RIGID

COOLING SPECIALIST
ABOUT US

RIGID is a company specialized in manufacturing, marketing, research & development of microclimate cooling systems and provides small cooling solutions for extreme hot environment and confined space. We specialize in and focus on Mini Compressor, Compact Liquid Chiller, DC Condensing Unit. Our micro cooling modules are well suited for a variety of applications covering the ordinary to the extraordinary, for example, commercial & personal refrigeration, small cooling system, and tiny liquid cycle refrigeration devices. The qualification of most products has met the technical and quality standard of Germany, U.S., Italy and Asian countries.
MINI COMPRESSOR

12V 24V 48V DC, R134A

RIGID Mini Compressor is developed for small cooling units and micro refrigeration & air conditioner. The mini compressor has features of the lightest weight, smallest size and extraordinary efficiency to satisfy the growing refrigeration compressor market nowadays.

Model Numbers:
QX1901VDL(H) 12V
QX1902VDL(H) 24V
QX1903VDL(H) 48V
QX3220VDL(H) 24V
COAXIAL LIQUID CHILLER

The Coaxial-C type chiller is a circulatory cooling subsystem. It consists of self-contained high-efficient refrigeration mini compressor with R134A coolant, smallest condenser, coaxial stainless st. evaporator (heat exchanger), filter drier, driver board and other refrigeration parts.

Model Numbers:

DV1910E-C (12V)
DV1920E-C (24V)
DV1930E-C (48V)
DV3220E-C (24V)

Heating & Cooling:

DV1910E-C/H (12V)
DV1920E-C/H (24V)
DV1930E-C/H (48V)
DV3220E-C/H (24V)
PLATE LIQUID CHILLER

The Plate-P liquid chiller is a circulatory cooling subsystem. It consists of self-contained high-efficient refrigeration mini compressor with R134A coolant, smallest condenser, frame&plate evaporator (heat exchanger), filter drier, driver board and other refrigeration parts.

Model Numbers:
DV1910E-P (12V)
DV1920E-P (24V)
DV1930E-P (48V)
DV3220E-P (24V)

Heating & Cooling:
DV1910E-P/H (12V)
DV1920E-P/H (24V)
DV1930E-P/H (48V)
DV3220E-P/H (24V)
COIL STAINLESS LIQUID CHILLER

The Coil-S type chiller module is the very compact cooling unit. It consists of self-contained high-efficient refrigeration mini compressor with R134A coolant, smallest condenser, stainless steel coil evaporator (heat exchanger), filter drier, driver board and other refrigeration parts.

Model Numbers:

DV1910E-S (12V)
DV1920E-S (24V)
DV1930E-S (48V)
DV3220E-S (24V)
COIL COPPER
LIQUID CHILLER

The copper Coil E-type liquid chiller module is a very compact cooling unit. It consists of high-efficient rotary dc compressor with R134A coolant, smallest condenser, copper coil evaporator (heat exchanger), filter drier, capillary, driver board and other refrigeration parts.

Model Numbers:

DV1910E (12V)
DV1920E (24V)
DV1930E (48V)
DV3220E (24V)
MICRO DC AIRCON

RIGID Micro DC Aircon includes miniature BLDC inverter compressor, driver board, condenser, evaporator, capillary and other refrigeration parts. All these cooling parts are well integrated in one unit. It meets customer’s specific demand where weight and space is critical.

Model Numbers:

DV1910E-AC (12V)
DV1920E-AC (24V)
DV1930E-AC (48V)
DV3220E-AC (24V)

Heating & Cooling:

DV1910E-AC/H (12V)
DV1920E-AC/H (24V)
DV1930E-AC/H (48V)
DV3220E-AC/H (24V)
**DC CONDENSING UNIT**

The DC Condensing Unit is a very compact cooling unit. It consists of self-contained high-efficient refrigeration mini compressor with R134A coolant, smallest condenser, capillary (no evaporator), filter drier, driver board and other refrigeration parts.

Model Numbers:

DV1910 (12V)
DV1920 (24V)
DV1930 (48V)
DV3220 (24V)
**DRIVER BOARD WIRING DIAGRAM**

A  Positive wire  Power “+”
B  Negative wire  Power “-”

① Switch (on-off), Enable terminal, reservation for EN.
② PWN speed control terminal (1K~10KHz).
③ Fault alarm compressor failure alarm, high level-normal, low level-failure.
④ Connecting lines (Connecting to the compressor).
⑤ TTL communication port
⑥ 0~5V to adjust the speed.
⑦ Terminals for potentiometers with 50k ohm to adjust speed.
⑧ Control program edit input socket
⑨ Green LED
⑩ Red LED
DRIVER BOARD WIRING

Connect power supply

Connect Compressor

Potentiometer to adjust compressor speed

Red: Positive wire power +
Black: Negative wire power -
SPEED CONTROL BY POTENTIONMETER

Anti-clockwise to decrease compressor speed

Clockwise to increase compressor speed
APPLICATIONS

- Automotive/Vessel
  - Micro Air Conditioning

- Medical/Aesthetic
  - Compact Direct Cooling

- Laser/Electronics
  - Laser/Precise Instrument

- DC Aircon/Cooler
  - Portable Body Cooling
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Rigid Technology – 8 Years of Innovation in Miniature Cooling Systems