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- No filter
- No freon
- Maintenance-free
- Moisture removal rate: 99.99%
- No need for a power supply

Compressed Air Cleaner

WELL AIR®

Using a Proprietary Collision Separation Method

Patented. Approved by the small and medium-sized business creation promotion law



This leaflet was printed using soybean oil

WELL AIR separates and eliminates water droplets that collect at the end of pipes.

New Concept

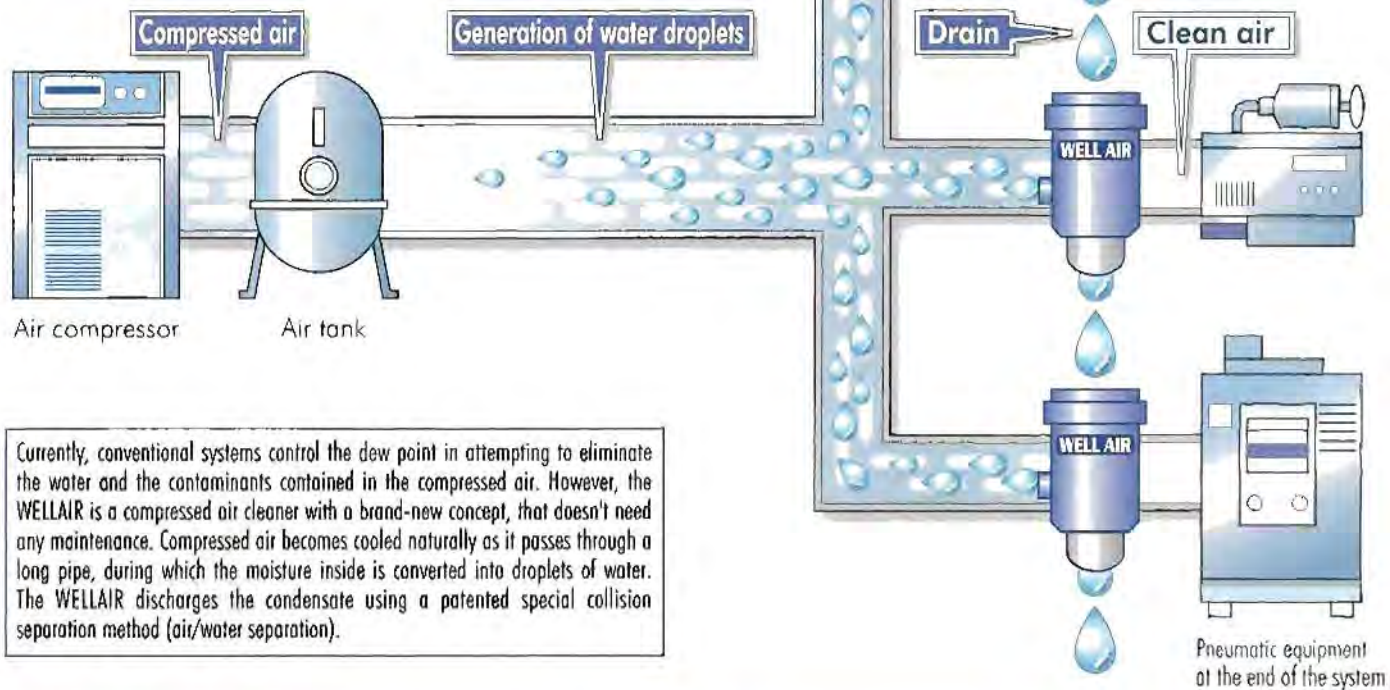
① Separate the water from compressed air

When water in the air has been converted to water droplets, the WELLAIR mechanically separates and eliminates them.

② Processes air at the end of the pipe

Shut-off drains at the end of a plumbing run, just before the working pneumatic equipment.

