CLAIMS

1. A compressor comprising:

a compressor body driven by a motor to compress gas;

an aftercooler for cooling the compressed gas supplied from the compressor body;

a dryer for dehumidifying the compressed gas flowing out from the aftercooler;

a drain discharge valve for discharging a drain from the dryer;

a first pressure sensor for measuring gas pressure downstream of the aftercooler; and

a control device including a rotation-speed adjusting unit that drives the motor at second acceleration smaller than first acceleration, the first acceleration being rated acceleration of the motor, when a pressure value measured by the first pressure sensor is less than a first threshold value predetermined at startup of the motor.

2. A compressor comprising:

a compressor body driven by a motor to compress gas;

a separator tank for separating a coolant from the compressed gas supplied from the compressor body and stores the coolant;

a pressure-holding check valve for preventing the compressed gas from flowing back toward the separator tank to keep pressure in the separator tank equal to or more than

a second threshold value predetermined;

a dryer provided downstream of the pressure-holding check valve to dehumidify the compressed gas supplied;

a drain discharge valve for discharging a drain from the dryer;

a first pressure sensor for measuring gas pressure downstream of the pressure-holding check valve; and

a control device including a rotation-speed adjusting unit that drives the motor at second acceleration smaller than first acceleration, the first acceleration being rated acceleration of the motor, when a pressure value measured by the first pressure sensor is less than a first threshold value predetermined at startup of the motor.

3. The compressor according to claim 2, further comprising:

a second pressure sensor for measuring the pressure in the separator tank,

wherein the control device further includes a drain-discharge-valve control unit that opens the drain discharge valve when a pressure value measured by the second pressure sensor is equal to or more than the second threshold value at startup of the motor.

4. A compressor comprising:

a compressor body driven by a motor to compress gas;

an aftercooler for cooling the compressed gas supplied

from the compressor body;

a dryer for dehumidifying the compressed gas flowing out from the aftercooler;

a drain discharge valve for discharging a drain from the dryer;

a first pressure sensor for measuring gas pressure downstream of the aftercooler;

a separator tank for separating a coolant from the compressed gas flowing from the compressor body to the aftercooler and stores the coolant;

a second pressure sensor for measuring pressure in the separator tank;

a pressure-holding check valve for preventing the compressed gas from flowing back toward the separator tank to keep the pressure in the separator tank equal to or more than a second threshold value predetermined; and

a control device including:

a rotation-speed adjusting unit that drives the motor at second acceleration smaller than first acceleration, the first acceleration being rated acceleration of the motor, when a pressure value measured by the first pressure sensor is less than a first threshold value predetermined and a pressure value measured by the second pressure sensor is equal to or more than the second threshold value, at startup of the motor; and

a drain-discharge-valve control unit that opens the drain discharge valve when the pressure value measured by the second pressure sensor is equal to or more than the second threshold value at the startup.

5. The compressor according to claim 3~~ or 4~~, wherein

the rotation-speed adjusting unit changes acceleration of the motor from the second acceleration to the first acceleration when the pressure value measured by the first pressure sensor is equal to or more than the first threshold value, or when a predetermined time elapses after changing acceleration from the first acceleration to the second acceleration, and

the drain-discharge-valve control unit closes the drain discharge valve after the acceleration is changed from the second acceleration to the first acceleration, or when a predetermined time elapses after the drain discharge valve is opened, whichever is earlier.

6. The compressor according to claim 5, wherein

the rotation-speed adjusting unit accelerates the motor to rated rotation speed after change to the first acceleration.

7. A method of operating a compressor including:

a compressor body driven by a motor to compress gas;

an aftercooler for cooling the compressed gas supplied from the compressor body;

a dryer for dehumidifying the compressed gas flowing out from the aftercooler;

a drain discharge valve for discharging a drain from the dryer; and

a first pressure sensor for measuring pressure of gas supplied to the dryer from the aftercooler, wherein

the method further comprises driving the motor at second acceleration smaller than first acceleration, the first acceleration being rated acceleration of the motor, when a pressure value measured by the first pressure sensor is less than a first threshold value predetermined at startup of the compressor body.

8. A method of operating a compressor including:

a compressor body driven by a motor to compress gas;

a separator tank for separating a coolant from the compressed gas supplied from the compressor body and stores the coolant;

a pressure-holding check valve for preventing the compressed gas from flowing back toward the separator tank to keep pressure in the separator tank at a second threshold value or more;

a dryer provided downstream of the pressure-holding check valve to dehumidify the compressed gas supplied;

a drain discharge valve for discharging a drain from the dryer; a first pressure sensor for measuring gas pressure

downstream of the pressure-holding check valve; and

a second pressure sensor for measuring the pressure in the separator tank, wherein

the method further comprises driving the motor at second acceleration smaller than first acceleration, the first acceleration being rated acceleration of the motor, when a pressure value measured by the first pressure sensor is less than a first threshold value predetermined at startup of the motor.

9. The method of operating a compressor, according to claim 8, wherein

the drain discharge valve is opened when the pressure value measured by the second pressure sensor is equal to or more than the second threshold value.

10. The compressor according to claim 4, wherein

the rotation-speed adjusting unit changes acceleration of the motor from the second acceleration to the first acceleration when the pressure value measured by the first pressure sensor is equal to or more than the first threshold value, or when a predetermined time elapses after changing acceleration from the first acceleration to the second acceleration, and

the drain-discharge-valve control unit closes the drain discharge valve after the acceleration is changed from the

second acceleration to the first acceleration, or when a predetermined time elapses after the drain discharge valve is opened, whichever is earlier.