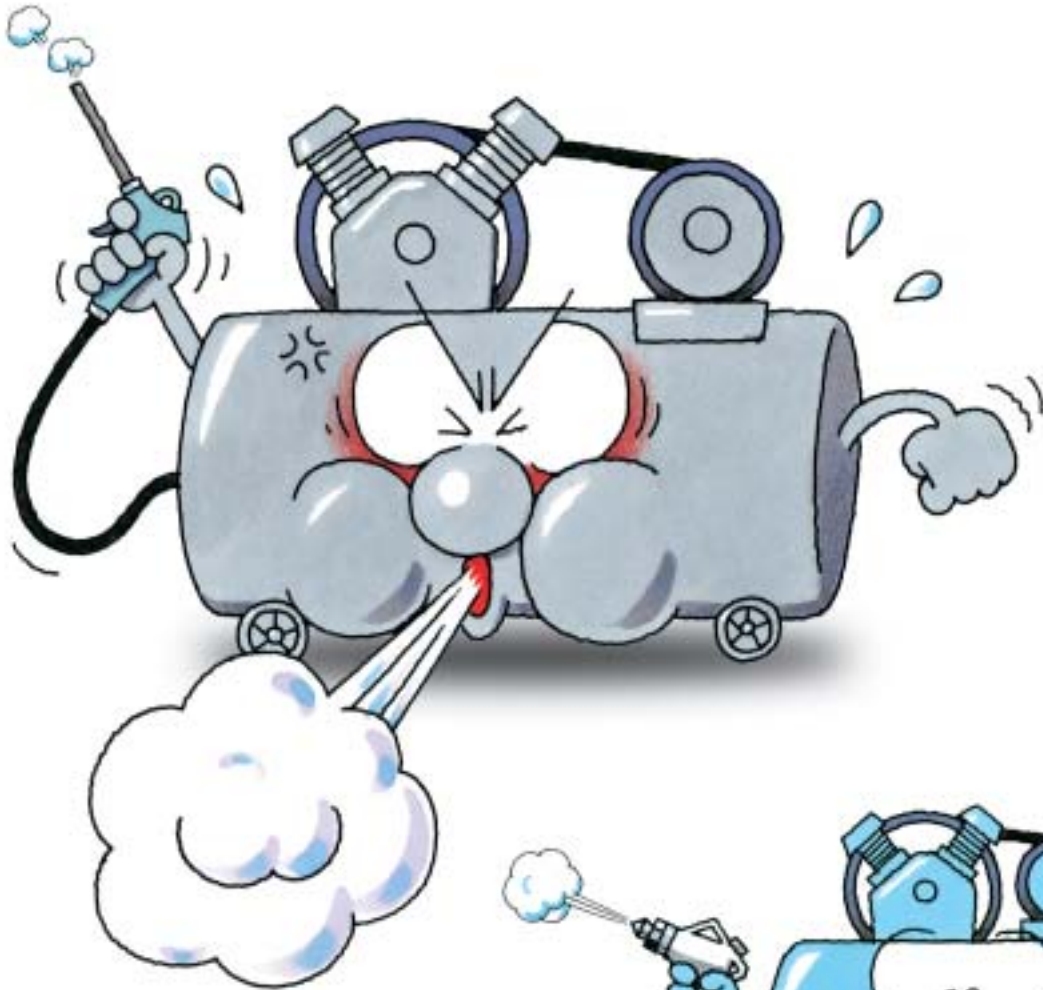
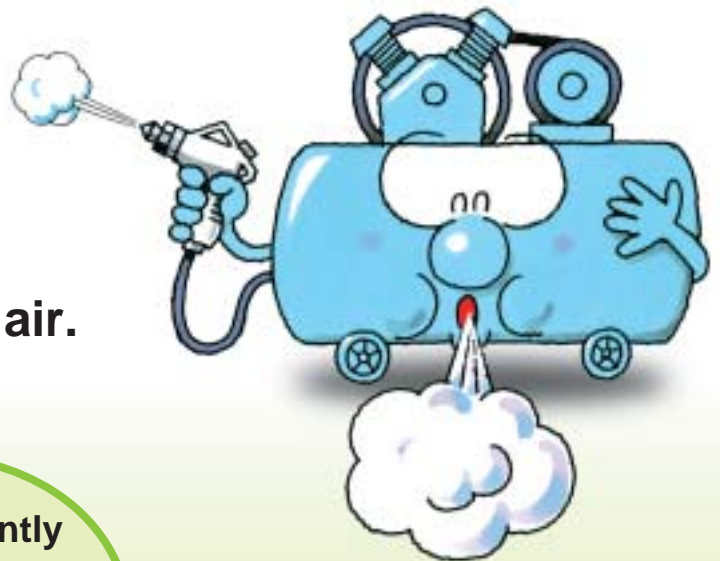


Are you using unnecessary air?

