

GAS FURNACES



RGRC- SERIES
Model with Input Rates
from 45,000 to 105,000 BTU/HR
[13.19 to 30.77 kW]
(All Models 95% A.F.U.E.†)



"Visit www.Ruud.com
for complete details."

ACHIEVER® **95% A.F.U.E.** **HIGH EFFICIENCY** **UPFLOW** **GAS FURNACES**

The Ruud® 95% A.F.U.E. High Efficiency line of upflow gas furnaces are designed for utility rooms, closets or alcoves.

The design is certified by CSA.

Features

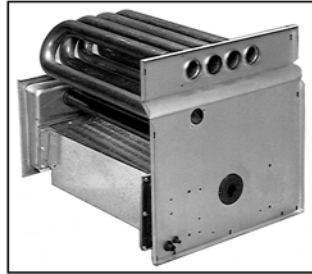
- Heat exchanger is constructed of aluminized steel for maximum corrosion resistance and thermal fatigue reliability.
- Low profile "34 inch" design is lighter and easier to handle and leaves room for optional accessories.
- Left or right side gas, electric, and condensate drainage connections on upflow models.
- Integrated control board manages all operational functions and provides hookups for humidifier and electronic air cleaner.
- An insulated blower compartment, a slow-opening gas valve and a specially designed inducer system make it one of the quietest furnaces on the market today.
- Pre-paint galvanized steel cabinet.
- Molded permanent filters.
- Optional indoor or outdoor combustion air. In addition, combustion air may be piped to either the top or side of the cabinet on all upflow models. A special molded fitting is provided to ease installation.
- Control fuse protection.
- Solid bottom is standard.
- Control board diagnostics.

A variety of cooling coils and plenums designed to use with the Achiever® 95% A.F.U.E. gas furnaces are available as optional accessories for air conditioning models.

†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

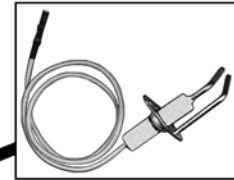
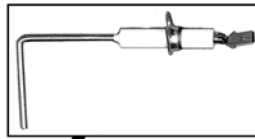


ACHIEVER® 95% A.F.U.E. HIGH EFFICIENCY UPFLOW GAS FURNACE

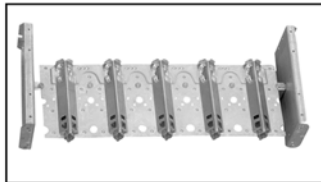


PRIMARY AND SECONDARY HEAT EXCHANGER

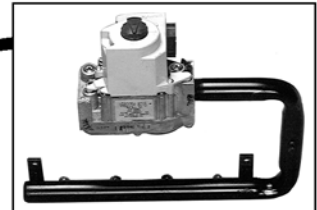
REMOTE SENSOR



DIRECT SPARK IGNITION & REMOTE SENSOR



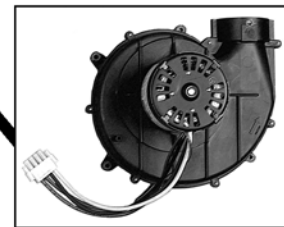
IN-SHOT BURNERS



GAS VALVE AND MANIFOLD



PRESSURE SWITCHES



DRAFT INDUCER



INTEGRATED FURNACE CONTROL

STANDARD EQUIPMENT

Completely assembled and wired; heat exchanger; primary: 409 and aluminized steel, secondary: 29-4C stainless steel; induced draft; pressure switches; redundant main gas control; blower compartment door safety switch; solid state time on/off blower control; limit controls; manual shut-off valve; 100% safety lock out; cool fan off delay; field selectable heat fan off delay; one hour automatic retry; power and self-test diagnostics; flame sense current diagnostics; electronic air cleaner connections; twinning (built-in) features; humidifier connections; humidifier on/off delay; low speed continuous fan option; single speed option for heating and cooling applications; pressure regulator for natural and L.P. (propane) gasses; transformer; direct drive, multi-speed blower motor. (Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

Side and bottom filter racks; return air cabinet for all sizes.

