

Controls and Wiring

Packaged rooftop units come equipped with a well-organized, large, easy to use, weatherproof internal control box with easy access, for a better user experience.

- » Units are factory-wired with color-coded wires and complete 24-volt electromechanical controls package.
- » Units include single-point power entry as standard
- » Terminal strips are provided as standard for easy installation and field power wiring.

Filtration

Unit provides a draw-through filter section as standard for better air quality and long lasting component maintenance.

- » Filters installed on the units are standard off the shelf sizes for easy replacement.
- » One size filter per unit for low maintenance cost and easy replacement.
- » 2" deep filters standard on all units with option for up to 4" on large chassis (15 tons and over).

Heating Section

Wide range of natural gas and electric heat selections effectively handle most comfort heating demand from morning warm-up control to full heat, all available with Daikin's Wrinkle Bend heat exchanger technology.

Gas Furnace

ETL certified heating modules provide a custom match to specific design requirement.

- » Wrinkle Bend Technology available on all Daikin gas heat exchangers. The Wrinkle Bend Technology reduces the manufacturing stress that leads to defects and pinholes in the tubes at the same time as it increases the gas turbulence to amplify the heat transfer.
- » Two-stage capability for varying heating loads requirements.
- » All 3-Phase models have a minimum 80% T.E. (Thermal Efficiency)
- » User has the flexibility to order heat exchanger tubes with 20 Gauge, G160, aluminized steel or stainless steel to meet your application needs.

- » The furnace has a tubular design with in-shot gas burner manifold and is installed downstream of the supply fan.
- » The module contains an induced draft fan that will maintain a negative pressure in the heat exchanger tubes for the removal of the flue gases to protect indoor air quality.
- » All gas fired units provides flame roll out safety and high limit temperature protection for reliable operation..
- » Induced draft fan includes an airflow safety switch to prevent heating operation in the event of no airflow for occupant safety.
- » All burner assemblies are factory tested and adjusted prior to shipment.
- » Heating control is fully integrated into the unit's control system for quick start-up and reliable control.
- » Optional field installed LP kits are available for staged heating modules as well as high altitude kits.

Electrical

Units are completely wired and tested at the factory to provide faster commissioning and start-up.

- » Wiring complies with NEC requirements and all applicable UL standards.
- » For ease of use, wiring and electrical components are number coded and labeled according to the electrical diagram.
- » A 115 V GFI convenience outlet requiring independent power supply for the receptacle is optional.
- » An optional unit powered 20 amp 115 V convenience outlet, complete with factory mounted transformer, disconnect switch, and primary and secondary overload protection, eliminates the need to pull a separate 115 V power source.
- » Supply air fan, compressor, and condenser fan motor branch circuits have individual short circuit protection. Unit includes knockouts in the bottom of the main control panels for field wiring entrance.
- » A single-point power connection with power block is standard and a terminal strip is provided for connecting low voltage control wiring.
- » For better serviceability an optional non-fused disconnect switch is mounted inside the control panel and operated by an externally mounted handle to disconnect the electrical power at the unit.



Applications

Daikin Rooftop units are intended for comfort cooling applications in normal heating, ventilating, and air conditioning. Consult your local Daikin sales representative for applications involving operations at high ambient temperatures, high altitudes, non-cataloged voltages, or for job-specific unit selections that fall outside of the range of the catalog tables.

For proper operation, units should be rigged in accordance with instructions stated on the installation manual. Fire dampers, if required, must be installed in the ductwork according to local and/or state codes. No space is allowed for these dampers in the unit.

Follow factory check, test and start procedures explicitly to achieve satisfactory start-up and operation.

Most rooftop applications take advantage of the significant energy savings provided with economizer operation. When an economizer system is used, mechanical refrigeration is typically not required below an ambient temperature of 50°F on most cases.

Serviceability

Daikin packaged rooftop units are built with serviceability in mind, designed to make future maintenance and service on the unit easy and accessible..

- » Our packaged rooftop units offer a slide out blower to facilitate the access and removal of the fan.
- » Independent compressor outside of the air bypass to eliminate component blockage and provide easy access.
- » Color coded and continuously marked wire to identify point-to-point component connections.
- » Condenser clean out from inside-out.
- » Easy access to gas valves and control panel.



