

Chiller Systems

High-performance Daikin Water Chillers

Daikin chilling units employ advanced technology that provides highly accurate temperature control to within 0.5°C. They are widely used in applications ranging from air conditioning to industrial equipment. Recent changes have introduced new models with substantially increased capacities of up to 480 HP and various model series, including advanced inverter type units, year-round cooling type units, and units with brine-resistant specifications. By providing a full lineup of heat source series choices, Daikin offers an even more flexible array of solutions for a wide range of heat source applications.



Air-Cooled Water Chillers

Dedicated water chillers are able to operate year round because they can accommodate a wide range of outdoor temperatures. The high-performance models with capacities of over 40 HP deliver precise capacity control from 10% to 100%. They are fully capable of withstanding the demanding conditions typical of industrial applications.



Air-Cooled Water Chillers - Heat Pump Type

Energy-saving, air-cooled heat pump system units are an economical way to provide a reliable supply of hot and cold water. Highly efficient and compact since no cooling tower is required, they are also suitable for office building air-conditioning. These high-end models provide an answer to a variety of air-conditioning requirements.



Water-Cooled Water Chillers

Water-cooled units provide a stable supply of chilled water year round and are unaffected by changes in the outdoor temperature. In addition to air-conditioning applications, they are also a highly reliable, industrial process-cooling solution thanks to their superior stability and wide temperature control range.

Equipped with a Newly Developed, Highly Efficient Compact Compressor

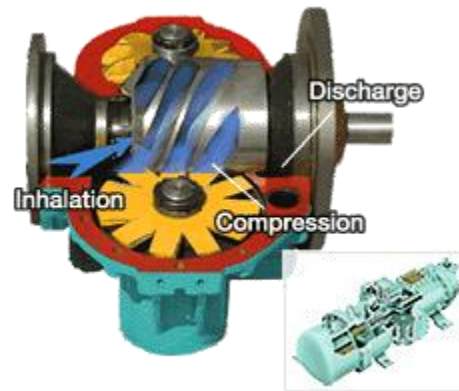
The new UWAP50BY1 model achieves a 7% COP increase, and a newly developed denture mold has enabled the production of the compact UWAP50BY1 model with a 13% reduction in volume and weight.

High Accuracy and High Durability

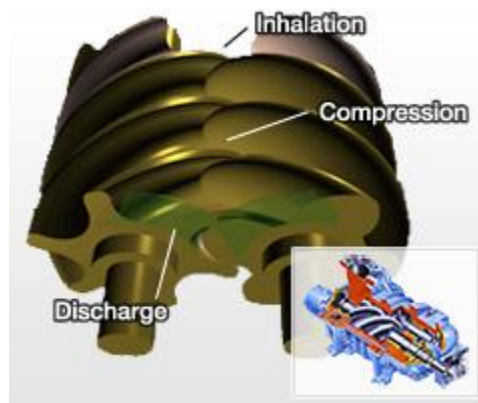
Gate rotors are positioned to the right and left of the screw to eliminate the eccentric load produced by a pressure differential. The orthogonal rotor shaft uses high-precision ball and roller bearings, enabling it to last twice as long as the twin-screw type. The gate rotors are well balanced to equalize pressure while reducing noise and vibration during operation.

Compressor

Structure and mechanism of a single- and twin-form unit

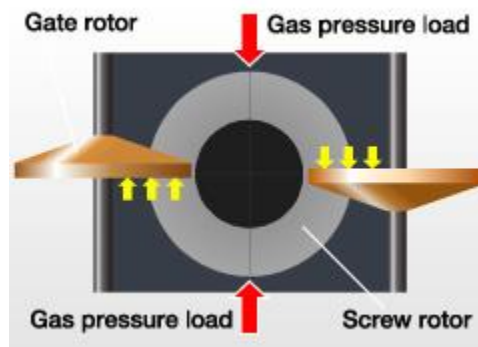


Single screw compressor (Technology adopted by Daikin)



Twin screw compressor

Comparison between a single- and twin-form unit - Bearing life is longer



Single screw compressor Pressure and balance are maintained by the screw rotor's upper and lower sides.

- The low bearing load confers long-life to the screw rotor and gate rotor bearings.
- Low vibration

Low Vibration and Sound Levels

Daikin water chillers use gate rotors made of high-performance engineering plastic for smooth meshing with the screw rotor, thus minimizing shock and vibration while maintaining stable operation. The gate rotors are well balanced to equalize pressure while reducing noise and vibration during operation.

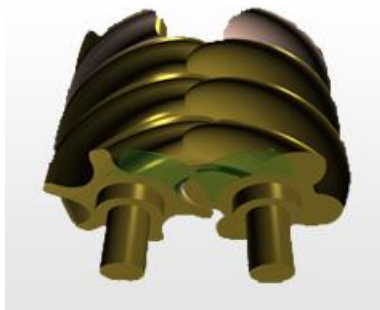
Compressor

Comparison between a single- and twin-form unit - The reason for low vibration



Single screw compressor (Technology adopted by Daikin)

The "12-compression process" per rotation means minimal pressure fluctuation, and enables miniaturization, weight savings, and smooth rotation.



Twin screw compressor