③ No need for maintenance



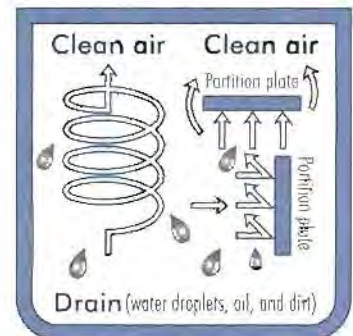
Currently, conventional systems control the dew point in attempting to eliminate the water and the contaminants contained in the compressed air. However, the WELLAIR is a compressed air cleaner with a brand-new concept, that doesn't need any maintenance. Compressed air becomes cooled naturally as it passes through a long pipe, during which the moisture inside is converted into droplets of water. The WELLAIR discharges the condensate using a patented special collision separation method (air/water separation).

Conventional systems	WELL AIR	Results after installation
<p>Control dew point</p> <p>Single point control</p>	<p>Special collision Separation method</p> <p>① No filter ② No maintenance ③ No need for power</p> <p>Separate air and water</p> <p>Air processed just before use</p> <p>① Low cost ② High performance ③ Compact and light weight</p>	<p>Improved uptime for pneumatic equipment</p> <p>Decreased costs</p>

What is the patented special collision separation method?

- WELL AIR's special collision separation method is a brand-new technology that provides a constant supply of clean air to pneumatic equipment. By taking advantage of the difference in specific gravity between air and contaminants (water droplets, oil, dirt, etc.), the WELLAIR separator uses collision and centrifugal force techniques to continually eliminate 99.99% of any moisture, just by its design.
- The system does not need any consumable elements, such as filters or drying agents, nor does it need electric power or refrigerants. Since it continually separates and eliminates contaminants by itself, it needs no maintenance. So there are no operating costs.
- Since there is no deterioration in performance, such as happens as a filter becomes clogged, it provides a constant level of high performance.

Main drawings



Cyclone system + Collision separation system

WELL AIR brings you the following advantages.

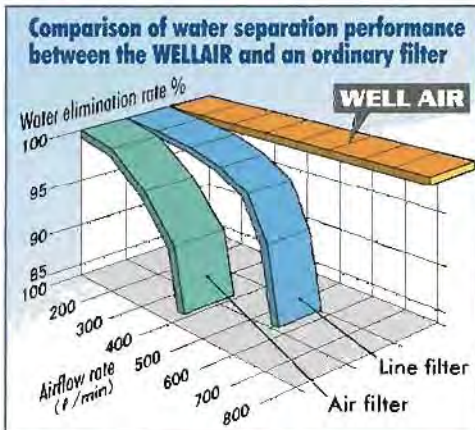


Do you have problems like nuisance maintenance of pneumatic equipment and failures due to unknown causes? Most of these problems are caused by the buildup of contamination (water, oil, and dirt) in compressed air. You can decrease your problems greatly and eliminate nuisance maintenance just by using a WELLAIR.

Seven major features give you the advantage

- 1** Moisture removal rate of 99.99%.
- 2** Maintain high performance.
- 3** No need for dew point control.
- 4** No need for filters.
- 5** Does not use freon gas.
- 6** No need for power or refrigerant.
- 7** Compact and lightweight.

WELL AIR = Continuous high performance.



Moisture removal test

Aggregate flow rate	50l/min	100l/min	200l/min	300l/min	400l/min	600l/min	800l/min	1000l/min	1200l/min
Pressure 3Kgf/cm ²	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
Pressure 5Kgf/cm ²	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
Pressure 7Kgf/cm ²	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%

*The water removal tests were carried out by injecting 30 cc of solution, consisting of water and ink, into the WELLAIR filter at a speed of 30 cc per second

Reference ■ Results of an inspection for general bacillus in a compressor's drain

Specimen to be inspected	Inspection item	Inspection result
Drain water in compressor	Number of bacteria	22,000/ml
Water after buffering the air passing through the WELLAIR for 1.5 hours	Number of bacteria (bacteria in air) (Cultured for 48 hours)	4/ml

*The inspection method conforms to the test method for city water (Supervised by the Life Sanitation Bureau of the Ministry of Welfare)

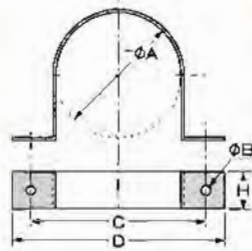
*Inspected by the Japan Environmental Sanitation Center

*The WELLAIR is not a sterilizer

A WELLAIR introduction CD-ROM and actual demonstration machines are available to give you a clearer picture of its performance.

