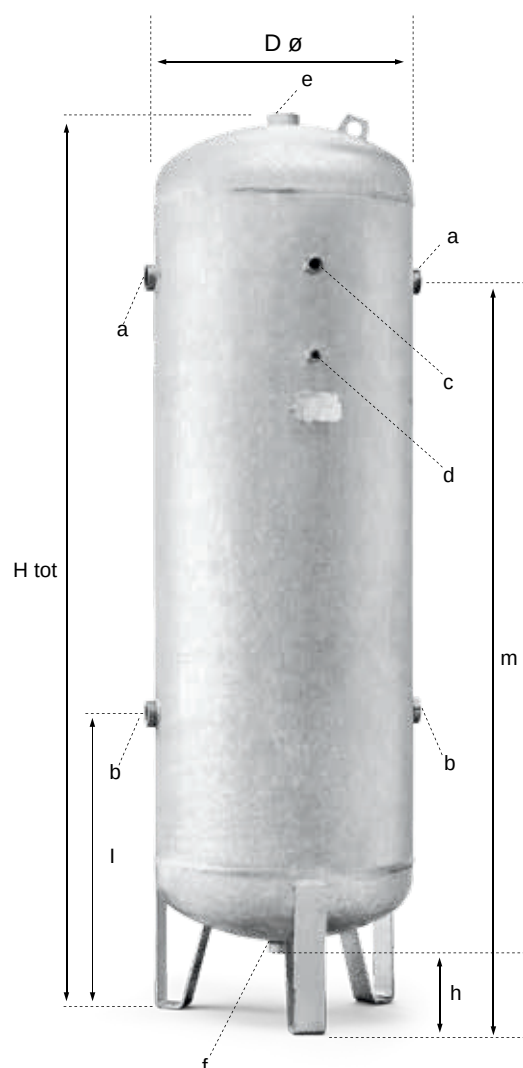
Capacity (L)	100	200	270	500	720	900	1000	1500	2000	3000	4000	5000
Pressure (bar)	11	11	11	11	10,8	11	12	11,5	11,5	11,5	11,5	11,5
Diameter Ø	370	446	500	600	750	800	800	1000	1000	1200	1450	1450
H tot (mm)	1172	1570	1668	2055	1860	2120	2315	2305	2805	2965	3070	3570
h (mm)	124	174	170	155	150	130	115	180	180	185	180	180
a	3/4"	1"	1"	1"	1"	1"1/2	2"	2"	2"	3"	3"	3"
b	3/4"	1"	1"	1"	1"	1"1/2	2"	2"	2"	3"	3"	3"
c	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/4"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	1/2"	1/2"	1/2"	2"	2"	2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4
f	1/2"	1/2"	1/2"	2"	2"	2"	2"	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4
l (mm)	298	397	599	775	895	860	745	590	595	700	780	780
m (mm)	998	1222	1304	1560	1705	1780	1685	1860	2355	2410	2430	2930
Kit type included	1	2	3	4	4	6	7	B	B	B	B	B
Weight (kg)	37	51	62	127	180	200	204	278	352	537	802	923
Norm & standards	2014/68/ CE (PED)											

Air Receivers

Capacity (L)	500	1000	2000	3000	4000	5000
Pressure (bar)	16	16	16	16	16	16
Diameter Ø	600	800	1000	1200	1430	1430
H tot	2055	2315	2810	2930	3110	3610
h	155	115	175	170	190	190
a	1"	2"	2"	2"	2"	2"
b	1"	2"	2"	2"	2"	2"
c	3/8"	3/8"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	2"	2"	2"	2"	2"	2"
f	2"	2"	2"	2"	2"	2"
l	775	745	565	645	765	765
m	1560	1685	2340	2370	2450	2945
Kit type included	5	8	C	C	not included	
Weight (kg)	159	246	490	620	905	1055
	2014-68 EU					

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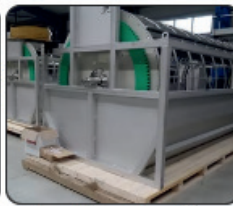
Process Equipment Solutions



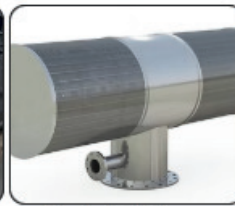
Static Rundown Screens



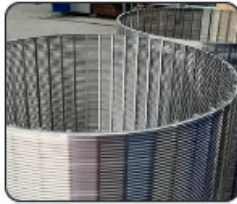
Channel Type Drum Filter



Conduit Type Drum Filter



Passive Intake Screen



Custom WedgeWire screen



Dissolved Air Flotation



Piping Spools



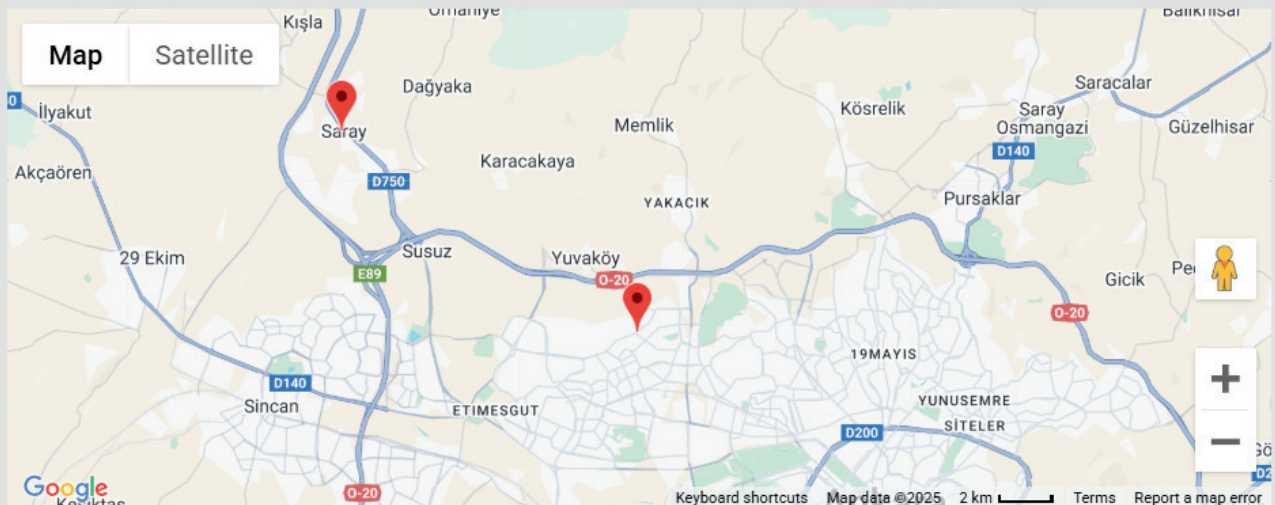
Inclined Belt Filter

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