NOTE: Furnace is not listed for use with fuels other than natural or L.P. (propane) gas.

All models can be converted by a qualified distributor or local service dealer to use L.P. (propane) gas without changing burners. Factory approved kits must be used to convert from natural to L.P. (propane) gas and may be ordered as optional accessories from a parts distributor.

For L.P. (propane) operation, refer to Conversion Kit Index Form.

WARNING
THIS FURNACE IS NOT APPROVED
OR RECOMMENDED
FOR USE IN MOBILE HOMES

PHYSICAL DATA AND SPECIFICATIONS—UPFLOW MODELS

U.S. and Canadian Models

MODEL NUMBERS	RGRC-04*MAES	RGRC-06*MAES	RGRC-07*MAES	RGRC-07*RBGS	RGRC-09*ZAJ5	RGRC-10*ZAJ5
HIGH FIRE INPUT BTU/HR [kW] ①	45,000 [13.19]	60,000 [17.58]	75,000 [21.98]	75,000 [21.98]	90,000 [26.38]	105,000 [30.77]
HEATING CAPACITY BTU/HR [kW]	42,000 [12.31]	56,000 [16.41]	70,000 [20.51]	70,000 [20.51]	84,000 [24.62]	100,000 [29.27]
HIGH ALTITUDE OUTPUT AT 8000' (HIGH FIRE) [kW] ②	28,458 [8.34]	37,944 [11.12]	47,430 [13.90]	47,430 [13.90]	56,915 [16.69]	66,402 [19.46]
BLOWER (D x W) [mm]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	11 x 7 [279 x 178]	12 x 11 [305 x 279]	12 x 11 [305 x 279]	12 x 11 [305 x 279]
MOTOR H.P. [W]—TYPE	1/2 [373]-4-PSC	1/2 [373]-4-PSC	1/2 [373]-4-PSC	1/2 [373]-4-PSC	3/4 [559]-4-PSC	3/4 [559]-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	6.8	6.8	9.5	9.5
HEATING SPEED	MED-LO	MED-HIGH	MED-HIGH	MED-HIGH	MED-HIGH	MED-HIGH
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
MINIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.10 [.025]	.12 [.029]	.12 [.029]	.12 [.029]	.15 [.037]	.20 [.049]
MAXIMUM EXT. STATIC PRESSURE (IN. W.C.) [kPa]	.50 [.124]	.50 [.124]	.50 [.124]	.50 [.124]	.50 [.124]	.50 [.124]
HEATING CFM @ .2" [.049 kPa] W.C. E.S.P. [L/s]	885 [417]	845 [398]	1050 [495]	1500 [708]	1640 [774]	1445 [682]
COOLING CFM @ .5" [.124 kPa] W.C. E.S.P. [L/s]	1195 [564]	1100 [519]	1110 [524]	1600 [755]	1820 [859]	1810 [854]
TEMPERATURE RISE-HIGH FIRE RANGE IN DEGREES °F [°C]	30-60 [16.7-33.3]	40-70 [22.2-38.9]	40-70 [22.2-38.9]	30-60 [16.7-33.3]	35-65 [19.4-36.1]	50-80 [27.8-44.4]
RETURN AIR CABINETS (OPT.) RXGR-FILTER SIZE [mm]	C17B (2) 12" x 16" [305 x 406]	C17B (2) 12" x 16" [305 x 406]	C17B (2) 12" x 16" [305 x 406]	C21B (2) 12" x 20" [305 x 508]	C21B (2) 12" x 20" [305 x 508]	C21B (2) 12" x 20" [305 x 508]
STANDARD, HIGH VELOCITY PERMANENT FILTER (IN.)	15 ³ / ₄ x 25 x 1	15 ³ / ₄ x 25 x 1	15 ³ / ₄ x 25 x 1	19 ¹ / ₄ x 25 x 1	19 ¹ / ₄ x 25 x 1	19 ¹ / ₄ x 25 x 1
APPROX. SHIPPING WEIGHT (LBS.) [kg]	111 [50.3]	117 [53.1]	124 [56.2]	137 [62.1]	148 [67.1]	152 [68.9]
AFUE ③	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%

NOTES: All models are 115V, 60HZ, 1 phase Gas connection size for all models is 1/2" [13 mm] N.P.T.