Options

■ Mounting bracket

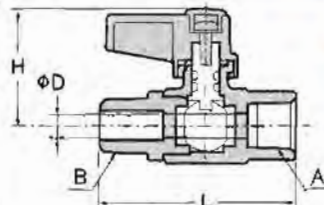


	φA	B	C	D	H
For the WA-150	65	φ5	83	105	15
For the WA-400	81	φ5	116	136	24
For the WA-1200	135	φ11	173	205	32

Material: Chrome plated SS41

Unit: mm

■ Ball valve : M6



Item name	Nominal diameter	A	B	L	H	φD
M6-0606	1/8 × 6	R1/8 thread	φ6	74.3	29	6
M6-0808	1/4 × 8	R1/4 thread	φ8	78.3	29	6
M6-0809	1/4 × 9	R1/4 thread	φ9	78.3	29	6
M6-1010	3/8 × 10.5	R3/8 thread	φ10.5	82.3	29	6

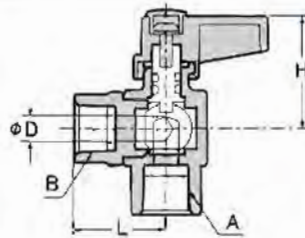
Maximum working pressure: 1.0Mpa = 10kgf/cm²

Maximum working temperature: -20 to 90°C

Fluids: Cooling water, oil, and air

Test pressure: 0.6Mpa air pressure = 6kgf/cm²

■ Ball valve : ML6



Item name	Nominal diameter	A	B	L	H	φD
ML6-0606	1/8 × 6	R1/8 thread	φ6	53.8	29	6
ML6-0808	1/4 × 8	R1/4 thread	φ8	55.8	29	6
ML6-0809	1/4 × 9	R1/4 thread	φ9	55.8	29	6
ML6-1010	3/8 × 10.5	R3/8 thread	φ10.5	62.3	30.5	7.5

Maximum working pressure: 1.0Mpa = 10kgf/cm²

Maximum working temperature: -20 to 90°C

Fluids: Cooling water, oil, and air

Test pressure: 0.6Mpa air pressure = 6kgf/cm²

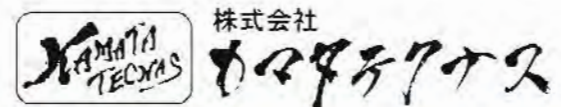
Precautions when installing the WELLAIR

1. Make sure to install the WELLAIR vertically.
2. Install the WELLAIR just before each piece of pneumatic equipment.
(Long plumbing runs from the WELLAIR to the working equipment may cause water to condense in the pipe, due to temperature differences between the compressed air and the atmosphere)
3. Make sure to check the air line inlet and outlet.
4. For detailed instructions on the WELLAIR, read the Instruction Manual that comes with the WELLAIR before installing it.
5. Install the pressure-regulator and the lubricator directly in line after the WELLAIR.