	DSG1803DL00001S	DSG1803DM00001S	DSG1803DH00001S	DSG1804DL00001S	DSG1804DM00001S
COOLING CAPACITY					
Total BTU/H	172,000	172,000	172,000	172,000	172,000
EER	10.8	10.8	10.8	10.8	10.8
IEER	14	14	14	14	14
AHRI Reference #	215894117	215894117	215894117	215894117	215894117
HEATING CAPACITY					
Heat Range	Low	Medium	High	Low	Medium
No. of Burners	6	8	8	6	8
High Stage Input / Output (KBTU/H)	260 / 210.6	360 / 291.6	400 / 324	260 / 210.6	360 / 291.6
Low Stage Input / Output (KBTU/H)	195 / 157.95	270 / 218.7	300 / 243	195 / 157.95	270 / 218.7
Thermal Efficiency (T.E.)	81%	81%	81%	81%	81%
Annual Fuel Utilization Efficiency (AFUE)	N/A	N/A	N/A	N/A	N/A
High Stage Temperature Rise Range (°F)	25-55	25-55	25-55	25-55	25-55
Low Stage Temperature Rise Range (°F)	15-45	15-45	15-45	15-45	15-45
EVAPORATOR MOTOR / RTPF (ROUND TUBE PLATE FIN)					
Motor Type	Direct Drive	Direct Drive	Direct Drive	Direct Drive	Direct Drive
External Static Pressure (ESP)	Standard	Standard	Standard	Standard	Standard
Wheel Dia. X Width	15 x 15	15 x 15	15 x 15	15 x 15	15 x 15
Indoor Nominal CFM	5000	5000	5000	5000	5000
RPM	300-1600	300-1600	300-1600	300-1600	300-1600
Indoor Horsepower	3.5	3.5	3.5	3.5	3.5
Filter Size (in)	20 X 20 X 2 (8)	20 X 20 X 2 (8)	20 X 20 X 2 (8)	20 X 20 X 2 (8)	20 X 20 X 2 (8)
Drain Size (NPT)	1"	1"	1"	1"	1"
R-32 Refrigerant Charge (oz.) (1)	105	105	105	105	105
R-32 Refrigerant Charge (oz.) (2)	90	90	90	90	90
Evaporator Coil Face Area (ft²)	21.69	21.69	21.69	21.69	21.69
Rows Deep/ Fins per Inch	2 / 18	2 / 18	2 / 18	2 / 18	2 / 18
CONDENSER FAN / MCHX (MICROCHANNEL HEAT EXCHANGER)					
Quantity of Condenser Fan Motors	3	3	3	3	3
RPM (High/Low stage)	1122	1122	1122	1050	1050
Outdoor Horsepower	1/3	1/3	1/3	1/3	1/3
Fan Diameter/ # Fan Blades	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3
Face Area (ft²)	25.9	25.9	25.9	25.9	25.9
Rows Deep / Fins per Inch	1 / 23	1 / 23	1 / 23	1 / 23	1 / 23
COMPRESSOR					
Quantity / Type / Stages per Compressor	2 / Scroll / 1	2 / Scroll / 1	2 / Scroll / 1	2 / Scroll / 1	2 / Scroll / 1
Compressor RLA / LRA	25 / 179	25 / 179	25 / 179	10.9 / 103.0	10.9 / 103.1
ELECTRICAL DATA					
Voltage-Phase-Frequency	208/230-3-60	208/230-3-60	208/230-3-60	460-3-60	460-3-60
Indoor Blower FLA	10.9	10.9	10.9	7.2	7.2
Max External Static (In. W.C.)	1.2	1.2	1.2	1.2	1.2
Outdoor Fan FLA	2.0	2.0	2	0.85	0.85
Min. Circuit Ampacity ¹	84.1/84.1	84.1/84.1	84.1/84.1	41.4	41.4
Max. Overcurrent Protection (A) ²	100/100	100/100	100/100	50	50
Power Supply Conduit Hole Dia. (in)	2.5	2.5	2.5	2.5	2.5
Low-Voltage Conduit Hole Dia. (in)	0.5	0.5	0.5	0.5	0.5
OPERATING WEIGHT (LBS)					
	1922	1922	1922	1922	1922
SHIP WEIGHT (LBS)					
	2037	2037	2037	2037	2037

¹ Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

² May use fuses or HACR-type circuit breakers of the same size as noted.

Note: Always check the S&R plate for electrical data on the unit being installed.

	DSG1804DH00001S	DSG1807DL00001S	DSG1807DM00001S	DSG1807DH00001S
COOLING CAPACITY				
Total BTU/H	172,000	172,000	172,000	172,000
EER	10.8	10.8	10.8	10.8
IEER	14	14	14	14
AHRI Reference #	215894117	215894117	215894117	215894117
HEATING CAPACITY				
Heat Range	High	Low	Medium	High
No. of Burners	8	6	8	8
High Stage Input / Output (KBTU/H)	400 / 324	260 / 210.6	360 / 291.6	400 / 324
Low Stage Input / Output (KBTU/H)	300 / 243	195 / 157.95	270 / 218.7	300 / 243
Thermal Efficiency (T.E.)	81%	81%	81%	81%
Annual Fuel Utilization Efficiency (AFUE)	N/A	N/A	N/A	N/A
High Stage Temperature Rise Range (°F)	25-55	25-55	25-55	25-55
Low Stage Temperature Rise Range (°F)	15-45	15-45	15-45	15-45
EVAPORATOR MOTOR / RTPF (ROUND TUBE PLATE FIN)				
Motor Type	Direct Drive	Direct Drive	Direct Drive	Direct Drive
External Static Pressure (ESP)	Standard	Standard	Standard	Standard
Wheel Dia. X Width	15 x 15	15 x 15	15 x 15	15 x 15
Indoor Nominal CFM	5000	5000	5000	5000
RPM	300-1600	300-1600	300-1600	300-1600
Indoor Horsepower	3.5	3.5	3.5	3.5
Filter Size (in)	20 X 20 X 2 (8)	20 X 20 X 2 (8)	20 X 20 X 2 (8)	20 X 20 X 2 (8)
Drain Size (NPT)	1"	1"	1"	1"
R-32 Refrigerant Charge (oz.) (1)	105	105	105	105
R-32 Refrigerant Charge (oz.) (2)	90	90	90	90
Evaporator Coil Face Area (ft²)	21.69	21.69	21.69	21.69
Rows Deep/ Fins per Inch	2 / 18	2 / 18	2 / 18	2 / 18
CONDENSER FAN / MCHX (MICROCHANNEL HEAT EXCHANGER)				
Quantity of Condenser Fan Motors	3	3	3	3
RPM (High/Low stage)	1050	1050	1050	1050
Outdoor Horsepower	1/3	1/3	1/3	1/3
Fan Diameter/ # Fan Blades	22 / 3	22 / 3	22 / 3	22 / 3
Face Area (ft²)	25.9	25.9	25.9	25.9
Rows Deep / Fins per Inch	1 / 23	1 / 23	1 / 23	1 / 23
COMPRESSOR				
Quantity / Type / Stages per Compressor	2 / Scroll / 1	2 / Scroll / 1	2 / Scroll / 1	2 / Scroll / 1
Compressor RLA / LRA	10.9 / 103.2	8.4 / 78.0	8.4 / 78.0	8.4 / 78.0
ELECTRICAL DATA				
Voltage-Phase-Frequency	460-3-60	575-3-60	575-3-60	575-3-60
Indoor Blower FLA	7.2	5	5	5
Max External Static (In. W.C.)	1.2	1.2	1.2	1.2
Outdoor Fan FLA	0.85	0.67	0.67	0.67
Min. Circuit Ampacity ¹	41.4	31	31	31
Max. Overcurrent Protection (A) ²	50	35	35	35
Power Supply Conduit Hole Dia. (in)	2.5	2.5	2.5	2.5
Low-Voltage Conduit Hole Dia. (in)	0.5	0.5	0.5	0.5
OPERATING WEIGHT (LBS)				
	1922	1922	1922	1922
SHIP WEIGHT (LBS)				
	2037	2037	2037	2037

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