① See Conversion Kit Index Form for high altitude derate.

② Canadian installations only.

③ In accordance with D.O.E. test procedures.

*E=Standard

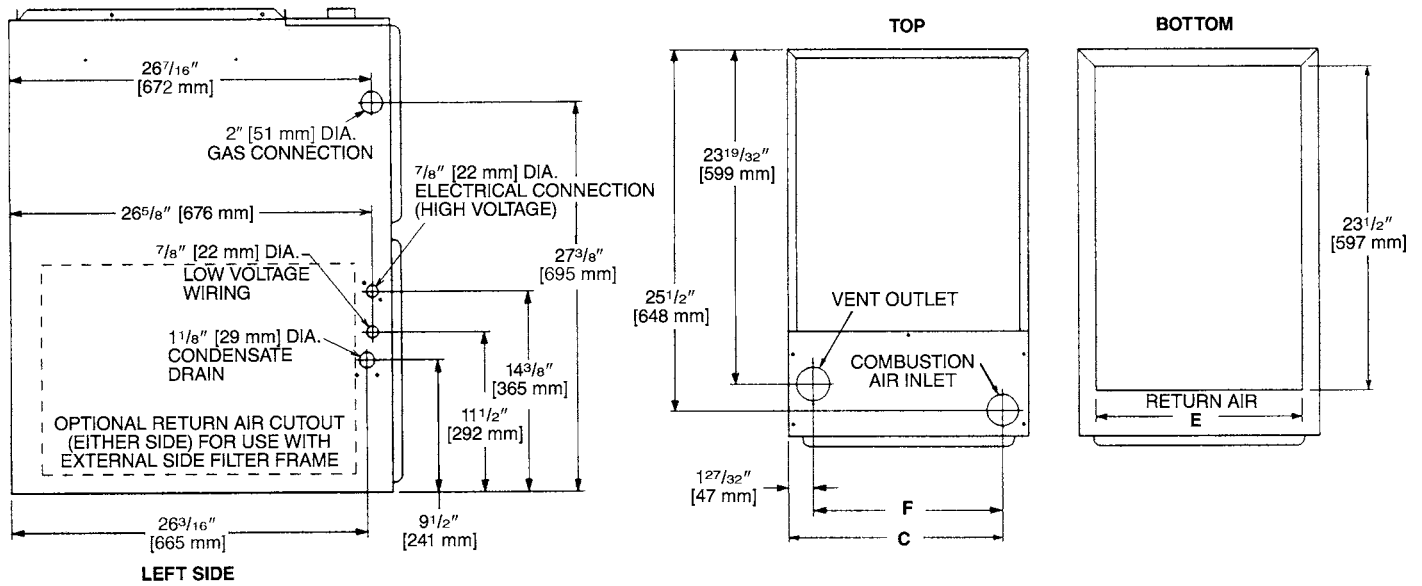
*N=NOx Models

MODEL IDENTIFICATION

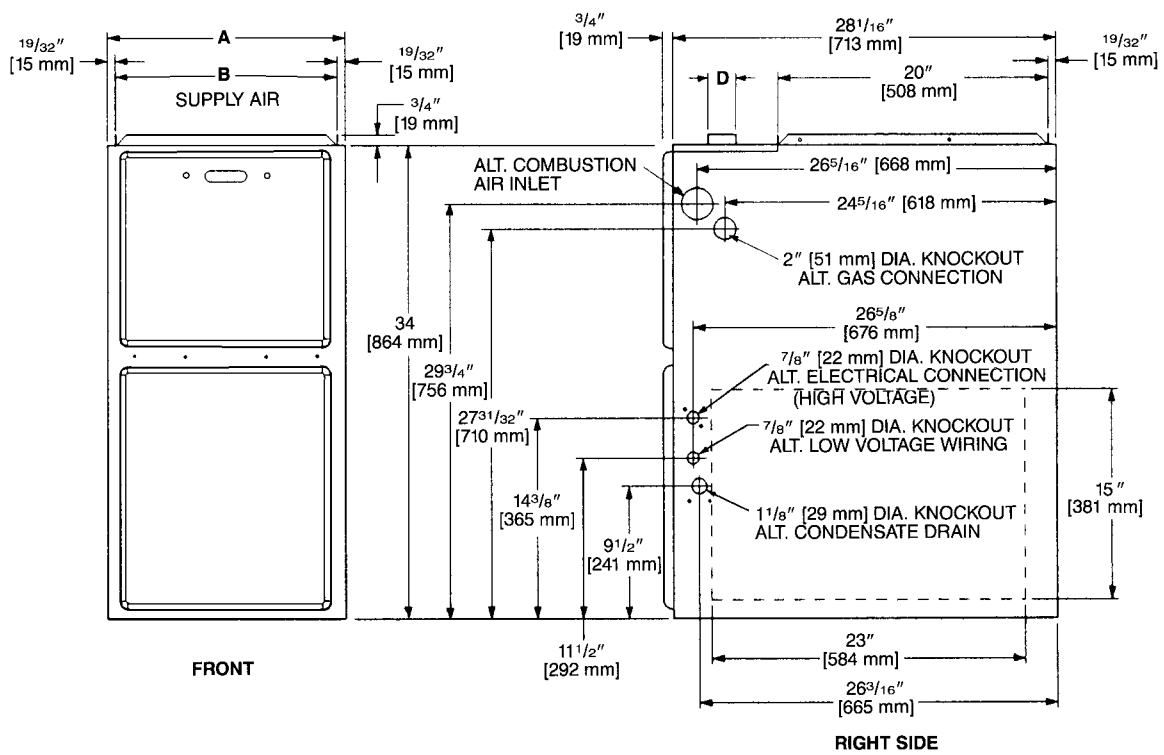
<u>R</u>	<u>G</u>	<u>R</u>	<u>C</u>	<u>04E</u>	<u>M</u>	<u>A</u>	<u>E</u>	<u>S</u>
Ruud	Gas Furnace	Upflow/Condensing Gas Furnace	Design Series	Heating Input Designation	Blower Size M = 11 x 7 [279 x 178 mm] R = 11 x 10 [279 x 254 mm] Z = 12 x 11 [305 x 279 mm]	Variations A = Std. Cabinet B = Wide Cabinet	Heat/Cool Designation E = 1100-1300 CFM [519-613.5 L/s] G = 1500-1700 CFM [707.9-802.3 L/s] J = 1900-2100 CFM [896.7-991.1 L/s]	Fuel Code S = U.S. and Canadian Natural Gas

[] Designates Metric Conversions

UPFLOW MODELS