Agent:

Manufactured by: 2004. 03. 01



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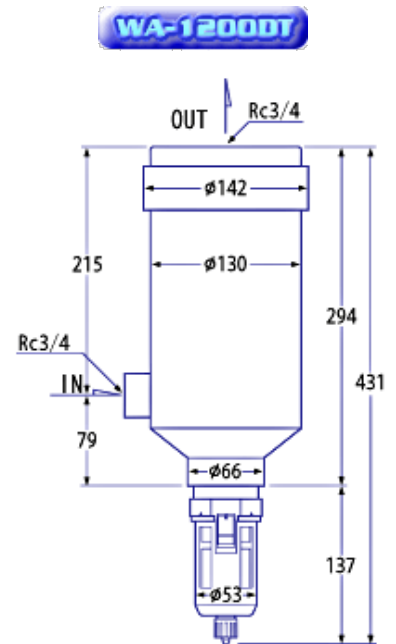
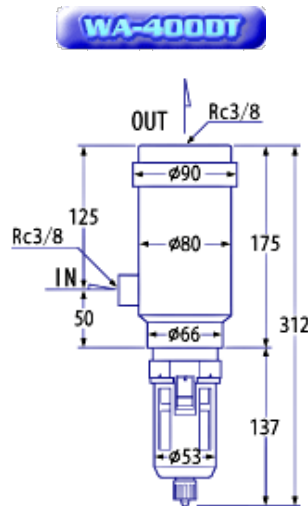
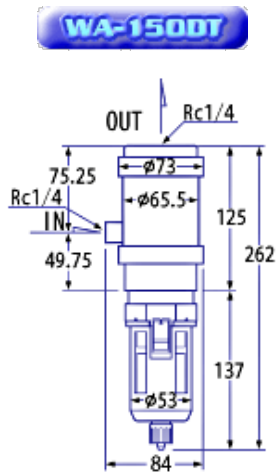
DT Series Specifications

This is the DT series of WELL AIR compressed air water removers with the revolutionary collision separation system. They are best for air that contains lots of dust and oil.

? For European Version

Model name	WA-150DT	WA-400DT	WA-1200DT
Maximum operating flow rate : NI/min	150	400	1200
Operating pressure range : Mpa(bar)	0.1-1.0 (1.0-10.0)		
Guaranteed withstand pressure : Mpa(bar)	1.5 (15.0)		
Fluid temperature : oC	5-65		
Drain exhaust section connections, diameter : Rc	hose nipple ϕ 6mm		
Air plumbing connections, diameter : Rc	1/4	3/8	3/4
Weight : kg	0.59	1.11	2.79

External Dimensions



HI Series Specifications

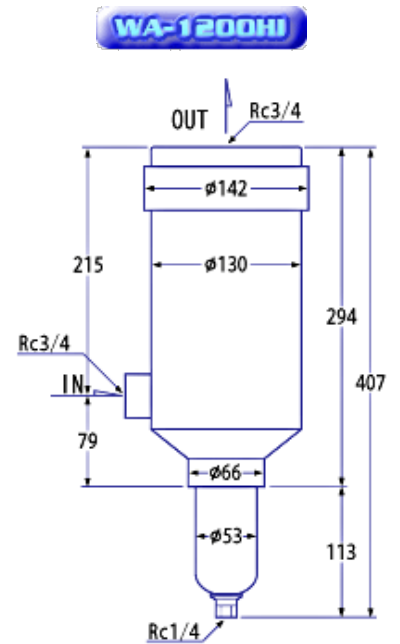
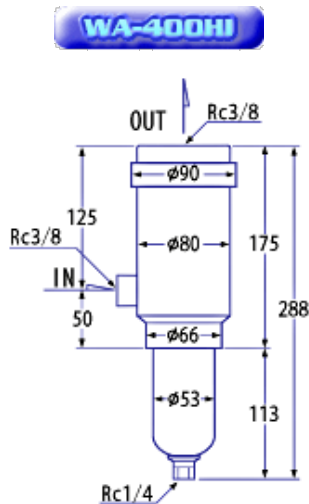
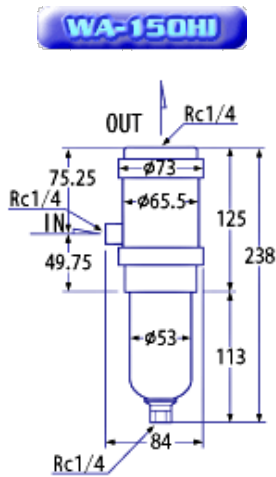
This is the HI series of WELL AIR compressed air water removers with the revolutionary collision separation system. They are for use at medium pressures, up to 1.6 Mpa (16 kgf/cm²).