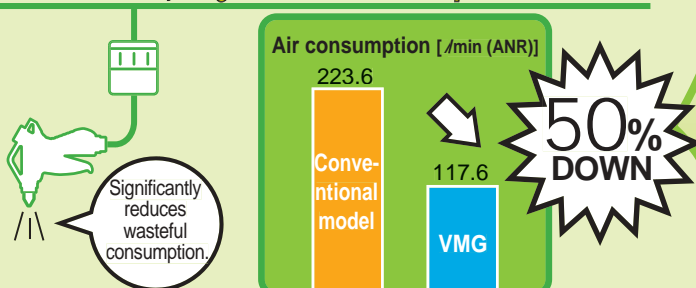


Hereafter,
enhance efficiency with less air.



Pressure loss in air blow is significantly reduced with an effective sectional area as large as 30 mm².

With an SMC Blow Gun, a large reduction in air consumption can be attained.



Note) Comparison with conventional model by SMC.
The result is achieved by changing the blow gun and optimizing the inlet side piping and supply pressure.
Conditions: Working condition Impact pressure of 0.02 MPa is ensured at a distance of 50 mm.
Supply pressure Conventional model: 0.4 MPa VMG: 0.3 MPa
Nozzle size Conventional model: ø4 VMG: ø2



Reduced loss in air blow
Energy Saving Blow Gun
Series VMG

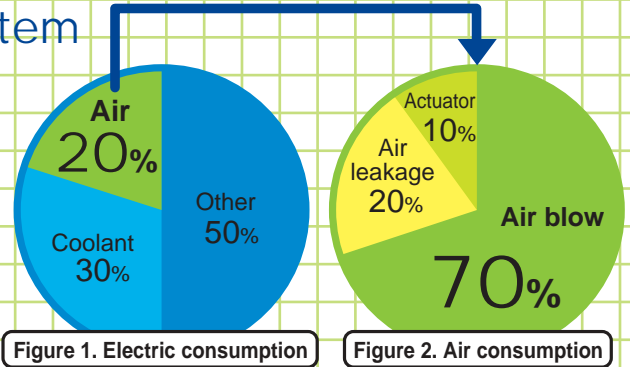
Proposal for energy saving pneumatic system

SMC supports innovation of the production system based on "energy saving" as a key word.

● Energy saving in pneumatic system

Considering electric power consumption classified by the purpose of use, it is reported that the electric power used for air (compressors) accounts for 20% of the total consumption (Figure 1).

Figure 2 shows air consumption classified by the purpose of use. The volume of air consumed for each of them should be determined and controlled in the first place.



Important

The point is 3:1.

The pressure loss is suppressed and air consumption reduced by adjusting the effective sectional areas of the inlet side piping system and the nozzle side so that they are in the ratio of 3:1.

Example

A manufacturer of automobile parts

Electricity: 10,000 kW ► 6,000 kW

Cost: Reduction of 200 million yen/year

40%
reduction

Received
Japan's Minister
of Economy,
Trade and
Industry
Award

● Financial loss due to air leakage

Hole diameter mm	Air leakage /min (ANR)	Leakage per year m ³ /year (ANR)	Annual financial loss yen/year
0.5	12	1.9×10 ³	6k
1	50	7.5×10 ³	22k
2	200	29.9×10 ³	90k
3	449	67.4×10 ³	202k
4	799	120×10 ³	359k
5	1,248	187×10 ³	561k

Unit price of compressed air: 3 yen/m³ (ANR) Pressure: 0.5 MPa Operation time of the compressor: 2,500 h/year

To reduce pressure loss:

- 1 Improve the effective sectional area ratio of the nozzle to the inlet side by adopting a nozzle with a small diameter.
- 2 Reduce the restriction and pressure loss on the fittings.
- 3 Regulate at the proper pressure.

Blow nozzle: Series KN



S coupler: Series KK



Regulator: Series AR



Filter regulator: Series AW

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