LEFT SIDE



FRONT

RIGHT SIDE

MODEL RGRC-	A	B	C	D	E	F	LEFT SIDE	MINIMUM CLEARANCE (IN.) [mm]					SHIP WGTS. [kg]
								RIGHT SIDE	BACK	TOP	FRONT	VENT	
04EM	17 1/2 [445]	16 11/32 [415]	15 5/8 [397]	2 [51]	15 [422]	13 25/32 [352]	0	0	0	1 [25]	2 [51]	0	111 [50]
06EM	17 1/2 [445]	16 11/32 [415]	15 5/8 [397]	2 [51]	15 [422]	13 25/32 [352]	0	0	0	1 [25]	2 [51]	0	117 [53]
07EM	17 1/2 [445]	16 11/32 [415]	15 5/8 [397]	2 [51]	15 [422]	13 25/32 [352]	0	0	0	1 [25]	2 [51]	0	124 [56]
07ER	21 [533]	19 27/32 [504]	19 1/8 [487]	2 [51]	18 1/2 [511]	17 9/32 [441]	0	0	0	1 [25]	2 [51]	0	137 [62]
09EZ	21 [533]	19 27/32 [504]	19 1/8 [487]	2 [51]	18 1/2 [511]	17 9/32 [441]	0	0	0	1 [25]	2 [51]	0	148 [67]
10EZ	21 [533]	19 27/32 [504]	19 1/8 [487]	2 [51]	18 1/2 [511]	17 9/32 [441]	0	0	0	1 [25]	2 [51]	0	152 [69]