? For European Version

Model name	WA-150HI	WA-400HI	WA-1200HI
Maximum operating flow rate : NI/min	150	400	1200
Operating pressure range : Mpa(bar)	0.1-1.6 (1.0-16.0)		
Guaranteed withstand pressure : Mpa(bar)	2.5 (25.0)		
Fluid temperature : oC	5-65		
Drain exhaust section connections, diameter : Rc	1/4		
Air plumbing connections, diameter : Rc	1/4	3/8	3/4
Weight : kg	0.58	1.10	2.79

External Dimensions



RE Series Specifications

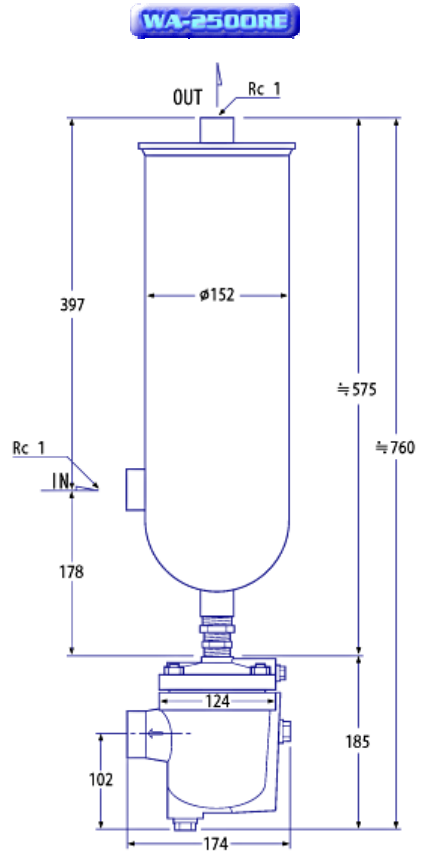
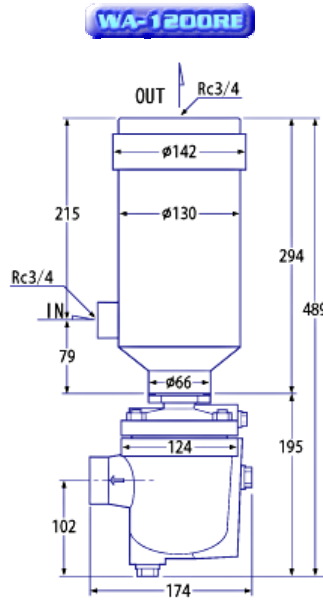
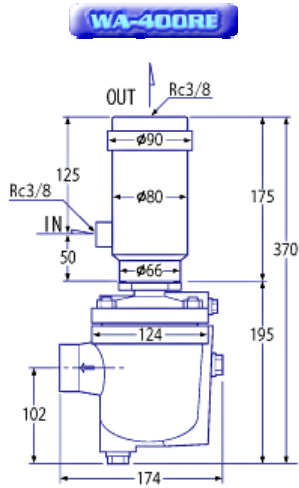
This is the RE series of WELL AIR compressed air water removers with the revolutionary collision separation system. They are equipped with a heavy-duty drain outlet.



◆ For European Version

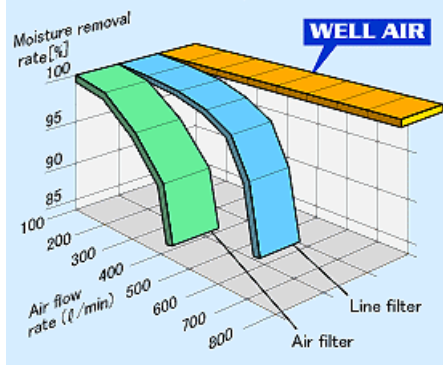
Model name	WA-400RE	WA-1200RE	WA-2500RE
Maximum operating flow rate : NI/min	400	1200	2500
Operating pressure range : Mpa(bar)	0.1-1.5 (1.0-15.0)		
Guaranteed withstand pressure : Mpa (bar)	1.5 (15.0)		
Fluid temperature : °C	5-65		
Drain exhaust section connections, diameter : Rc	1/4		
Air plumbing connections, diameter : Rc	3/8	3/4	1
Weight : kg	3.78	5.38	13.10

