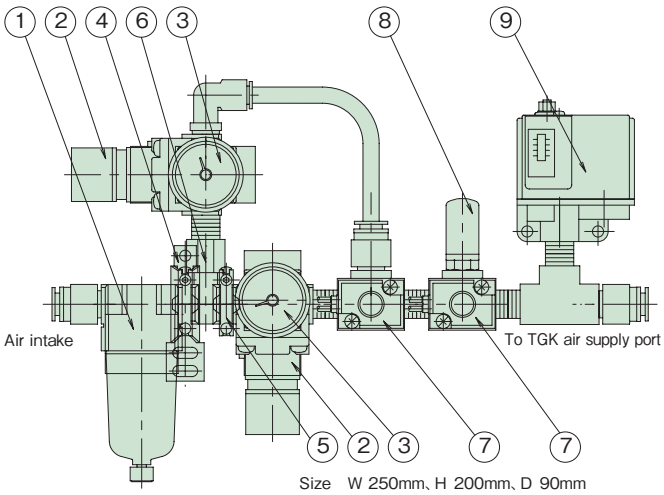
Dual air control system

This system uses two regulators. At the time of startup, the regulator set to the higher pressure feeds air to the TGK series. A timer is used to count several seconds (1 to 10 seconds), and then the regulator set to the lower pressure is switched in order to reset the torque to the optimal value. Such a system enables various types of automatic torque adjustments during operation.

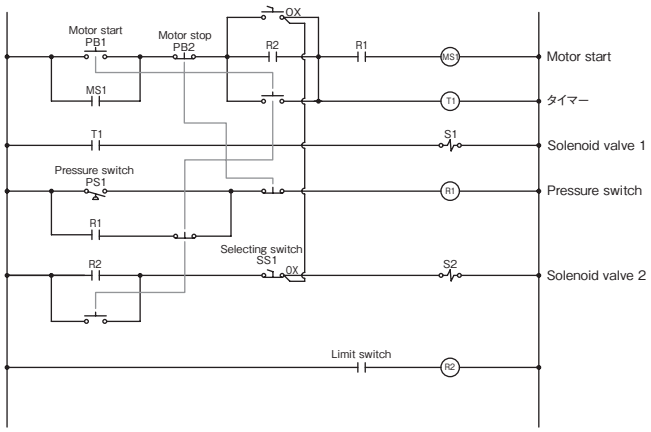
Air device configuration



Part number	Device name	Referential model number (SMC)
1	Air filter	AF20-02
2	Regulator	AR20-02
3	Pressure gauge	G36-02
4	Spacer with bracket	Y200T
5	Spacer	Y200
6	T type spacer	Y210-02
7	3-port solenoid valve	VT307-1G-02
8	Silencer	AN20-02
9	Pressure switch	IS3000-02

Electrical diagram

PB 1	Motor start button
PB 2	Motor stop button
SS 1	Selecting switch
SS 2	Pressure switch
S 1	Solenoid valve 1
S 2	Solenoid valve 2



Basic operation

Selecting switch (SS1) is set to "AIR ON."
Press the motor start button (PB1). The motor starts and the TGK series returns to the "CLUTCH ON" state. The limit switch is turned on, the self-holding of the motor is completed, and the motor continues to rotate even if you release the motor start button (PB1)
Note) If the pressure switch is off, the motor does not rotate even if you press the motor start button (PB1).

The sensor target of the TGK series moves simultaneously when an overload occurs, and the amount of movement is detected by a limit switch or a similar device.
If the limit switch is turned off, the solenoid valve (S1) switches to turn off the self-holding of the motor, and then the motor stops.
In the "CLUTCH OFF" state, you can do this by turning the selecting switch (SS1) to "AIR OFF." When turned to "AIR OFF," the solenoid valve switches, the air supply to the TGK series stops, the TGK series turns to "CLUTCH OFF," and the motor continues to rotate, but the driving force is not transferred to the driven side.

Electrical diagram