BLOWER PERFORMANCE DATA—RGRC- MODELS

MODEL	BLOWER SIZE [mm]	MOTOR H.P. [W]	BLOWER SPEED	CFM [L/s] AIR DELIVERY						
				EXTERNAL STATIC PRESSURE INCHES WATER COLUMN [kPa]						
				0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]
RGRC-04 EMAES	11 x 7 [279 x 178]	1/2 [373]	LOW	805 [380]	780 [368]	760 [358]	720 [340]	685 [323]	645 [304]	605 [285]
			MED-LO	920 [434]	885 [417]	850 [401]	810 [382]	775 [365]	730 [344]	690 [325]
			MED-HI	1140 [538]	1110 [524]	1085 [512]	1045 [493]	1010 [476]	950 [448]	890 [420]
			HIGH	1360 [642]	1320 [623]	1280 [604]	1235 [583]	1195 [564]	1140 [538]	1080 [500]
RGRC-06 EMAES	11 x 7 [279 x 178]	1/2 [373]	LOW*	770 [363]	740 [349]	710 [335]	675 [318]	645 [304]	605 [285]	570 [269]
			MED-LO	880 [415]	845 [398]	815 [384]	790 [373]	760 [358]	715 [337]	670 [316]
			MED-HI	1060 [500]	1025 [483]	990 [467]	960 [453]	925 [436]	880 [415]	835 [394]
			HIGH	1260 [594]	1215 [573]	1175 [554]	1135 [535]	1100 [519]	1040 [491]	985 [465]
RGRC-07 EMAES	11 x 7 [279 x 178]	1/2 [373]	LOW*	780 [368]	745 [351]	710 [335]	675 [318]	640 [302]	595 [281]	555 [261]
			MED-LO	880 [415]	850 [401]	825 [389]	785 [370]	750 [354]	702 [331]	655 [309]
			MED-HI	1090 [514]	1050 [495]	1010 [477]	970 [458]	925 [436]	875 [413]	825 [389]
			HIGH	1300 [613]	1255 [592]	1210 [571]	1160 [547]	1110 [524]	1055 [498]	1005 [474]
RGRC-07 ERBGS	11 x 10 [279 x 254]	1/2 [373]	LOW*	1115 [526]	1091 [515]	1067 [504]	1044 [493]	1020 [481]	984 [464]	948 [447]
			MED-LO	1326 [626]	1315 [621]	1304 [615]	1270 [599]	1236 [583]	1197 [565]	1157 [546]
			MED-HI	1535 [724]	1512 [714]	1488 [702]	1453 [686]	1418 [669]	1373 [648]	1327 [626]
			HIGH	1765 [833]	1723 [813]	1681 [793]	1639 [774]	1596 [753]	1544 [729]	1492 [704]
RGRC-09 EZAJS	12 x 11 [305 x 279]	3/4 [559]	LOW*	1199 [566]	1183 [558]	1167 [551]	1132 [534]	1097 [518]	1062 [501]	1026 [484]
			MED-LO	1442 [681]	1416 [668]	1390 [656]	1360 [642]	1329 [627]	1288 [608]	1247 [589]
			MED-HI	1666 [786]	1637 [773]	1606 [758]	1554 [733]	1501 [708]	1456 [687]	1407 [664]
			HIGH	2040 [963]	1993 [941]	1946 [918]	1888 [891]	1829 [863]	1758 [830]	1686 [796]
RGRC-10 EZAJS	12 x 11 [305 x 279]	3/4 [559]	LOW*	1230 [580]	1205 [569]	1160 [547]	1155 [545]	1130 [533]	1090 [514]	1050 [496]
			MED-LO	1490 [703]	1445 [682]	1405 [663]	1375 [649]	1350 [637]	1295 [611]	1240 [585]
			MED-HI	1710 [807]	1665 [786]	1620 [765]	1570 [741]	1540 [727]	1475 [696]	1410 [665]
			HIGH	2010 [949]	1955 [923]	1900 [897]	1855 [875]	1810 [854]	1710 [807]	1610 [760]

*Not applicable to heating speed.