External Dimensions



Comparison Of Water Separation Performance

Comparison of Drain Separation Performance



OUTLINE of water removal performance

As you can see in the figure on the left, the moisture removal rate of the WELL AIR does not drop due to increased airflow rates or after a period of time. It can provide a good continuous supply of clean air to pneumatic devices.

This is because the WELL AIR does not use any elements (such as filters) or any moving parts. That's why there is no deterioration of performance over time.

By using a WELL AIR water remover, you can significantly decrease the number of faulty products that may be caused by malfunctioning pneumatic devices, or by drain residues. Also, you do not need to stop the equipment for maintenance, so you can improve the productivity of plants and each manufacturing site.



Moisture removal rate test of the WELL AIR

Aggregate of flow volume [L/min]		50	100	200	300	400	500	600	700	800	900	1000	1100	1200
Pressure	3kgf/cm ²	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
	5kgf/cm ²	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
	7kgf/cm ²	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%

<The moisture removal test was executed by injecting 30 cc of water and ink at the inlet to the WELL AIR at a speed of 30 cc per sec.>

<References>

Results of a compressor inspection for general bacteria

Specimen	Inspection item	Result
Drain water in a compressor	Number of general bacteria	22,000/ml
Water aerated for 1 1/2 hours by compressed air passing through the WELL AIR	Number of general bacteria (bacteria in the air)	4/ml (cultured for 46 hours)

- The inspection method applied conforms to the service water test method.

(set by the Life Sanitation Bureau of the Ministry of Welfare)

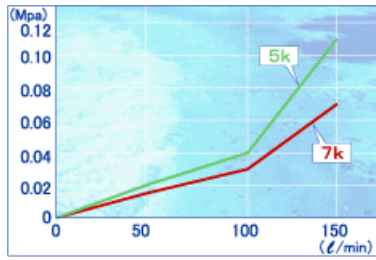
- Tested by the Japan Environmental Sanitation Center.

- WELL AIR is not sterilizer.

(Test for general bacteria in compressed air.)

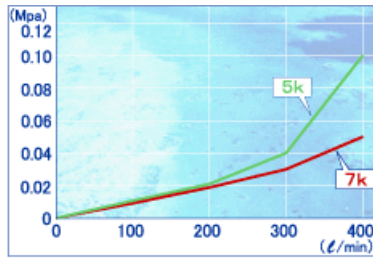
Pressure Drop Data

WA-150



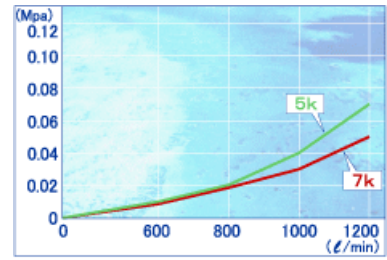
Flow rate (L/min.)	Primary pressure	
	0.5Mpa	0.7Mpa
000	0.00	0.000
050	0.02	0.015
100	0.04	0.030
150	0.11	0.070

WA-400



Flow rate (L/min.)	Primary pressure	
	0.5Mpa	0.7Mpa
000	0.00	0.00
100	0.01	0.01
200	0.02	0.02
300	0.04	0.03
400	0.10	0.05

WA-1200



Flow rate (L/min.)	Primary pressure	
	0.5Mpa	0.7Mpa
0000	0.00	0.00
0600	0.01	0.01
0800	0.02	0.02
1000	0.04	0.03
1200	0.07	0.05

X CLOSE