NOTE: Unit tested without filters

NOTE: CFM values represent furnace-only airflow ratings

[] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY

Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

Primary and Secondary Heat Exchanger.....Limited Lifetime
 Conditional Parts (Registration Required)Ten (10) Years
 Parts.....Five (5) Years

For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

ACCESSORIES—UPFLOW

VENT TERMINATION KITS CONCENTRIC: HORIZONTAL/ VERTICAL =

RXGY-E03A (US & Canadian Installations)

HORIZONTAL TWO PIPE: RXGY-D02, RXGY-D03, RXGY-D04
(US Installations)

RXGY-D02A, RXGY-D03A, RXGY-D04A (Canadian Installations)

RXGY-G02 (US Only)

NEUTRALIZER KIT: RXGY-A01

FOSSIL FUEL KIT: RXPF-F01, RXPF-F02 (TVA)

RETURN AIR PLENUM: RXGR-C17B
RXGR-C21B
RXGR-C24B

EXTERNAL BOTTOM FILTER RACK: RXGF-CB

EXTERNAL SIDE FILTER RACK: RXGF-CA

FOR HIGH ALTITUDES:

NOTE: For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for altitude. See Installation Instructions for more information. This optional method may **NOT** be used for U.S. installations.

[] Designates Metric Conversions

FILTER RACK FILTER SIZES* INCHES [mm]		
MODEL	RXGF-CB (BOTTOM)	RXGF-CA (SIDE)
RGRC-04	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]
RGRC-06	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]
RGRC-07EM	15 ³ / ₄ x 25 [400 x 635]	15 ³ / ₄ x 25 [400 x 635]
RGRC-07ER	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]
RGRC-09	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]
RGRC-10	19 ¹ / ₄ x 25 [489 x 635]	15 ³ / ₄ x 25 [400 x 635]

*Filter racks are shipped without filters.

Filters shipped with furnace may be used or a suitable 1" [25.4 mm] filter.

PLENUM DATA FOR "A" COILS

Plenum adapters are required in some instances for use on upflow applications when plenum and furnace size do not match.

FURNACE WIDTH IN. [mm]	PLENUM WIDTH IN. [mm]	PLENUM ADAPTER UPFLOW	COIL PLENUM
14 [356]	16 ¹ / ₄ [413]	RXAA-C171	RXAL-B16BU
14 [356]	20 ¹ / ₄ [514]	RXAA-C172	RXAL-B20BU
17 ¹ / ₂ [445]	16 ¹ / ₄ [413]	RXAA-C185	RXAL-B16BU
17 ¹ / ₂ [445]	20 ¹ / ₄ [514]	RXAA-C173	RXAL-B20BU
17 ¹ / ₂ [445]	21 ⁵ / ₈ [549]	RXAA-C187	RXAL-B21BU
17 ¹ / ₂ [445]	25 ¹ / ₄ [641]	RXAA-C174	RXAL-B25BU
21 [533]	25 ¹ / ₄ [641]	RXAA-C175	RXAL-B25BU
21 [533]	22 ¹ / ₄ [565]	RXAA-C176	RXAL-B22BU
21 [533]	21 ⁵ / ₈ [549]	RXAA-C188	RXAL-B21BU

Note: See Form Number C22-206 for MultiFlex® coil data.

NOTES

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

**Ruud Heating,
Cooling and
Water Heating**

P.O. Box 17010, Fort Smith, AR 72917



"In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice."