

BLOCK

LOT

ADDRESS (SITE)

PERMIT NO.

RECEIVED



CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI and VII

DIV. OF INSPECTION

I. IDENTIFICATION

1. Proposed Work-site at: 656 HARBOR ROAD

2. Name of Owner in Fee: JOE NIEMCZYK

Address: 656 HARBOR ROAD - BRICK, N.J. 08784

3. Ownership in Fee: Public ☐ Private ☒

4. Principal Contractor: JOE NIEMCZYK

Address: 656 HARBOR ROAD, BRICK, N.J. 08784

License No. OR, if new home, Builder Reg. No. N/A Exp. Date N/A

Federal Emp. No. N/A Social Security No. [REDACTED]

5. Architect or Engineer: LORD ENGINEERING GROUP Tel. (908) 367-1650

Address: 161 ROUTE 9, LAKEWOOD, N.J. 08701

6. Responsible Person In Charge of Work: JOE NIEMCZEK

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	\$ 347 -	25 -	459 -
2. Electrical			
3. Plumbing	248 -		
4. Fire Protection	145 -		33 -
5. Other			
6. Subtotal	\$ 765 -		
Less 20% for State Plan Review	77 -	46 -	
7. Subtotal	\$ 29 -	68 -	
8. DCA Training Fee			
9. Subtotal	\$ 77 -	46 -	
10. Cert. of Occupancy			
Other	2 PAID \$30.00		
TOTAL	\$ 978 -	551 -	

VI. BUILDING/SITE CHARACTERISTICS

1. Number of Stories	2	268	
2. Height of Structure	20' 11"		
Area—Largest Floor	2423	sq. ft.	4436
Building Area—All Floors	2504	sq. ft.	
5. Volume of Structure	16265	cu. ft.	42,400
6. Construction Classification	5B		
7. Total Land Area Disturbed	1900	sq. ft.	18265
8. Flood Hazard Zone	A5		
se Flood Elevation	6.10	ft.	2413.5
atlands	yes		
(no)			
11. Fire Grading	1 HR.		
12. Max. Live Load	40 PSF		
13. Max. Occupancy Load	12		

II. PROPOSED WORK

1. ☐ Minor Work (single trade)
2. ☐ Small Job (\$5,000 and no prior approvals)
3. ☒ New Building
4. ☐ Addition
5. ☐ Alteration
6. ☒ Fire Protection
7. ☒ Plumbing
8. ☒ Electrical
9. ☐ Asbestos Abatement
10. ☐ Demolition

TOTAL COSTS

Est. Cost

210,000

OPTIONAL (for office use only)

Plans Rec'd By	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates	Re-viewer
			2-3-9		8/18/95	gc
			10/15/95	gc	8/17/95	gc
			1-30-95	gc	8/21/95	gc
			2-23-95	gc	3/17/95	gc
GC	1/24/95		1/24/95	gc		

III. DO YOU WANT: (optional) 1. ☐ Partial Releases 2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/Dumbwaiters/Moving Walks
2. ☐ High Pressure Boilers
3. ☐ Pressure Vessels
4. ☐ Refrigeration Systems
5. ☐ Cross-Connections/Backflow Preventers
6. ☐ Hazardous Uses/Places of Assembly
7. ☐ Sprinklers
8. ☐ Smoke Control Systems in Open Wells
9. ☐ Underground Storage Tanks

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL

1. ☐ Hotels (R-1)
2. ☐ Multi-Family (R-2)
3. ☐ Two-Family (R-3) BOCA
4. ☐ Two-Family (R-4) CABO
5. ☒ One-Family (R-3) BOCA
6. ☐ One-Family (R-4) CABO
- No of dwelling units:
- Before Construction 1
- After Construction 1
- Net gain or loss 0

B. NON-RESIDENTIAL

1. State Specific Use:
2. Use Group:
3. Change in Use Group. Indicate Former:

LDS BR 10210865

CERTIFICATION IN LIEU OF OATH

I OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____

Date

1-9-95

II. AGENT SECTION

(to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☐ Check if contractor.

Agent Name _____

Address _____

Telephone (_____) _____

Signature _____

Date _____

OFFICE DATE RECEIVED: _____

COMMENTS

VII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL	
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date
☐ Planning Board								
☐ Zoning Board								
☐ Sewer Authority								
☐ Water Authority								
☐ Fire Department								
☐ Police Department								
☐ Health Department								
☐ Oil Conservation								
☐ N.J. Dept. of Community Affairs								
☐ N.J. Department of Transportation								
☐ N.J. Dept. of Environmental Protection								
☐ Utility Dig No.								
☐ Other								
☐								
☐								
☐								

**IMPORTANT
A.H.B.T. - EXEMPT**

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional)

Name of Code & Edition	Name of Code & Edition	Other
Building _____	Energy _____	
Electrical _____	Barrier Free _____	
Plumbing _____	Flood Hazard _____	
Fire Protection _____	As Built Elevation Cert. _____	
Mechanical _____	Other _____	

X. CERTIFICATES ISSUED (office use only)

DATE EXPIRED

☐ Temporary Certificate of Occupancy	No. _____	_____
☐ Temporary Certificate of Occupancy	No. _____	_____
☐ Continued Certificate of Occupancy	No. _____	_____
☐ Certificate of Occupancy	No. _____	_____
☐ Certificate of Approval	No. _____	_____
☐ None		

INSPECTOR: *George Riva*

JOB:

SECTION: *I*DATE: *8/25/95*TYPE OF WORK: *Final Eng.*WEATHER: *Sunny*LOCATION: *656 Harbor Rd*TEMPERATURE: *75°*BLOCK: *982*LOT: *29*

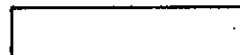
**ENGINEERING RECOMMENDATIONS FOR
CERTIFICATE OF OCCUPANCY
INSPECTION CHECK LIST**

ITEMS TO BE COMPLETED	COMPLETED	DEFICIENT
1. Driveway	✓	
2. Grading	✓	
3. Sidewalk	✓	
4. Road Pavement	✓	
5. Landscaping & Sodding	✓	
6. Clean-up Procedures	✓	
7. Note on going construction in immediate area	✓	
8. Safety	✓	

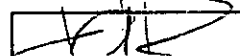
COMMENTS REFERENCING ITEM NUMBER:

Requires Elevation Certificate

RECOMMENDATIONS:

☐ TEMP. C.O.☒ FINAL C.O.☐ DETAILED REINSPECTION☐ HOLD INSPECTION UNTIL LOT ELEVATION FIELD VERIFIED

PLANNING BOARD ENGINEER



MUNICIPAL ENGINEER

I, _____, Authorized representative of _____, hereby acknowledge the above deficiencies, and further realize that the Certificate of Occupancy will be conditioned upon the acceptable resolution thereof within _____ days of the issuance of Certificate of Occupancy.



CONSTRUCTION PERMIT

Date Issued

Control #

Permit #

11-9-94

3233-94

IDENTIFICATION Block 982 Lot 29Work Site Location 656 Harbor Rd. Contractor sameAddress same #0002#Owner in Fee Unseki Trianaz 3233#Address same BLOCKTele. () Exp. Date 982 #

Lic. No. or Bldrs. Reg. No. Federal Emp. No. LOT

Tele. () or Social Security No. 29 #

is hereby granted permission to perform the following work:

☒ BUILDING ☒ PLUMBING ☐ OTHER
☐ ELECTRICAL ☒ FIRE PROTECTION

DESCRIPTION OF WORK:

addn. and fence

NOTE: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$ 40,900.

CONSTRUCTION OFFICIAL

PAYMENTS (Office Use Only)		
Building	64	10.00
Plumbing	06	16.00
Electrical		16.00
Fire Protection	46	11.00
Other	21	6.00
Other	21	10.00
DCA Training Fee	6	10.00
Cert. of Occ.	20	5.00
Other	20	10.00
Total	40,900	18.00
Check No.	115	0.00
Cash		
Collected By:		



PERMIT UPDATE

Date Update Issued

Control #

Permit #

Date Permit Issued

8/17/95

157-95

IDENTIFICATION Block

982

Lot

29

Work Site Location

567 1st St

Contractor

Address

Owner in Fee

1111 1st St

Address

Tele. ()

Lic. No. or Bldrs. Reg. No.

Tele. ()

Federal Emp. No.

or Social Security No.

Is hereby granted permission to perform the following work:

☐ BUILDING

☐ PLUMBING

☐ Other

☐ ELECTRICAL

☐ FIRE PROTECTION

DESCRIPTION OF WORK:

add 1 floor
100 - fireplace

Estimated Cost of Work \$

100

PAYMENTS (Office Use Only)

Building

000.00

Plumbing

000.00

Electrical

000.00

Fire Protection

33.00

Other

33.00

Other

33.00

DCA Training Fee

000.00

Cert. of Occ.

000.00

Other

14.20

Total

33.00

Check No.

4 3463

Cash

Collected By:

10



**PLUMBING
SUBCODE
TECHNICAL SECTION**



Date Received
Date Issued 2-3-95
Control #
Permit # 157-95

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 902
Work Site Location 656 HARBOR ROAD
Owner in Fee JOE NIEMCZEW
Address 656 HARBOR ROAD
Tele. [REDACTED]
Contractor JERSEY COAST MECH INC
Address 130 ST LAWRENCE BLVD
BRICK NJ 08723
Tele. (908) 477-6007
Lic. No. 8798
Federal Emp. No. 222-969-044 or Social Security No. _____

B. PLUMBING CHARACTERISTICS

Use Group Present R-3 Proposed X R-3
Building Sewer Size 4" DRAIN / PUBLIC SEWER
Water Service Size 1" / PUBLIC WATER
Estimated Cost of Plumbing Work \$ 5000.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW:	INSPECTIONS:	Dates (Month/Day)
	Type:	Failure Failure Approval Initial
☐ No Plans Required	Slab	
☐ Joint Plan Review Required:	Rough	
☐ Bldg. ☐ Elec. ☐ Fire	Water	
☐ Plumb. Plans Approved	Sewer	
Date: _____	Fixtures <u>15</u>	
Approved by: _____	Gas Equipment <u>644</u>	
	Gas Final	
SUBCODE APPROVAL:	Solar	
☐ CO ☐ CCO ☐ CA	TCO	
Date: _____		

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

[Signature]
Licensed Plumbing Contractor ☐ Exempt Applicant

[Signature]
Signature-Contractor Seal

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
1	Water Closet	14
2	Urinal/Bidet	14
3	Bath Tub	21
2	Lavatory	14
0	Shower	
0	Floor Drain	
0	Sink	7
0	Dishwasher	7
0	Drinking Fountain	
2	Washing Machine	7
1	Hose Bibb	14
1	Gas Piping	13
1	Fuel Oil Piping	
2	Water Heater	23
1	Steam-Boiler	50
0	Hot Water Boiler	
0	Sewer Pump	
0	Interceptor/Separator	
0	Backflow Preventer	
0	Greasetrap	
2	Water Cooled A/C	
1	or Refrigeration Unit	50
1	Sewer Connection	
1	Water Service Connection	
2	Gas Service Connection	
0	Active Solar System	
5	Other YEARS	10

Paid ☐ Check # _____ Minimum Fee \$ _____	Administrative Surcharge \$ _____
Collected by: _____ TOTAL \$ 248.00	

6-9-95 - 190 GAS TEST - WASHER AND
NOT BEING INSTALLED

shower stall

Fixtures in the house are

2 - WC

2 - LAU

1 - SHOWER

2 - TUBS

1 - KS

1 - Dishwasher

8-21-95 -

Backflow device for whirlpool

1 - HW/H

1 - Furnace

NO - WASHING MACHINE

Change Contractor



PLUMBING
SUBCODE
TECHNICAL SECTION



Date Received
Date Issued
Control #
Permit #

8-8-95
2-3-95
157-95

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO. 1-800-272-1000.

Block 28
Work Site Location 454 Hudson Road
Owner in Fee Joe Nisimezek
Address 454 Haden Rd
Brock NY.
Tele. [REDACTED]
Contractor VALENTIN P/L & HTG
Address 250 STEVEN RD
PISCATAWAY
Tele. (908) 752-1147
Lic. No. 4024
Federal Emp. No. [REDACTED] or Social Security [REDACTED]

B. PLUMBING CHARACTERISTICS

Use Group Present [REDACTED] Proposed [REDACTED]
Building Sewer Size [REDACTED] Public Sewer [REDACTED] Private Septic [REDACTED]
Water Service Size [REDACTED] Public Water [REDACTED] Private Well [REDACTED]
Estimated Cost of Plumbing Work \$ \$500-

JOB SUMMARY (Office Use Only)

PLAN REVIEW:	INSPECTIONS	Dates (Month/Day)			
	Type:	Failure	Failure	Approval	Initial
☐ No Plans Required	Slab				
☐ Joint Plan Review Required:	Rough				
☐ Bldg. ☐ Elec.	Water				
☐ Fire ☐ Elevator	Sewer				
☐ Plumb. Plans Approved	Fixtures				
Date: _____	Gas Equipment				
Approved by: _____	Gas Piping				
	Solar				
	TCO				
Subcode Approval: ☒ CO ☐ CC ☐ I ☐ H ☐ A	CO				
Approved By: <u>[Signature]</u>	2-21-95				
Date: <u>8-21-95</u>					

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

[Signature]
Signature—Contractor Seal

☒ Licensed Plumbing Contractor ☐ Exempt Applicant

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
2	Water Closet	
0	Urinal/Bidet	
2	Bath Tub	
2	Lavatory	
0	Shower	
1	Floor Drain	
1	Sink	
1	Dishwasher	
1	Drinking Fountain	
1	Washing Machine	
2	Hose Bibb	
0	Water Heater	
0	Fuel Oil Piping	
0	Gas Piping	
0	Steam Boiler	
0	Hot Water Boiler	
0	Sewer Pump	
0	Interceptor/Separator	
0	Backflow Preventer	
2	Greasetrap	
1	Water Cooled A/C	
1	or Refrigeration Unit	
1	Sewer Connection	
1	Water Service Connection	
0	Active Solar System	
5	Other <u>6m/15</u>	

Paid ☐ Check # _____	Administrative Surcharge \$ _____
DCA Training Fee \$ _____	Minimum Fee \$ _____
Collected by: _____	TOTAL \$ _____



**PLUMBING
SUBCODE
TECHNICAL SECTION**



Date Received
Date Issued 2-3-95
Control #
Permit # 157-95

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 902

Work Site Location 656 HARBOR ROAD Lot 29

Owner in Fee DE NIEMCZEK
Address 656 HARBOR ROAD
BRIDGE PL

Contractor JERSEY EAST MECH INC
Address 130 STANFORD BLVD
BRIDGE NJ 08722

Tele (908) 477-6007

Lic. No. 8798
Federal Emp. No. 222-969-044 or Social Security No.

B. PLUMBING CHARACTERISTICS

Use Group Present R-3 Proposed X R-3
Building Sewer Size 4" MAIN / PUBLIC WATER
Water Service Size 1" / PUBLIC WATER
Estimated Cost of Plumbing Work \$ 5000.00

JOB SUMMARY (Office Use Only)	
PLAN REVIEW:	INSPECTIONS:
☐ No Plans Required	Type: Failure Failure Approval Initial
☐ Joint Plan Review Required:	Slab
☐ Bldg. ☐ Elec. ☐ Fire	Rough
☐ Plumb. Plans Approved	Water
Date:	Sewer
Approved by:	Fixtures
	Gas Equipment
	Gas Final
	Solar
	TCO
SUBCODE APPROVAL:	
☐ CO ☐ CCO ☐ CA	
Approved by:	
Date:	

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

☒ Licensed Plumbing Contractor ☐ Exempt Applicant

Signature-Contractor Seal
FREDERICK W. LEWIS
PLUMBER & PIPE FITTER
No. 8798

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
2	Water Closet	14
2	Urinal/Bidet	14
2	Bath Tub	21
2	Lavatory	14
0	Shower	
0	Floor Drain	
0	Sink	7
0	Dishwasher	7
0	Drinking Fountain	7
2	Washing Machine	14
0	Hose Bibb	15
0	Gas Piping	25
0	Fuel Oil Piping	50
1	Water Heater	
2	Steam-Boiler FURN	
0	Hot Water Boiler	
0	Sewer Pump	
0	Interceptor/Separator	
0	Backflow Preventer	
0	Greasetrap	
2	Water Cooled A/C	
1	or Refrigeration Unit	50
1	Sewer Connection	
1	Water Service Connection	
2	Gas Service Connection	
0	Active Solar System	
5	Other YEARS	10

Administrative Surcharge	\$
Paid ☐ Check #	\$
Minimum Fee	\$
Collected by: TOTAL	\$ 248.00



FIRE PROTECTION SUBCODE TECHNICAL SECTION



Date Received
Date Issued
Control #
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 0902 Lot 129
Work Site Location 656 HARBOUR ROAD
Owner in Fee JOE NIELMEIER
Address 656 HARBOUR ROAD
City BRIDGEVIEW State NEW JERSEY
Tele. (201) 364-1626
L.C. No. N/A
Federal Emp. No. N/A or Social Security No. [REDACTED]

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present P-3 Proposed P-3 & 33 for fire
Const. Class. Present 5-B Proposed 5-B
Heating Systems ☒ New ☐ Existing
Type: ☒ Gas ☐ Oil ☐ Electrical ☐ Solar
Location: AS SHOWN ON FIRE PLAN
Total Est. Cost of Fire Prot. Work \$ 4500.00 ☐ Other 760

JOB SUMMARY (Office Use Only)

PLAN REVIEW:	INSPECTIONS:	Dates (Month/Day)
	Type:	Failure Failure Approval Initial
☐ No Plans Required	Suppression Test	
☐ Joint Plan Review Required:	Fire Alarm Test	
☐ Bldg. ☐ Plumb.	Smoke Test	
☐ Elec. ☐ Elevator	Mechanical	
☒ Fire Plans Approved	TCO	
Date: <u>13/15/98</u>	Other <u>8/10/95 SD not worked</u>	
Approved by: <u>[Signature]</u>	Other <u>Start - N GAS Model</u>	
SUBCODE APPROVAL:	Other	
☒ CO ☐ CCO ☐ CA		
Date: <u>8/17/95</u>		
Approved by: <u>[Signature]</u>		

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the agent or owner of record and am authorized to make this application.

SIGNATURE [Signature]

D. TECHNICAL SITE DATA Single family home
level 2 bedroom
STD are interconnected

Description of Work	Number	FEE (Office Use Only)
Water Supply Source	<u>N/A</u>	
Method of Valve Supervision	<u>N/A</u>	
Local Alarm Supervision	<u>N/A</u>	
Central Supervision	<u>N/A</u>	
Proprietary Supervision	<u>N/A</u>	
Flammable Liquid Storage Tanks	<u>N/A</u>	
Combustible Liquid Storage Tanks	<u>N/A</u>	
L.P.G. Storage Tanks	<u>N/A</u>	
L.N.G. Storage Tanks	<u>N/A</u>	
Wet Sprinkler Heads	<u>N/A</u>	
Dry Sprinkler Heads	<u>N/A</u>	
TOTAL	<u>6</u>	<u>46</u>
Smoke Detectors	<u>N/A</u>	
Heat Detectors	<u>N/A</u>	
TOTAL	<u>0</u>	
Stand Pipes	<u>N/A</u>	
Kitchen Hood Exhaust Systems	<u>N/A</u>	
Pre-Engineered Systems	<u>N/A</u>	
CO ₂ Suppression	<u>N/A</u>	
Halon Suppression	<u>N/A</u>	
Foam Suppression	<u>N/A</u>	
Dry Chemical	<u>N/A</u>	
Wet Chemical	<u>N/A</u>	
Gas or Oil Fired Appliance	<u>3</u>	<u>99</u>
OTHER		

Paid ☐ Check # _____	Administrative Surcharge \$ _____
Collected by: _____	Minimum Fee \$ _____
	DCA Training Fee \$ _____
	TOTAL FEE \$ <u>145.00</u>

TOWNSHIP OF BRICK

ZONING PERMIT

Date of Issue: Jan. 18, 1995

1995 **Z** 0038

Block 982 Lot 29 Zone R-10

Property Address: 656 Harbor Road

Owner: Joe Niemczyk (Phone) 

Applicant: same (Phone): same

Use: Single-family dwelling.

Proposed Construction (if any): Demolish termite-damaged house and build new
single-family dwelling.

Conditions:

Please note that Building Permits, as well as Zoning Permits, must be obtained prior to any construction.

This permit shall be null, void and of no effect if any of the facts contained in the application upon the basis of which this permit was granted are false or untrue in any material respect. This permit shall expire one (1) year after the date of issuance if the use or substantial construction has not been commenced.

Sean Kirney

Land Use Officer

BRICK UTILITIES
THE BRICK TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

COMMISSIONERS

1551 Highway 88 West • Brick, New Jersey 08724-2399
(908) 458-7000 • FAX (908) 458-7725

KEVIN F. DONALD
Executive Director

JOHN C. EKARIUS
Chairman

THOMAS G. MAIORINE
Vice Chairman

PATRICK L. BOTTAZZI
Secretary

WILLIAM MILLER
Treasurer

BRIAN MACFIE
Asst. Sec./Treas.

January 4, 1995

Mr. Joseph Niemczyk
17 West Scott Avenue
Rahway, NJ 07065

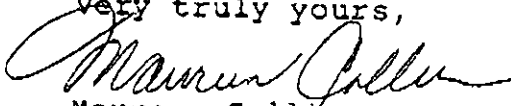
Subject: Account No.: N789604
Service Location: 656 Harbor Road
Block: 982 Lot: 29
Building to be Demolished

Dear Mr. Niemczyk:

This is to certify that the water service at the subject property has been terminated and the water metering system has been removed.

Please note that it is the responsibility of the homeowner to insure that the sewer line is properly capped so that debris from the demolition procedure does not enter the sewer system.

Very truly yours,



Maureen Collier
Customer Accounts Division

© Bell Atlantic

Bell Atlantic - New Jersey, Inc.
980 Hooper Avenue
Toms River, New Jersey 08753
908 244-9417
FAX 908 244-1268

William J. Perry, Sr.
Office Admin./Right of Way
Eastern Shore

January 4, 1995

Mr. William Burke
Lord Engineering Group
761 U.S.Hwy.#9
Lakewood, N.J. 08701

Dear Mr. Burke,

This letter is to confirm Bell Atlantic removed our service wires from #656 Harbor Road., Brick, N.J. on December 5, 1994. Our service order number was C18239FD for this job function.

Should you have any questions give me a call on 908-244-9417.

Very Truly Yours,



William J. Perry Sr.
Office Admin./Right of Way
Engineering Department

WJP/sw
file



J.J. MOUNT SERV

Post-It® Fax Note 7671		Date 1-5	# of pages 1
To Bill Burke	From Dave Dunne		
Co./Dept. LDED Eng.	Co. NJN 6		
Phone #	Phone # 1800-221-0031		
Fax # 367-1774	Fax # 370-4564		

January 5, 1995

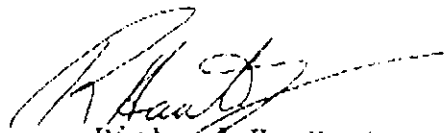
Ms C. Lombardi
51 Fitzrandolph Road
West Orange NJ 07052

Re: 656 Harbor Road - Brick Town
Retired service at main

Dear Ms. Lombardi:

Per your request, New Jersey Natural Gas Company has investigated the above referenced property for the presence of our natural gas facilities. The facilities (if any) have been permanently retired at the main, which may be in the road or behind the curb.

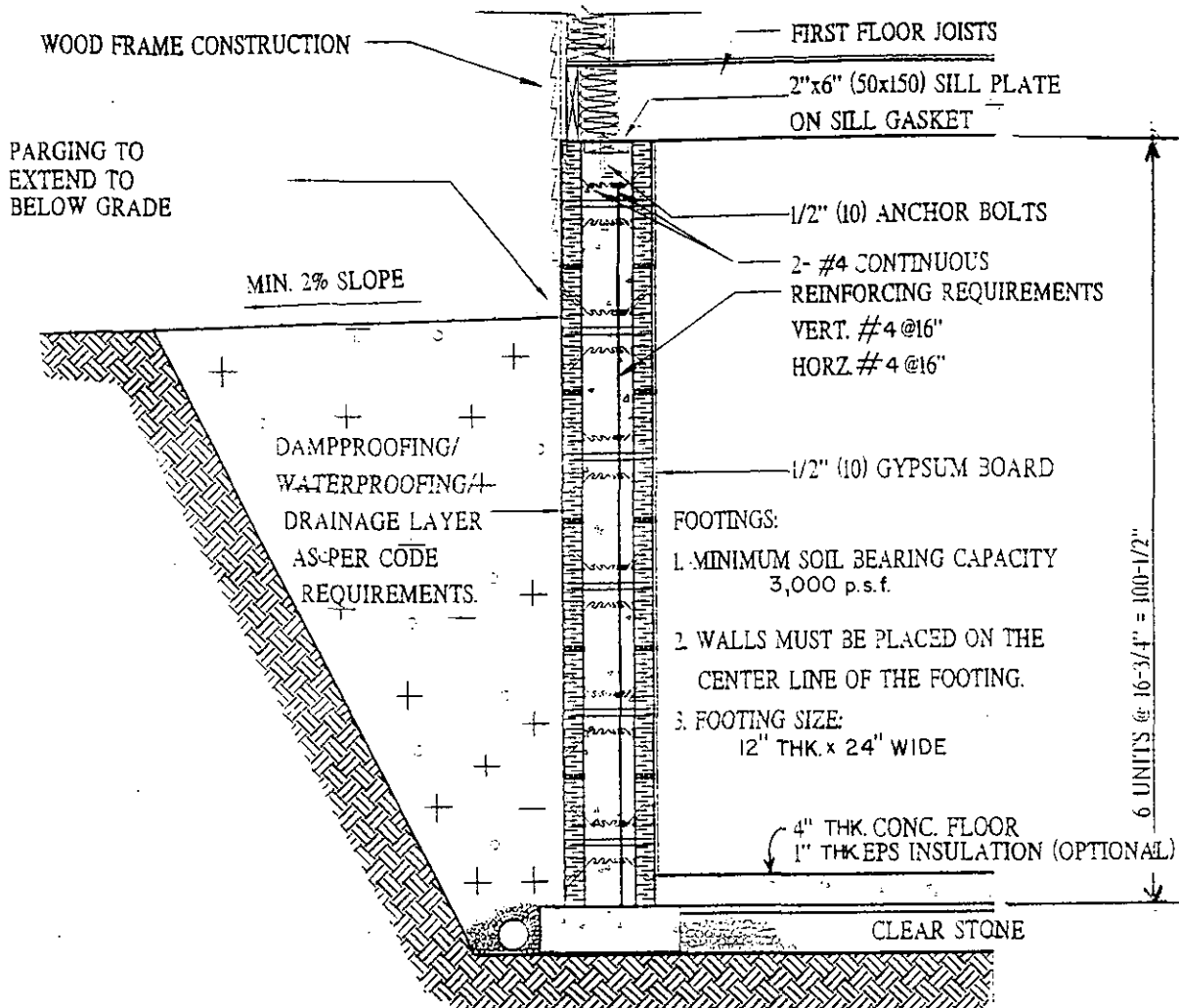
If you would like to have the gas service restored, you will need to contact one of our representatives at least six (6) weeks prior to the estimated reconnection date. This is necessary for us to obtain the permits required to restore service. The service will be installed in a straight line, perpendicular from the curb line to the meter location.


Richard H. Hauter
Distribution Field
Supervisor
Ocean Division

RE:drd

cc: R. Gallo
file





ASSUMPTIONS FOR DESIGN OF BELOW GRADE WALLS (BASEMENT WALLS)

1. REFER TO GENERAL NOTES ON PAGE 51.
2. REINFORCING TO BE PLACED ON INSIDE WALL FACE WITH 3/4" (20mm) CLEAR COVER TO HORIZONTAL BARS, AND 1-3/16" (30mm) CLEAR COVER TO VERTICAL BARS.
3. WALL IS Laterally SUPPORTED AT TOP AND BOTTOM.
4. WALL DESIGNED FOR AN EQUIVALENT FLUID PRESSURE OF 30 lb/cu.ft. (480 kg/cu.m) AS PER NATIONAL BUILDING CODE CLAUSE 9.4.4.6.
5. DESIGN ASSUMES FREE DRAINED GRANULAR EARTH MATERIAL FOR BACKFILL AND AVERAGE STABLE SOIL CONDITIONS.
6. WALL IS NOT DESIGNED FOR ANY SURCHARGE LOAD PLACED ADJACENT TO THE WALL.
7. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE - 3000 psi (20mPa) @ 28 DAYS.
8. REINFORCING STEEL TO CONFORM TO CSA G30.12 GRADE 400.
9. FOUNDATION WALLS CONTAINING OPENINGS MORE THAN 4' (1200) IN LENGTH OR IN MORE THAN 25% OF ITS LENGTH, SHALL BE CONSIDERED Laterally UNSUPPORTED AND MUST BE REINFORCED TO WITHSTAND THE EARTH PRESSURE. ADDITIONAL REINFORCING REQUIRED MUST BE DETERMINED ON AN INDIVIDUAL BASIS. HOUSE WIDTH - 9.6m (31'-6") - 0.6m (2') OVERHANG, BEARING WALL ON CENTERLINE OF HOUSE WHICH SUPPORTS FIRST AND SECOND FLOORS.

ROOF LOADS

DL=0.72kPa (15psf)

LL=2.0kPa (40psf)x0.8=1.6kPa (33.4psf)

TRIBUTORY WIDTH=5.4m (17.7')

FIRST FLOOR LOADS

DL=0.72kPa (15psf)

LL=1.9kPa (40psf)

TRIBUTORY WIDTH=4.8m (15.7)/2=2.4m (8')

SECOND FLOOR LOADS

DL=0.72kPa (15psf)

LL=1.4kPa (30psf)

TRIBUTORY WIDTH=4.8m (15.7)/2=2.4m (7.8')

AAB

BUILDING SYSTEM

TYP. FOUNDATION - WOOD FRAME / AAB CONSTRUCTION

▲ ALTERNATE #1 TO 2-10-95 FND. PLANS

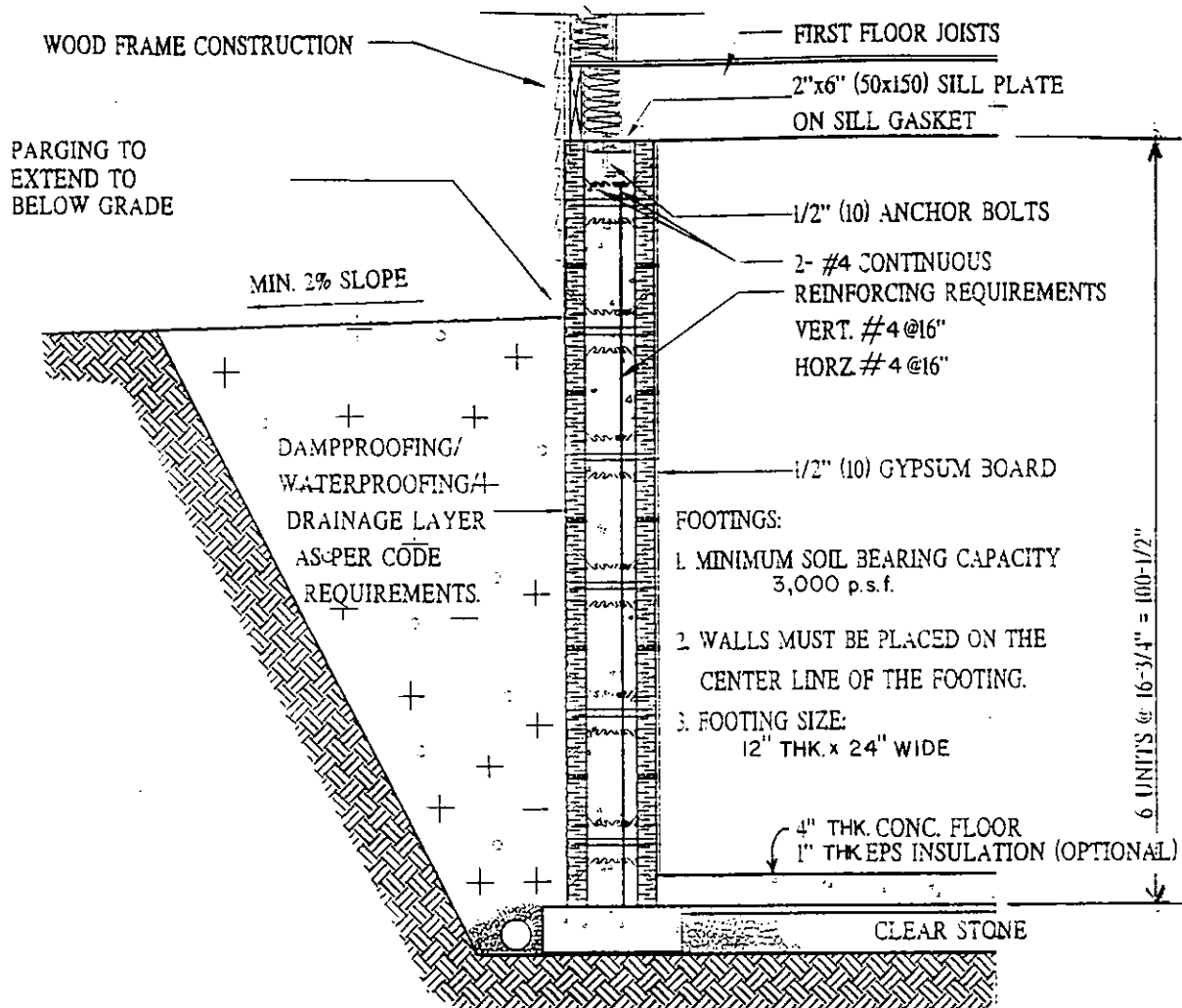
JWL #94050 SHEET 1/2

JOHN W. LORD ASSOCIATES - T/A
LORD ENGINEERING GROUP
STRUCTURAL
MECHANICAL
ELECTRICAL
CIVIL

PROFESSIONAL ENGINEERS, PLANNERS,
AND LAND SURVEYORS
781 RIVER ROAD (Hwy 9-1)
LOWER LEVEL, SUITE 8
LAKEWOOD, NEVADA 89006
PHONE 908-727-1800
FAX 908-727-1778

JOHN W. LORD, P.E., P.L.S.
N.J. P.E. LICENSE NO. 12485
N.J. P.L.S. LICENSE NO. 03759

DATE



ASSUMPTIONS FOR DESIGN OF BELOW GRADE WALLS (BASEMENT WALLS)

1. REFER TO GENERAL NOTES ON PAGE 51.
 2. REINFORCING TO BE PLACED ON INSIDE WALL FACE WITH 3/4" (20mm) CLEAR COVER TO HORIZONTAL BARS, AND 1-3/16" (30mm) CLEAR COVER TO VERTICAL BARS.
 3. WALL IS Laterally SUPPORTED AT TOP AND BOTTOM.
 4. WALL DESIGNED FOR AN EQUIVALENT FLUID PRESSURE OF 30 lb/cu.ft. (480 kg/cu.m) AS PER NATIONAL BUILDING CODE CLAUSE 9.4.4.6.
 5. DESIGN ASSUMES FREE DRAINED GRANULAR EARTH MATERIAL FOR BACKFILL AND AVERAGE STABLE SOIL CONDITIONS.
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 8. REINFORCING STEEL TO CONFORM TO CSA G30.12 GRADE 400.
 9. FOUNDATION WALLS CONTAINING OPENINGS MORE THAN 4' (1200) IN LENGTH OR IN MORE THAN 25% OF ITS LENGTH, SHALL BE CONSIDERED Laterally UNSUPPORTED AND MUST BE REINFORCED TO WITHSTAND THE EARTH PRESSURE. ADDITIONAL REINFORCING REQUIRED MUST BE DETERMINED ON AN INDIVIDUAL BASIS.
- HOUSE WIDTH - 9.6m (31'-6") + 0.6m (2') OVERHANG, BEARING WALL ON CENTERLINE OF HOUSE WHICH SUPPORTS FIRST AND SECOND FLOORS.
- | | | |
|--|--|--|
| ROOF LOADS | FIRST FLOOR LOADS | SECOND FLOOR LOADS |
| DL=0.72kPa (15psf) | DL=0.72kPa (15psf) | DL=0.72kPa (15psf) |
| LL=2.0kPa (40psf)x0.8=1.6kPa (33.4psf) | LL=1.9kPa (40psf) | LL=1.4kPa (30psf) |
| TRIBUTORY WIDTH-5.4m (17.7') | TRIBUTORY WIDTH-4.8m (15.7')/2=2.4m (8') | TRIBUTORY WIDTH-4.8m (15.7')/2=2.4m (7.8') |

AAB

BUILDING SYSTEM

TYP: FOUNDATION - WOOD FRAME / AAB CONSTRUCTION

△ ALTERNATE #1 TO 2-10-95 FND. PLANS

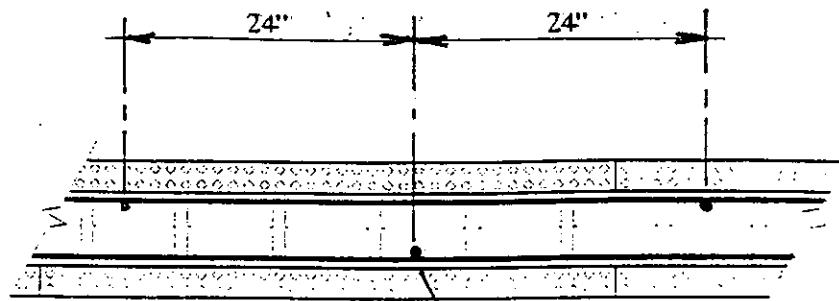
JWL #94050 SHEET 1/2

JOHN W. LORD ASSOCIATES - TA-
LORD ENGINEERING GROUP
STRUCTURAL
MECHANICAL
MUNICIPAL
CIVIL

PROFESSIONAL ENGINEERS, PLANNERS,
AND LAND SURVEYORS
781 RIVER ROAD (HWY 9-1)
LOWER LEVEL - SUITE 8
LAKEWOOD, NEW JERSEY 08708
PHONE: 908-767-1600
FAX: 908-767-1770

JOHN W. LORD, RE. PLS.
NJ REG. P.E. LICENSE NO. 12-488
NJ REG. LICENSE NO. 03039

DATE: 7-21-95



DOWELS @24" (610) o/c
ALTERNATE SIDES OF WALL
(FOR CONNECTION BETWEEN POURS)

PLAN VIEW
N.T.S.

2-#4 BARS CONT.

1-#4 DOWEL x 3" (200) LONG
ON JOISTS @4'-0" (1220) o/c (OTHER
JOISTS - MIN. 1" (100) BRG. ON CONC.
C/W 2-3" (75) NAILS THROUGH
JOIST FOR EMBEDMENT IN CONCRETE)

TOP OF FLOOR

GIRDERS @
COLUMN LINES
① ② AND ③

LIMIT OF FIRST POUR

#4 DOWELS
@24" o.c.

ENCASE IN 6 mil. POLY
OR TREAT WITH WOOD PRESERVATIVE

BARS CONT.

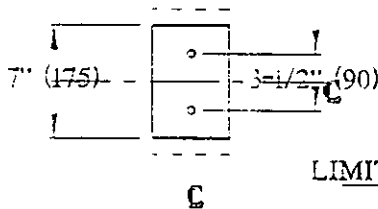
SECTION - LOAD BEARING WALL

CUT TOP &
BOTTOM @ 45
5" (125)

(2)-1/2" ANCHOR BOLT o/w
2" (50) WASHER x 3/16" (5) THICK
MAXIMUM SPACING 7'-0"

TOP OF FLOOR

FLOOR JOISTS



LIMIT OF FIRST POUR

SOLID BLOCKING
@4'-0" o.c.

#4 DOWELS @24"
ALTERNATE SIDES OF WALL
(MIN. 18" EMBEDMENT
EACH POUR)

SECTION - NON-LOAD
BEARING WALL

CONNECT HEADER JOIST
TO PLASTIC WEBS
WITH 2-#10 SCREWS @ 16" (405) o/c

AAB

BUILDING SYSTEM

EMBEDDED SUB-FLOOR CONNECTION - AAB CONSTRUCTION

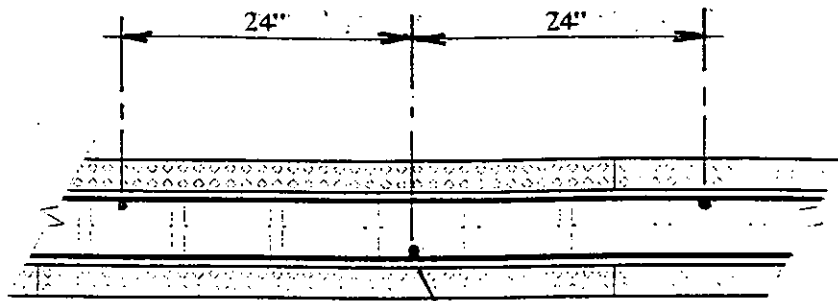
⚠ ALTERNATE #2 TO 2-10-95

JWL #94050 SHEET 2/2

JOHN W. LORD ASSOCIATES - T/A
LORD ENGINEERING GROUP
STRUCTURAL
MECHANICAL
MINING
CIVIL

PROFESSIONAL ENGINEERS, PLANNERS,
AND LAND SURVEYORS
76 RIVER ROAD (HWY 9-1)
LOWER LEVEL SUITE 8
LAKEWOOD, NEW JERSEY 08701
PHONE 908-667-1654
FAX 908-387-1775

JOHN W. LORD, P.E., P.L.S. DATE
NEW JERSEY LICENSE NO. 32455
ILLINOIS LICENSE NO. 03758



DOWELS @24" (610) o/c
ALTERNATE SIDES OF WALL
(FOR CONNECTION BETWEEN POURS)

PLAN VIEW
N.T.S.

1- #4 DOWEL x 8" (200) LONG
ON JOISTS @4'-0" (1220) o/c (OTHER
JOISTS - MIN. 4" (100) BRG. ON CONC.
C/W 2-3" (75) NAILS THROUGH
JOIST FOR EMBEDMENT IN CONCRETE)

2-#4 BARS CONT.

TOP OF FLOOR

17" (10)
3" (75)

GIRDERS @
COLUMN LINES
① ② AND ③

LIMIT OF FIRST POUR

#4 DOWELS
@24" o.c.

— ENCASE IN 6 mil. POLY
OR TREAT WITH WOOD PRESERVATIVE

BARS CONT.

SECTION - LOAD BEARING WALL

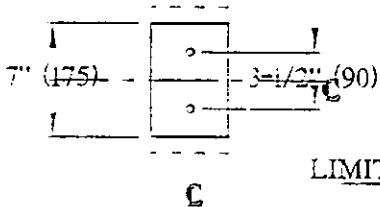
CUT TOP &
BOTTOM @ 45

5" (125) →

(2)-1/2" ANCHOR BOLT o/w
2" (50) WASHER x 3/16" (5) THICK
MAXIMUM SPACING 7'-0"

TOP OF FLOOR

FLOOR JOISTS



LIMIT OF FIRST POUR

SOLID BLOCKING
@4'-0" o.c.

#4 DOWELS @24"
ALTERNATE SIDES OF WALL
(MIN. 18" EMBEDMENT
EACH POUR)

SECTION - NON-LOAD
BEARING WALL

CONNECT HEADER JOIST
TO PLASTIC WEBS
WITH 2-#10 SCREWS @ 16" (405) o/c

AAB

BUILDING SYSTEM

EMBEDDED SUB-FLOOR CONNECTION - AAB CONSTRUCTION

⚠ ALTERNATE #2 TO 2-10-95

JWL #94050 SHEET 2/2

JOHN W. LORD ASSOCIATES - T/A

**LORD
ENGINEERING
GROUP**

STRUCTURAL
MECHANICAL
MINING
CIVIL

PROFESSIONAL ENGINEERS, PLANNERS,
AND LAND SURVEYORS
76 RIVER ROAD, SUITE 201
LOWELL, MASSACHUSETTS 01850
TEL: 908-867-1636
FAX: 908-867-1772

JOHN W. LORD, P.E., P.L.S.
MASS. P.L.S. LICENSE NO. 12455
ILL. P.L.S. LICENSE NO. 03754

DATE



Jersey Central Power & Light Company
417 New Jersey Avenue
Point Pleasant Beach, New Jersey 08742
(908) 901-2338

November 30, 1994

Lord Engineering
Attn: Bill Burke

Dear: Mr. Burke;

This letter confirms that Jersey Central Power & Light Company has performed a field inspection of the building at the location listed below and determined that our electric service cables and meters have been removed.

**656 Habor Road
Brick, N. J. 08724**

This notification is effective as of the above date, and certifies that the referenced building is now electrically safe for demolition.

Sincerely,

Project Specialist

demo

**THE BRICK TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY**

1551 HIGHWAY 88 WEST
BRICK, NEW JERSEY 08724
458-7000

CERTIFICATE OF COMPLIANCE

Date 8/28/95

NAME Joseph Niemczyk

ADDRESS 1311 Martine Ave. Scotch Plains, NJ

PROPERTY LOCATION 656 Harbor Road

Account No. N789604 Block 982 Lot 29

I hereby certify that the above applicant has complied with all Rules
and Regulations of this Authority and has paid all required fees and charges.

For the Authority

Gatti Evan

982
29

Building Dept.
Brick Township, N.J.

To Whom it may concern,
This note is to state that I
Joseph Niemczyk ; Home Owner
656 Harbor Rd. with permission
of the building Dept. moved my
belongings into the House And
will not Hold the Township
Responsible For Damages.

Thank You

A handwritten signature in black ink, appearing to be 'C. [unclear]', written over a horizontal line.

NJ || P E R M I T / C E R T I F I C A T E D A T A || UCCARS

A] PERMIT NO: 95-157 BLOCK: 982 USE GROUP: R-3
 DATE ISSUED: 02/03/95 LOT: 29 CENSUS ITEM: 101
 NAME: (LAST, FIRST) NUMBER: STREET: (WORKSITE ADR)
 NIEMCZYK J 656 HARBOR DR

B] X NEW BUILDING] [2504 SQ FT HOUSEG UNITS GAIN: SALE 1 RENT 1
 ADDITION 18265 CU FT LOST: SALE 0 RENT 0
 ALTERATION TOTAL VALUE OF CONSTR: 220000
 DEMOLITION
 UNDERGROUND TANK INDUSTRIALIZED BLDG: STATE APPROVED
 PUBLIC OWNERSHIP HUD

C] FEES - BUILDING: 372(INS) 77(ADM) DCA: 29 TOT: 978
 ELECTRIC: 0 30 CERTIF: 77 PD: 978
 PLUMBING: 248 0 OTHER: 0 BAL: 0
 FIRE: 145 0
 ELEVATOR: 0 0

D] CERTIF NO: 95-157 X CO { 1 } CA CC { 0 } FEE: 0
 DATE ISSUED: 08/28/95 TCO { 0 } CCO TCC { 0 }
 <F10> TO CONTINUE

JOHN W. LORD & ASSOCIATES

Engineering Planning Surveying
761 Route 9, Lower Level
Lakewood, New Jersey 08701
(908) 367-1650

LETTER OF TRANSMITTAL**RECEIVED**

FEB 24 1995

TO Brick Township Building Dept.

DIV. OF INSPECTION

Hand Delivered

DATE 2/24/95	JOB NO. 94.050
ATTENTION	
RE: Niemczyk Project	
656 Harbor Road	
Block 982, Lot 29	
Township of Brick	

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

- ☐ Shop drawings ☒ Prints ☒ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
3			revised plot plans
3	sets		of revised foundation plans

THESE ARE TRANSMITTED as checked below:

- ☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☒ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☒ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS If you have any questions or require additional information, please feel
free to call me at your earliest convenience.

COPY TO J. Niemczyk; G. Lombardi; fileSIGNED: John W. Lord

SIZING FOR WATER AND SEWER SERVICES

Property Owner Niemczek Date 8-16-95

Property Address 656 Harbor Rd Block 982 Lot 29

Zoning _____ Use Group _____

Contractor _____ License No. Registration _____

Water Main Size _____ Water Pressure _____ Sewer Main Size _____

Plumbing Fixtures	Number	(sfu) Water Units	(dfu) Drainage Units
1: Water Closet	<u>2</u>	() <u>6</u>	() _____
2. Lavatory	<u>2</u>	() <u>2</u>	() _____
3. Bath Tub	<u>2</u>	() <u>2</u>	() _____
4. Shower Stall	<u>1</u>	() <u>2</u>	() _____
5. Kitchen Sink	<u>1</u>	() <u>2</u>	() _____
6. Service Sink	_____	() _____	() _____
7. Laundry Tray	_____	() _____	() _____
8. Dishwasher	<u>1</u>	() <u>1</u>	() _____
9. Washing Machine	<u>0</u>	() <u>NO WASHER</u>	() _____
10. Urinal	_____	() _____	() _____
11. Floor Drain	_____	() _____	() _____
12. Drinking Fountain	_____	() _____	() _____
13. Air Conditioner (water cooled)	_____	() _____	() _____
14. Dental Unit	_____	() _____	() _____
15. Lawn Sprinkler No. of Heads	_____	() _____	() _____
16. Fire Sprinkler No. of Heads	_____	() _____	() _____
17. _____	_____	() _____	() _____
18. _____	_____	() _____	() _____

Total 15

Gallons per minute 10.9

Size of Service 3/4

Date: 8-16-95

Approved: Daniel Newman
Brick Township Plumbing Inspector

982

29

1-2

PLUMBING & MECHANICAL CHECK LIST

Plumber called

1-26-95

3:38 PM

TECHNICAL SECTION INCOMPLETE

PLUMBER'S IDENTIFICATION & SEAL

ISOMETRIC SKETCH *on paper no good*

LIST OF EXISTING FIXTURES

GAS PIPING (LENGTH OF RUN - SIZING - APPLIANCE RATINGS)

SIZE OF EXISTING HEATING UNIT

BROCHURE FOR NEW HEATING UNIT

HEAT LOSS SURVEY

BARRIER-FREE CODE REQUIREMENTS

OTHER

130/95

June 28th Monday

for a's and b's

100

100

2

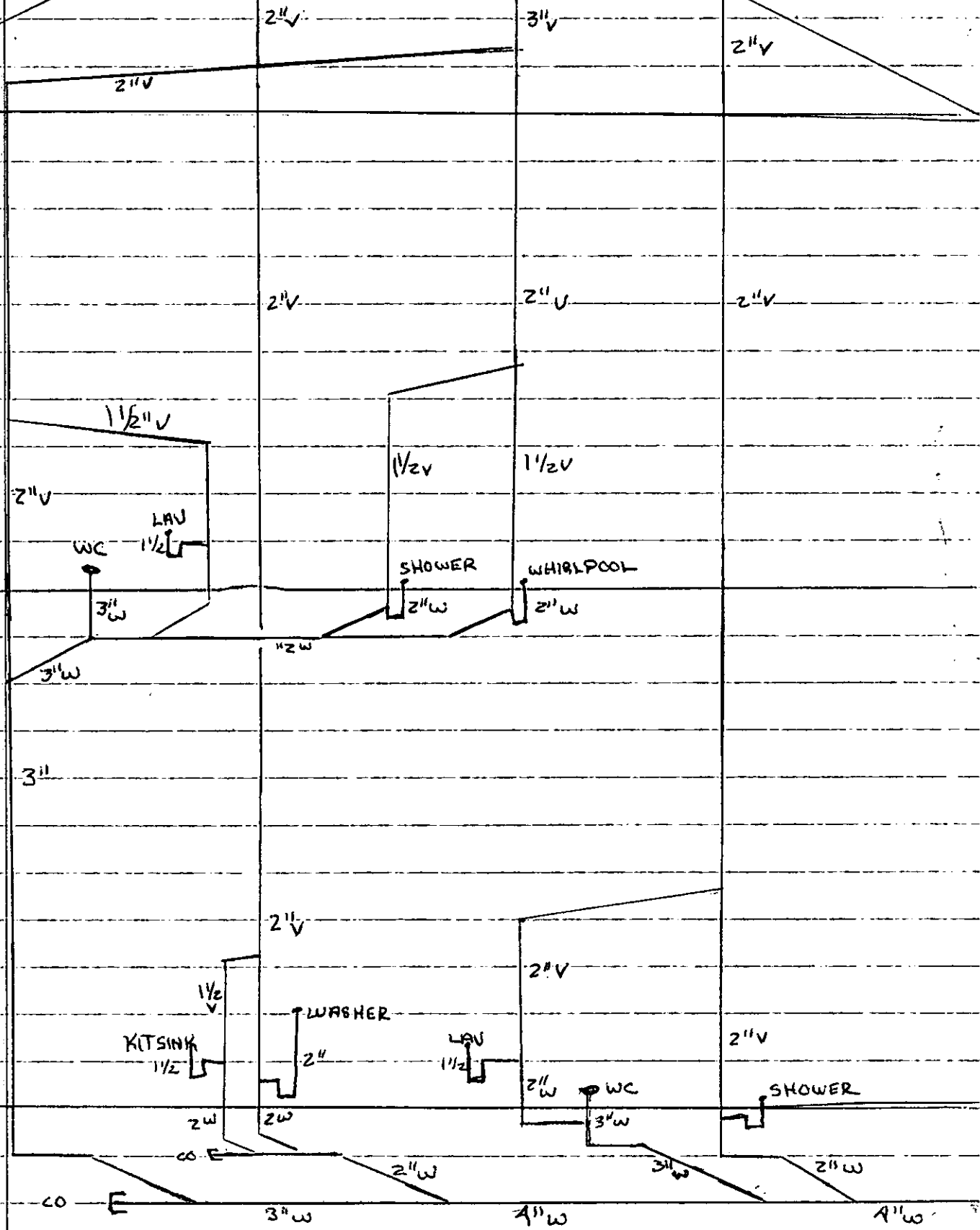
Dr. H. H. H.

10

Joe Nemick
Harbor Rd.
Blk 982
Lot 29

JCMI
NJ LIC #8798
473-6007

2

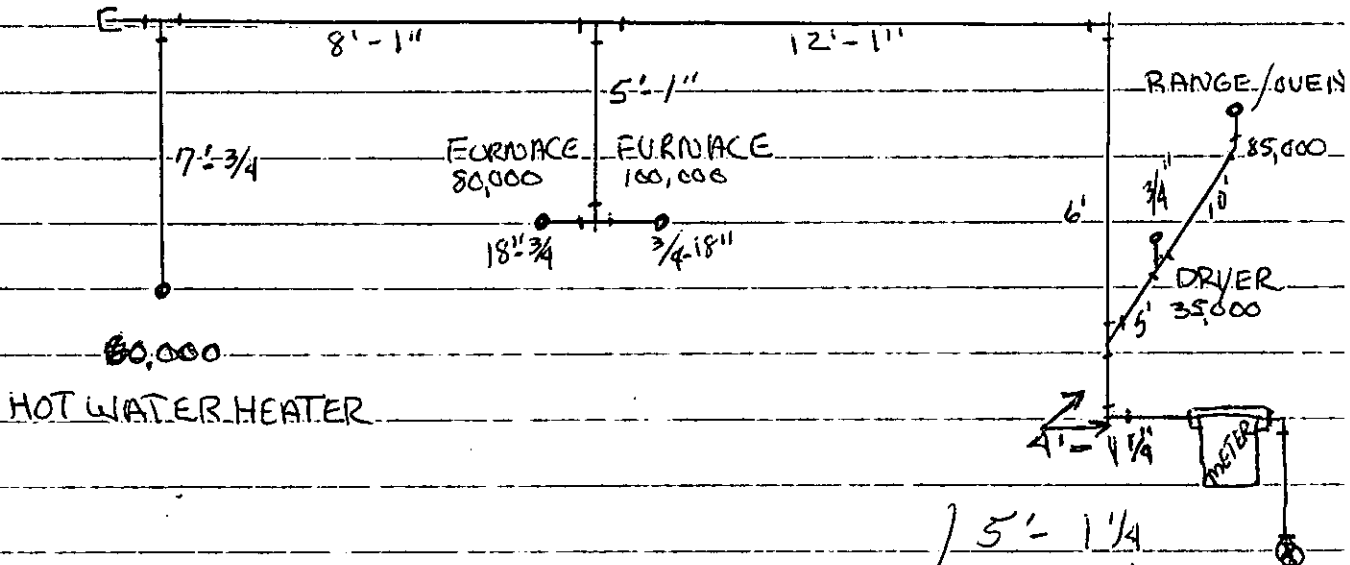


Joe Nemcheck
Harbor Rd

Blk 982

LOT 29

Gas piping diagram



total BTU
350,000

approx
total
5'-1 1/4"
30'-1"
25'-3/4"
FLEX-CONN 1/2"

NTUC #8798

JCMA
477-6007

KOHLER FACSIMILE LEAD SHEET

Kohler Co.
444 Highland Drive
Kohler, WI 53044
Telephone 414-457-4441

DATE: July 6, 1994
FAX NO.: 908-905-9629
ATTENTION: Garry
COMPANY NAME: L & H Supply
CITY/STATE:

FROM: Tim Stessman
DEPT: Codes and Standards DEPT. NO.: 8057
EXTENSION: 2122 MAIL STOP: 078
FAX NO.: 414-459-1701

TOTAL NO. OF PAGES SENT: 3 (including lead sheet)

IF YOU DO NOT RECEIVE ALL PAGES OR HAVE ANY PROBLEM WITH RECEIVING,
PLEASE CALL (414) 457-4441 AND ASK FOR LAURA (EXT. 2393).

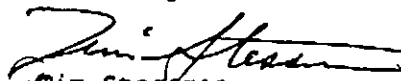
REFERENCE: 3-Way Diverter/Vacuum Breaker (p/n 54991) Provided with K-6531

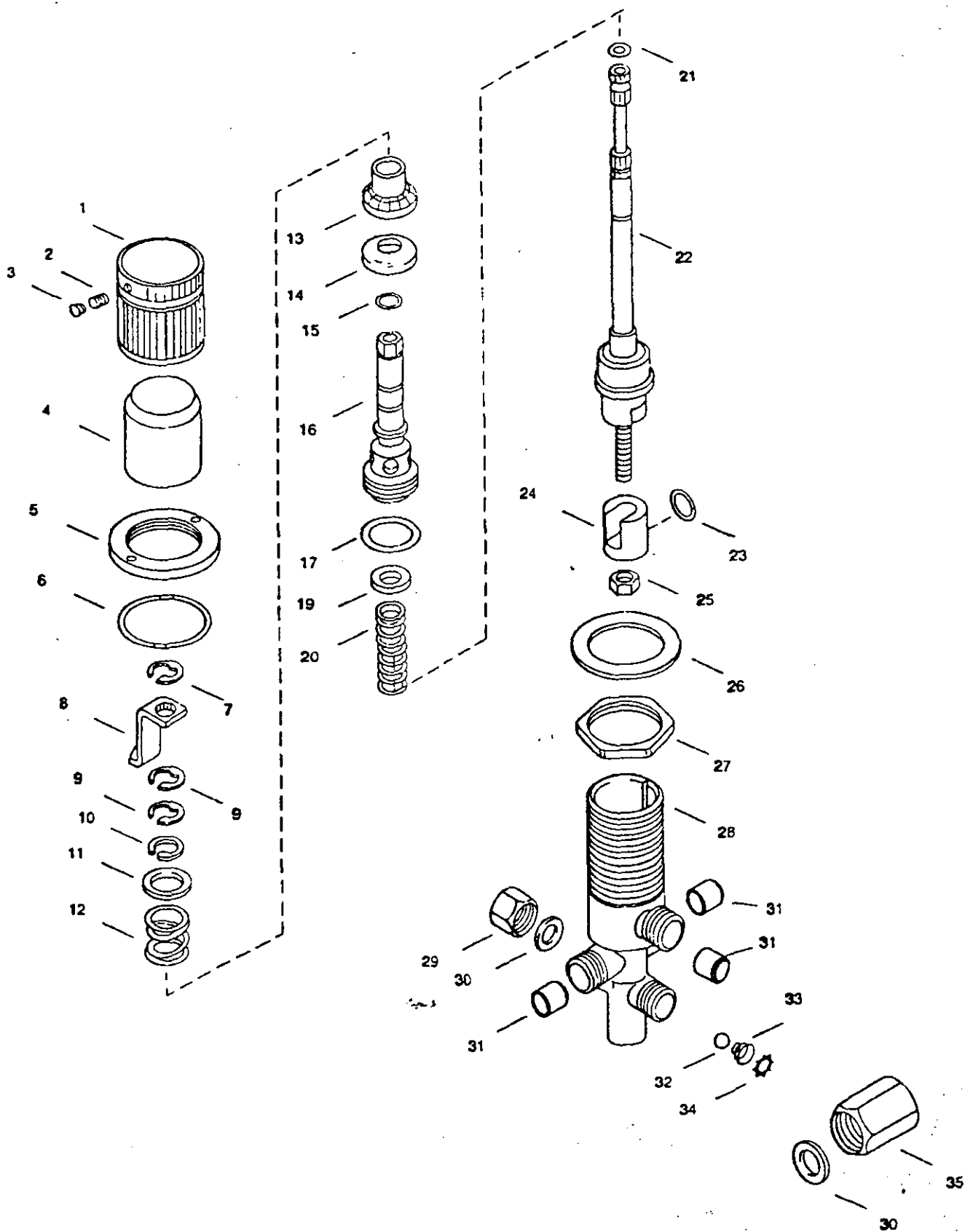
See items 13 & 14 next pages. These items form the vacuum breaker integral with this diverter. Being a rather unique device, IAPMO (author of the Uniform Plumbing Code (UPC)), developed a standard just for such devices. This standard (PS 45-91) includes tests for backflow protection.

The Kohler 54991 3-Way Diverter/Vacuum Breaker meets IAPMO PS 45-91, and has been tested by an independent testing laboratory to the same.

Please feel free to contact me if you have further questions.

Sincerely,


Tim Stessman
Engineering Analyst
Codes and Standards
P & SP Engineering



Variation and/or finish/color code may be required when ordering.

KOHLER[®] SERVICE PARTS

THREE-WAY DIVERTER ASSEMBLY

SERVICE PARTS

ITEM NO.	PART NO.	DESCRIPTION
1	52714	Handle Assembly
2	34453	Set Screw
3	52723	Hole Plug
4	52665	Sleeve
5	52666	Flange
6	48686	O-Ring
7	50593	E-Ring, Bowd
8	50338	Detent
9	50541	E-Ring
10	54997	Retaining Clip
11	54996	Washer
12	54995	Spring
13	55003	Diaphragm Backing Ring
14	55004	Diaphragm
15	55110	O-Ring
16	73485	Seat
17	41391	O-Ring
18	70427	Lubricant Capsule (Not Shown)
19	65413	Washer
20	54998	Spring
21	55109	O-Ring
22	59239	Stem Assembly
23	55108	O-Ring
24	55001	Spool
25	57088	Lock Nut
26	54994	Washer
27	55002	Nut, Shank
28	73628	Valve Body
29	52745	Hex Cap
30	40295	Fiber Washer
31	55766	Reducer Bushing
32		Available in Service Kit Only
33		Available in Service Kit Only
34		Available in Service Kit Only
35	52724	Hex Coupling

SERVICE KITS

PART NO.	ITEM NO.	QTY.	DESCRIPTION
54991	7	1 ea.	Diverter Valve Assembly
	8	1 ea.	E-Ring, Bowd
	9	1 ea.	Detent
	10	2 ea.	E-Ring
	11	1 ea.	Retaining Clip
	12	1 ea.	Washer
	13	1 ea.	Spring
	14	1 ea.	Diaphragm Backing Ring
	15	1 ea.	Diaphragm
	16	1 ea.	O-Ring
	17	1 ea.	Seat
	18	1 ea.	O-Ring
	19	1 ea.	Washer
	20	1 ea.	Spring
	21	1 ea.	O-Ring
	22	1 ea.	Stem Assembly
	23	1 ea.	O-Ring
	24	1 ea.	Spool
	25	1 ea.	Lock Nut
	26	1 ea.	Washer
	27	1 ea.	Nut, Shank
	28	1 ea.	Valve Body
	32	1 ea.	Ball Check
	33	1 ea.	Spring, Conical
	34	1 ea.	Retaining Ring
73619			Seat Subassembly Kit
	2	1 ea.	Hole Plug
	10	1 ea.	Retaining Clip
	11	1 ea.	Washer
	12	1 ea.	Spring
	13	1 ea.	Diaphragm Backing Ring
	14	1 ea.	Diaphragm
	15	1 ea.	O-Ring
	16	1 ea.	Seat
	17	1 ea.	O-Ring
	18	1 ea.	Lubricant Capsule (Not Shown)
57386			O-Ring & Diaphragm Kit
	13	1 ea.	Diaphragm Backing Ring
	14	1 ea.	Diaphragm
	17	1 ea.	O-Ring
	18	1 ea.	Lubricant Capsule (Not Shown)
	21	1 ea.	O-Ring
	23	1 ea.	O-Ring
73617			Seat Kit
	2	1 ea.	Hole Plug
	16	1 ea.	Seat
	17	1 ea.	O-Ring
	18	1 ea.	Lubricant Capsule (Not Shown)
54992			Stem Subassembly Kit
	19	1 ea.	Washer
	20	1 ea.	Spring
	21	1 ea.	O-Ring
	22	1 ea.	Stem Assembly
	23	1 ea.	O-Ring
	24	1 ea.	Spool
	25	1 ea.	Lock Nut
58740			Bushing Kit
59237	31	3 ea.	Reducer Bushing
		1 ea.	Check Valve Kit
	32	1 ea.	Ball, Check
	33	1 ea.	Spring, Conical
	34	1 ea.	Retaining Ring

Variation and/or finish/color code may be required when ordering.

IMPORTANT CONSUMER INFORMATION

LIMITED ONE-YEAR WARRANTY

Kohler plumbing fixtures and fittings are warranted free of manufacturing defects.

Kohler Co. will, at its election, repair, replace, or make appropriate adjustment where Kohler Co. inspection disclosed any such defects occurring in normal usage within one year after installation. Kohler Co. is not responsible for installation errors.

To obtain warranty service, contact Kohler Co. either through your Dealer or Plumbing Contractor or by writing Kohler Co., Attn: Consumer Affairs Department, Kohler, WI 53044 U.S.A.

IMPLIED WARRANTIES, INCLUDING THAT OF MERCHANTABILITY, ARE EXPRESSLY LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. KOHLER CO. DISCLAIMS ANY RESPONSIBILITY FOR CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so this limitation and exclusion may not apply to you. This warranty gives you specific legal rights. You may also have rights which vary from state to state.

This is our exclusive written warranty.

KOHLER CO., KOHLER, WISCONSIN 53044

CARE AND CLEANING FOR YOUR NEW KOHLER FAUCET

CHROME PLATED FAUCETS. Your attractive chrome finished faucets will remain sparkling if you clean them with a damp sponge and buff dry to restore their gleam. In hard water areas you may use the following cleaners, but remember, they must be rinsed off immediately.

- NEW SPIC AND SPAN
- MR. CLEAN w/Soft Abrasive
- GLASS PLUS

- Dow Bathroom
- LYSOL Pine Action
- TOP JOB

- Lysol Deodorizing
- MR. CLEAN All-Purpose
- LIME-A-WAY Bath & Kitchen

- LYSOL Direct Multi-Purpose
- FANTASTIK All-Purpose
- PINE MAGIC Multi-Purpose

- FANTASTIK Bathroom
- LYSOL Basin, Tub & Tile
- PINE POWER

GOLD FINISHES. The best way to clean these faucets is to use warm water and dab dry with a cotton ball. For occasional cleaning of stubborn deposits, use ONLY the following cleaners listed below. Rinse off any residue immediately and dab dry with a cotton ball.

- Lysol Direct Multi-Purpose
- FANTASTIK All-Purpose

- Lysol Deodorizing
- GLASS PLUS

- PINE POWER
- Lysol Bathroom

- MR. CLEAN All-Purpose
- TOP JOB

- Lysol Pine

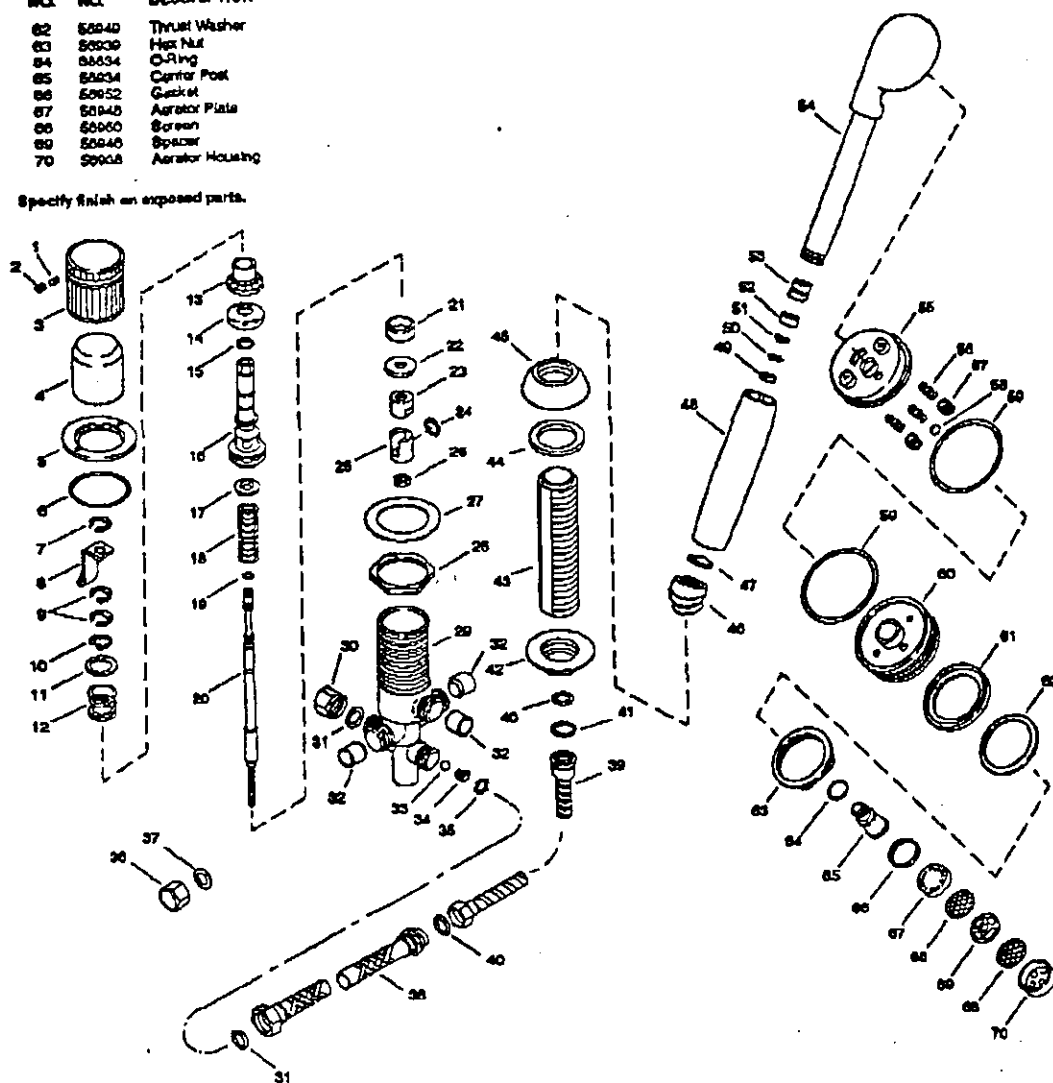
POLISHED BRASS AND COLORED FAUCETS. Clean these faucets with a mild soap and warm water. Wipe entire faucet completely dry with a clean, soft cloth. Many cleaners may contain chemicals, such as ammonia, which could adversely affect the finish and are not recommended for cleaning.

DO NOT USE ABRASIVE CLEANERS OR SOLVENTS ON KOHLER FAUCETS.

NOTE: Part numbers listed refer to service parts and may not correspond to production part numbers packed with fitting. Order by service part number only.

ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	54453	Set screw	62	55940	Thrust Washer
2	52723	Male Plug	63	55039	Hex Nut
3	52714	Handle Assembly	64	55534	O-Ring
4	52955	Sleeve	65	55534	Carrier Post
5	52955	Flange	66	55952	Gasket
6	40506	O-Ring	67	55945	Aerator Plate
7	50593	E-Ring	68	55950	Screen
8	50338	Delta	69	55945	Spacer
9	50541	E-Ring	70	55958	Aerator Housing
10	54997	Retaining Clip			
11	54006	Washer			
12	54005	Spring			
13	55003	Diaphragm Backing Ring			
14	55004	Diaphragm			
15	55110	O-Ring			
16	55006	Ball			
17	55413	Washer			
18	54096	Spring			
19	55109	O-Ring			
20	55006	Ball			
21	55174	O-Ring			
22	55000	Washer			
23	55173	O-Ring			
24	55104	O-Ring			
25	55001	Spool			
26	57068	Jam Nut			
27	54994	Washer			
28	55002	Nut, Shank			
29	55007	Valve Body			
30	52745	Hex Cap			
31	40296	Fiber Washer			
32	55768	Reducer Bushing			
33	55439	Ball, Check			
34	52986	Spring, Control			
35	57130	Retaining Ring			
36	57318	Pipe Cap			
37	22540	Washer			
38	56959	High Pressure Hose (M/F #31)			
39	71155	Hose w/ O-Ring			
40	41160	Washer			
41	34353	O-Ring			
42	50905	Shank Nut			
43	55459	Shank			
44	39924	Washer			
45	54458	Escutcheon			
46	54457	Elbow Assembly			
47	55953	Screen			
48	57578	Handle Insert			
49	57568	Retaining Clip			
50	57993	Retaining Clip			
51	57964	Flow Control			
52	57962	Control Housing			
53	57067	Insert Assembly			
54	57577	Handle			
55	56936	Head Plate			
56	56937	Spring			
57	55933	Inlet Ball			
58	57346	Ball Bearing			
59	55947	Grip Ring			
60	56975	Front Housing Assembly			
61	55931	Diffuser			

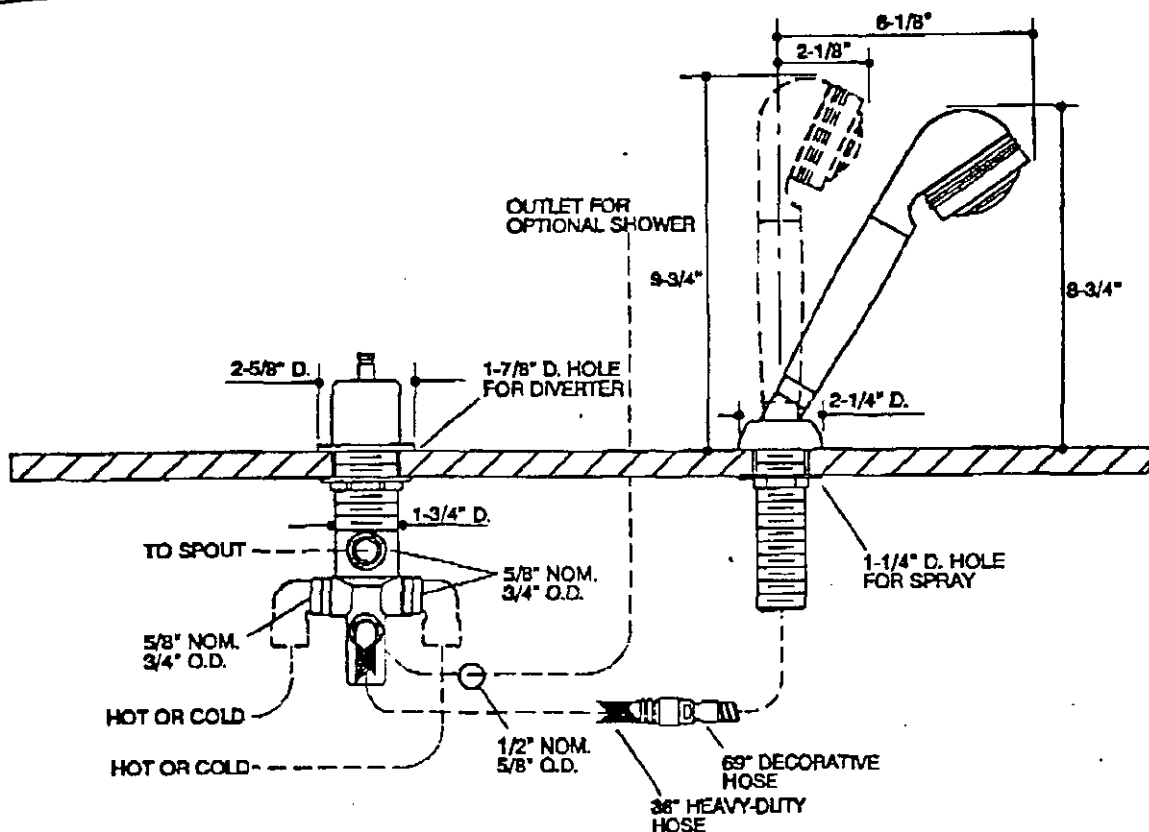
Specify finish on exposed parts.



KOHLER®

INSTALLATION INSTRUCTIONS

PERSONAL HAND SHOWER K-6531-AA



NOTE: DASHED LINES INDICATE ITEMS SUPPLIED BY INSTALLER.

PLEASE READ: IMPORTANT SUMMARIES, CAUTIONS, AND NOTES

OBSERVE ALL LOCAL PLUMBING CODES

All information in these instructions is based on the latest product information available at the time of publication. Kohler Co. reserves the right to make changes in product characteristics, packaging, or availability at any time without notice.

- Advance planning before installation is crucial. Carefully read entire instructions before beginning installation, especially the "Planning Your Installation" section. Component location, spacing, and situational requirements can vary. The illustrations do not show all configurations. Check for elbows and tubing needed. Dry-fit assemblies before soldering.
- PROVIDE AN ACCESS PANEL FOR ALL INSTALLATIONS.
- Kohler Co. recommends soldering all connections from the diverter to the spout, and from the diverter to the hot and cold valves. To avoid potential leakage below the rim, do not use flexible hose connections.

- If using 1/2" Nom. (5/8" O.D.) tubing, use provided 3/4" x 5/8" nominal reducer couplings to solder directly to 3/4" I.D. valve ports.
- Kohler Co. recommends using hard-drawn tubing (type M, K, or L) from the valves to the diverter to the spout.
- The shower arm to diverter connection requires 3/8" Nom. copper tubing (1/2" O.D.).
- Install water hammer arresters in the supply line.
- When compression joints are used, Kohler Co. recommends an assembly torque of 45–60 foot pounds for compression nuts. To produce the required torque with hard-drawn tubing, from hand-tight, approximately 1/2 of a turn is needed.
- REMOVE ALL INTERNAL COMPONENTS OF THE DIVERTER VALVE BEFORE SOLDERING. EXCESSIVE HEAT WILL DAMAGE THE COMPONENTS.

PLEASE LEAVE THESE INSTRUCTIONS FOR THE CONSUMER. THEY CONTAIN IMPORTANT CARE, CLEANING, AND WARRANTY INFORMATION.

BEFORE YOU BEGIN:

TOOLS AND MATERIALS REQUIRED:

- Open end/adjustable wrenches
- Adjustable arc pliers
- Snap ring pliers
- Support blocks or straps (see "DIVERTER SUPPORT" section)
- Hole cutting equipment
- Soldering equipment & supplies
- Assorted hex wrenches
- 5/8" Nom. (3/4" O.D.) tubing (hard-drawn for compression fittings)

NOTE: Confirm materials needed by dry-fitting all components before beginning installation.

DIVERTER CONFIGURATION:

NOTE: Soldered connections are recommended on all ports except the hand shower port.

Dry-fit pipe and components before doing any soldering.

DIVERTER SUPPORT:

CAUTION: YOU MAY NEED TO PROVIDE ADDITIONAL SUPPORT FOR THE DIVERTER. SEE NOTE BELOW.

See Fig. #1. Verify location of components and orientation of ports. The lowest two ports are labeled "HAND SH." for hand shower and "WALL SH." for wall-mount shower. The middle tier of ports are interchangeable hot and cold ports. The highest-most port is for the spout. Hot, cold, and spout ports accept 5/8" Nom. (3/4" O.D.) tubing for direct connection. Optional adapters are provided for 1/2" Nom. tubing. The wall shower port accepts 3/8" Nom. (1/2" O.D.) tubing.

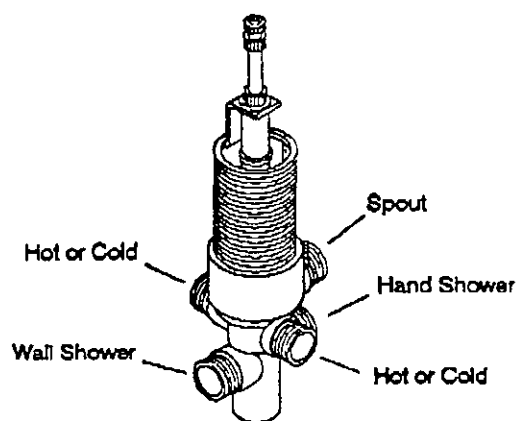


Fig. #1

NOTE: The flange and the sleeve (see Fig. #2) — and the piping connections, once they're made — are all that secure the diverter to the deck/rim. And the sleeve must be removed during installation. When the sleeve is removed, secure the diverter at all times either by hand or with a block or plate.

For maintenance or other access to the diverter's inner component assembly, the sleeve must be removed. The torque necessary to remove this inner component assembly may twist a long span of unsupported pipe. The diverter must be secured by hand via an access panel or by permanent blocking.

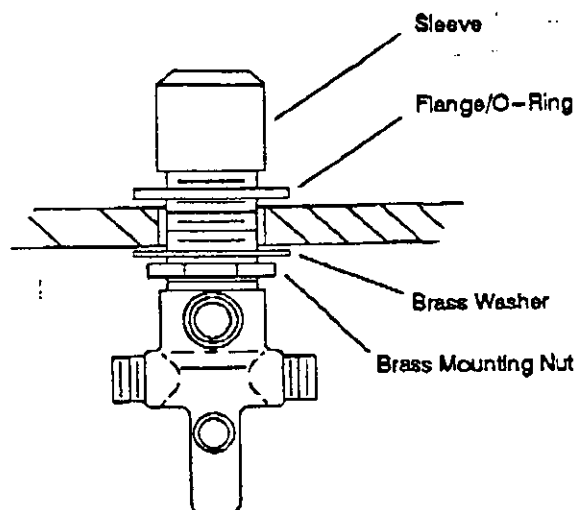


Fig. #2

OPTIONAL COMPONENT LOCATION:

Carefully plan installation before beginning roughing-in.

Many different configurations of the components are possible. The variety of installations for which the diverter is suitable cannot be illustrated.

See Fig. #3. References in the text require that you decide in advance on the location and orientation of the diverter. The location of the hand shower and optional components and the direction in which the inlets/outlets point will affect the piping and connectors needed.

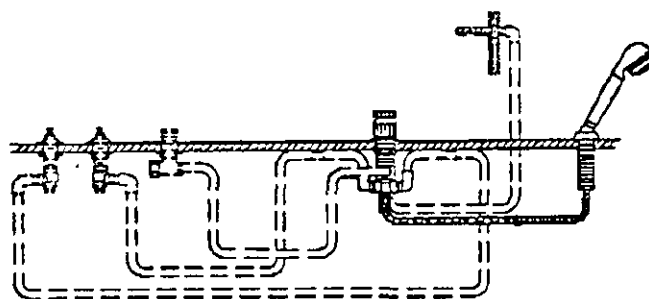


Fig. #3

Minimum distance between the optional valves is limited by the handle size and the direction in which the outlets point. Allow clearance for optional spout connection.

The distance between the diverter and the heavy duty hose connection can be extended with piping below the rim, but may not be safe or practical. A long run of piping will mean a long run of room-temperature standing water when the hand shower is first activated for use.

Use your judgement regarding distance from the diverter to other components and to the wall and fixture—allow yourself sufficient working room for making the four soldered and one adapter connection to the diverter.

HELPFUL HINTS:

Some procedures are best performed with a helper, such as the following procedures:

- Hold the diverter body from below while, from above, tightening the internal component assembly to the diverter.

Long runs of piping should be secured to the underside of the deck/rim. Possible ways of securing the diverter include the following:

- See Fig. #3. Routing the piping up to the underside of the deck/rim and securing the piping at a point near the diverter.
- Blocking underneath the diverter body with 2x4 lumber.
- Securing an angle bracket from the wall to underneath the diverter body.

It's possible that the hand shower hose could get tangled or snagged below deck/rim while in use.

- To alleviate snags or tangles, create a plywood "chute" to keep the hose from potential snags such as pipe bends or exposed framing.

INSTALLATION SEQUENCE

BEFORE SOLDERING

DECK/RIM SPECIFICATIONS/DRILLING:

See Roughing-In Diagram.

Maximum deck/rim depth	1-3/8"
Diverter hole	1-7/8"
Hose guide hole	1-1/4"

- 1 Provide an access panel for all installations.
- 2 See Roughing-In Diagram. Provide a bath deck/rim surface roughed-in in accordance with the front page roughing-in dimensions. The maximum total deck/rim thickness is 1-3/8". The length and width can vary but must be sufficient to hold all options, including bath spout, diverter, spray hose guide, and two valves. Allow sufficient clearance for handles. Placement of the spray hose guide must allow for access to the connection between the high pressure hose and the interlink hose. For easiest installation, do not install bath unit until all soldering (except supplies) is complete. Then install bath and connect supplies.

SPOUT:

- 3 See Fig. #4. Install spout shank per spout installation instructions. If possible, do not install plated finished portion of spout until all other installation and construction is complete.

VALVES / TEMPORARY HANDLE ASSEMBLY:

- 4 Install valve bodies per valve body installation instructions. Loosely secure valve bodies.
- 5 Per handle installation instructions, temporarily assemble handles to adjust valves to proper height before connecting lines to diverter or supply.

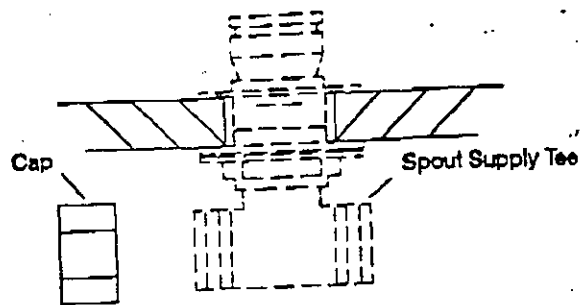


Fig. #4

DIVERTER:

- 6 See Fig. #5. Remove the internal component assembly, as this is most easily done before the diverter valve is attached to the rim. The internal component assembly must be removed before soldering, but cannot be accessed with a wrench when the sleeve is securing the diverter to the top of the deck. Use an open-end wrench, turning counterclockwise, to initially loosen the internal component assembly, then continue to unscrew until free. Set aside internal component assembly.

Do not remove check valve in hand shower port.

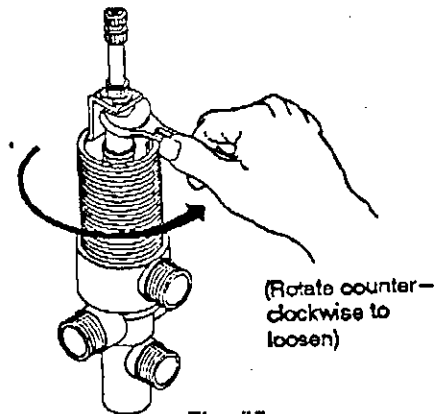


Fig. #5

- 7 See Fig. #6. Screw brass mounting nut onto new diverter valve body as far down as it will go; slip brass washer over brass mounting nut. Place diverter valve up through rim.

NOTE: You may need a helper to align and secure the diverter.

- 8 See Fig. #6. Put the O-Ring onto the bottom of the flange, place flange with O-Ring over the diverter valve. Screw the sleeve down onto the diverter valve.

- 9 Loosely tighten the nut under the rim; align the inlets and outlets below the rim as decided in the "COMPONENT LOCATION" section. Hand-tighten the nut.

CAUTION: THE SLEEVE WILL BE REMOVED ONCE AFTER SOLDERING TO RE-INSTALL THE INTERNAL COMPONENT ASSEMBLY. THE SLEEVE MUST ALSO BE REMOVED IF O-RINGS OR GASKETS LATER NEED REPLACEMENT. AT SUCH TIME THE PIPING CONNECTIONS ARE ALL THAT HOLD THE DIVERTER UP TO THE RIM, AND THE WEIGHT OF THE DIVERTER MAY DAMAGE THE CONNECTIONS. IT MAY BE NECESSARY TO BLOCK OR STRAP IN THE DIVERTER. SEE "DIVERTER SUPPORT" AND "HINTS" SECTION.

CAUTION: SOLDERING HEAT MAY DAMAGE INTERNAL DIVERTER COMPONENTS--BE SURE ALL INTERNAL COMPONENTS ARE REMOVED BEFORE SOLDERING.

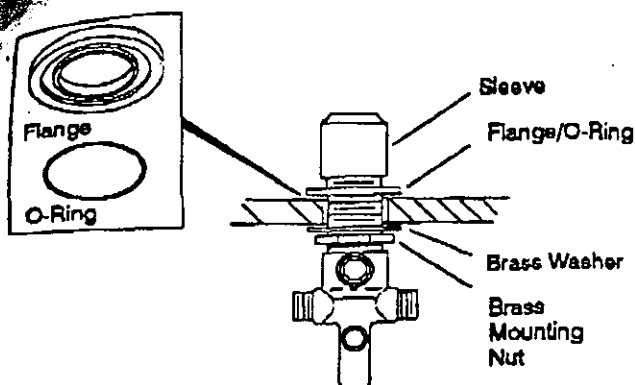


Fig. #6

NOTE: The check valve, which is shipped installed in the hand shower port, need not be removed during soldering and may be difficult to remove/re-install.

SPRAY HOSE GUIDE:

- 10** See Fig. #7. Place washer over top of shank. Thread hose guide escutcheon onto top of shank. From underside, thread shank nut onto shank and tighten firmly.

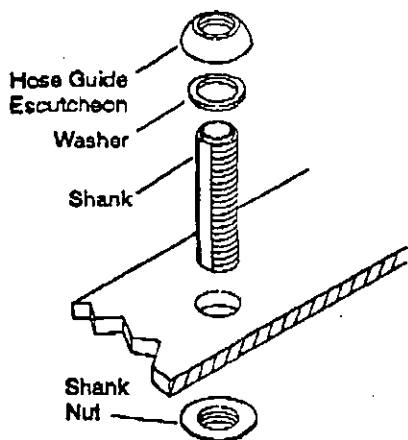


Fig. #7

PRE-SOLDERING CHECKLIST:

CAUTION: OBSERVE THE FOLLOWING BEFORE DOING ANY SOLDERING:

- Internal diverter component assembly should still be removed.
- The diverter mounting nut will need to be loose to unscrew the sleeve and replace the internal component assembly after soldering.
- Do not connect the flexible hand shower hoses until soldering is complete.
- Do not install hex cap with fiber washer (if needed) until after all soldering is complete.

SOLDER CONNECTIONS:

- 11** Dry-fit all piping and connectors. Plan the easiest order of solder connection for your installation. Instructions follow for the soldering order for the installation shown on the roughing-in diagram.
- 12** See Fig. #8. If the installation includes a wall-mount shower, making this connection first may allow the easiest access. Solder $3/8"$ Nom. ($1/2"$ O.D.) copper water tube into the outlet marked "WALL SH." for wall shower.

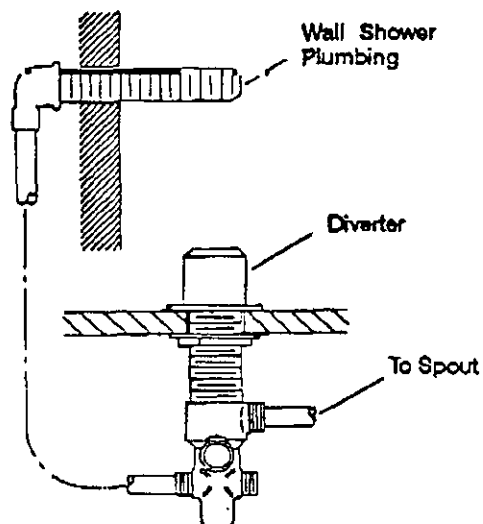


Fig. #8

- 13** If the installation does not include a wall-mount shower, do not cap the port until after all soldering is complete.
- 14** Next solder connections between the spout and the diverter.
- 15** See Fig. #9. Then connect the hot and cold lines from handles to diverter.

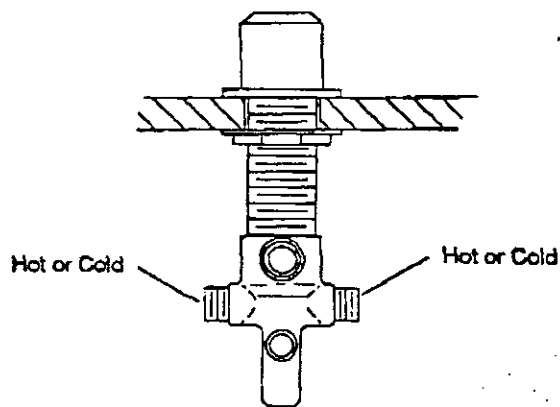


Fig. #9

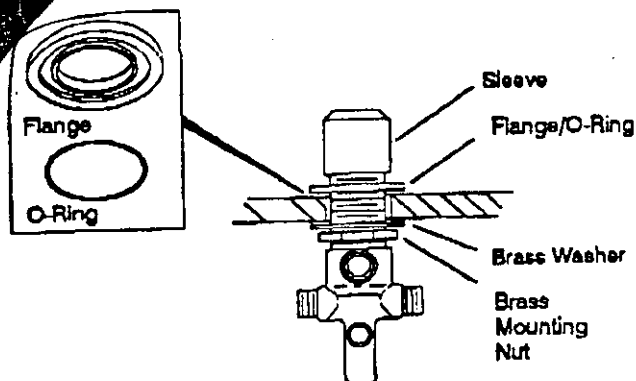


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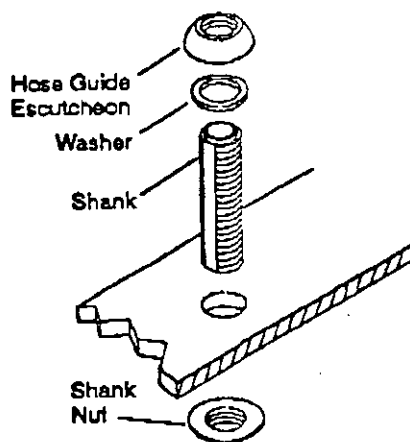


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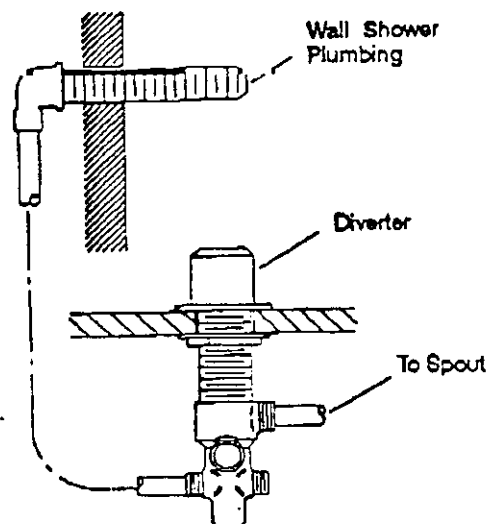


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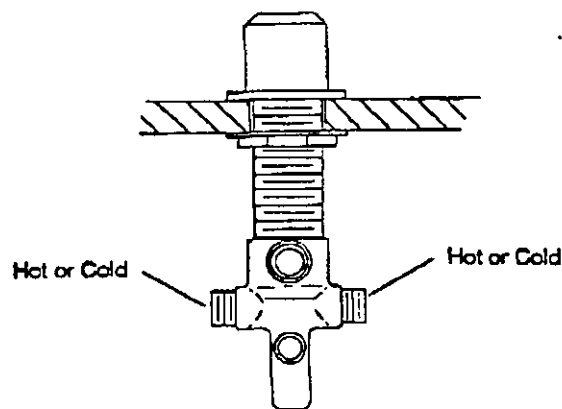
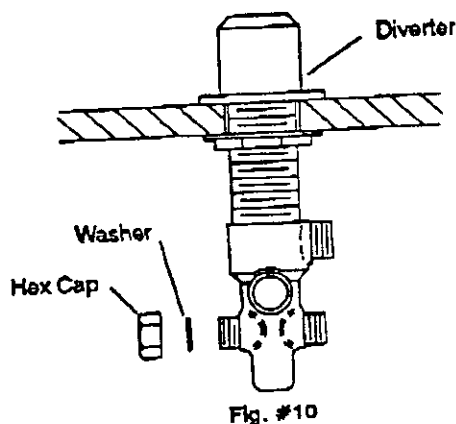


Fig. #9

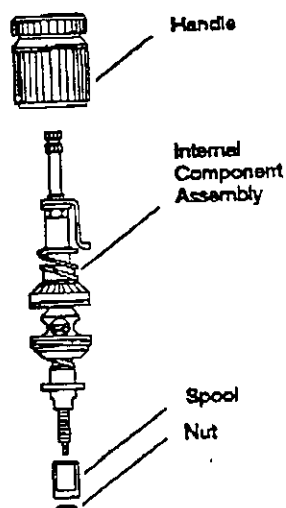
WATER SOLDERING:**WATER SHOWER/SPRAY ONLY:**

- 16 See Fig. #10. If the installation does not include a wall-mount shower, use fiber washer and hex cap (supplied) to seal wall shower port.



CAUTION: TO PREVENT POSSIBLE CROSS-FLOW IF SHOWER PORT IS BLOCKED OFF, THE SPOOL ON THE INTERNAL COMPONENT ASSEMBLY MUST BE REMOVED.

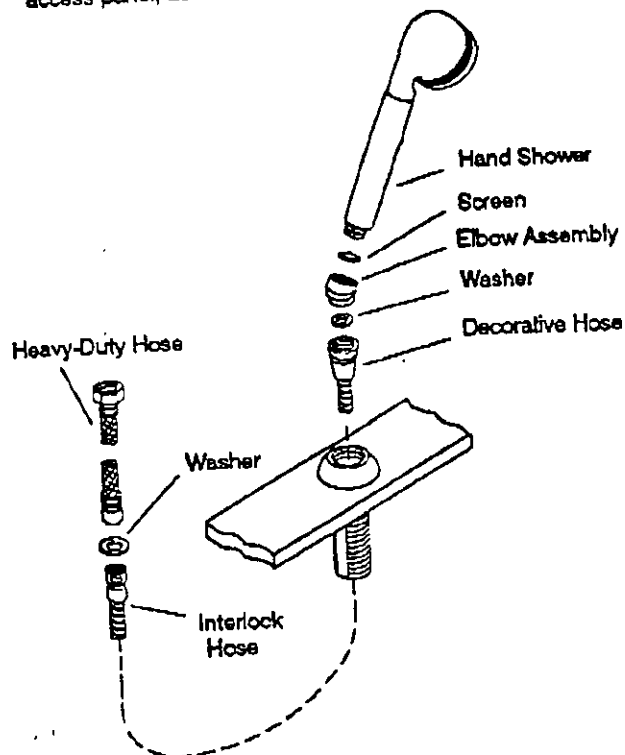
- 17 See Fig. #11, to remove spool. Remove spool from internal component assembly. Place the handle on the stem of the internal component assembly, grasp the handle, and unscrew the nut at the bottom of the assembly. Slide off the spool. Remove the handle.

**HAND SHOWER:**

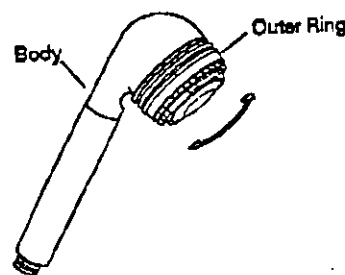
- 18 HAND SPRAY: See Fig. #12. Two types of spray hose, one heavy gauge and the other decorative, are included. One end of the decorative Interlock Hose is smaller than the other. Feed this end down through the hose guide, and attach, with a washer, to the heavy duty High Pressure Hose.

- 19 See Fig. #13. (Optional): Thread the supplied elbow assembly, with screen, onto the hand held shower. Thread the decorative interlock hose, with washer, onto elbow assembly.

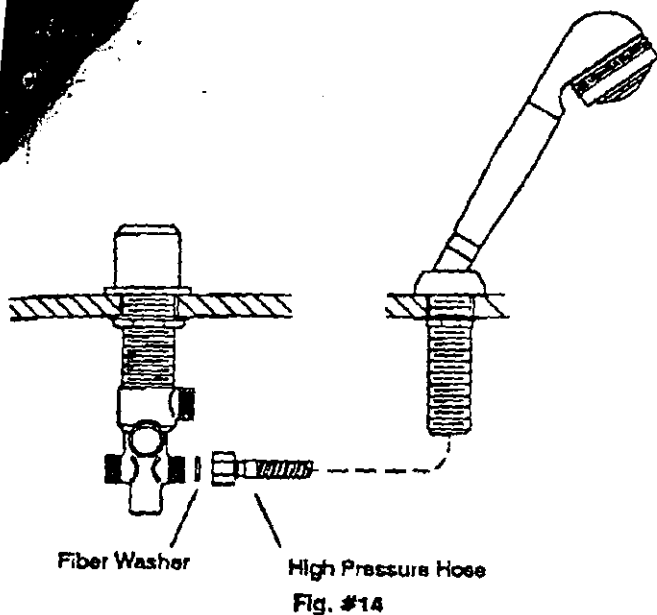
- 20 Connect the heavy-duty hose, with washers, where appropriate for your installation. This two-hose arrangement makes it possible to replace the decorative hose without removing the access panel, deck or framing to gain access.



- 21 See Fig. #13. Check shower head for smooth operation. Grasp the outer ring of the shower head and gently rotate clockwise or counterclockwise. There are two small detents within the outer ring to divide the three operating positions.



- 22 See Fig. #14, to connect the High Pressure Hose to the hand shower port. Place washer in hose end; tighten to diverter body.

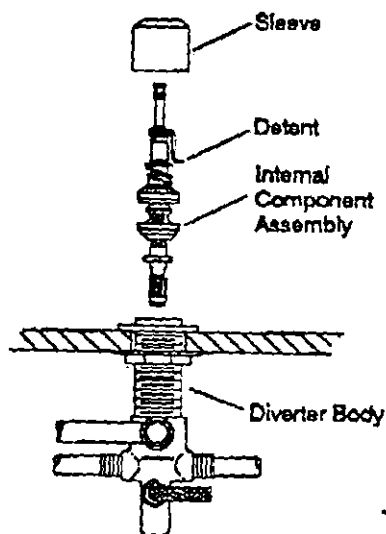


NOTE: Be sure to untwist loops in the hose to avoid kinking.

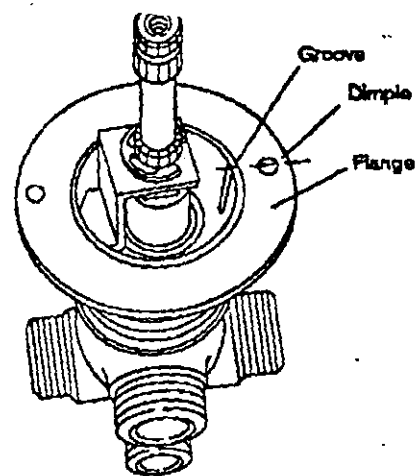
NOTE: If extending hand shower line, using appropriate hardware, screw high pressure connector directly to end of line extension.

DIVERTER:

- 23** See Fig. #15. While supporting from below, remove the sleeve from the top of the diverter. Replace internal components of the diverter, noting that the stem end is up. It may be necessary to press in slightly on the bent metal detent which provides the "click-stops" for the diverter. Carefully wrench-tighten the internal component assembly to the outer diverter body.



- 24** See Fig. #16. Re-install the sleeve, but this time align the two dimples in the flange with the two grooves in the internal diverter wall before you finish tightening the sleeve and nut.

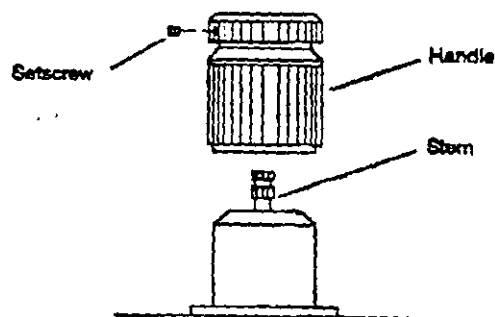


NOTE: The dimples in the flange are for visual purposes only—they make it easier to identify whether the diverter is pointed for wall or hand shower use.

- 25** Start the setscrew securely into the handle before placing the handle over the diverter body or the set screw may fall inside the diverter body.

NOTE: The set screw, being very small, is easy to misplace or mishandle.

- 26** See Fig. #17. Attach diverter handle to stem of the diverter valve with setscrew. The hole for the setscrew should line up with one of the dimples on the flange. **DO NOT INSTALL THE SET SCREW HOLE PLUG UNTIL AFTER TESTING INSTALLATION.**



FINAL CONNECTIONS:

- 27** Connect hot and cold supplies.
28 Install handles.
29 Install spout.
30 Install wall shower.

BLESHOOTING:

Remove the heads from the shower(s). Run water for a few moments to clean out the system. Check all connections. The diverter valve handle should rotate freely. Water pressure above 10 p.s.i. will hold the valve in the up position. Reinstall the heads from the wall-mounted and/or hand shower(s).

32 Install set screw hole plug into diverter handle after all testing is complete.

TO REPLACE INTERNAL GASKETS AND O-RINGS:

A See Fig. #18. Remove the top snap ring, the click-stop tab, the next two snap rings, and the subassembly with the large black diaphragm. From this subassembly, remove the snap ring, washer, spring, white guide, and then the large black diaphragm. Replace the diaphragm.

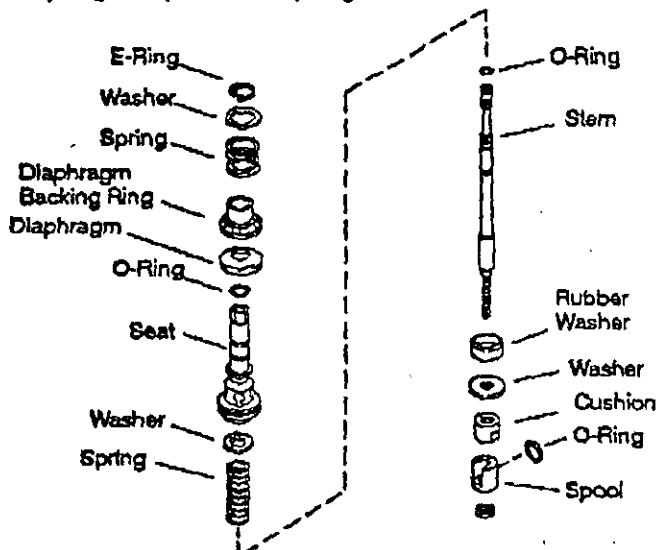


Fig. #18

B From the stem rod, remove the bottom-end nut. Remove the brass spool by pulling gently outward. Replace O-Ring or spool and O-Ring as necessary. Unscrew the notched brass spacer; remove the gasket; replace if necessary. The small O-Ring notched into the stem must be gently pried out if it is to be replaced.

C Reverse this procedure to reconnect the internal components. Note that two snap rings go below and one goes above the click-stop tab.

IMPORTANT CONSUMER INFORMATION

Please take a moment to familiarize yourself with the Kohler Warranty, its benefits, and limitations. Kohler Co. and its distributors support you with one of the largest Service Networks of its type. Here's what you need to do if you require service:

FIRST: Contact the dealer or contractor who sold and installed the product. They should be able to solve any problems you may have.

SECOND: If your dealer or contractor cannot solve the problem, they will contact or supply you with the name of the local Kohler Distributor and the:



KOHLER TECHNICAL SPECIALIST

THIRD: If you are unable to obtain warranty service through either your contractor or Kohler Co. distributor, please write us directly at the address below.

FOURTH: Include all pertinent information regarding your claim, including a complete description of the product, model numbers, colors, finishes, and the date the product was installed. Include a description of the problem, and a photocopy of your invoice for the products involved. Also give us the name of the contractor and distributor.

Kohler Co. Consumer Affairs Kohler, Wisconsin 53044

IMPORTANT CONSUMER INFORMATION LIMITED ONE-YEAR WARRANTY

Kohler plumbing fixtures and fittings are warranted free of manufacturing defects.

Kohler Co. will, at its election repair, replace, or make appropriate adjustment where Kohler Co. inspection disclosed any such defects occurring in normal usage within one year after installation. Kohler Co. is not responsible for installation costs.

To obtain warranty service, contact Kohler Co. either through your Dealer or Plumbing Contractor or by writing Kohler Co., Attn: Consumer Affairs Department, Kohler, WI 53044 U.S.A.

IMPLIED WARRANTIES, INCLUDING THAT OF MERCHANTABILITY, ARE EXPRESSLY LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. KOHLER CO. DISCLAIMS ANY RESPONSIBILITY FOR CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so this limitation and exclusion may not apply to you. This warranty gives you specific legal rights. You may also have rights which vary from state to state.

This is our exclusive written warranty.

KOHLER CO., KOHLER, WISCONSIN 53044

CARE AND CLEANING FOR YOUR NEW KOHLER FAUCET

CHROME PLATED FAUCETS. Your attractive chrome finished faucets will remain sparkling if you clean them with a damp sponge and buff dry to restore their gleam. In hard water areas you may use the following cleaners, but remember, they must be rinsed off immediately.

- NEW EPIC AND SPAN
- DOW Bathroom
- LYSOL Deodorizing
- LYSOL Direct Multi-Purpose
- FANTASTIK Bathroom
- MR. CLEAN w/Soft Abrasive
- LYSOL Pine Action
- MR. CLEAN All-Purpose
- FANTASTIK All-Purpose
- LYSOL Bath, Tub & Tile
- GLASS PLUS
- TOP JOB
- LIME-A-WAY Bath & Kitchen
- PINE MAGIC Multi-Purpose
- PINE POWER

GOLD FINISHES. The best way to clean these faucets is to use warm water and dab dry with a cotton ball. For occasional cleaning of stubborn deposits, use ONLY the following cleaners listed below. Rinse off any residue immediately and dab dry with a cotton ball.

- LYSOL Direct Multi-Purpose
- LYSOL Deodorizing
- PINE POWER
- MR. CLEAN All-Purpose
- FANTASTIK All-Purpose
- GLASS PLUS
- LYSOL Bathroom
- TOP JOB
- LYSOL Pine

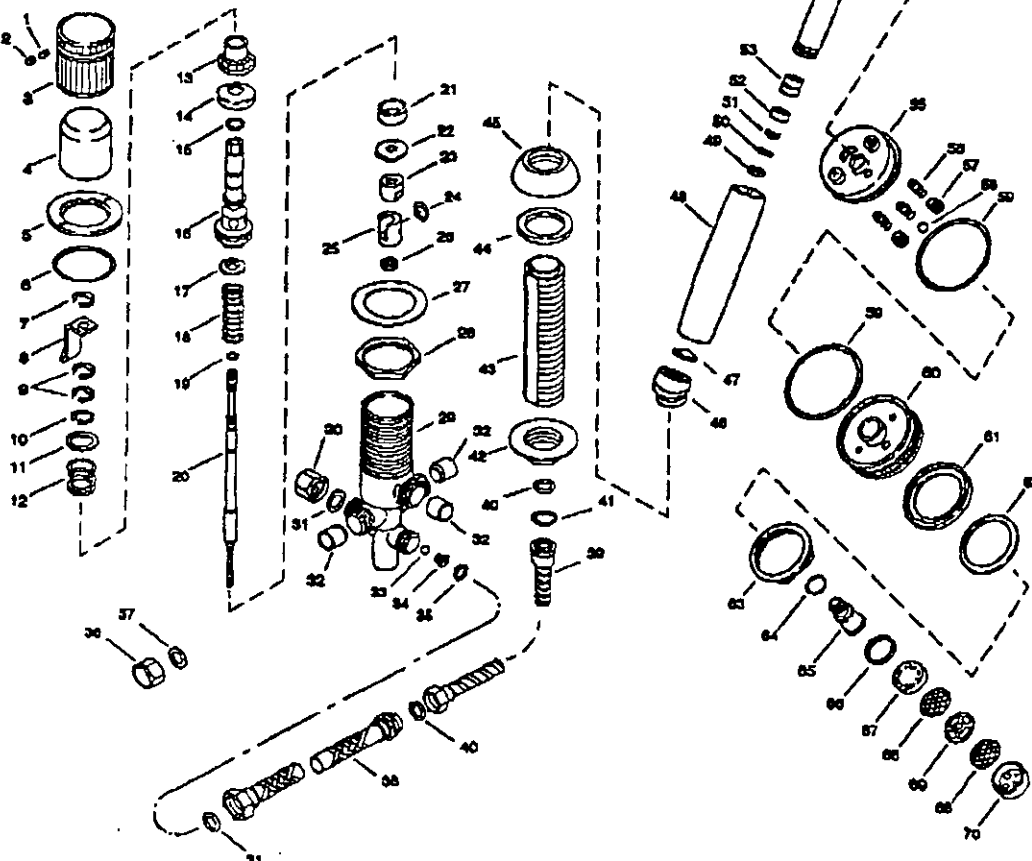
POLISHED BRASS AND COLORED FAUCETS. Clean these faucets with a mild soap and warm water. Wipe entire faucet completely dry with a clean, soft cloth. Many cleaners may contain chemicals, such as ammonia, which could adversely affect the finish and are not recommended for cleaning.

DO NOT USE ABRASIVE CLEANERS OR SOLVENTS ON KOHLER FAUCETS.

NOTE: Part numbers listed refer to service parts and may not correspond to production part numbers packed with fitting. Order by service part number only.

ITEM NO.	PART NO.	DESCRIPTION
1	04483	Set screw
2	32723	Male Plug
1-3	82714	Handle Assembly
4	82005	Stem
5	82568	Flange
6	48500	O-Ring
7	80563	O-Ring
8	80336	Detent
9	80541	O-Ring
10	54997	Retaining Clip
11	54208	Washer
12	54095	Spring
13	55003	Diaphragm Backing Ring
14	55004	Diaphragm
15	56110	O-Ring
16	35006	Seat
17	56413	Washer
18	54096	Spring
19	86109	O-Ring
20	86005	Stem
21	56174	Cushion, Upper
22	55000	Washer
23	56173	Cushion, Lower
24	56108	O-Ring
25	56001	Spool
26	57088	Jam Nut
27	54094	Washer
28	55002	Nut, Shank
29	56007	Valve Body
30	52745	Hex Cap
31	40295	Fiber Washer
32	55709	Reducer Bushing
33	56430	Ball, Check
34	32686	Spring, Control
35	57130	Retaining Ring
36	57315	Pipe Cap
37	22540	Washer
38	58059	High Pressure Hose (w/ #51)
39	71168	Hose w/ O-Ring
40	41163	Washer
41	84363	O-Ring
42	50003	Shank Nut
43	56459	Shank
44	30924	Washer
45	88458	Escutcheon
46	56457	Elbow Assembly
47	86053	Screen
48	57578	Handle Insert
49	57368	Retaining Clip
50	57903	Retaining Clip
51	57904	Flow Control
52	87992	Control Housing
53	87097	Insert Assembly
54	57577	Handle
55	86038	Head Plate
56	56007	Spring
57	86039	Insert Seal
58	57346	Ball Bearing
59	86047	Grip Ring
60	86078	Front Housing Assembly
61	66021	Diffuser

Specify finish on exposed parts.



NJ		MATCHING ENTRIES				UCCARS
PERM/CERTIF	BLOCK	LOT	NAME	ADDRESS	STREET	
94-3233	982	29	NIEMCZYK J	656	HARBOR RD	
95-157	982	29	NIEMCZYK J	656	HARBOR DR	
95-157+A	982	29	NIEMCZYK J	656	HARBOR DR	
95-157+B	982	29	NIEMCZYK J	656	HARBOR DR	

to select; <ENTER> to display; <F10> for new search

2/2/94

NU || P E R M I T / C E R T I F I C A T E D A T A || UCCARS

A] Permit No: 94-3233 Block: 982 Use Group: R-3
 Date Issued: 11/09/94 Lot: 29 Census Item: 434
 Name: (last, first) Number: Street: (worksite adr)
 NIEMCZYK J 656 HARBOR RD

B] New Building] [312 sq ft Housg Units Gain: Sale 0 Rent 0
 X Addition 3744 cu ft Lost: Sale 0 Rent 0
 Alteration Total Value of Constr: 40900
 Demolition
 Underground Tank
 Public Ownership Industrialized Bldg: State Approved
 HUD

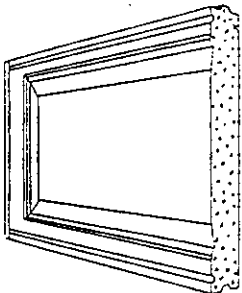
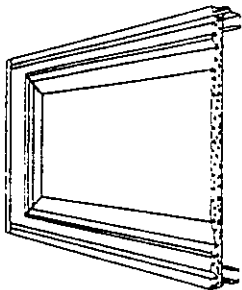
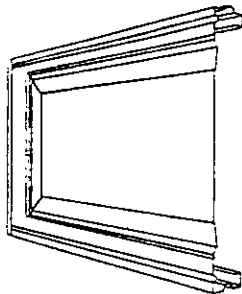
C] Fees - Building: 154(Ins) 21(Adm) DCA: 6 Tot: 388
 Electric: 0 45 Certif: 20 Pd: 388
 Plumbing: 96 0 Other: 0 Bol: 0
 Fire: 46 0
 Elevator: 0 0

D] Certif No: / / CO (0) CA CC (0) Fee:
 Date Issued: / / TCO (0) CCO TCC (0) 0
 <F10> to continue



THE BETTER-BILT

2" THICK RAISED PANEL STEEL GARAGE DOOR
IS AVAILABLE IN THREE DIFFERENT SERIES.



B-50 SERIES: The B-50 offers a rich traditional look with deep detailed raised panels which complement any home from colonial through modern architecture. This heavy duty 26 gauge steel door is prepainted inside and out in your choice of white, almond or brown. The two-part system of epoxy primer and baked on polyester top coat over hot-dipped galvanized steel will give years of maintenance-free service. The interlocking tongue and groove joint provides exceptional strength as well as a tight weatherseal between all sections. The door bottom rail is fitted with a heavy duty astragal. A limited ten year warranty applies.

B-150 SERIES: The B-150 offers all the fine features of the B-50 with the additional advantage of a 3/4" polystyrene insulation package. This package provides additional all-season protection against the elements and comes with a Polycraft backcover. A limited ten year warranty applies.

B-250 SERIES: The B-250 is completely laminated with a 26 ga. exterior and a white enameled metal interior and is the BETTER-BILT top of the line raised panel steel door in every respect. A high density moulded polystyrene core combined with its laminated sandwich construction enables the door to withstand the elements while offering a R = 9.2 energy rating. Special features include heavy duty track and hardware and a special polyester woodgrained finish. The B-250 has no equal for strength, durability and longevity and comes with a limited lifetime warranty.

T.C. & ASSOCIATES
Pre-Engineered Steel Bldgs.

TRAVERS F. CAMBRA
Representative

"GARAGE DOOR EXPRESS"

- More for Less -

357 Bartley Road
Jackson, NJ 08527
Phone/Fax (908) 367-3753
Beeper (908) 473-7300

- Residential
- Commercial
- Coiling Doors

BETTER-BILT SERIES DOORS ARE AVAILABLE IN:

- 3 COLORS: Decorator White, Almond and Brown
- 8 WIDTHS: 8', 9', 10', 12', 14', 15', 16', & 18'
- 3 STANDARD HEIGHTS: 6'-6", 7'-0", and 8'-0"
- 4 STANDARD DESIGNS: Solid raised paneled, plain glass windows in the third or top section, cathedral (shown), fanlite (shown). Other designs available on special order including double fanlite for single car doors and single fanlite for double doors.

Note: Not all designs available in all sizes. Consult the factory.

UNIT DIM.	2'-11 1/2"	3'-1 1/2"	4'-1 1/2"	5'-1 1/2"
RGH. OPG.	3'-0"	4'-0"	5'-0"	6'-0"
UNOBS. GLASS	12 1/2"	18 1/2"	24 1/2"	30 1/2"
2'-10 1/2" 1'-11 1/2" 14 1/2"	 G32	 G42		
2'-11 1/2" 3'-0" 2 1/2"	 G33	 G43	 G53	 G63
3'-5 1/2" 3'-6" 3 1/2"	 G336	 G436	 G536	 G636
3'-11 1/2" 4'-0" 3 1/2"	 G34	 G44	 G54	 G64
4'-11 1/2" 5'-0" 5 1/2"	 G36	 G45	 G55	 G65



MAIN OFFICE:
190 OBERLIN AVENUE N.
LAKEWOOD, NEW JERSEY 08701

FAX # (908) 905-9628
(908) 905-1000

Dear Customer:

Enclosed is the Load Calculation Report you requested. L&H Plumbing & Heating Supplies, Inc. is happy to provide this as a service to you, our valued customer.

This report was prepared using A.C.C.A. Manual - J 7th Edition data, an approved industry standard for residential load applications. As such, we feel confident that the results in this report are as accurate as is reasonably possible.

If you have any questions regarding this report or need any other assistance, please feel free to contact L&H Plumbing & Heating Supplies' Technical Services Department at (908)905-1000.

Thank you for your continued patronage.

Sincerely,

L&H PLUMBING & HEATING SUPPLIES, INC.
Technical Services Staff

Computed results are estimates, since building construction
and operating conditions are subject to variation

Middletown (908) 530-7200	•	Avon (908) 775-5270	•	Bridgewater (908) 725-0666	•	Forked River (609) 693-0077	•	Williamstown (609) 629-5005	•	Burlington (609) 386-0097	•	Toms River (908) 240-1500
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S/N 2453

RIGHT-J SHORT FORM

01/05/94

Job #: 296131/LOMBARDIE RESIDENCE
 For: JERSEY COAST MECHANICAL INC. (J221)
 130 ST. LAWRENCE BLVD.
 BRICK NJ 08723
 (908) 477-6007

Htg Clg
 Outside db 0 95
 Inside db 70 75
 Design TD 70 20
 Daily Range - M
 Inside Humid. - 50
 Grains Water - 31

By: L & H PLUMBING & HEATING SUPPLIES INC.
 190 OBERLIN AVE. NORTH
 LAKEWOOD NJ 08701
 (908) 905-1005

Const. Quality a
 # of Fireplaces 1

HEATING EQUIPMENT

COOLING EQUIPMENT

Make COMFORTMAKER, BURNHAM
 Model OR WEIL McLAIN
 Type
 Efficiency / HSPF 0.0
 Heating Input 0 Btuh
 Heating Output 0 Btuh
 Heating Temp Rise 0 Deg F
 Actual Heating Fan 1815 CFM
 Htg Air Flow Factor 0.018 CFM/Btuh

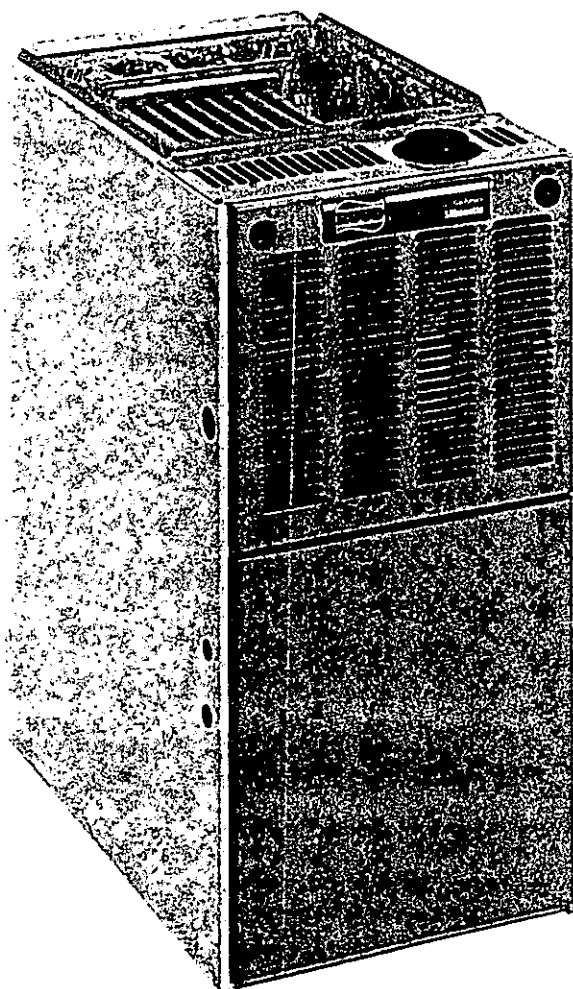
Make COMFORTMAKER OR TOSHIBA
 Model
 Type 10.0 S.E.E.R. MIN.
 COP/EER/SEER 0.0
 Sensible Cooling 0 Btuh
 Latent Cooling 0 Btuh
 Total Cooling 0 Btuh
 Actual Cooling Fan 1815 CFM
 Clg Air Flow Factor 0.039 CFM/Btuh

Space Thermostat HONEYWELL

Load Sensible Heat Ratio 89

ROOM NAME		AREA	HTG	CLG	HTG	CLG
		SQ. FT.	BTUH	BTUH	CFM	CFM
FAMILY ROOM		203	13661	9830	243	385
LIV/FOYER		555	31916	11688	568	458
KITCHEN		240	15044	7651	268	300
DINING ROOM		152	5834	873	104	34
LAUNDRY		58	1052	96	19	4
BATH		84	1658	139	29	5
BED 4		137	6720	1271	119	50
LOWER HALLWAY		96	1258	0	22	0
MAS BED		239	10144	6684	180	262
MAS WIC		44	552	212	10	8
MAS BATH		190	1269	526	23	21
UPPER HALLWAY		95	263	159	5	6
BED 2		225	6388	3606	114	141
BED 3		186	6280	3542	112	139
Entire House		2504	102041	46278	1815	1815
Ventilation Air			0	0		
Equip. @ 1.00 RSM				46278		
Latent Cooling				5598		
TOTALS		2504	102041	51876	1815	1815

RUUD®



UGDG- SERIES
Models with Input Rates from
50,000 to 150,000 BTU/HR
(U.S. & Canadian Models)



RUUD® SILHOUETTE® 78%-80% A.F.U.E.† UPFLOW GAS FURNACES

The Ruud Silhouette® line of upflow gas furnaces are designed for utility rooms, closets, or alcoves. Because of the Silhouette's low-profile 34 inch height, the upflow model can also be used to satisfy most applications that traditionally call for a horizontal furnace.

The design is certified by the American Gas Association. Canadian models are certified by the Canadian Gas Association.

Features

- Patented Turbulex® Heat Exchanger, constructed of both stainless and aluminized steel for the maximum in corrosion resistance.
- Low profile "34 inch" design is lighter and easier to handle, and leaves room for optional equipment.
- Both standing pilot and hot surface ignition models available.
- Left or right side gas and electric inlet connections with quick, simple change.
- Hot surface ignition models feature an integrated board with humidifier and electronic air cleaner hookups. An accessory kit is available for standing pilot models.
- Insulated blower compartment, a slow-open gas valve and a specially designed draft inducer motor make it one of the quietest furnaces on the market today.
- Integrated solid state control board.
- Pre-paint galvanized steel cabinet.
- Molded permanent filter.
- Grab-holes in doors to aid in easy door removal and replacement.

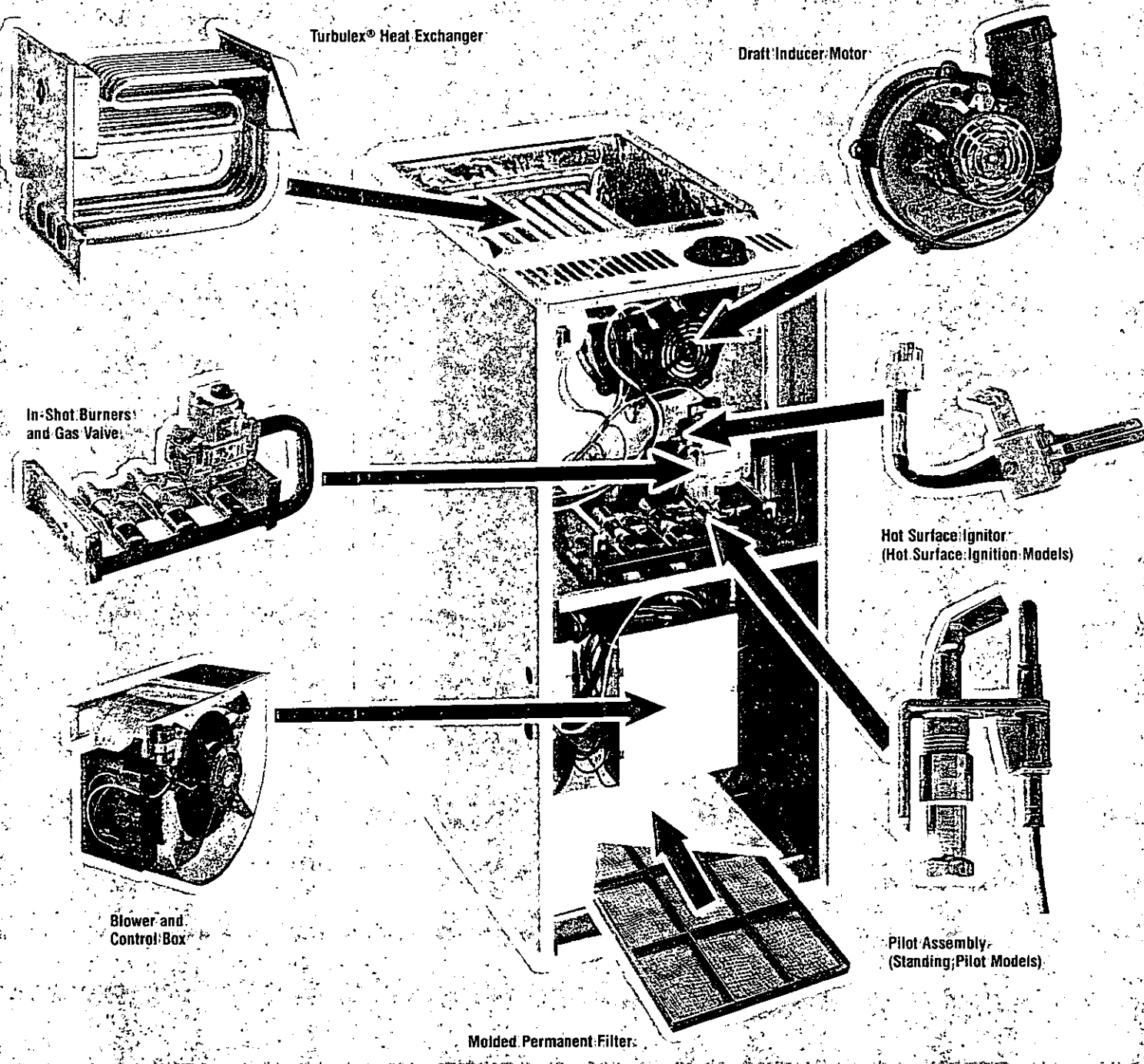


A variety of cooling coils and plenums designed to use with Ruud Silhouette gas furnaces are available as optional accessories for air conditioning models.

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



RUUD SILHOUETTE 78-80% UPFLOW GAS FURNACE



STANDARD EQUIPMENT

Completely assembled and wired; induced draft; pressure switch; redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; manual shut-off valve; pressure regulator for natural and L.P. (propane) gas; transformer; direct drive multi-speed blower motor. Furnaces are equipped with cooling/heating relay and transformer (40VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

Side filter frame assembly. Return air cabinet for all sizes. (See Page 5)

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

The complete terms of limited and other warranties are available at our sales office, or through local installer.

All models can be converted by a qualified Ruud 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 Ruud parts distributor.

For L.P. (propane) operation, refer to Conversion Kit Index Form No. 92-21519-30 for U.S. models and Form No. 92-21519-31 for Canadian models.

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

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

PHYSICAL DATA AND SPECIFICATIONS—U.S. MODELS (UPFLOW)

MODEL NUMBERS	UGDG-050AUER UGDG-05MAUER UGDG-05EAUER UGDG-05NAUER	UGDG-075AUER UGDG-07MAUER UGDG-07EAUER UGDG-07NAUER	UGDG-075AMGR UGDG-07MAMGR UGDG-07EAMGR UGDG-07NAMGR	UGDG-100AUER UGDG-10MAUER UGDG-10EAMER UGDG-10NAMER	UGDG-100BRJR UGDG-10MBRJR UGDG-10EBRJR UGDG-10NBRJR	UGDG-125ARJR UGDG-12MARJR UGDG-12EARJR UGDG-12NARJR	UGDG-150ARJR UGDG-15MARJR UGDG-15EARJR UGDG-15NARJR
INPUT-BTU/HR ②	50,000	75,000	75,000	100,000	100,000	125,000	150,000
HEATING CAPACITY BTU/HR	41,000	59,500	60,500	80,000	80,000	99,000	119,500
HEAT EXT. STATIC PRESSURE	.10	.12	.12	.15	.15	.20	.20
BLOWER (D x W)	11 x 6	11 x 6	11 x 7	11 x 6 = UGDG-10*AU 11 x 7 = UGDG-10*AM	11 x 10	11 x 10	11 x 10
MOTOR H.P.—SPEEDS—TYPE	1/2-4-PSC	1/2-3-PSC	3/4-4-PSC	1/2-3-PSC	3/4-4-PSC	3/4-4-PSC	3/4-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	9.5	6.8	9.5	9.5	9.5
HEATING SPEED	MED-LOW	MED	MED-LOW	MED	MED-LOW	MED-LOW	MED-LOW
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
COOLING CFM @ .5" E.S.P. (NOMINAL)	1200	1200	1600	1200	2000	2000	2000
MAX. EXT. STATIC PRESSURE (IN.)	.50	.50	.50	.50	.50	.50	.50
TEMPERATURE RISE RANGE °F	25-55	40-70	25-55	55-85 = UGDG-10*AU 50-80 = UGDG-10*AM	40-70	35-65	50-80
STANDARD FILTER	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	19 1/4 x 25	22 3/4 x 25	22 3/4 x 25
APPROX. SHIPPING WEIGHT (LBS.)	85	105	105	115	120	140	150
RETURN AIR CABINETS (OPT.) RXGR- FILTER SIZE	C14B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C21B (2) 20 x 16	C24B (2) 24 x 16	C24B (2) 24 x 16
FILTER FRAME (OPT.) RXGF- FILTER SIZE	Z16B (1) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25
AFUE—STANDING PILOT MODELS ①	78.7%	78.7%	78.6%	78%	78.6%	78.2%	78.1%
AFUE—H.S.I. MODELS ①	81.4%	80.6%	80.5%	80%	80.1%	80%	80%
CALIFORNIA SEASONAL EFFICIENCY— H.S.I./NO. MODELS	74.9/75.4	74.9/75.4	74.7/75.3	75.4/75.4	73.9/74.5	74.2/74.2	74.7/74.7

NOTES: All models are 115V, 60HZ, 10. Gas connection size for all models is 1/2" N.P.T.

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form No. 92-21519-30 for high altitude derate.

PHYSICAL DATA AND SPECIFICATIONS—CANADIAN MODELS (UPFLOW)

MODEL NUMBERS	UGDG-050AUEA UGDG-05EAUEA	UGDG-075AUEA UGDG-07EAUEA	UGDG-075AMGA UGDG-07EAMGA	UGDG-100AUEA UGDG-10EAUEA	UGDG-100BRJA UGDG-10EBRJA	UGDG-125ARJA UGDG-12EARJA	UGDG-150ARJA UGDG-15EARJA
INPUT-BTU/HR ②	50,000	75,000	75,000	100,000	100,000	125,000	150,000
HEATING CAPACITY BTU/HR	41,000	59,500	60,500	80,000	81,000	99,000	119,500
HIGH ALTITUDE INPUT	45,000	67,500	67,500	90,000	90,000	112,500	135,000
HIGH ALTITUDE OUTPUT CAPACITY	36,500	53,500	54,000	72,000	72,500	89,000	107,500
HEAT EXT. STATIC PRESSURE	.10	.12	.12	.15	.15	.20	.20
BLOWER (D x W)	11 x 6	11 x 6	11 x 7	11 x 6 = UGDG-10*AU 11 x 7 = UGDG-10*AM	11 x 10	11 x 10	11 x 10
MOTOR H.P.—SPEEDS—TYPE	1/2-4-PSC	1/2-3-PSC	3/4-4-PSC	1/2-3-PSC	3/4-4-PSC	3/4-4-PSC	3/4-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	9.5	6.8	9.5	9.5	9.5
HEATING SPEED	MED-LOW	MED	MED-LOW	MED	MED-LOW	MED-LOW	MED-LOW
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
COOLING CFM @ .5" E.S.P. (NOMINAL)	1200	1200	1600	1200	2000	2000	2000
MAX. EXT. ST. PRESSURE (IN.)	.50	.50	.50	.50	.50	.50	.50
TEMPERATURE RISE RANGE °F	25-55	40-70	25-55	55-85 = UGDG-10*AU 50-80 = UGDG-10*AM	40-70	35-65	50-80
STANDARD FILTER	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	19 1/4 x 25	22 3/4 x 25	22 3/4 x 25
APPROX. SHIPPING WEIGHT (LBS.)	85	105	105	115	120	140	150
RETURN AIR CABINETS (OPT.) RXGR- FILTER SIZE	C14B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C21B (2) 20 x 16	C24B (2) 24 x 16	C24B (2) 24 x 16
FILTER FRAME (OPT.) RXGF- FILTER SIZE	Z16B (1) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25
AFUE—STANDING PILOT MODELS ①	78.7%	78.7%	78.6%	78%	78.6%	78.2%	78.1%
AFUE—H.S.I. MODELS ①	81.4%	80.6%	80.5%	80%	80.1%	80%	80%

NOTES: All models are 115V, 60HZ, 10. Gas connection size for all models is 1/2" N.P.T.

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form No. 92-21519-31 for high altitude derate.

MODEL IDENTIFICATION—UPFLOW MODELS

U	G	D	G	—	07E	A	U	E	R
Ruud	Gas	Upflow	Design		Heating Input Designation	Variations	Blower	Heating & Cooling	Fuel Type
Furnace		Series			Standing Pilot Model NO _x Hot Surface Ignition Model NO _x Input BTU/HR	A = Std. Cabinet B = Wide Cabinet	Designation U = 11 x 6 M = 11 x 7 R = 11 x 10	Designation E = 1100-1330 CFM G = 1450-1750 CFM J = 1800-2075 CFM	R = Natural Gas, U.S. Standard Furnace A = Natural Gas, Canadian Standard Furnace
					050 05M 05E 05N 50,000 075 07M 07E 07N 75,000 100 10M 10E 10N 100,000 125 12M 12E 12N 125,000 150 15M 15E 15N 150,000				

UPFLOW DIMENSIONS

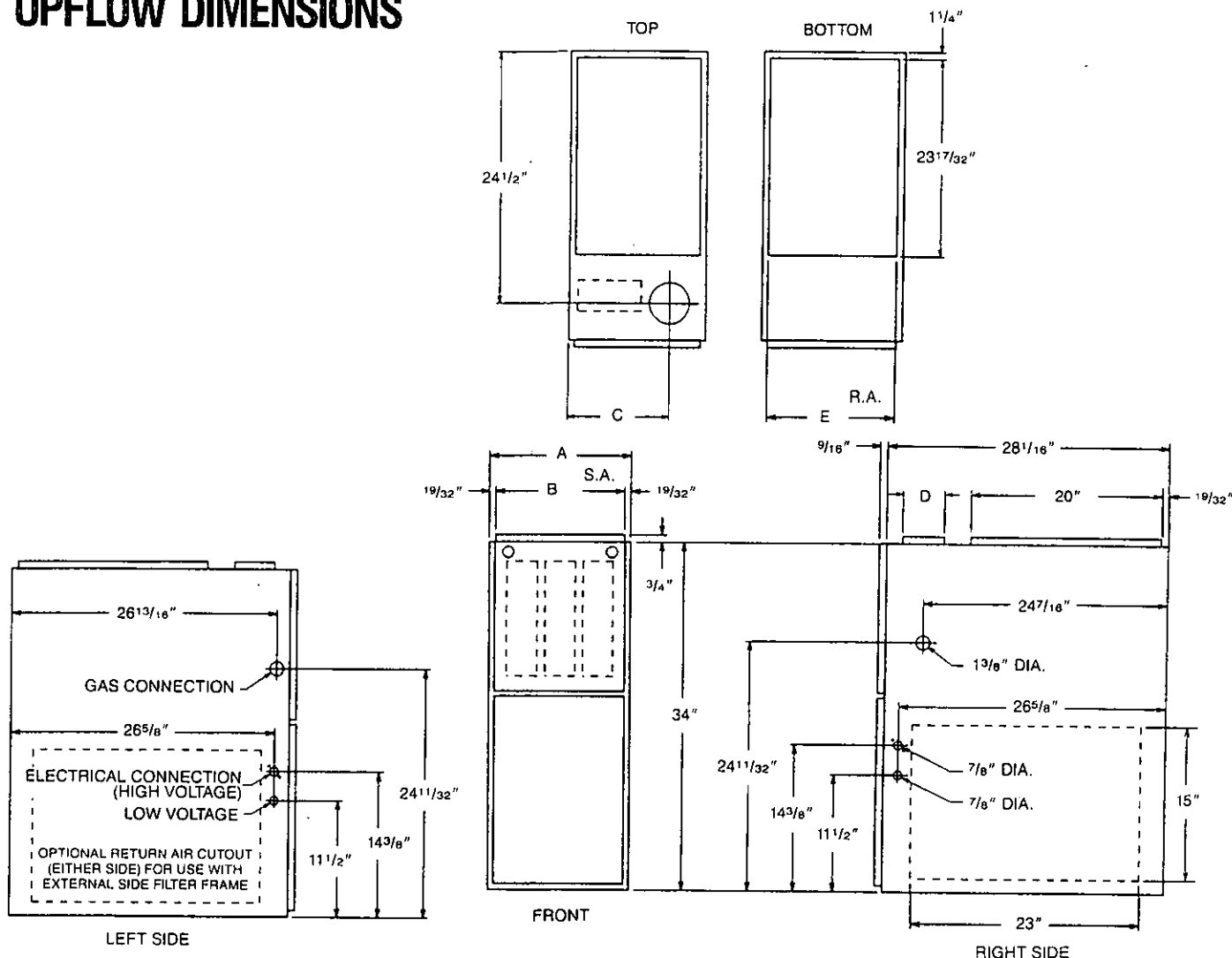


TABLE 1. DIMENSIONS AND CLEARANCE TO COMBUSTIBLE MATERIAL (INCHES)

MODEL	A	B	C	D	E	REDUCED CLEARANCES (IN.)					
						LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT
UGDG-05	14	12 ^{27/32}	10 ^{3/8}	Ⓐ	11 1/2	0	4ⓑ	0	1	6	6ⓒ
UGDG-07	17 1/2	16 ^{11/32}	12 1/8	Ⓐ	15	0	3ⓑ	0	1	6	6ⓒ
UGDG-10(-)A	17 1/2	16 ^{11/32}	12 1/8	Ⓐ	15	0	3ⓑ	0	1	6	6ⓒ
UGDG-10(-)B	21	19 ^{27/32}	13 7/8	Ⓐ	18 1/2	0	0	0	1	6	6ⓒ
UGDG-12	24 1/2	23 ^{11/32}	15 5/8	Ⓐ	22	0	0	0	1	6	6ⓒ
UGDG-15	24 1/2	23 ^{11/32}	15 5/8	Ⓐ	22	0	0	0	1	6	6ⓒ

NOTES: Ⓐ Vent diameter connection as shipped from the factory is 3". Certain installations will require a 3" to 4" or 3" to 5" adaptor.

ⓑ May be 0" with type "B-1" vent.

ⓒ May be 1" with type "B-1" vent.

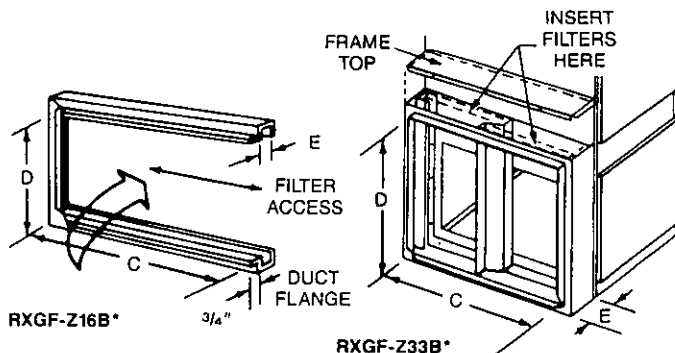
Furnaces must be vented in accordance with AGA/GAMA rating guidelines included with each furnace, and in accordance with local codes.

ACCESSORIES—UPFLOW

PLENUM DATA

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

FURNACE WIDTH	PLENUM WIDTH	PLENUM/ADAPTER UPFLOW	COIL PLENUM
14	16 1/4	RXAA-C171	RXAL-B16BU
14	20 1/4	RXAA-C172	RXAL-B20BU
17 1/2	16 1/4	RXAA-C185	RXAL-B16BU
17 1/2	20 1/4	RXAA-C173	RXAL-B20BU
17 1/2	21 5/8	RXAA-C187	RXAL-B21BU
17 1/2	25 1/4	RXAA-C174	RXAL-B25BU
21	25 1/4	RXAA-C175	RXAL-B25BU
21	22 1/4	RXAA-C176	RXAL-B22BU
21	21 5/8	RXAA-C188	RXAL-B21BU
24 1/2	25 1/4	RXAA-C177	RXAL-B25BU
24 1/2	21 5/8	RXAA-C187	RXAL-B21BU



EXTERNAL SIDE FILTER FRAMES	C	D	E
RXGF-Z16B	23	14	1 1/4
RXGF-Z33B	26 1/2	23 1/2	6

NOTE: C and D are plenum dimensions.
*Filters supplied with filter frame.

RXGW-AAA01

Humidifier and Electronic Air Cleaner Accessory Board for Robertshaw Control RBC1 and Honeywell ST9101A 1014 Blower Controls.

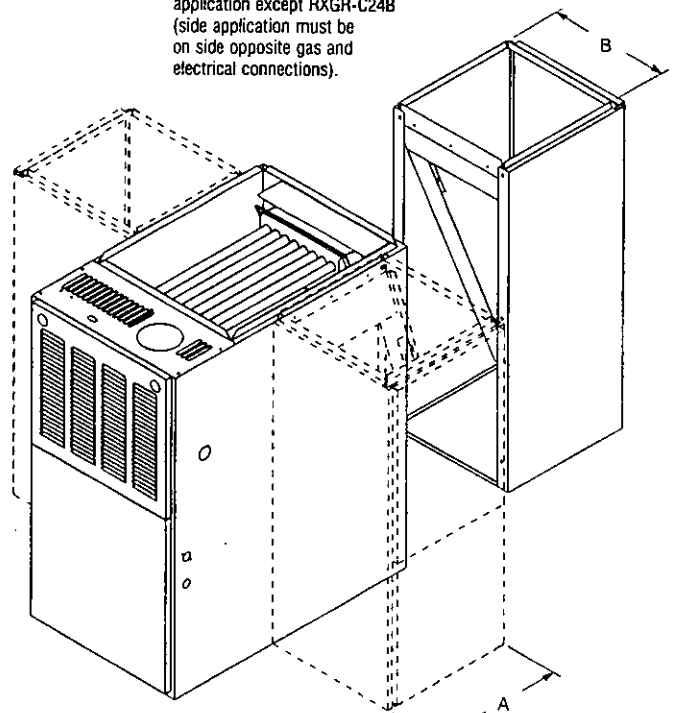
NOTE: Available for standing pilot models only.

RXPF-E01

FOSSIL FUEL KIT—is for use with Ruud Heat Pumps and Silhouette warm air furnaces.

ACCESSORY RETURN AIR CABINETS

Return Air Cabinets may be installed on rear or either side application except RXGR-C24B (side application must be on side opposite gas and electrical connections).



THE RXGR-C24B MAY ONLY BE INSTALLED ON REAR AND LEFT SIDES.

RETURN AIR CABINETS	A	B	FILTER SIZE*
RXGR-C14B	14	12 27/32	(2) 12 x 16
RXGR-C17B	17 1/2	16 11/32	(2) 12 x 16
RXGR-C21B	21	19 27/32	(2) 20 x 16
RXGR-C24B	24 1/2	23 11/32	(2) 24 x 16

WARNING: IMPORTANT NOTICE

A SOLID METAL BASE PLATE (SEE TABLE) MUST BE IN PLACE WHEN THE FURNACE IS INSTALLED WITH SIDE OR REAR AIR RETURN DUCTS. FAILURE TO INSTALL A BASE PLATE COULD CAUSE PRODUCTS OF COMBUSTION TO BE CIRCULATED INTO THE LIVING SPACE AND CREATE POTENTIALLY HAZARDOUS CONDITIONS.

FURNACE WIDTH	SOLID BOTTOM KIT NO.	BASE PLATE NO.	BASE PLATE SIZE
14	RXGB-B14	AE-61229-02	12 3/4 x 24 11/16
17 1/2	RXGB-B17	AE-61229-03	16 1/4 x 24 11/16
21	RXGB-B21	AE-61229-04	19 3/4 x 24 11/16
24 1/2	RXGB-B24	AE-61229-05	23 1/4 x 24 11/16

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.

Gas Heat Exchanger Warranty Twenty (20) Years
Draft Inducer Warranty Five (5) Years
Integrated Blower Control Board Warranty . . . Five (5) Years
(Standing Pilot and Hot Surface Ignition Boards)
Any Other Part One (1) Year

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

BLOWER PERFORMANCE DATA—UPFLOW MODELS

MODEL NUMBER	BLOWER SIZE	MOTOR H.P.	BLOWER SPEED	CFM/AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES WATER COLUMN						
				1.7	1.6	1.5	1.4	1.3	1.2	1.1
UGDG-050AUE* UGDG-05MAUER UGDG-05EAUE* UGDG-05NAUER	11 x 6	1/2	LOW MED-LO MED-HI HIGH	575 895 1060 1250	605 920 1085 1290	635 940 1105 1320	680 955 1125 1350	695 970 1150 1390	715 980 1170 1440	735 990 1190 —
UGDG-075AUE* UGDG-07MAUER UGDG-07EAUE* UGDG-07NAUER	11 x 6	1/2	LOW MED HIGH	800 995 1160	820 1020 1200	840 1045 1235	855 1060 1265	870 1080 1295	885 1095 1320	900 1115 1345
UGDG-075AMG* UGDG-07MAMGR UGDG-07EAMG* UGDG-07NAMGR	11 x 7	3/4	LOW MED-LO MED-HI HIGH	985 1105 1385 1475	1010 1135 1425 1525	1025 1155 1450 1585	1035 1170 1480 1640	1040 1185 1510 1690	1045 1195 1535 1740	1050 1205 1565 —
UGDG-100AUE* UGDG-10MAUER	11 x 6 11 x 6	1/2	LOW MED	770 920	795 945	810 970	830 990	845 1010	860 1030	875 1050
UGDG-10EAME* UGDG-10NAMER	11 x 7 11 x 7		HIGH	1120	1120	1155	1190	1220	1250	1280
UGDG-100BRJ* UGDG-10MRJR UGDG-10EBRJ* UGDG-10NBRJR	11 x 10	3/4	LOW MED-LO MED-HI HIGH	1095 1265 1615 1865	1110 1285 1655 1935	1120 1300 1680 2010	1125 1310 1705 2080	1130 1315 1725 2145	1135 1320 1735 2200	1140 1325 1745 —
UGDG-125ARJ* UGDG-12MARJR UGDG-12EARJ* UGDG-12NARJR	11 x 10	3/4	LOW MED-LO MED-HI HIGH	1130 1300 1665 1895	1140 1315 1710 1975	1150 1330 1740 2050	1160 1340 1760 2120	1170 1350 1775 2195	1175 1355 1780 2285	— 1360 — —
UGDG-150ARJ* UGDG-15MARJR UGDG-15EARJ* UGDG-15NARJR	11 x 10	3/4	LOW MED-LO MED-HI HIGH	1150 1300 1655 1775	1170 1330 1695 1847	1175 1345 1735 1915	1180 1360 1775 1980	1185 1365 1800 2045	1190 1375 1830 2110	1195 1385 1845 —

NOTES: *Designates "R" for U.S. models, and "A" for Canadian models.

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

**RUUD
AIR CONDITIONING
DIVISION**

P.O. Box 17010, Fort Smith, Arkansas 72917-7010



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

RUUD®

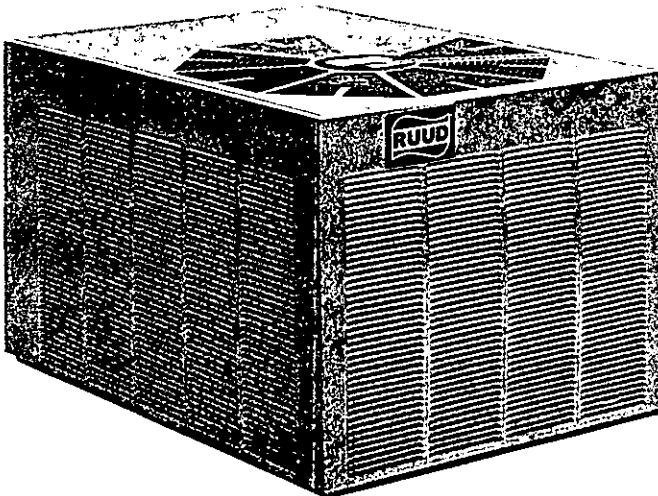
RUUD® ACHIEVER 12® SUPER HI-EFFICIENCY CONDENSING UNITS

Seven Models

Cooling Capacities
19,500 to 56,000 BTU/HR

UAMA- SERIES

Nominal Sizes 1½ to 5 Tons



The Ruud Achiever 12 Super High Efficiency UAMA- Condensing Unit was designed with performance in mind. These units offer comfort, energy conservation and dependability for single, multi-family and light commercial applications.

The Ruud Achiever 12 UAMA- Condensing Units are the result of an ongoing development program for improved efficiencies. With SEER's ranging to 12.4, these units continue a tradition of high efficiency.

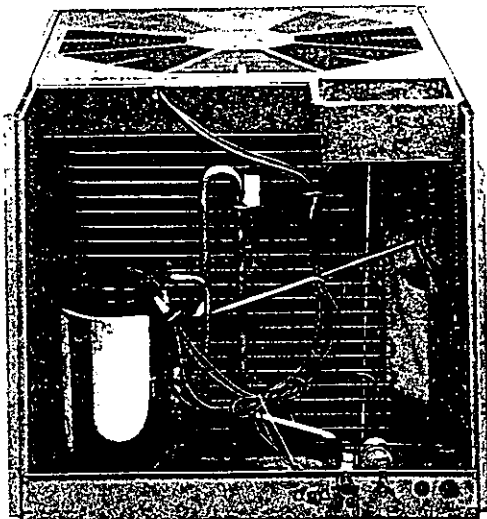
- Attractive, louvered wrap-around jacket protects the coil from yard hazards and weather extremes. Top grille is steel reinforced for extra strength. Cabinet is powder painted for all-weather protection.
- Air is discharged upward away from bushes and shrubs. The discharge pattern of the top grille provides minimum air restriction, resulting in quiet fan operation.
- Exclusive Combination Grille/Motor Mount secures the motor to the underside of the discharge grille. The grille protects the motor windings and bearings from rain and snow.
- All controls are accessible by removing one service panel. Removable top grille provides access to the condenser fan motor and condenser coil.



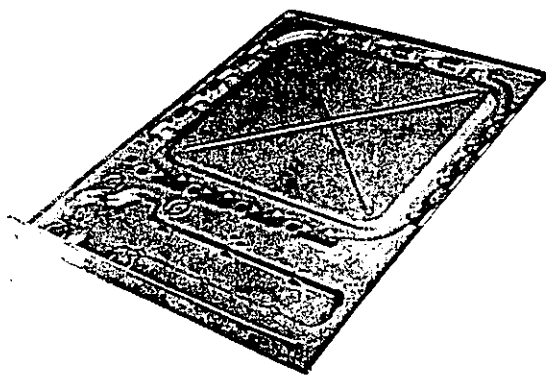
- Single speed motor designed for low speed, quiet, energy-saving operation.



"CERTIFIED UNDER THE
A.R.I. CERTIFICATION
PROGRAM—A.R.I.
STANDARD 210"



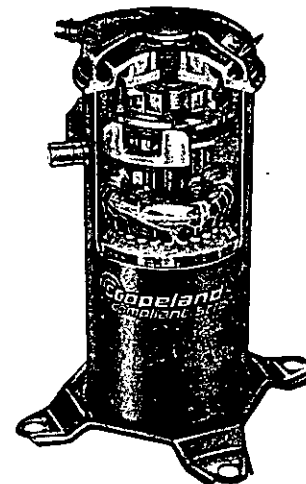
All controls and compressor are accessible for servicing by removal of the service panel.



Drawn Painted Base Pan.

COPELAND® COMPLIANT SCROLL®

Copeland's new scroll compressor is the key to efficiency for this Ruud model. It's the latest in high-efficiency compressor technology. The advanced compliant scroll compressor offers low noise and vibration characteristics and features tolerance to liquid refrigerant and system contamination. The Copeland Compliant Scroll also has low start torque, eliminating start problems in the field. And its unique design enables the UAMA- condensing unit to perform more efficiently.



Engineering Features

UAMA- Series Condensing Units

1. Scroll compressor is hermetically sealed and incorporates internal high temperature motor overload protection, and durable insulation on the motor windings. It is externally mounted on rubber grommets to reduce vibration and noise.
2. Compressors have an internal pressure relief assembly to protect against excessive pressure differential.
3. All refrigerant connections are on the exterior of the unit, located close to the ground for neat appearing installations.
4. Cabinet is constructed of powder painted galvanized steel. The full wraparound louvered grille protects the coil from damage.
5. Copper Tube—Aluminum Fin coils are used on all models.
6. The control box is located in the top corner of the cabinet providing for easy access through a service panel.
7. Service valves are standard on all models.
8. Power and control wiring are kept separate.
9. Every unit is factory charged and tested.
10. Separate compressor compartment for easy service access.
11. Drawn, painted base pan for extra corrosion resistance and sound reduction.
12. **UAMA- Series** has a **10 year compressor limited warranty**, factory installed low pressure control, high pressure control, compressor sound wrap, and a liquid line filter drier.
13. Anti-Short cycle time delay control.

Field Installed Accessories

- **Low Ambient Switch**—Cycles outdoor fan to maintain adequate condensing pressures assuring liquid refrigerant flow to the coil. Allows indoor cooling with outdoor temperatures down to 0°F. (Model No. RXAD-A04)

It is recommended that this control be installed in units to be operated at outdoor ambient temperatures under 70°F.

Model Number Identification

<u>U</u>	<u>A</u>	<u>M</u>	<u>A</u>	<u>—</u>	<u>024</u>	<u>J</u>	<u>A</u>	<u>Z</u>
RUUD	CONDENSING UNIT	TYPE-M SUPER HI-EFFICIENCY	DESIGN SERIES		NOMINAL COOLING CAPACITY	ELECTRICAL DESIGNATION J = 208/230-1-60	VARIATIONS A = DELUXE MODEL	COMPRESSOR TYPE Z = COPELAND ZR COMPLIANT SCROLL COMPRESSOR
					018 = 18,000 BTU/HR			
					024 = 24,000 BTU/HR			
					030 = 30,000 BTU/HR			
					036 = 36,000 BTU/HR			
					042 = 42,000 BTU/HR			
					048 = 48,000 BTU/HR			
					060 = 60,000 BTU/HR			

Performance Data @ ARI Standard Conditions—Cooling

Model Numbers		80°F DB/67°F WB Indoor Air 95°F DB Outdoor Air				
Outdoor Unit UAMA	Indoor Coil and/or Air Handler	Total Capacity BTU/HR	Net Sensible BTU/HR	Net Latent BTU/HR	Single-Phase Total Watts	SEE1
018JAZ	RCBA-24** + RXCT-BCA	18,800	13,000	5,800	1,695	12.0
	RCBA-24** + RXCT-BCA (UBEA-14)	18,800	13,000	5,800	1,665	12.4
	RCBA-24** + RXCT-BCA (UBHA-14)	18,800	13,000	5,800	1,665	12.4
	RCBA-2453	18,800	13,000	5,800	1,695	11.5
	RCBA-2453 (UBEA-14)	18,800	13,000	5,800	1,640	11.9
	RCBA-2453 (UBHA-14)	18,800	13,000	5,800	1,640	11.9
	RCGA-24A1 ②	18,800	13,000	5,800	1,695	12.0
	RCGA-24A1 (UBEA-14)	18,800	13,000	5,800	1,665	12.4
	RCGA-24A1 (UBHA-14)	18,800	13,000	5,800	1,665	12.4
	RCHA-24A1	18,800	13,000	5,800	1,695	12.0
	RCHA-24A1 (UBEA-14)	18,800	13,000	5,800	1,665	12.4
	RCHA-24A1 (UBHA-14)	18,800	13,000	5,800	1,665	12.4
024JAZ	RCAB-A025	21,200	14,416	6,784	2,048	10.0
	RCAB-A025 (UHQA-08)	21,400	14,616	6,784	1,928	11.0
	RCAH-Z025	21,000	14,280	6,720	2,029	10.0
	RCBA-24** + RXCT-BCB	22,400	15,200	7,200	2,093	12.0
	RCBA-24** + RXCT-BCB (UBEA-14)	22,600	15,400	7,200	2,036	12.4
	RCBA-24** + RXCT-BCB (UBHA-14)	22,600	15,400	7,200	2,036	12.4
	RCBA-2457	22,400	15,232	7,168	2,093	11.5
	RCBA-2457 (UBEA-14)	22,400	15,232	7,168	2,027	11.9
	RCBA-2457 (UBHA-14)	22,400	15,232	7,168	2,027	11.9
	RCEH-Z025	21,000	14,280	6,720	2,049	10.0
	RCGA-24A2 ②	22,400	15,200	7,200	2,093	12.0
	RCGA-24A2 (UBEA-14)	22,600	15,400	7,200	2,036	12.4
	RCGA-24A2 (UBHA-14)	22,600	15,400	7,200	2,036	12.4
	RCHA-24A2	22,400	15,200	7,200	2,093	12.0
	RCHA-24A2 (UBEA-14)	22,600	15,400	7,200	2,036	12.4
	RCHA-24A2 (UBHA-14)	22,600	15,400	7,200	2,036	12.4
	RCLB-A024	22,800	15,504	7,296	2,073	10.8
	RCLB-A024 (UHQA-08)	23,200	15,904	7,296	1,974	11.5
	RCPB-C024	21,200	14,416	6,784	2,048	10.0
	RCTB-A024	22,600	15,368	7,232	2,055	12.0
	RCTB-A024 (UHQA-08)	23,000	15,768	7,232	1,957	13.0
	RCTH-A024	23,000	15,640	7,360	2,081	12.0
030JAZ	RCAB-A031	29,000	20,590	8,410	2,673	10.3
	RCAH-Z037	28,600	20,306	8,294	2,673	10.1
	RCBA-36** + RXCT-BCC	30,000	21,331	8,669	2,691	12.0
	RCBA-36** + RXCT-BCC (UBEA-17)	30,200	21,531	8,669	2,603	12.4
	RCBA-36** + RXCT-BCC (UBHA-17)	30,200	21,531	8,669	2,603	12.4
	RCBA-37** + RXCT-BCC	30,000	21,331	8,669	2,691	12.0
	RCBA-37** + RXCT-BCC (UBEA-17)	30,200	21,531	8,669	2,603	12.4
	RCBA-37** + RXCT-BCC (UBHA-17)	30,200	21,531	8,669	2,603	12.4
	RCBA-3765	30,000	21,300	8,700	2,691	11.5
	RCBA-3765 (UBEA-17)	30,000	21,300	8,700	2,620	11.9
	RCBA-3765 (UBHA-17)	30,000	21,300	8,700	2,620	11.9
	RCEH-Z031	29,000	20,590	8,410	2,685	10.2
	RCGA-37A1 ②	30,000	21,331	8,669	2,691	12.0
	RCGA-37A1 (UBEA-17)	30,200	21,531	8,669	2,603	12.4
	RCGA-37A1 (UBHA-17)	30,200	21,531	8,669	2,603	12.4
	RCHA-36A1	30,000	21,331	8,669	2,691	12.0
	RCHA-36A1 (UBEA-17)	30,200	21,531	8,669	2,603	12.4
	RCHA-36A1 (UBHA-17)	30,200	21,531	8,669	2,603	12.4
	RCLB-A030	30,600	21,726	8,874	2,696	10.8
	RCLB-A030 (UHQA-13)	30,800	21,926	8,874	2,644	11.2
	RCPB-C036	29,400	20,874	8,526	2,685	10.4
	RCTB-A036	30,400	21,584	8,816	2,690	12.1
	RCTB-A036 (UHQA-13)	30,600	21,784	8,816	2,627	12.5
	RCTH-A036	30,400	21,584	8,816	2,690	12.1

① Sound rating in accordance with ARI Standard 270.

② Highest sales volume tested combination required by D.O.E. test procedure

Performance Data @ ARI Standard Conditions—Cooling (continued)

Model Numbers		80°F DB/ 67°F WB: Indoor Air 95°F DB Outdoor Air							ARI Sound Rating ①	Indoor CFM
Outdoor Unit UAMA-	Indoor Coil and/or Air Handler	Total Capacity BTU/HR	Net Sensible BTU/HR	Net Latent BTU/HR	Single Phase		Three Phase			
					Total Watts	SEER	Total Watts	SEER		
048JAZ	RCHA-48A1	47,000	32,699	14,301	4,352	12.00			7.8	1,600
	RCHA-48A1 (UBEA-21)	47,000	32,699	14,301	3,790	12.40			7.8	1,600
	RCHA-48A1 (UBHA-21)	47,000	32,699	14,301	3,790	12.40			7.8	1,600
	RCTB-A060	48,500	33,950	14,550	4,350	12.30			7.8	1,600
	RCTB-B060	48,500	33,950	14,550	4,350	12.30			7.8	1,600
	RCTB-B060 (UHQA-16)	49,000	34,450	14,550	4,261	12.75			7.8	1,600
	RCTH-A048 (UHQA-16)	49,000	34,300	14,700	4,261	12.50			7.8	1,600
	RCTH-A060	49,000	34,300	14,700	4,395	12.00			7.8	1,600
060JAZ	RCBA-60** + RXCT-BCF	56,000	38,724	17,276	5,283	12.00			7.8	1,900
	RCBA-60** + RXCT-BCF (UBEA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCBA-60** + RXCT-BCF (UBHA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCBA-6089	56,000	39,200	16,800	5,283	11.50			7.8	1,900
	RCBA-6089 (UBEA-24)	56,000	39,200	16,800	5,185	11.80			7.8	1,900
	RCBA-6089 (UBHA-24)	56,000	39,200	16,800	5,185	11.80			7.8	1,900
	RCGA-60A1 ②	56,000	38,724	17,276	5,283	12.00			7.8	1,900
	RCGA-60A1 (UBEA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCGA-60A1 (UBHA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCHA-60A1	56,000	38,724	17,276	5,283	12.00			7.8	1,900
	RCHA-60A1 (UBEA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCHA-60A1 (UBHA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCQB-B060	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCQB-B060 (UHQA-20)	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCQB-C060	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCQB-C060 (UHQA-20)	58,500	41,700	16,800	5,318	12.40			7.8	1,900
		RCTH-A060	55,000	37,978	17,022	5,263	11.50			7.8
	RCTH-A060 (UHQA-20)	55,000	37,978	17,022	5,263	11.50			7.8	1,900

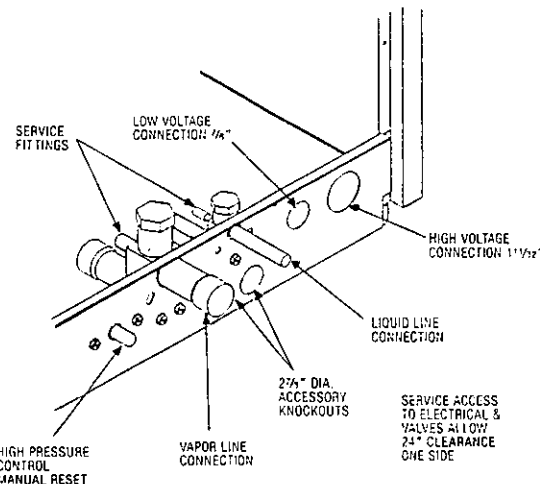
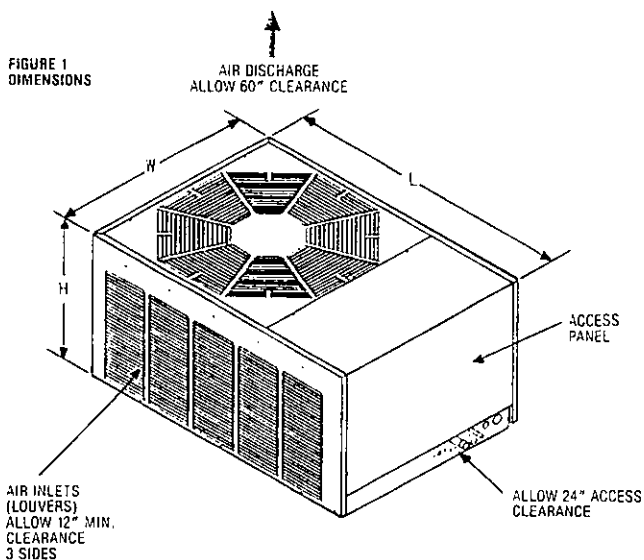
① Sound rating in accordance with ARI Standard 270.

② Highest sales volume tested combination required by D.O.E. test procedures.

Electrical and Physical Data

Model No. UAMA-	ELECTRICAL							PHYSICAL					
	Phase Hertz Volts	Compr. RLA	Compr. LRA	Fan Motor FLA	Min. Circuit Ampacity Amps	Fuse or HACR Circuit Breaker		Outdoor Coil			R22 Oz.	Weight	
						Min. Amps	Max. Amps	Face Area Sq. Ft.	No. Rows	CFM		Net Lbs.	Shipping Lbs.
018JAZ	1-60-208/230	9.6/9.6	49	.8	13/13	20/20	20/20	15.8	1	2947	88	200	217
024JAZ	1-60-208/230	12.9/12.9	62.5	.8	16/16	20/20	25/25	15.8	1	2029	85	184	201
030JAZ	1-60-208/230	13.5/13.5	76	1.2	18/18	25/25	30/30	15.8	1	2947	96	189	206
036JAZ	1-60-208/230	18.0/18.0	90.5	1.2	24/24	30/30	40/40	15.8	1	2947	96	196	213
042JAZ	1-60-208/230	19.9/19.9	107	2.0	26/26	35/35	45/45	15.8	1	3995	95	201	218
048JAZ	1-60-208/230	23.7/23.7	129	2.0	32/32	40/40	50/50	17.3	2	3944	172	270	287
060JAZ	1-60-208/230	28.9/28.9	169	2.0	39/39	50/50	60/60	20.8	2	3995	192	309	332

Unit Dimensions



Model Number UAMA-	Height "H" (Inches)	Length "L" (Inches)	Width "W" (Inches)
-018/-024/-030 -036/-042/-048	26 3/4	42 9/16	31
-060	34 3/4	43	31

Condensing Units Refrigerant Line Size Information

Liquid Line Lengths ①															
Unit Nom. Tons	Std. Liq. Line Size	Horizontal Run — Feet						Vertical Separation of Outdoor & Indoor Units — Feet							
		Max. Line Length						Outdoor Unit Above ② ③				Outdoor Unit Below ④			
		30'	40'	60'	80'	100'	150'	30'	40'	60'	80'	100'	10' Max.	40' Max.	
1.5	1/4"	1/4"			5/16"			1/4"		5/16"			1/4"	5/16"	
2.0		1/4"		5/16"			3/8"		1/4"		5/16"				
2.5		1/4"	5/16"			3/8"		1/4"	5/16"						
3.0	5/16"	5/16"			3/8"			5/16"		3/8"			5/16"	3/8"	
3.5		5/16"		3/8"			5/16"		3/8"						
4.0	3/8"	3/8"				1/2"		3/8"				3/8"	1/2"		
5.0		3/8"				1/2"		3/8"			1/2"				

- ① Factory charge is sufficient for 25 feet of standard liquid line. For different line lengths, adjust refrigerant charge as follows: 1/4" line ± .3 oz. per foot, 5/16" line ± .4 oz. per foot, 3/8" line ± .6 oz. per foot, 1/2" line ± 1.2 oz. per foot.
 ② Total run (vertical and horizontal) must not exceed 120 feet.
 ③ Indoor coil Flowcheck Piston size must be reduced as follows: No change up to 35' in separation height. Reduce (4) sizes for 35' to 75' separation height. Reduce (8) sizes for 75' to 100' separation height. (No change required for TXV coils)
 ④ Total run (vertical and horizontal) must not exceed 60 feet.

Vapor Line Length/Size versus Capacity Multiplier									
UAMA		018	024	030	036	042	048	060	
Vapor Line Run — Feet		Nominal Unit Tons							
		1.5	2.0	2.5	3.0	3.5	4.0	5.0	
		3/4" O.D. Standard 7/8" O.D. Optional			7/8" O.D. Standard 1 1/8" O.D. Optional		1 1/8" O.D. Standard 1 3/8" O.D. Optional		
25'	Standard	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
	Optional	1.01	1.01	1.01	1.01	1.01	1.01	1.01	
50'	Standard	.99	.99	.99	.99	1.00	1.00	.99	
	Optional	1.00	1.00	1.00	1.01	1.01	1.01	1.01	
100'	Standard	.99	.98	.97	.98	.99	.99	.99	
	Optional	1.00	.99	.99	1.00	1.00	1.00	1.00	
150'	Standard	.98	.97	.95	.97	.99	.99	.98	
	Optional	1.00	.98	.97	.99	1.00	1.00	.99	

NOTES: Capacity Multiplier x Rated Capacity = Actual Capacity.

Additional compressor oil is not required for runs up to 150 feet.

Oil traps in vertical runs are not required for any height up to 100 feet. See Liquid Line chart for Vertical Separation Requirements and Limitations.

RECOMMENDATIONS: Add a crankcase heater for runs over 30 feet. Plus, add an accumulator or pump-down cycle for runs over 60 feet. Plus, add a Low Ambient Control for runs over 90 feet.

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.

Compressor Ten (10) Years
 Any Other Part One (1) Year

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

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

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

**RUUD
 AIR CONDITIONING
 DIVISION**

P.O. Box 17010, Fort Smith, Arkansas 72917-7010

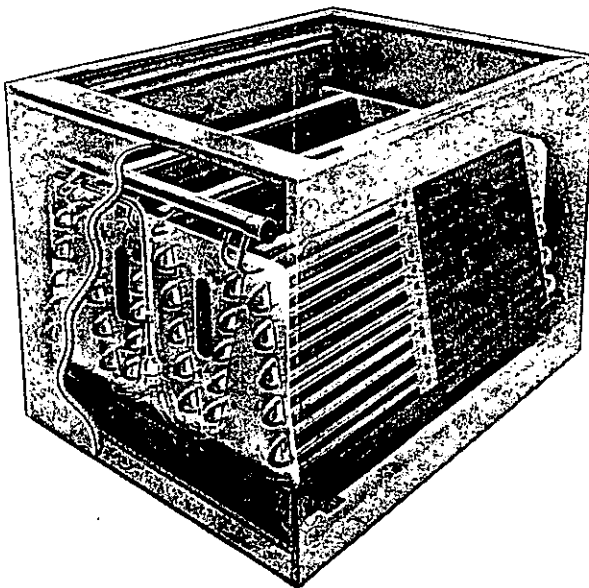
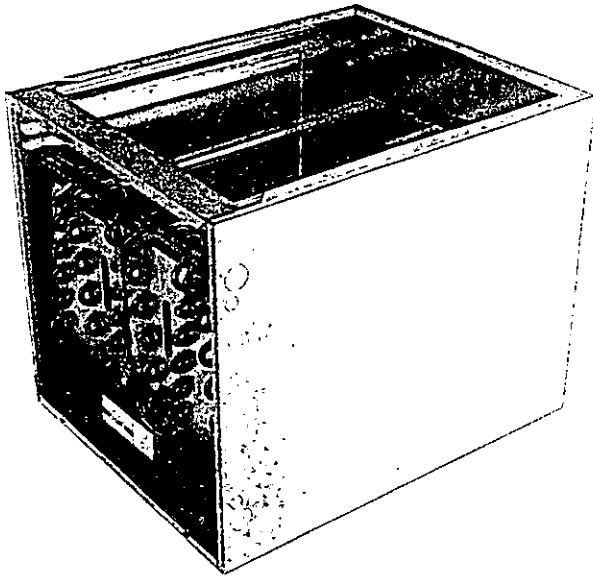


"In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice."

PRINTED IN U.S.A. 1-94 BP

FORM NO. A22-149 REV. 2
 Supersedes Form No. A22-149 Rev. 1

RUUD®



RUUD® RCBA-/RCGA-/RCHA- MULTIFLEX™ CASED OR UNCASED INDOOR COILS

**AIRFLOW CAPACITIES
600-2000 CFM**

Ruud Indoor Coils are designed for use with Ruud outdoor units and are available in upflow, downflow and horizontal configurations. All configurations are convertible to any of the other airflow possibilities.

The MultiFlex™ coils provide capacities ranging from 18,000 to 60,000 BTUH.

The patented single-row, single-coil pleated concept results in extremely low pressure drops and corresponding easy cleaning.

Refrigerant and drain connections may be made from either side of the coil.

Engineering Features

- Constructed of enhanced aluminum fins bonded to inner grooved copper tubing.
- Coils have sweat fitting refrigerant connections.
- Primary condensate drain connections are 3/4" F.N.P.T.
- Coils are A.R.I. certified for system application with a wide variety of Ruud outdoor units.
- Condensate drain pan is constructed of a high grade, heat resistant, corrosion free polymer material.
- Double-wall construction offers sturdiness along with dead air space insulation and sound attenuation.



"CERTIFIED UNDER THE
A.R.I. CERTIFICATION
PROGRAM-A.R.I.
STANDARDS 210 & 240"



MODEL NUMBER IDENTIFICATION

R	C	H	A	—	36	A1	A①U	17	B	—	OPT
Ruud	Coil	Type of Coil	Design Series		Nominal Capacity	Metering Device	Airflow/Refrigerant Connections	Coil Casing	Adapter		Variation
			A = 1st Design			** = Flowcheck Piston (RCBA Coils) ** = TX Valve (RCGA/RCHA Coils)	A(-) = Standard Side Connections G(-) = Front Connections	14 = 14.0" 17 = 17.5" 21 = 21.0" 24 = 24.5"	B = Adapters (78% Upflow)		
B = Standard Coil H = High Efficiency (Heat Pump) G = Hi-Efficiency A/C Evaporator Coil											

24 = 18,000 To 24,000 BTUH
36 = 30,000 To 36,000 BTUH
48 = 42,000 To 48,000 BTUH
60 = 60,000 BTUH

Metering Device also available as a field installed kit. (RXCT-AC*)

**Metering Device—RCGA Coils

COIL SIZE	TX VALVE METERING CODE	VALVE SIZE (TON)	PISTON SIZE	SUPER-HEAT SETTING
24	A1	1½	.120	45
24	A2	2	.172	45
36	A1	2½	.157	45
36	A2	3	.157	45
48	A1	3½ & 4	.172	45
60	A1	5	.172	45

**Metering Device—RCHA Coils

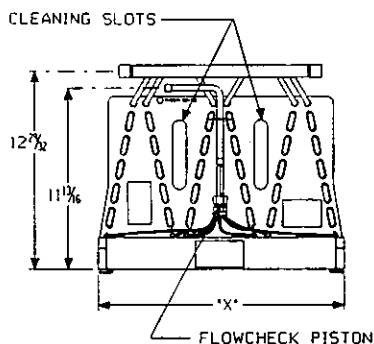
COIL SIZE	TX VALVE METERING CODE	VALVE SIZE (TON)	PISTON SIZE	SUPER-HEAT SETTING
24	A1	1½	.120	45
24	A2	2	.157	48
36	A1	2½ & 3	.157	48
48	A1	3½ & 4	.172	55
60	A1	5	.172	55

- ②AD = Upflow/Downflow Airflow, Refrigerant Connections Right Side.
 ②AU = Upflow/Downflow Airflow, Refrigerant Connections Left Side.
 AL = Horizontal Coil, Right to Left Airflow, Top Refrigerant Connections, May Be Used Upflow.
 AR = Horizontal Coil, Left to Right Airflow, Top Refrigerant Connections, May Be Used Upflow.
 ②AS = Upflow/Downflow Airflow, Field Refrigerant Connections Left or Right Side.
 GG = Front Connections (Upflow/Downflow).
 GH = Front Connections Horizontal Left.
 GZ = Front Connections Horizontal Right.

NOTES: ① Model Number Designation Through This Character for Uncased Coils.
 ② May Be Used in Horizontal Position with the Addition of Horizontal Drain Pan Kit, Accessory Number RXBD-AA.

UNIT DIMENSIONS & WEIGHTS—RCBA CASSED AND UNCASSED COILS

MODEL NUMBER	UNIT WIDTH (IN.)		CONNECTION SIZE (IN.)		UNIT WEIGHT (LBS.)					
	UNCASSED COIL "X" IN.	STANDARD CASSED COIL "W" IN.	SWEAT		UNCASSED COIL		STANDARD CASSED COIL		CASSED COIL WITH HORIZ. DRAIN/PAN	
			LIQUID I.D.	SUCTION I.D.	WT.	SHIP WT.	WT.	SHIP WT.	WT.	SHIP WT.
RCBA-24	12¾	14	¾	¾	15	17	32	34	34	36
RCBA-36	15¾	17½		¾	20	22	39	41	41	43
RCBA-48	19¾	21		7/8	26	29	46	49	48	51
RCBA-60	22¾	24½		7/8	32	35	54	57	56	60



UNIT MAY BE INSTALLED UPFLOW, DOWNFLOW, HORIZONTAL RIGHT OR LEFT HAND AIR SUPPLY.

ALL OPENINGS IN CASING ARE KNOCKOUTS.

REFRIGERANT, & DRAIN K.O.'S ARE TYPICAL BOTH SIDES OF CABINET.

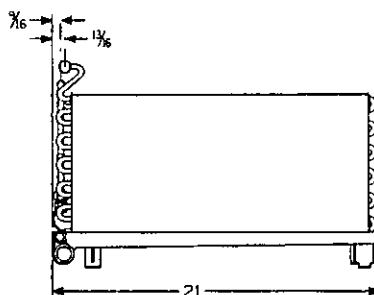
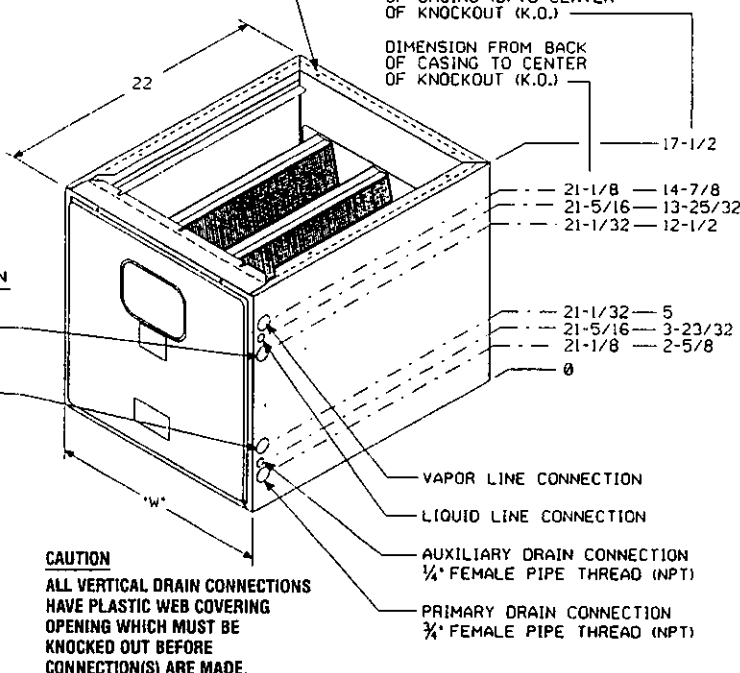
HORIZONTAL APPLICATION

CONDENSATE DRAIN AUXILIARY ¾" F.N.P.T.
 PRIMARY ¾" F.N.P.T.
 DRAIN CONN.'S MUST EXIT BOTTOM.
 REFRIGERANT CONN.'S MUST EXIT TOP SIDE.
 REQUIRES ADDITION OF HORIZONTAL DRAIN PAN. (FACTORY OR FIELD INSTALLED)

DUCT FLANGES MUST BE FORMED Ø PERFORATION. (TOP & BOTTOM)

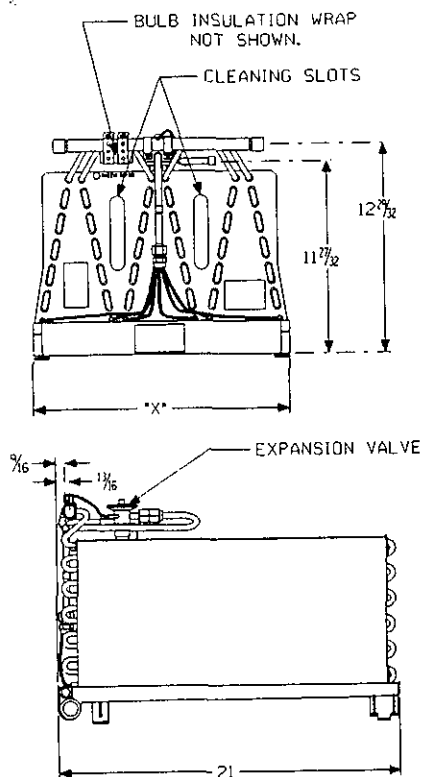
DIMENSION FROM BOTTOM OF CASING Ø TO CENTER OF KNOCKOUT (K.O.)

DIMENSION FROM BACK OF CASING TO CENTER OF KNOCKOUT (K.O.)



UNIT DIMENSIONS & WEIGHTS—RCGA-/RCHA- CASED AND UNCASD COILS

MODEL NUMBER	UNIT WIDTH (IN.)		CONNECTION SIZE (IN.)		UNIT WEIGHT (LBS.)					
	UNCASD COIL "X" IN.	STANDARD CASED COIL "W" IN.	SWEAT		UNCASD COIL		STANDARD CASED COIL		CASED COIL WITH HORIZ. DRAIN PAN	
			LIQUID I.D.	SUCTION I.D.	WT.	SHIP WT.	WT.	SHIP WT.	WT.	SHIP WT.
RCGA-/RCHA-24	12 ¹ / ₄	14	3/8	3/4	16	18	33	35	35	37
RCGA-/RCHA-36	15 ³ / ₄	17 ¹ / ₂		7/8	21	23	40	42	42	44
RCGA-/RCHA-48	19 ¹ / ₄	21			27	30	47	50	49	52
RCGA-/RCHA-60	22 ³ / ₄	24 ¹ / ₂			33	36	55	58	57	61



UNIT MAY BE INSTALLED UPFLOW, DOWNFLOW, HORIZONTAL RIGHT OR LEFT HAND AIR SUPPLY.

ALL OPENINGS IN CASING ARE KNOCKOUTS.

REFRIGERANT, & DRAIN K.O.'S ARE TYPICAL BOTH SIDES OF CABINET.

HORIZONTAL APPLICATION

CONDENSATE DRAIN

AUXILIARY
3/4" F.N.P.T.

PRIMARY
3/4" F.N.P.T.

DRAIN CONN.'S MUST EXIT BOTTOM.

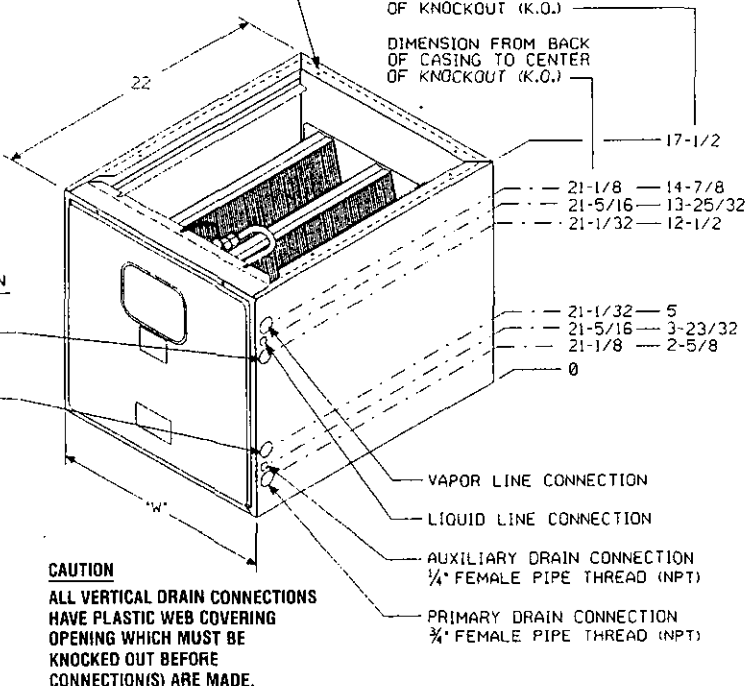
REFRIGERANT CONN.'S MUST EXIT TOP SIDE.

REQUIRES ADDITION OF HORIZONTAL DRAIN PAN. (FACTORY OR FIELD INSTALLED)

DUCT FLANGES MUST BE FORMED & PERFORATION. (TOP & BOTTOM)

DIMENSION FROM BOTTOM OF CASING (Ø) TO CENTER OF KNOCKOUT (K.O.)

DIMENSION FROM BACK OF CASING TO CENTER OF KNOCKOUT (K.O.)



CAUTION

ALL VERTICAL DRAIN CONNECTIONS HAVE PLASTIC WEB COVERING OPENING WHICH MUST BE KNOCKED OUT BEFORE CONNECTION(S) ARE MADE.

RCBA-/RCGA-/RCHA- SUPPLY & RETURN AIR DIMENSIONS

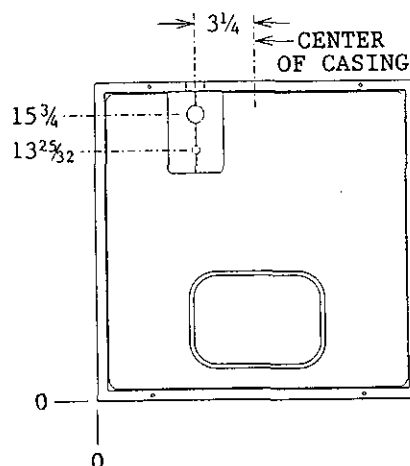
UPFLOW/HORIZONTAL

CABINET WIDTH		14"	17.5"	21"	24.5"
SUPPLY AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 5/8"	19 5/8"	19 5/8"	19 5/8"
RETURN AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 7/8"	19 7/8"	19 7/8"	19 7/8"

DOWNFLOW

CABINET WIDTH		14"	17.5"	21"	24.5"
SUPPLY AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 7/8"	19 7/8"	19 7/8"	19 7/8"
RETURN AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 5/8"	19 5/8"	19 5/8"	19 5/8"

"G(-)" FRONT CONNECTION FOR RCBA-/RCGA-/RCHA-



PHYSICAL DATA

COIL MODEL NUMBER	APPROX. DESIGN AIRFLOW RANGE (CFM)	FACE AREA (SQ. FT.)	FINS/IN.	NUMBER OF SLABS
RCBA-/RCGA-/RCHA-24**A	600-800	5.07	18	4
RCBA-/RCGA-/RCHA-36**A	1000-1200	7.60		6
RCBA-/RCGA-/RCHA-48**A	1400-1600	10.13		8
RCBA-/RCGA-/RCHA-60**A	2000	12.67		10

CASED COIL APPLICATION

Coil can be matched to heating products as listed in table below.

CASED COIL MODEL NUMBER	GAS FURNACE MODELS: UGDG, UGLG, UGVG							GAS FURNACE MODELS: UGEC, UGKC							OIL FURNACE MODELS: UOBC, UONC, UOUC						
	.05	.07 AU	.10 A	.07 AM	.10 B	.12	.15	.04E	.06E	.07E	.09E	.10E	.12E	.05E	.06E	.08E	.09E	.11E	.13E	.15E	
RCBA-/RCGA-/RCHA-24**##14	X																				
RCBA-/RCGA-/RCHA-24**##17		X	X																		
RCBA-/RCGA-/RCHA-24**##21								X	X	X					X	X					
RCBA-/RCGA-/RCHA-36**##17	3	X	X	X																	
RCBA-/RCGA-/RCHA-36**##17B	2																				
RCBA-/RCGA-/RCHA-36**##21					X			X	X	X					X	X					
RCBA-/RCGA-/RCHA-36**##24						X	X				X	X	X		X	X	X	X			
RCBA-/RCGA-/RCHA-48**##21				3	X				X	X											
RCBA-/RCGA-/RCHA-48**##21B				2																	
RCBA-/RCGA-/RCHA-48**##24						X	X				X	X	X				X	X			
RCBA-/RCGA-/RCHA-60**##24					3	X	X				X	X	X						1	1	
RCBA-/RCGA-/RCHA-60**##24B					2																
CABINET WIDTH	14"	17 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	21"	24 1/2"	

NOTES: **—Indicates piston size on RCBA- coils and TX valve code on RCGA-/RCHA- coils.

##—May be AD, AU, AL, AR, AS, GG, GH, or GZ depending on model number.

X—Upflow/Downflow/Horizontal application.

1—Upflow application only—Requires plenum adapter accessory RXBA-AE.

2—Upflow application only—Includes factory installed adapters.

3—Upflow applications require plenum adapter accessory RXBA-AC.

Downflow/Horizontal application requires plenum adapter accessory RXBA-AD.

RCBA-/RCGA-/RCHA- PRESSURE DROP

Cased Coil Size		14		17		21		24	
No. of Coil Slabs		4		6		8		10	
Coil Cooling Size		-018, -024		-030, -036		-042, -048		-060	
Coil Position (Airflow)		Up	Down	Up	Down	Up	Down	Up	Down
Static Pressure Drop Through Wet Cooling Coil In. W.C.	AIRFLOW CFM.								
	.05	578	521	752	673	895	764	1005	885
	.10	889	827	1113	977	1299	1103	1559	1308
	.15	1158	977	1416	1244	1641	1386	1939	1605
	.20	1346	1149	1647	1413	1960	1637	2271	1883
	.25	1546	1271	1876	1633	2187	1826	2552	2134
	.30	1665	1401	2065	1784	2429	2013	2890	2365

* Air pressure drop for horizontal airflow is the same as that shown for upflow.

UNCASED COIL APPLICATION

Coil can be matched to products as listed in table below.

COIL MODEL NUMBER	ELECTRIC FURNACE—UBEA HEAT PUMP/AIR HANDLER—UBHA-①			
	14"	17 1/2"	21"	24 1/2"
RCBA-24**A	X			
RCBA-36**A		X		
RCBA-48**A			X	
RCBA-60**A				X
Cabinet Width	14"	17 1/2"	21"	24 1/2"

NOTES: Requires horizontal drain pan accessory (RXBD-AA) for horizontal applications.

① Requires coil code A (without coil—with plenum) in unit model number.

REFRIGERANT METERING

PISTON SIZES (PART NUMBER 61-23414-**))

MODEL SIZE	UPKA- HEAT PUMP	UAKA- CONDENSING UNIT
-018 1.5 Ton	53	53
-024 2.0 Ton	62	57
-030 2.5 Ton	70	65
-036 3.0 Ton	73	73
-042 3.5 Ton	78	78
-048 4.0 Ton	82	76
-060 5.0 Ton	89	89

METERING DEVICE

RCGA- COILS						
Coil Size	24	24	36	36	48	60
TX Valve Metering Code	A1	A2	A1	A2	A1	A1
Valve Size (Ton)	1 1/2	2	2 1/2	3	4	5
Piston Size	.120	.172	.157	.157	.172	.172
Superheat Setting	45	45	45	45	45	45
RCHA- COILS						
Coil Size	24	24	36	48	60	
TX Valve Metering Code	A1	A2	A1	A1	A1	
Valve Size (Ton)	1 1/2	2	2 1/2 & 3	3 1/2 & 4	5	
Piston Size	.120	.157	.157	.172	.172	
Superheat Setting	45	48	48	55	55	

COIL MODEL NUMBER	ELECTRIC FURNACE—UBEA HEAT PUMP/AIR HANDLER—UBHA-①			
	14"	17 1/2"	21"	24 1/2"
RCGA-/RCHA-24**A	X			
RCGA-/RCHA-36**A		X		
RCGA-/RCHA-48**A			X	
RCGA-/RCHA-60**A				X
Cabinet Width	14"	17 1/2"	21"	24 1/2"

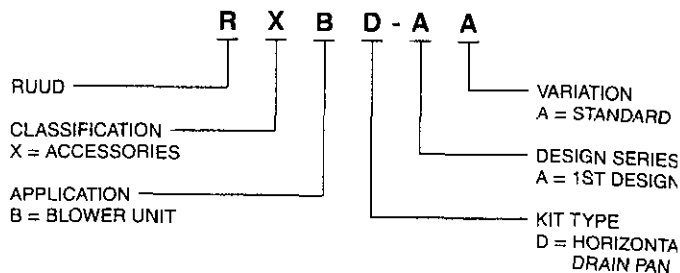
NOTES: Requires horizontal drain pan accessory (RXBD-AA) for horizontal applications.

① Requires coil code A (without coil—with plenum) in unit model number.

ACCESSORIES

HORIZONTAL DRAIN PAN KIT RXBD-AA

This horizontal drain pan accessory is for installation in cased indoor cooling and heat pump coils. This accessory allows an upflow/downflow coil to be converted for horizontal application. The same drain pan fits all RCBA-/RCGA-/RCHA- coils.



RCBA- HORIZONTAL INDOOR COIL ASSEMBLY

Figure 1.
Indoor Coil and Drain Pan Set-Up for
Horizontal Left Hand Air Supply.

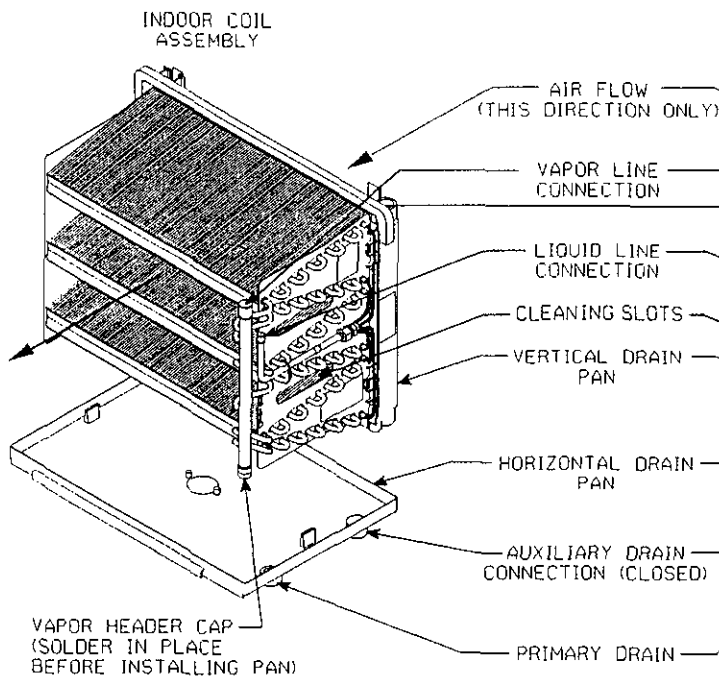
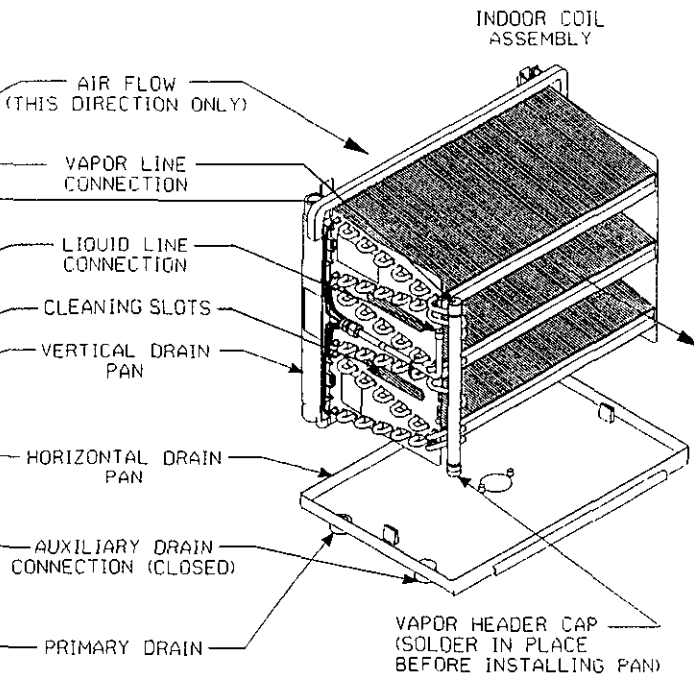
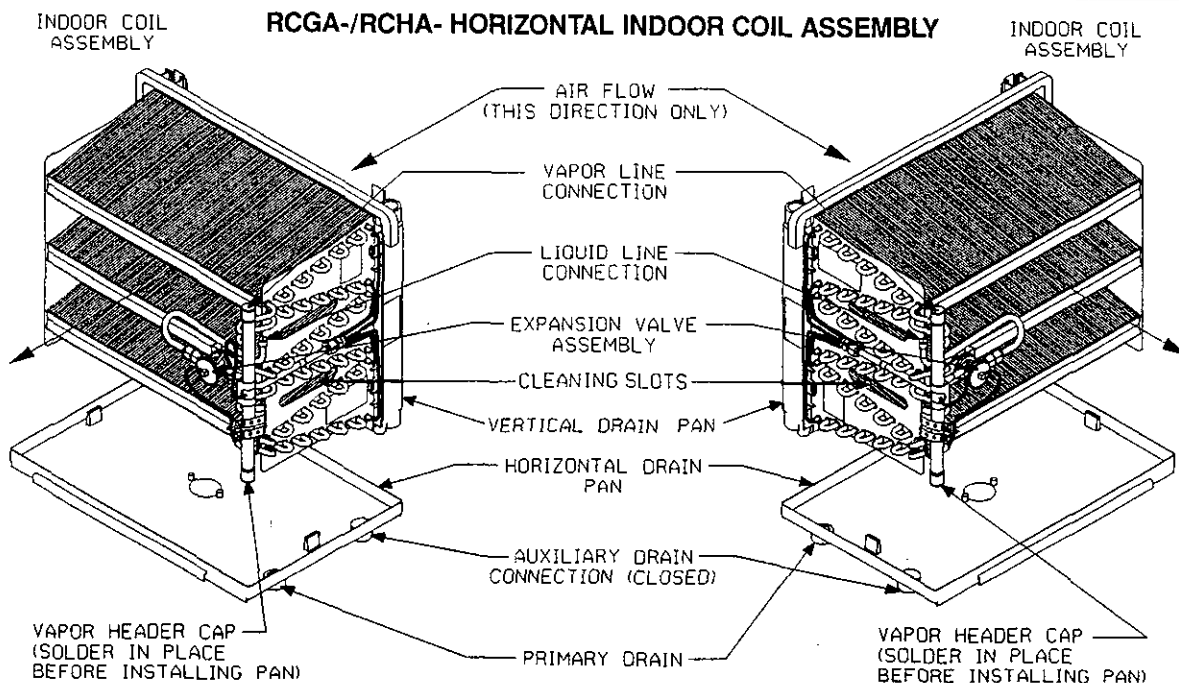


Figure 2.
Indoor Coil and Drain Pan Set-Up for
Horizontal Right Hand Air Supply.



RCGA-/RCHA- HORIZONTAL INDOOR COIL ASSEMBLY



ACCESSORIES (continued)

INTERNAL COUPLER ACCESSORY RXBA-AA AND RXBA-AB

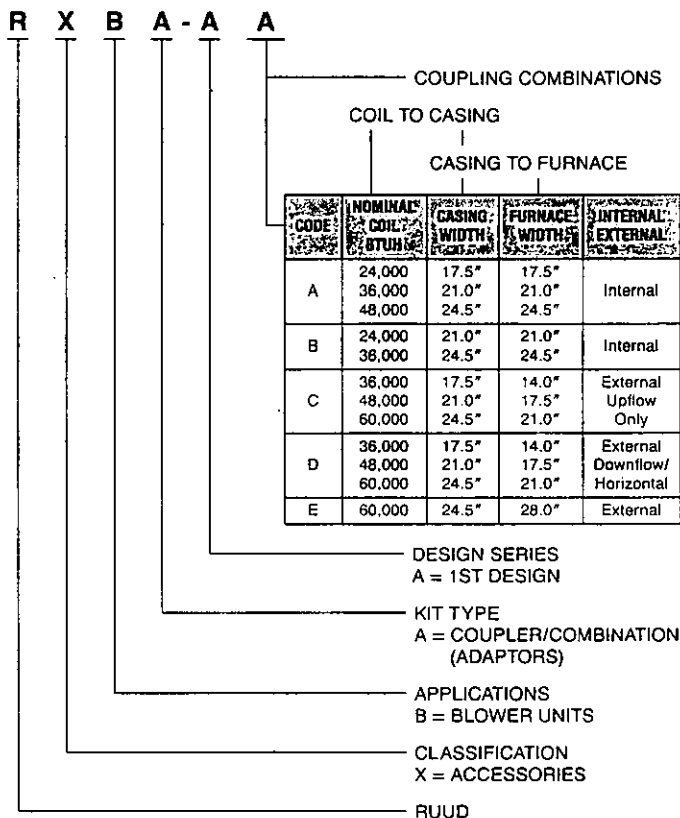
This internal coupler accessory is for installation in cased indoor cooling and heat pump coils. This allows a nominal size coil to be installed in the next larger size casing to be used on a gas or oil furnace. **NOTE: This accessory is for installation in coil casings to fit gas or oil furnaces only—this accessory must not be used on electric furnaces or heat pump air handlers. The RXBA-AA can be ordered factory installed by both designating the next size larger casing width and by designating a "with adapter" (B) in the coil model number.**

PLENUM ADAPTER ACCESSORY RXBA-AC AND RXBA-AD

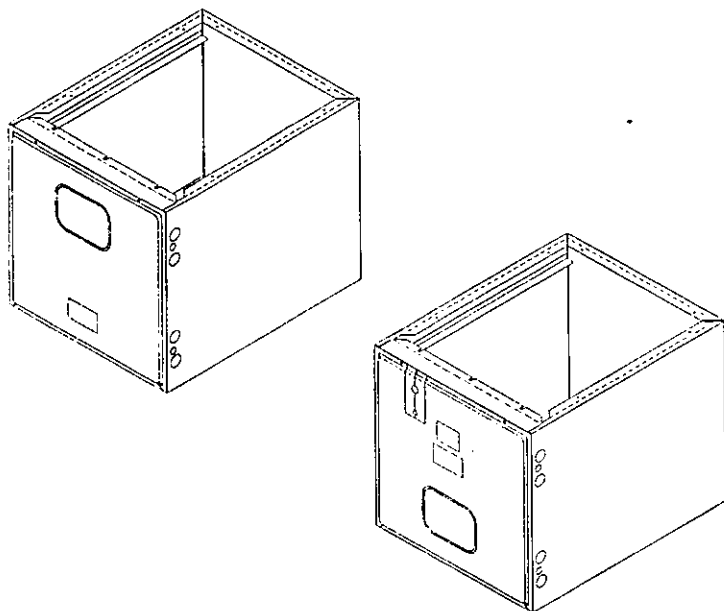
This plenum adapter accessory is for installation on cased indoor cooling and heat pump coils. This allows a nominal size cased coil to be installed on the next smaller size gas or oil furnace. **NOTE: This accessory is for installation on coil casings to fit gas or oil furnaces only—this accessory must not be used on electric furnaces or heat pump air handlers. The RXBA-AC (Upflow Only) can be ordered factory installed by designation as "with adapter" (B) in the coil model number. The RXBA-AD for Downflow/Horizontal applications can be ordered separately through the order center.**

PLENUM ADAPTER ACCESSORY RXBA-AE

This plenum adapter accessory is for use with the 24.5" wide cased indoor cooling and heat pump coils. This allows a 24.5" wide cased coil to be installed on a 28" wide oil furnace.

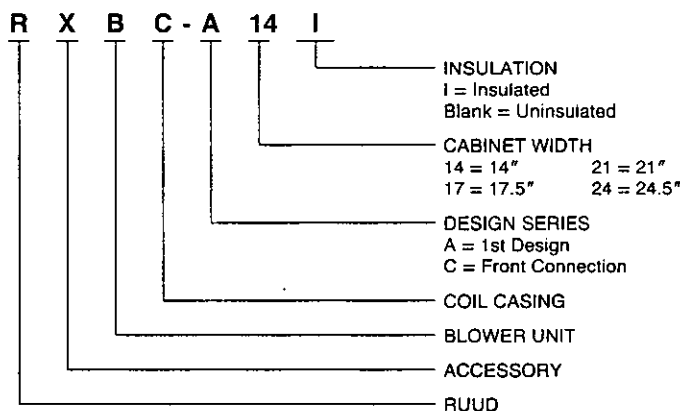


RXBC- INDOOR COIL CASING



UNIT DIMENSIONS & WEIGHTS— RXBC- INDOOR COIL CASINGS

MODEL NUMBER	WIDTH "W" IN.	HEIGHT IN.	DEPTH IN.	UNIT WEIGHT (LBS.)	
				WT.	SHIP WT.
RXBC-A14	14	17 1/2	22	17	19
RXBC-A17	17 1/2			19	21
RXBC-A21	21			20	23
RXBC-A24	24 1/2			22	25



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 warranty.

Any Part One (1) Year

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

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

**RUUD
AIR CONDITIONING
DIVISION**

P.O. Box 17010, Fort Smith, Arkansas 72917-7010



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

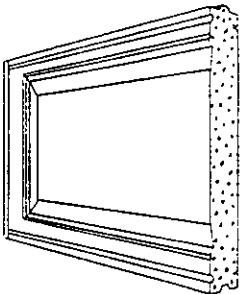
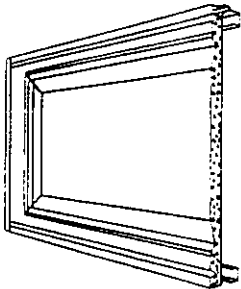
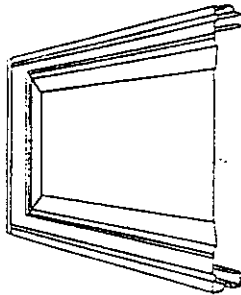
PRINTED IN U.S.A. 5-93 BP

FORM NO. C22-206 REV. 1
Supersedes Form No. C22-206 Rev. 0



THE BETTER-BILT

2" THICK RAISED PANEL STEEL GARAGE DOOR
IS AVAILABLE IN THREE DIFFERENT SERIES.



B-50 SERIES: The B-50 offers a rich traditional look with deep detailed raised panels which complement any home from colonial through modern architecture. This heavy duty 26 gauge steel door is prepainted inside and out in your choice of white, almond or brown. The two-part system of epoxy primer and baked on polyester top coat over hot-dipped galvanized steel will give years of maintenance-free service. The interlocking tongue and groove joint provides exceptional strength as well as a tight weatherseal between all sections. The door bottom rail is fitted with a heavy duty astragal. A limited ten year warranty applies.

B-150 SERIES: The B-150 offers all the fine features of the B-50 with the additional advantage of a 3/4" polystyrene insulation package. This package provides additional all-season protection against the elements and comes with a Polycraft backcover. A limited ten year warranty applies.

B-250 SERIES: The B-250 is completely laminated with a 26 ga. exterior and a white enameled metal interior and is the BETTER-BILT top of the line raised panel steel door in every respect. A high density moulded polystyrene core combined with its laminated sandwich construction enables the door to withstand the elements while offering a R = 9.2 energy rating. Special features include heavy duty track and hardware and a special polyester woodgrained finish. The B-250 has no equal for strength, durability and longevity and comes with a limited lifetime warranty.

T.C. & ASSOCIATES
Pre-Engineered Steel Bldgs.

TRAVERS F. CAMBRA
Representative

"GARAGE DOOR EXPRESS"

- More for Less -

357 Bartley Road
Jackson, NJ 08527
Phone/Fax (908) 367-3753
Beeper (908) 473-7300

- Residential
- Commercial
- Coiling Doors

BETTER-BILT SERIES DOORS ARE AVAILABLE IN:

- 3 COLORS: Decorator White, Almond and Brown
- 8 WIDTHS: 8', 9', 10', 12', 14', 15', 16', & 18'
- 3 STANDARD HEIGHTS: 6'-6", 7'-0", and 8'-0"
- 4 STANDARD DESIGNS: Solid raised paneled, plain glass windows in the third or top section, cathedral (shown), fanlite (shown). Other designs available on special order including double fanlite for single car doors and single fanlite for double doors.

Note: Not all designs available in all sizes. Consult the factory.

PICTURE WINDOWS UNITS (STATIONARY)

UNIT DIM.	4'-5"	5'-1"	5'-9"
RGH. OPQ.	4'-0"	5'-2"	5'-10"
UNOBS. GLASS	44"	54"	62"
	4442	5042	
	4446	5046	
		5052	5040 WHITE & SANDTONE
	4442		

NARROLINE® DOUBLE HUNG WINDOWS

UNIT DIM.	1'-6"	2'-1"	2'-5"	2'-9"	3'-1"	3'-5"	3'-9"
RGH. OPQ.	1'-0"	2'-2"	2'-6"	2'-10"	3'-2"	3'-6"	3'-10"
UNOBS. GLASS	16"	20"	24"	28"	32"	36"	40"
	16210	20210	24210	28210	32210	36210	40210
	1632	2032	2432	2832	3232	3632	4032
	16310	20310	24310	28310	32310	36310	40310
	1842	2042	2442	2842	3042	3442	3842
	1846	2046	2446	2846	3046	3446	3846
	1852	2052	2452	2852	3052	3452	3852
	1856	2056	2456	2856	3056	3456	3856
	1862	2062	2462	2862	3062	3462	3862

CASEMENT WINDOW BASIC UNIT SIZES

UNIT DIM.	1'-6"	1'-9"	2'-0"	2'-4"	2'-8"	3'-0"	4'-0"	4'-6"	5'-11"
RGH. OPQ.	1'-0"	1'-9"	2'-0"	2'-4"	2'-10"	3'-0"	4'-0"	4'-6"	6'-0"
UNOBS. GLASS	16"	18"	24"	30"	36"	48"	60"	72"	96"
	CR12	CN12	C12	CW12"					
	CR13	CN13	C13	CW13"	CR23	CN23	C23	CW23"	C33
	CR135	CN135	C135	CW135"	CR235	CN235	C235	CW235"	C335
	CR14	CN14	C14	CW14"	CR24	CN24	C24	CW24"	C34
	CR145	CN145	C145	CW145"					
	CR15	CN15	C15	CW15"					
	CR155	CN155	C155	CW155"					
	CR16	CN16	C16	CW16"					
					CR25	CN25	C25	CW25"	C35

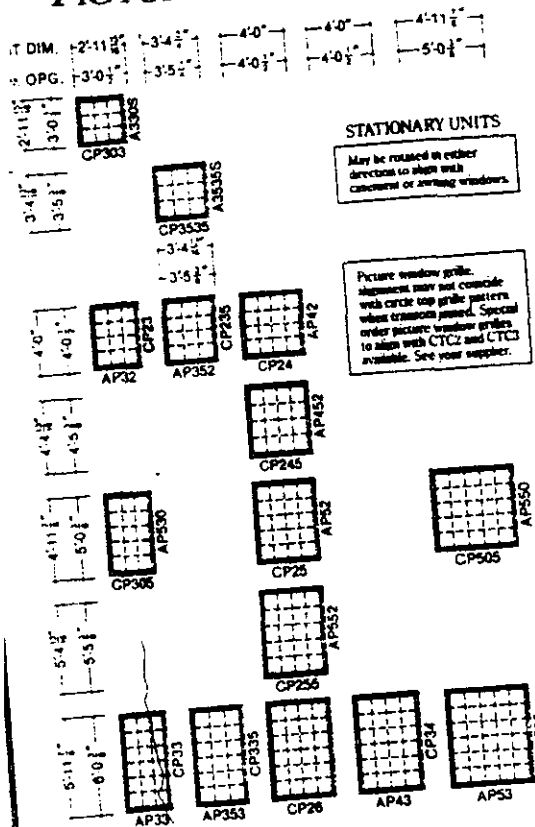
NARROLINE TRANSOM WINDOWS

UNIT DIM.	1'-6"	2'-1"	2'-5"	2'-9"	3'-1"	3'-5"	3'-9"
RGH. OPQ.	1'-0"	2'-2"	2'-6"	2'-10"	3'-2"	3'-6"	3'-10"
UNOBS. GLASS	16"	20"	24"	28"	32"	36"	40"
	TR1816	TR2016	TR2416	TR2816	TR3216	TR3616	TR4016
	TR1818	TR2018	TR2418	TR2818	TR3218	TR3618	TR4018
	TR1820	TR2020	TR2420	TR2820	TR3220	TR3620	TR4020
	TR1822	TR2022	TR2422	TR2822	TR3222	TR3622	TR4022
	TR1824	TR2024	TR2424	TR2824	TR3224	TR3624	TR4024
	TR1826	TR2026	TR2426	TR2826	TR3226	TR3626	TR4026
	TR1832	TR2032	TR2432	TR2832	TR3232	TR3632	TR4032

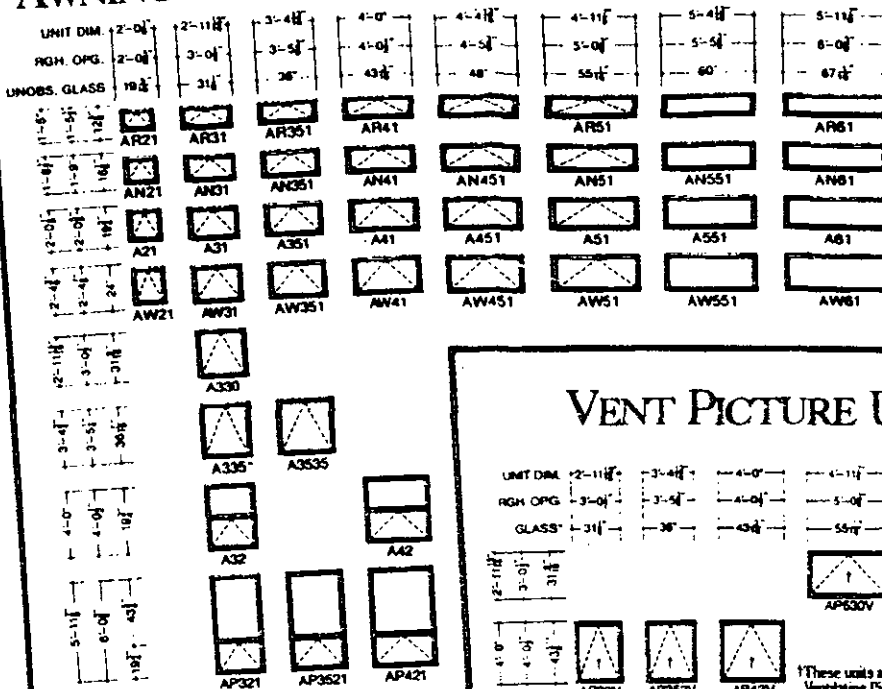


Come home to quality.
Andersen.™

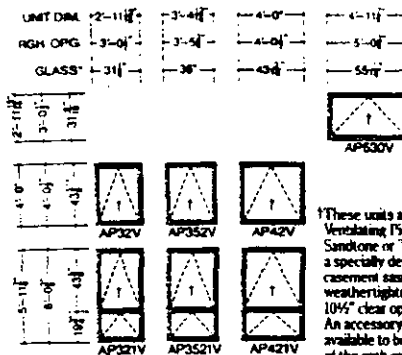
CASEMENT AND AWNING PICTURE WINDOWS



AWNING WINDOW BASIC UNIT SIZES



VENT PICTURE UNITS



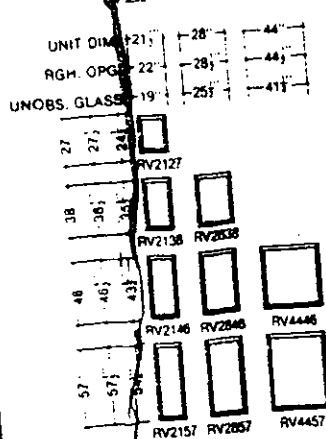
These units are available as Awning Ventilating Picture Windows in White, Sandstone or Terracotta. The units have a specially designed set of hinges. Two casement sash locks provide additional weathertightness. The operator allows 10 1/2" clear opening for limited ventilation. An accessory awning support bar is available to be used for safe closing of the sash exterior from the interior. The ventilating picture windows are not intended to be used as egress units. Will not accept electric window openers.

Come home to quality. Andersen.

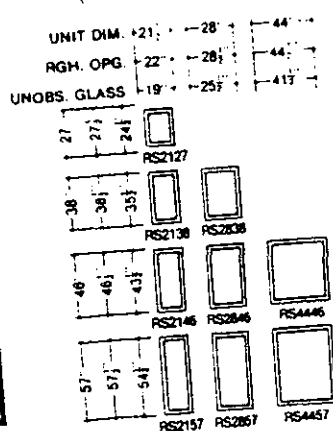


ROOF WINDOWS

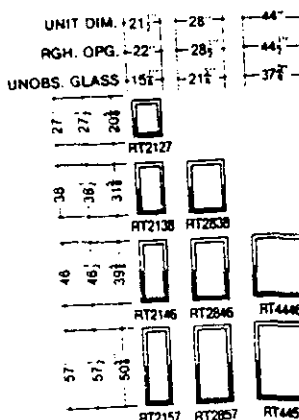
BASIC UNIT SIZES (VENTING)



BASIC UNIT SIZES (STATIONARY)

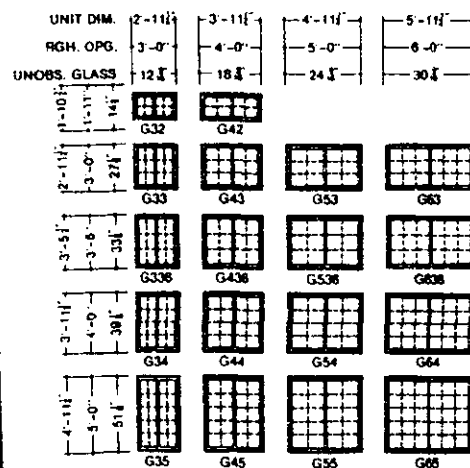


BASIC UNIT SIZES (VENT/TILT)



GLIDING WINDOWS

BASIC UNIT SIZES





MAIN OFFICE:
190 OBERLIN AVENUE N.
LAKEWOOD, NEW JERSEY 08701

FAX # (908) 905-9628
(908) 905-1000

Dear Customer:

Enclosed is the Load Calculation Report you requested. L&H Plumbing & Heating Supplies, Inc. is happy to provide this as a service to you, our valued customer.

This report was prepared using A.C.C.A. Manual - J 7th Edition data, an approved industry standard for residential load applications. As such, we feel confident that the results in this report are as accurate as is reasonably possible.

If you have any questions regarding this report or need any other assistance, please feel free to contact L&H Plumbing & Heating Supplies' Technical Services Department at (908)905-1000.

Thank you for your continued patronage.

Sincerely,

L&H PLUMBING & HEATING SUPPLIES, INC.
Technical Services Staff

Computed results are estimates, since building construction
and operating conditions are subject to variation

Middletown
(908) 530-7200

Avon
(908) 775-5270

Bridgewater
(908) 725-0666

Forked River
(609) 693-0077

Williamstown
(609) 629-5005

Burlington
(609) 386-0097

Toms River
(908) 240-1500

S/N 2453

RIGHT-J SHORT FORM

01/05/94

Job #: 296131/LOMBARDIE RESIDENCE
 For: JERSEY COAST MECHANICAL INC.
 130 ST. LAWRENCE BLVD.
 BRICK
 (908) 477-6007

(J221)

NJ 08723

By: L & H PLUMBING & HEATING SUPPLIES INC.
 190 OBERLIN AVE. NORTH
 LAKEWOOD
 (908)905-1005

NJ 08701

Htg Clg
 Outside db 0 95
 Inside db 70 75
 Design TD 70 20
 Daily Range - M
 Inside Humid. - 50
 Grains Water - 31
 Const. Quality a
 # of Fireplaces 1

HEATING EQUIPMENT

Make COMFORTMAKER, BURNHAM
 Model OR WEIL McLAIN
 Type
 Efficiency / HSPF 0.0
 Heating Input 0 Btuh
 Heating Output 0 Btuh
 Heating Temp Rise 0 Deg F
 Actual Heating Fan 1815 CFM
 Htg Air Flow Factor 0.018 CFM/Btuh

COOLING EQUIPMENT

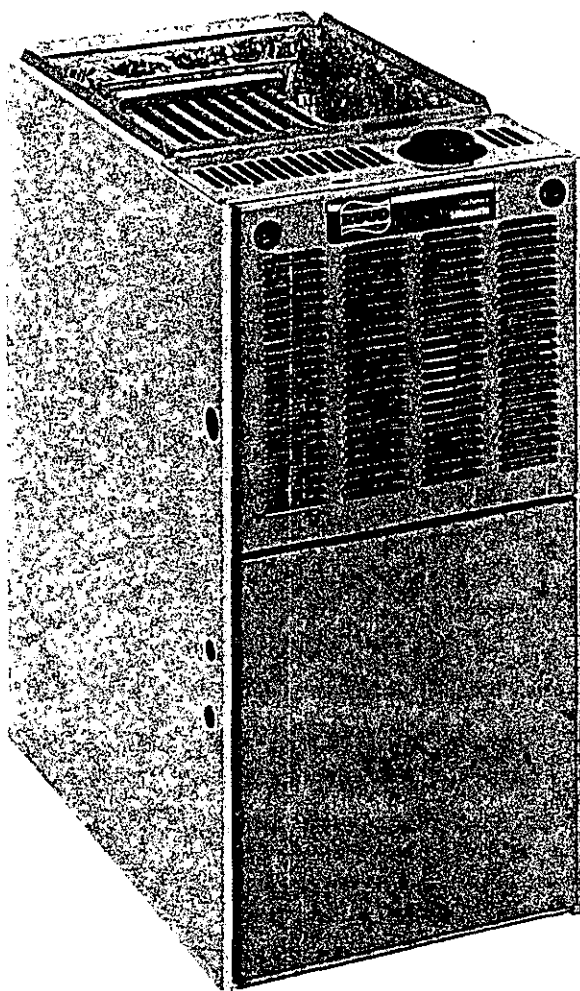
Make COMFORTMAKER OR TOSHIBA
 Model
 Type 10.0 S.E.E.R. MIN.
 COP/EER/SEER 0.0
 Sensible Cooling 0 Btuh
 Latent Cooling 0 Btuh
 Total Cooling 0 Btuh
 Actual Cooling Fan 1815 CFM
 Clg Air Flow Factor 0.039 CFM/Btuh

Space Thermostat HONEYWELL

Load Sensible Heat Ratio 89

ROOM NAME	AREA SQ. FT.	HTG BTUH	CLG BTUH	HTG CFM	CLG CFM
FAMILY ROOM	203	13661	9830	243	385
LIV/FOYER	555	31916	11688	568	458
KITCHEN	240	15044	7651	268	300
DINING ROOM	152	5834	873	104	34
LAUNDRY	58	1052	96	19	4
BATH	84	1658	139	29	5
BED 4	137	6720	1271	119	50
LOWER HALLWAY	96	1258	0	22	0
MAS BED	239	10144	6684	180	262
MAS WIC	44	552	212	10	8
MAS BATH	190	1269	526	23	21
UPPER HALLWAY	95	263	159	5	6
BED 2	225	6388	3606	114	141
BED 3	186	6280	3542	112	139
Entire House	2504	102041	46278	1815	1815
Ventilation Air		0	0		
Equip. @ 1.00 RSM			46278		
Latent Cooling			5598		
TOTALS	2504	102041	51876	1815	1815

RUUD®



UGDG- SERIES

Models with Input Rates from
50,000 to 150,000 BTU/HR
(U.S. & Canadian Models)



RUUD® SILHOUETTE® 78%-80% A.F.U.E.† UPFLOW GAS FURNACES

The Ruud Silhouette® line of upflow gas furnaces are designed for utility rooms, closets, or alcoves. **Because of the Silhouette's low-profile 34 inch height, the upflow model can also be used to satisfy most applications that traditionally call for a horizontal furnace.**

The design is certified by the American Gas Association. Canadian models are certified by the Canadian Gas Association.

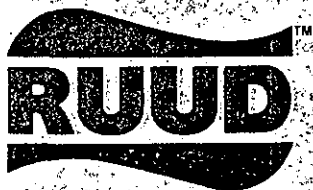
Features

- Patented Turbulex® Heat Exchanger, constructed of both stainless and aluminized steel for the maximum in corrosion resistance.
- Low profile "34 inch" design is lighter and easier to handle, and leaves room for optional equipment.
- Both standing pilot and hot surface ignition models available.
- Left or right side gas and electric inlet connections with quick, simple change.
- Hot surface ignition models feature an integrated board with humidifier and electronic air cleaner hookups. An accessory kit is available for standing pilot models.
- Insulated blower compartment, a slow-open gas valve and a specially designed draft inducer motor make it one of the quietest furnaces on the market today.
- Integrated solid state control board.
- Pre-paint galvanized steel cabinet.
- Molded permanent filter.
- Grab-holes in doors to aid in easy door removal and replacement.

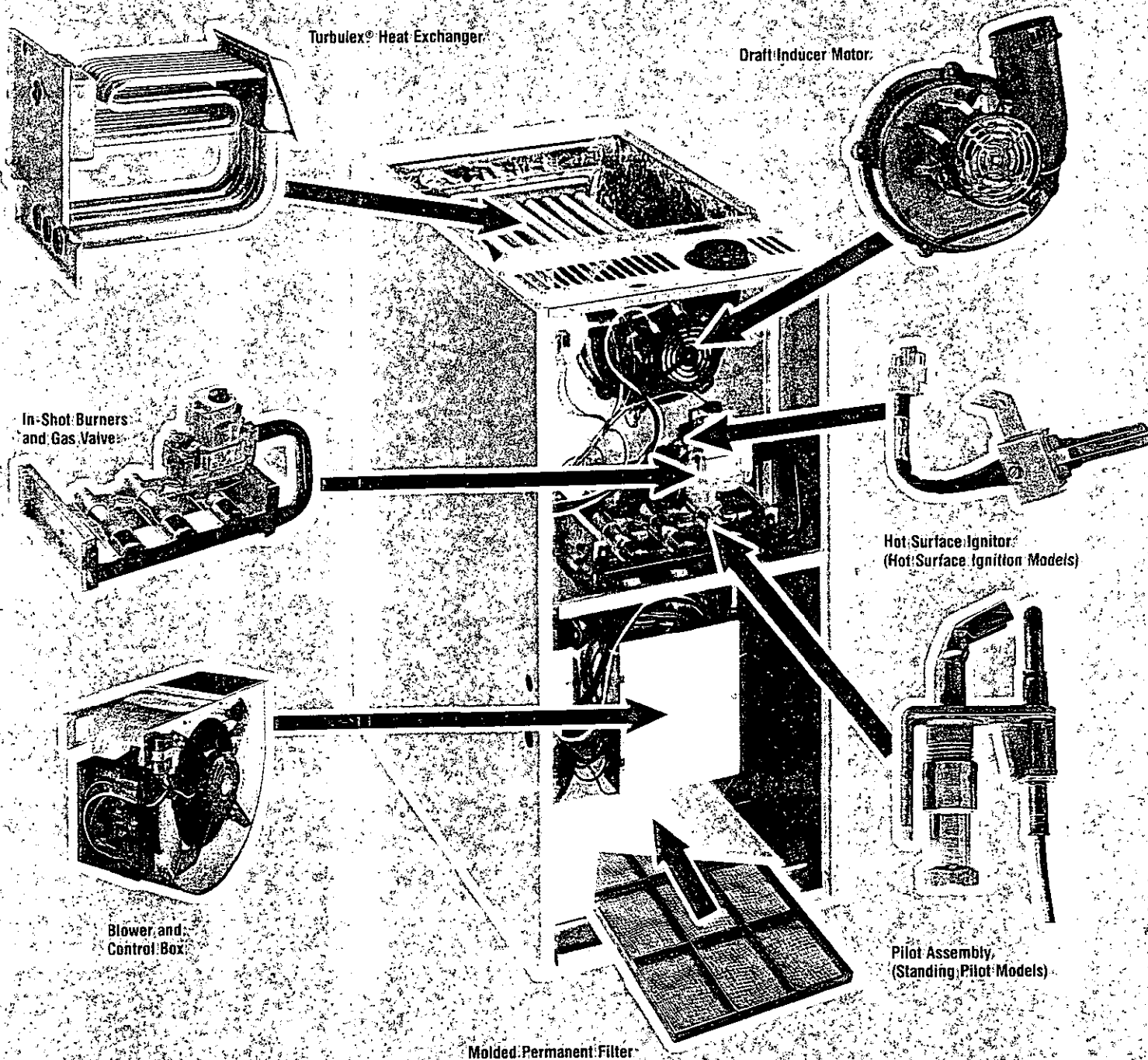


A variety of cooling coils and plenums designed to use with Ruud Silhouette gas furnaces are available as optional accessories for air conditioning models.

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



RUUD SILHOUETTE 78-80% UPFLOW GAS FURNACE



STANDARD EQUIPMENT

Completely assembled and wired; induced draft; pressure switch; redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; manual shut-off valve, pressure regulator for natural and L.P. (propane) gas; transformer; direct drive multi-speed blower motor. Furnaces are equipped with cooling/heating relay and transformer (40VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.)

OPTIONAL EQUIPMENT

Side filter frame assembly. Return air cabinet for all sizes. (See Page 5)

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

The complete terms of limited and other warranties are available at our sales office, or through local installer.

All models can be converted by a qualified Ruud 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 Ruud parts distributor.

For L.P. (propane) operation, refer to Conversion Kit Index Form No. 92-21519-30 for U.S. models and Form No. 92-21519-31 for Canadian models.

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

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

PHYSICAL DATA AND SPECIFICATIONS—U.S. MODELS (UPFLOW)

MODEL NUMBERS:	UGDG-050AUER UGDG-05MAUER UGDG-05EAUER UGDG-05NAUER	UGDG-075AUER UGDG-07MAUER UGDG-07EAUER UGDG-07NAUER	UGDG-075AMGR UGDG-07MAMGR UGDG-07EAMGR UGDG-07NAMGR	UGDG-100AUER UGDG-10MAUER UGDG-10EAUER UGDG-10NAMES	UGDG-100BRJR UGDG-10MBRJR UGDG-10EBRJR UGDG-10NBRJR	UGDG-125ARJR UGDG-12MARJR UGDG-12EARJR UGDG-12NARJR	UGDG-150ARJR UGDG-15MARJR UGDG-15EARJR UGDG-15NARJR
INPUT-BTU/HR ②	50,000	75,000	75,000	100,000	100,000	125,000	150,000
HEATING CAPACITY BTU/HR	41,000	59,500	60,500	80,000	81,000	99,000	119,500
HEAT EXT. STATIC PRESSURE	.10	.12	.12	.15	.15	.20	.20
BLOWER (D x W)	11 x 6	11 x 6	11 x 7	11 x 6 = UGDG-10*AU 11 x 7 = UGDG-10*AM	11 x 10	11 x 10	11 x 10
MOTOR H.P.—SPEEDS—TYPE	1/2-4-PSC	1/2-3-PSC	3/4-4-PSC	1/2-3-PSC	3/4-4-PSC	3/4-4-PSC	3/4-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	9.5	6.8	9.5	9.5	9.5
HEATING SPEED	MED-LOW	MED	MED-LOW	MED	MED-LOW	MED-LOW	MED-LOW
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
COOLING CFM @ .5" E.S.P. (NOMINAL)	1200	1200	1600	1200	2000	2000	2000
MAX. EXT. STATIC PRESSURE (IN.)	.50	.50	.50	.50	.50	.50	.50
TEMPERATURE RISE RANGE °F	25-55	40-70	25-55	55-85 = UGDG-10*AU 50-80 = UGDG-10*AM	40-70	35-65	50-80
STANDARD FILTER	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	19 1/4 x 25	22 3/4 x 25	22 3/4 x 25
APPROX. SHIPPING WEIGHT (LBS.)	85	105	105	115	120	140	150
RETURN AIR CABINETS (OPT.) RXGR-FILTER SIZE	C14B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C21B (2) 20 x 16	C24B (2) 24 x 16	C24B (2) 24 x 16
FILTER FRAME (OPT.) RXGF-FILTER SIZE	Z16B (1) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25
AFUE-STANDING PILOT MODELS ①	78.7%	78.7%	78.6%	78%	78.6%	78.2%	78.1%
AFUE-H.S.I. MODELS ①	81.4%	80.6%	80.5%	80%	80.1%	80%	80%
CALIFORNIA SEASONAL EFFICIENCY—H.S.I./NO. MODELS	74.9/75.4	74.9/75.4	74.7/75.3	75.4/75.4	73.9/74.5	74.2/74.2	74.7/74.7

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

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form No. 92-21519-30 for high altitude derate.

PHYSICAL DATA AND SPECIFICATIONS—CANADIAN MODELS (UPFLOW)

MODEL NUMBERS:	UGDG-050AUEA UGDG-05EAUEA	UGDG-075AUEA UGDG-07EAUEA	UGDG-075AMGA UGDG-07EAMGA	UGDG-100AUEA UGDG-10EAUEA	UGDG-100BRJA UGDG-10EBRJA	UGDG-125ARJA UGDG-12EARJA	UGDG-150ARJA UGDG-15EARJA
INPUT-BTU/HR ②	50,000	75,000	75,000	100,000	100,000	125,000	150,000
HEATING CAPACITY BTU/HR	41,000	59,500	60,500	80,000	81,000	99,000	119,500
HIGH ALTITUDE INPUT	45,000	67,500	67,500	90,000	90,000	112,500	135,000
HIGH ALTITUDE OUTPUT CAPACITY	36,500	53,500	54,000	72,000	72,500	89,000	107,500
HEAT EXT. STATIC PRESSURE	.10	.12	.12	.15	.15	.20	.20
BLOWER (D x W)	11 x 6	11 x 6	11 x 7	11 x 6 = UGDG-10*AU 11 x 7 = UGDG-10*AM	11 x 10	11 x 10	11 x 10
MOTOR H.P.—SPEEDS—TYPE	1/2-4-PSC	1/2-3-PSC	3/4-4-PSC	1/2-3-PSC	3/4-4-PSC	3/4-4-PSC	3/4-4-PSC
MOTOR FULL LOAD AMPS	6.8	6.8	9.5	6.8	9.5	9.5	9.5
HEATING SPEED	MED-LOW	MED	MED-LOW	MED	MED-LOW	MED-LOW	MED-LOW
COOLING SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
COOLING CFM @ .5" E.S.P. (NOMINAL)	1200	1200	1600	1200	2000	2000	2000
MAX. EXT. ST. PRESSURE (IN.)	.50	.50	.50	.50	.50	.50	.50
TEMPERATURE RISE RANGE °F	25-55	40-70	25-55	55-85 = UGDG-10*AU 50-80 = UGDG-10*AM	40-70	35-65	50-80
STANDARD FILTER	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	15 3/4 x 25	19 1/4 x 25	22 3/4 x 25	22 3/4 x 25
APPROX. SHIPPING WEIGHT (LBS.)	85	105	105	115	120	140	150
RETURN AIR CABINETS (OPT.) RXGR-FILTER SIZE	C14B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C17B (2) 12 x 16	C21B (2) 20 x 16	C24B (2) 24 x 16	C24B (2) 24 x 16
FILTER FRAME (OPT.) RXGF-FILTER SIZE	Z16B (1) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z16B (1) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25	Z33B (2) 16 x 25
AFUE-STANDING PILOT MODELS ①	78.7%	78.7%	78.6%	78%	78.6%	78.2%	78.1%
AFUE-H.S.I. MODELS ①	81.4%	80.6%	80.5%	80%	80.1%	80%	80%

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

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form No. 92-21519-31 for high altitude derate.

MODEL IDENTIFICATION—UPFLOW MODELS

U	G	D	G	—	07E	A	U	E	R
Ruud	Gas	Upflow	Design		Heating Input Designation	Variations	Blower	Heating & Cooling	Fuel Type
Furnace		Series			Standing Pilot	A = Std. Cabinet	Designation	Designation	R = Natural Gas, U.S. Standard Furnace
					NO _x Model	B = Wide Cabinet	U = 11 x 6	E = 1100-1330 CFM	A = Natural Gas, Canadian Standard Furnace
					Hot Surface Ignition		M = 11 x 7	G = 1450-1750 CFM	
					NO _x Model		R = 11 x 10	J = 1800-2075 CFM	
					Input BTU/HR				
					050 05M 05E 05N 50,000				
					075 07M 07E 07N 75,000				
					100 10M 10E 10N 100,000				
					125 12M 12E 12N 125,000				
					150 15M 15E 15N 150,000				

UPFLOW DIMENSIONS

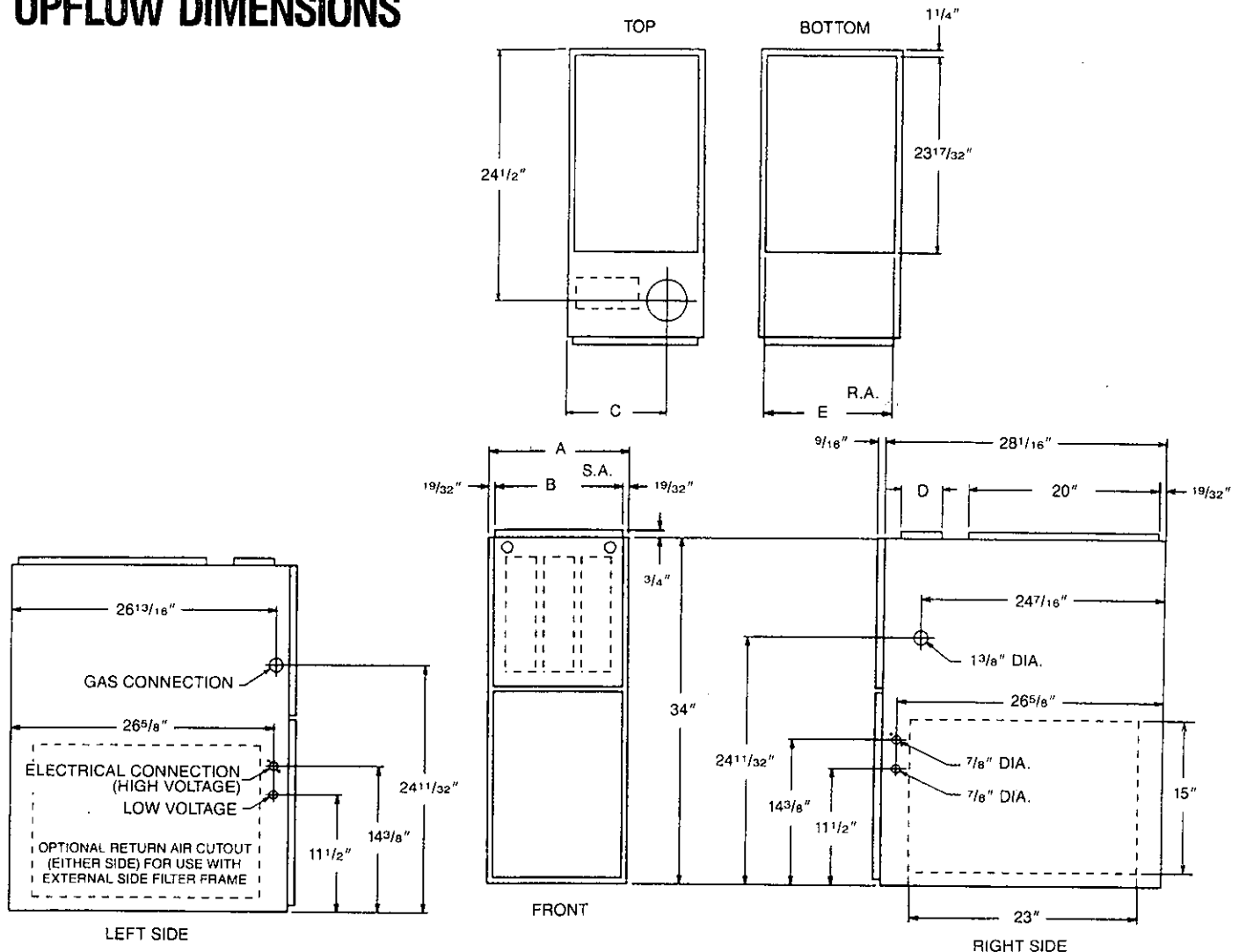


TABLE 1. DIMENSIONS AND CLEARANCE TO COMBUSTIBLE MATERIAL (INCHES)

MODEL	A	B	C	D	E	REDUCED CLEARANCES (IN.)					
						LEFT SIDE	RIGHT SIDE	BACK	TOP	FRONT	VENT
UGDG-05	14	$12\frac{27}{32}$	$10\frac{3}{8}$	Ⓐ	$11\frac{1}{2}$	0	4Ⓑ	0	1	6	6Ⓒ
UGDG-07	$17\frac{1}{2}$	$16\frac{11}{32}$	$12\frac{1}{8}$	Ⓐ	15	0	3Ⓑ	0	1	6	6Ⓒ
UGDG-10(-)A	$17\frac{1}{2}$	$16\frac{11}{32}$	$12\frac{1}{8}$	Ⓐ	15	0	3Ⓑ	0	1	6	6Ⓒ
UGDG-10(-)B	21	$19\frac{27}{32}$	$13\frac{7}{8}$	Ⓐ	$18\frac{1}{2}$	0	0	0	1	6	6Ⓒ
UGDG-12	$24\frac{1}{2}$	$23\frac{11}{32}$	$15\frac{5}{8}$	Ⓐ	22	0	0	0	1	6	6Ⓒ
UGDG-15	$24\frac{1}{2}$	$23\frac{11}{32}$	$15\frac{5}{8}$	Ⓐ	22	0	0	0	1	6	6Ⓒ

NOTES: Ⓐ Vent diameter connection as shipped from the factory is 3". Certain installations will require a 3" to 4" or 3" to 5" adaptor.

Ⓑ May be 0" with type "B-1" vent.

Ⓒ May be 1" with type "B-1" vent.

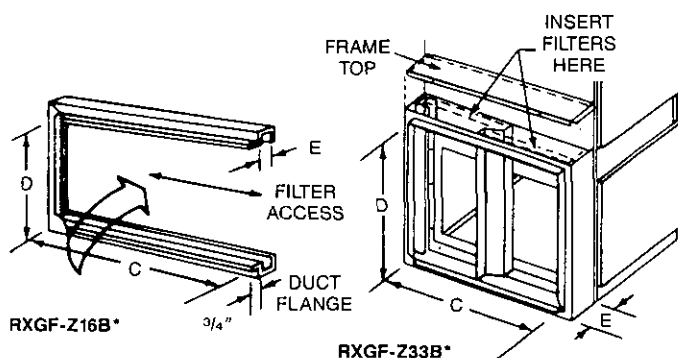
Furnaces must be vented in accordance with AGA/GAMA rating guidelines included with each furnace, and in accordance with local codes.

ACCESSORIES—UPFLOW

PLENUM DATA

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

FURNACE WIDTH	PLENUM WIDTH	PLENUM ADAPTER UPFLOW	COIL PLENUM
14	16 1/4	RXAA-C171	RXAL-B16BU
14	20 1/4	RXAA-C172	RXAL-B20BU
17 1/2	16 1/4	RXAA-C185	RXAL-B16BU
17 1/2	20 1/4	RXAA-C173	RXAL-B20BU
17 1/2	21 5/8	RXAA-C187	RXAL-B21BU
17 1/2	25 1/4	RXAA-C174	RXAL-B25BU
21	25 1/4	RXAA-C175	RXAL-B25BU
21	22 1/4	RXAA-C176	RXAL-B22BU
21	21 5/8	RXAA-C188	RXAL-B21BU
24 1/2	25 1/4	RXAA-C177	RXAL-B25BU
24 1/2	21 5/8	RXAA-C187	RXAL-B21BU

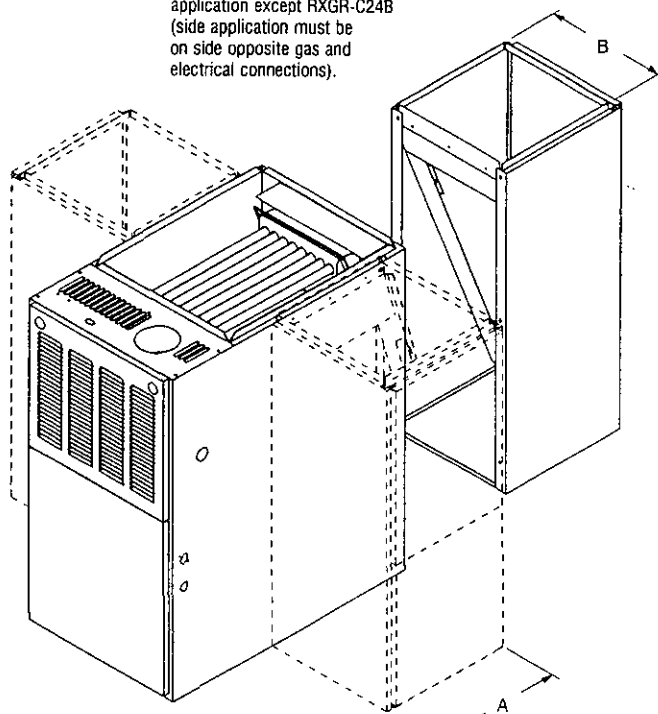


EXTERNAL SIDE FILTER FRAMES	C	D	E
RXGF-Z16B	23	14	1 1/4
RXGF-Z33B	26 1/2	23 1/2	6

NOTE: C and D are plenum dimensions.
*Filters supplied with filter frame.

ACCESSORY RETURN AIR CABINETS

Return Air Cabinets may be installed on rear or either side application except RXGR-C24B (side application must be on side opposite gas and electrical connections).



THE RXGR-C24B MAY ONLY BE INSTALLED ON REAR AND LEFT SIDES.

RETURN AIR CABINETS	A	B	FILTER SIZE
RXGR-C14B	14	12 27/32	(2) 12 x 16
RXGR-C17B	17 1/2	16 11/32	(2) 12 x 16
RXGR-C21B	21	19 27/32	(2) 20 x 16
RXGR-C24B	24 1/2	23 11/32	(2) 24 x 16

RXGW-AAA01

Humidifier and Electronic Air Cleaner Accessory Board for Robertshaw Control RBC1 and Honeywell ST9101A 1014 Blower Controls.

NOTE: Available for standing pilot models only.

RXPF-E01

FOSSIL FUEL KIT—is for use with Ruud Heat Pumps and Silhouette warm air furnaces.

WARNING: IMPORTANT NOTICE

A SOLID METAL BASE PLATE (SEE TABLE) MUST BE IN PLACE WHEN THE FURNACE IS INSTALLED WITH SIDE OR REAR AIR RETURN DUCTS. FAILURE TO INSTALL A BASE PLATE COULD CAUSE PRODUCTS OF COMBUSTION TO BE CIRCULATED INTO THE LIVING SPACE AND CREATE POTENTIALLY HAZARDOUS CONDITIONS.

FURNACE WIDTH	SOLID BOTTOM KIT NO.	BASE PLATE NO.	BASE PLATE SIZE
14	RXGB-B14	AE-61229-02	12 3/4 x 24 11/16
17 1/2	RXGB-B17	AE-61229-03	16 1/4 x 24 11/16
21	RXGB-B21	AE-61229-04	19 3/4 x 24 11/16
24 1/2	RXGB-B24	AE-61229-05	23 1/4 x 24 11/16

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.

Gas Heat Exchanger Warranty Twenty (20) Years
Draft Inducer Warranty Five (5) Years
Integrated Blower Control Board Warranty Five (5) Years
(Standing Pilot and Hot Surface Ignition Boards)
Any Other Part One (1) Year

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

BLOWER PERFORMANCE DATA—UPFLOW MODELS

MODEL NUMBER	BLOWER SIZE	MOTOR H.P.	BLOWER SPEED	CFM/AIR DELIVERY EXTERNAL STATIC PRESSURE INCHES WATER COLUMN						
				7/8"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"
UGDG-050AUE*	11 x 6	1/2	LOW	575	605	635	680	695	715	735
UGDG-05MAUER			MED-LO	895	920	940	955	970	980	990
UGDG-05EAUE*			MED-HI	1060	1085	1105	1125	1150	1170	1190
UGDG-05NAUER			HIGH	1250	1290	1320	1350	1390	1440	—
UGDG-075AUE*	11 x 6	1/2	LOW	800	820	840	855	870	885	900
UGDG-07MAUER			MED	995	1020	1045	1060	1080	1095	1115
UGDG-07EAUE*			HIGH	1160	1200	1235	1265	1295	1320	1345
UGDG-07NAUER										
UGDG-075AMG*	11 x 7	3/4	LOW	985	1010	1025	1035	1040	1045	1050
UGDG-07MAMGR			MED-LO	1105	1135	1155	1170	1185	1195	1205
UGDG-07EAMG*			MED-HI	1385	1425	1450	1480	1510	1535	1565
UGDG-07NAMGR			HIGH	1475	1525	1585	1640	1690	1740	—
UGDG-100AUE*	11 x 6	1/2	LOW	770	795	810	830	845	860	875
UGDG-10MAUER	11 x 6		MED	920	945	970	990	1010	1030	1050
UGDG-10EAME*	11 x 7		HIGH	1120	1120	1155	1190	1220	1250	1280
UGDG-10NAMER	11 x 7									
UGDG-100BRJ*	11 x 10	3/4	LOW	1095	1110	1120	1125	1130	1135	1140
UGDG-10MRJR			MED-LO	1265	1285	1300	1310	1315	1320	1325
UGDG-10EBRJ*			MED-HI	1615	1655	1680	1705	1725	1735	1745
UGDG-10NBRJR			HIGH	1865	1935	2010	2080	2145	2200	—
UGDG-125ARJ*	11 x 10	3/4	LOW	1130	1140	1150	1160	1170	1175	—
UGDG-12MARJR			MED-LO	1300	1315	1330	1340	1350	1355	1360
UGDG-12EARJ*			MED-HI	1665	1710	1740	1760	1775	1780	—
UGDG-12NARJR			HIGH	1895	1975	2050	2120	2195	2285	—
UGDG-150ARJ*	11 x 10	3/4	LOW	1150	1170	1175	1180	1185	1190	1195
UGDG-15MARJR			MED-LO	1300	1330	1345	1360	1365	1375	1385
UGDG-15EARJ*			MED-HI	1655	1695	1735	1775	1800	1830	1845
UGDG-15NARJR			HIGH	1775	1847	1915	1980	2045	2110	—

NOTES: *Designates "R" for U.S. models, and "A" for Canadian models.

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

RUUD
AIR CONDITIONING
DIVISION

P.O. Box 17010, Fort Smith, Arkansas 72917-7010



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

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6-92 BP

FORM NO. G22-442 REV. 2
Supersedes Form No. G22-442 Rev. 1

RUUD®

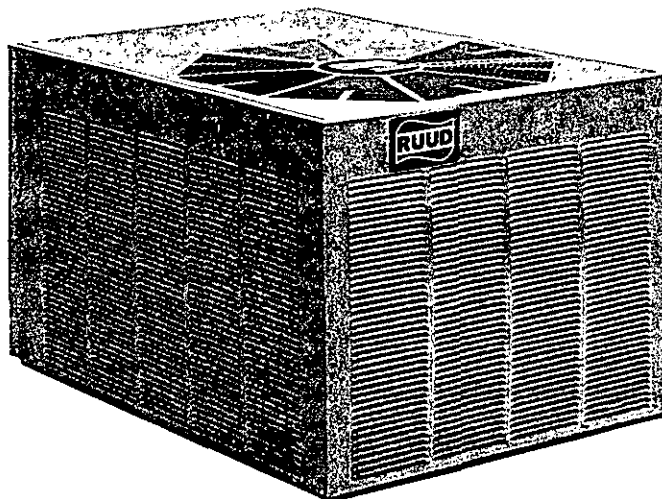
RUUD® ACHIEVER 12® SUPER HI-EFFICIENCY CONDENSING UNITS

Seven Models

Cooling Capacities
19,500 to 56,000 BTU/HR

UAMA- SERIES

Nominal Sizes 1½ to 5 Tons



The Ruud Achiever 12 Super High Efficiency UAMA- Condensing Unit was designed with performance in mind. These units offer comfort, energy conservation and dependability for single, multi-family and light commercial applications.

The Ruud Achiever 12 UAMA- Condensing Units are the result of an ongoing development program for improved efficiencies. With SEER's ranging to 12.4, these units continue a tradition of high efficiency.

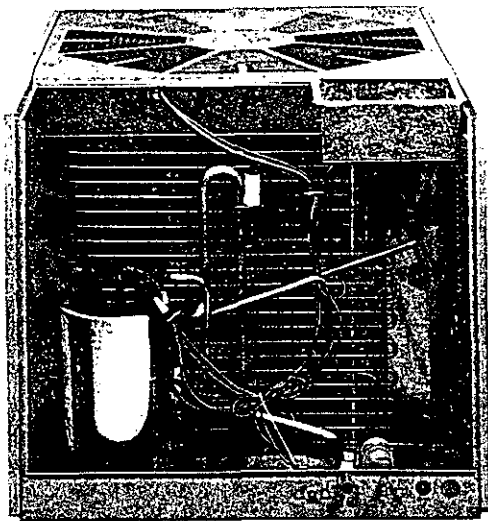
- Attractive, louvered wrap-around jacket protects the coil from yard hazards and weather extremes. Top grille is steel reinforced for extra strength. Cabinet is powder painted for all-weather protection.
- Air is discharged upward away from bushes and shrubs. The discharge pattern of the top grille provides minimum air restriction, resulting in quiet fan operation.
- Exclusive Combination Grille/Motor Mount secures the motor to the underside of the discharge grille. The grille protects the motor windings and bearings from rain and snow.
- All controls are accessible by removing one service panel. Removable top grille provides access to the condenser fan motor and condenser coil.



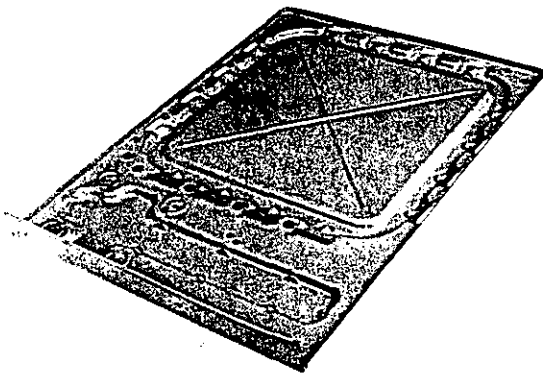
- Single speed motor designed for low speed, quiet, energy-saving operation.



"CERTIFIED UNDER THE
A.R.I. CERTIFICATION
PROGRAM—A.R.I.
STANDARD 210"



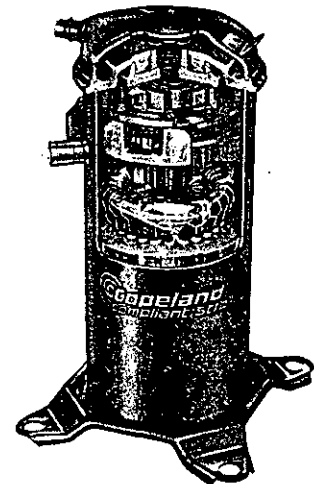
All controls and compressor are accessible for servicing by removal of the service panel.



Drawn Painted Base Pan.

COPELAND® COMPLIANT SCROLL®

Copeland's new scroll compressor is the key to efficiency for this Ruud model. It's the latest in high-efficiency compressor technology. The advanced compliant scroll compressor offers low noise and vibration characteristics and features tolerance to liquid refrigerant and system contamination. The Copeland Compliant Scroll also has low start torque, eliminating start problems in the field. And its unique design enables the UAMA- condensing unit to perform more efficiently.



Engineering Features

UAMA- Series Condensing Units

1. Scroll compressor is hermetically sealed and incorporates internal high temperature motor overload protection, and durable insulation on the motor windings. It is externally mounted on rubber grommets to reduce vibration and noise.
2. Compressors have an internal pressure relief assembly to protect against excessive pressure differential.
3. All refrigerant connections are on the exterior of the unit, located close to the ground for neat appearing installations.
4. Cabinet is constructed of powder painted galvanized steel. The full wraparound louvered grille protects the coil from damage.
5. Copper Tube—Aluminum Fin coils are used on all models.
6. The control box is located in the top corner of the cabinet providing for easy access through a service panel.
7. Service valves are standard on all models.
8. Power and control wiring are kept separate.
9. Every unit is factory charged and tested.
10. Separate compressor compartment for easy service access.
11. Drawn, painted base pan for extra corrosion resistance and sound reduction.
12. **UAMA- Series** has a **10 year compressor limited warranty**, factory installed low pressure control, high pressure control, compressor sound wrap, and a liquid line filter drier.
13. Anti-Short cycle time delay control.

Field Installed Accessories

- **Low Ambient Switch**—Cycles outdoor fan to maintain adequate condensing pressures assuring liquid refrigerant flow to the coil. Allows indoor cooling with outdoor temperatures down to 0°F. (Model No. RXAD-A04)

It is recommended that this control be installed in units to be operated at outdoor ambient temperatures under 70°F.

Model Number Identification

<u>U</u>	<u>A</u>	<u>M</u>	<u>A</u>	<u>—</u>	<u>024</u>	<u>J</u>	<u>A</u>	<u>Z</u>
RUUD	CONDENSING UNIT	TYPE-M SUPER HI-EFFICIENCY	DESIGN SERIES		NOMINAL COOLING CAPACITY	ELECTRICAL DESIGNATION J = 208/230-1-60	VARIATIONS A = DELUXE MODEL	COMPRESSOR TYPE Z = COPELAND ZR COMPLIANT SCROLL COMPRESSOR
					018 = 18,000 BTU/HR 024 = 24,000 BTU/HR 030 = 30,000 BTU/HR 036 = 36,000 BTU/HR 042 = 42,000 BTU/HR 048 = 48,000 BTU/HR 060 = 60,000 BTU/HR			

Performance Data @ ARI Standard Conditions—Cooling (continued)

Model Numbers		80°F DB/ 67°F WB Indoor Air 95°F DB Outdoor Air						ARI Sound Rating ①	Indoor CFM	
Outdoor Unit: UAMA--	Indoor Coil and/or Air Handler	Total Capacity BTU/HR	Net Sensible BTU/HR	Net Latent BTU/HR	Single Phase		Three-Phase			
					Total Watts	SEER	Total Watts	SEER		
048JAZ	RCHA-48A1	47,000	32,699	14,301	4,352	12.00			7.8	1,600
	RCHA-48A1 (UBEA-21)	47,000	32,699	14,301	3,790	12.40			7.8	1,600
	RCHA-48A1 (UBHA-21)	47,000	32,699	14,301	3,790	12.40			7.8	1,600
	RCTB-A060	48,500	33,950	14,550	4,350	12.30			7.8	1,600
	RCTB-B060	48,500	33,950	14,550	4,350	12.30			7.8	1,600
	RCTB-B060 (UHQA-16)	49,000	34,450	14,550	4,261	12.75			7.8	1,600
	RCTH-A048 (UHQA-16)	49,000	34,300	14,700	4,261	12.50			7.8	1,600
060JAZ	RCTH-A060	49,000	34,300	14,700	4,395	12.00			7.8	1,600
	RCBA-60--+ RXCT-BCF	56,000	38,724	17,276	5,283	12.00			7.8	1,900
	RCBA-60--+ RXCT-BCF (UBEA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCBA-60--+ RXCT-BCF (UBHA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCBA-6089	56,000	39,200	16,800	5,283	11.50			7.8	1,900
	RCBA-6089 (UBEA-24)	56,000	39,200	16,800	5,185	11.80			7.8	1,900
	RCBA-6089 (UBHA-24)	56,000	39,200	16,800	5,185	11.80			7.8	1,900
	RCGA-60A1 ②	56,000	38,724	17,276	5,283	12.00			7.8	1,900
	RCGA-60A1 (UBEA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCGA-60A1 (UBHA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCHA-60A1	56,000	38,724	17,276	5,283	12.00			7.8	1,900
	RCHA-60A1 (UBEA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCHA-60A1 (UBHA-24)	56,000	38,724	17,276	5,185	12.40			7.8	1,900
	RCQB-B060	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCQB-B060 (UHQA-20)	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCQB-C060	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCQB-C060 (UHQA-20)	58,500	41,700	16,800	5,318	12.40			7.8	1,900
	RCTH-A060	55,000	37,978	17,022	5,263	11.50			7.8	1,900
	RCTH-A060 (UHQA-20)	55,000	37,978	17,022	5,263	11.50			7.8	1,900

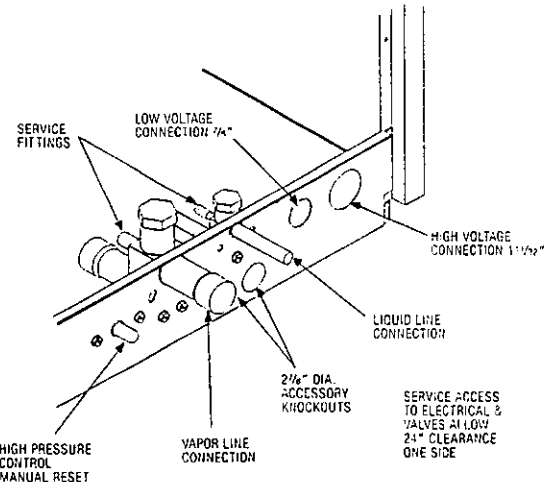
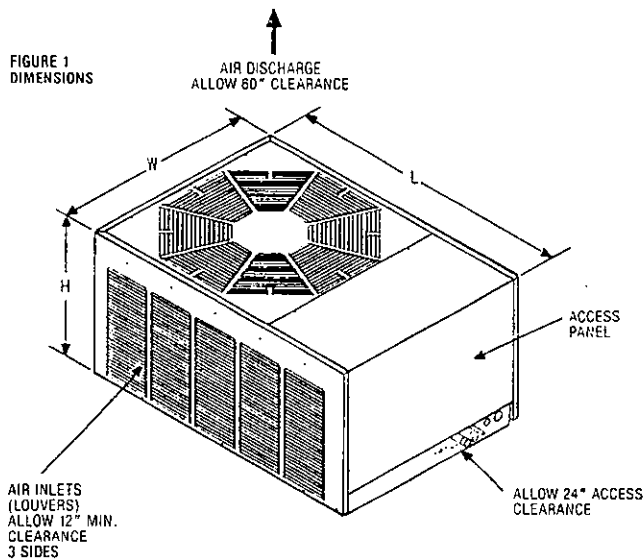
① Sound rating in accordance with ARI Standard 270.

② Highest sales volume tested combination required by D.O.E. test procedures.

Electrical and Physical Data

Model No: UAMA--	ELECTRICAL							PHYSICAL					
	Phase Hertz: Volts	Compr. RLA	Compr. LRA	Fan Motor FLA	Min. Circuit Ampacity Amps	Fuse or HACR Circuit Breaker		Outdoor Coil			R22 Oz.	Weight	
						Min. Amps	Max. Amps	Face Area Sq. Ft.	No. Rows	CFM		Net Lbs.	Shipping Lbs.
018JAZ	1-60-208/230	9.6/9.6	49	.8	13/13	20/20	20/20	15.8	1	2947	88	200	217
024JAZ	1-60-208/230	12.9/12.9	62.5	.8	16/16	20/20	25/25	15.8	1	2029	85	184	201
030JAZ	1-60-208/230	13.5/13.5	76	1.2	18/18	25/25	30/30	15.8	1	2947	96	189	206
036JAZ	1-60-208/230	18.0/18.0	90.5	1.2	24/24	30/30	40/40	15.8	1	2947	96	196	213
042JAZ	1-60-208/230	19.9/19.9	107	2.0	26/26	35/35	45/45	15.8	1	3995	95	201	218
048JAZ	1-60-208/230	23.7/23.7	129	2.0	32/32	40/40	50/50	17.3	2	3944	172	270	287
060JAZ	1-60-208/230	28.9/28.9	169	2.0	39/39	50/50	60/60	20.8	2	3995	192	309	332

Unit Dimensions



Model Number UAMA--	Height "H" (Inches)	Length "L" (Inches)	Width "W" (Inches)
-018/-024/-030 -036/-042/-048	26 3/4	42 9/16	31
-060	34 3/4	43	31

Condensing Units Refrigerant Line Size Information

Liquid Line Lengths ①														
Unit Nom. Tons	Std. Liq. Line Size	Horizontal Run — Feet						Vertical Separation of Outdoor & Indoor Units — Feet						
		Max. Line Length						Outdoor Unit Above ② ③				Outdoor Unit Below ④		
		30'	40'	60'	80'	100'	150'	30'	40'	60'	80'	100'	10' Max	40' Max
1.5	1/4"	1/4"			5/16"			1/4"		5/16"			1/4"	5/16"
2.0		1/4"		5/16"			3/8"	1/4"		5/16"				
2.5		1/4"	5/16"			3/8"	1/4"	5/16"						
3.0	5/16"	5/16"			3/8"			5/16"		3/8"			5/16"	3/8"
3.5		5/16"		3/8"			5/16"		3/8"					
4.0	3/8"	3/8"			1/2"			3/8"					3/8"	1/2"
5.0		3/8"			1/2"			3/8"			1/2"			

- ① Factory charge is sufficient for 25 feet of standard liquid line. For different line lengths, adjust refrigerant charge as follows: 1/4" line ± .3 oz. per foot, 5/16" line ± .4 oz. per foot, 3/8" line ± .6 oz. per foot, 1/2" line ± 1.2 oz. per foot.
 ② Total run (vertical and horizontal) must not exceed 120 feet.
 ③ Indoor coil Flowcheck Piston size must be reduced as follows: No change up to 35' in separation height. Reduce (4) sizes for 35' to 75' separation height. Reduce (8) sizes for 75' to 100' separation height. (No change required for TXV coils)
 ④ Total run (vertical and horizontal) must not exceed 60 feet.

Vapor Line Length/Size versus Capacity Multiplier								
UAMA		018	024	030	036	042	048	060
Vapor Line Run—Feet		Nominal Unit Tons						
		1.5	2.0	2.5	3.0	3.5	4.0	5.0
		3/4" O.D. Standard 7/8" O.D. Optional			7/8" O.D. Standard 1 1/8" O.D. Optional		1 1/8" O.D. Standard 1 3/8" O.D. Optional	
25'	Standard	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Optional	1.01	1.01	1.01	1.01	1.01	1.01	1.01
50'	Standard	.99	.99	.99	.99	1.00	1.00	.99
	Optional	1.00	1.00	1.00	1.01	1.01	1.01	1.01
100'	Standard	.99	.98	.97	.98	.99	.99	.99
	Optional	1.00	.99	.99	1.00	1.00	1.00	1.00
150'	Standard	.98	.97	.95	.97	.99	.99	.98
	Optional	1.00	.98	.97	.99	1.00	1.00	.99

NOTES: Capacity Multiplier x Rated Capacity = Actual Capacity.

Additional compressor oil is not required for runs up to 150 feet.

Oil traps in vertical runs are not required for any height up to 100 feet. See Liquid Line chart for Vertical Separation Requirements and Limitations.

RECOMMENDATIONS: Add a crankcase heater for runs over 30 feet. Plus, add an accumulator or pump-down cycle for runs over 60 feet. Plus, add a Low Ambient Control for runs over 90 feet.

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.

Compressor Ten (10) Years
 Any Other Part One (1) Year

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

BEFORE PURCHASING THIS APPLIANCE, READ IMPORTANT ENERGY COST AND EFFICIENCY INFORMATION AVAILABLE FROM YOUR RETAILER.

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

**RUUD
 AIR CONDITIONING
 DIVISION**

P.O. Box 17010, Fort Smith, Arkansas 72917-7010

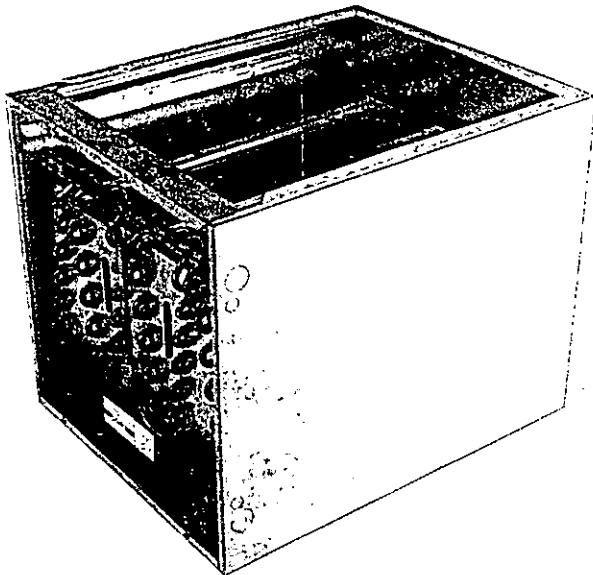


"In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice."

PRINTED IN U.S.A. 1-94 BP

FORM NO. A22-149 REV. 2
 Supersedes Form No. A22-149 Rev. 1

RUUD®



RUUD® RCBA-/RCGA-/RCHA- MULTIFLEX™ CASED OR UNCASED INDOOR COILS

**AIRFLOW CAPACITIES
600-2000 CFM**

Ruud Indoor Coils are designed for use with Ruud outdoor units and are available in upflow, downflow and horizontal configurations. All configurations are convertible to any of the other airflow possibilities.

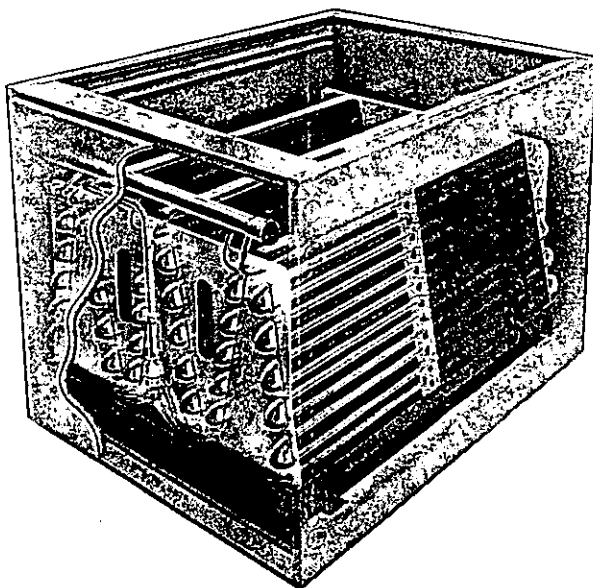
The MultiFlex™ coils provide capacities ranging from 18,000 to 60,000 BTUH.

The patented single-row, single-coil pleated concept results in extremely low pressure drops and corresponding easy cleaning.

Refrigerant and drain connections may be made from either side of the coil.

Engineering Features

- Constructed of enhanced aluminum fins bonded to inner grooved copper tubing.
- Coils have sweat fitting refrigerant connections.
- Primary condensate drain connections are 3/4" F.N.P.T.
- Coils are A.R.I. certified for system application with a wide variety of Ruud outdoor units.
- Condensate drain pan is constructed of a high grade, heat resistant, corrosion free polymer material.
- Double-wall construction offers sturdiness along with dead air space insulation and sound attenuation.



"CERTIFIED UNDER THE
A.R.I. CERTIFICATION
PROGRAM-A.R.I.
STANDARDS 210 & 240"

MODEL NUMBER IDENTIFICATION

R	C	H	A	—	36	A1	AOU	17	B	—	OPT
Ruud	Coil	Type of Coil	Design Series		Nominal Capacity	Metering Device	Airflow/Refrigerant Connections	Coil Casing	Adapter		Variation
			A = 1st Design			** = Flowcheck Piston (RCBA Coils) ** = TX Valve (RCGA/RCHA Coils)	A(-) = Standard Side Connections G(-) = Front Connections	14 = 14.0" 17 = 17.5" 21 = 21.0" 24 = 24.5"	B = Adapters (78% Upflow)		

B = Standard Coil
H = High Efficiency (Heat Pump)
G = Hi-Efficiency A/C Evaporator Coil

24 = 18,000 To 24,000 BTUH
36 = 30,000 To 36,000 BTUH
48 = 42,000 To 48,000 BTUH
60 = 60,000 BTUH

NOTES: ① Model Number Designation Through This Character for Uncased Coils.
② May Be Used in Horizontal Position with the Addition of Horizontal Drain Pan Kit, Accessory Number RXBD-AA.

Metering Device also available as a field installed kit. (RXCT-AC*)

** Metering Device—RCGA Coils

COIL SIZE	TX VALVE METERING CODE	VALVE SIZE (TON)	PISTON SIZE	SUPER-HEAT SETTING
24	A1	1½	.120	45
24	A2	2	.172	45
36	A1	2½	.157	45
36	A2	3	.157	45
48	A1	3½ & 4	.172	45
60	A1	5	.172	45

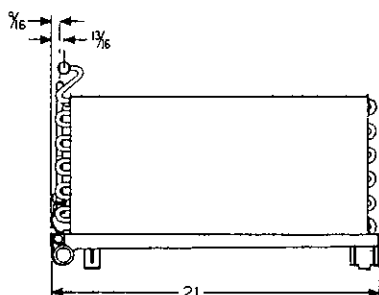
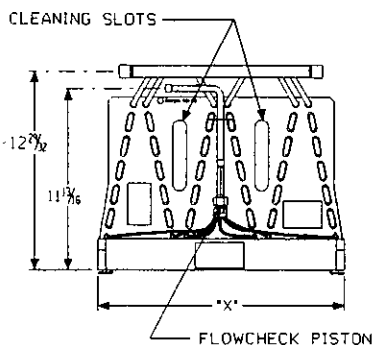
** Metering Device—RCHA Coils

COIL SIZE	TX VALVE METERING CODE	VALVE SIZE (TON)	PISTON SIZE	SUPER-HEAT SETTING
24	A1	1½	.120	45
24	A2	2	.157	48
36	A1	2½ & 3	.157	48
48	A1	3½ & 4	.172	55
60	A1	5	.172	55

② AD = Upflow/Downflow Airflow, Refrigerant Connections Right Side.
② AU = Upflow/Downflow Airflow, Refrigerant Connections Left Side.
AL = Horizontal Coil, Right to Left Airflow, Top Refrigerant Connections, May Be Used Upflow.
AR = Horizontal Coil, Left to Right Airflow, Top Refrigerant Connections, May Be Used Upflow.
② AS = Upflow/Downflow Airflow, Field Refrigerant Connections Left or Right Side.
GG = Front Connections (Upflow/Downflow).
GH = Front Connections Horizontal Left.
GZ = Front Connections Horizontal Right.

UNIT DIMENSIONS & WEIGHTS—RCBA CASSED AND UNCASSED COILS

MODEL NUMBER	UNIT WIDTH (IN.)		CONNECTION SIZE (IN.)		UNIT WEIGHT (LBS.)					
	UNCASSED COIL "X" IN.	STANDARD CASSED COIL "W" IN.	SWEAT		UNCASSED COIL		STANDARD CASSED COIL		CASSED COIL WITH HORIZ. DRAIN PAN	
			LIQUID I.D.	SUCTION I.D.	WT.	SHIP WT.	WT.	SHIP WT.	WT.	SHIP WT.
RCBA-24	12¼	14	¾	¾	15	17	32	34	34	36
RCBA-36	15¾	17½		¾	20	22	39	41	41	43
RCBA-48	19¼	21		7/8	26	29	46	49	48	51
RCBA-60	22¾	24½		7/8	32	35	54	57	56	60



UNIT MAY BE INSTALLED UPFLOW, DOWNFLOW, HORIZONTAL RIGHT OR LEFT HAND AIR SUPPLY.

ALL OPENINGS IN CASING ARE KNOCKOUTS.

REFRIGERANT, & DRAIN K.O.'S ARE TYPICAL BOTH SIDES OF CABINET.

HORIZONTAL APPLICATION

CONDENSATE DRAIN

AUXILIARY ¾" F.N.P.T.

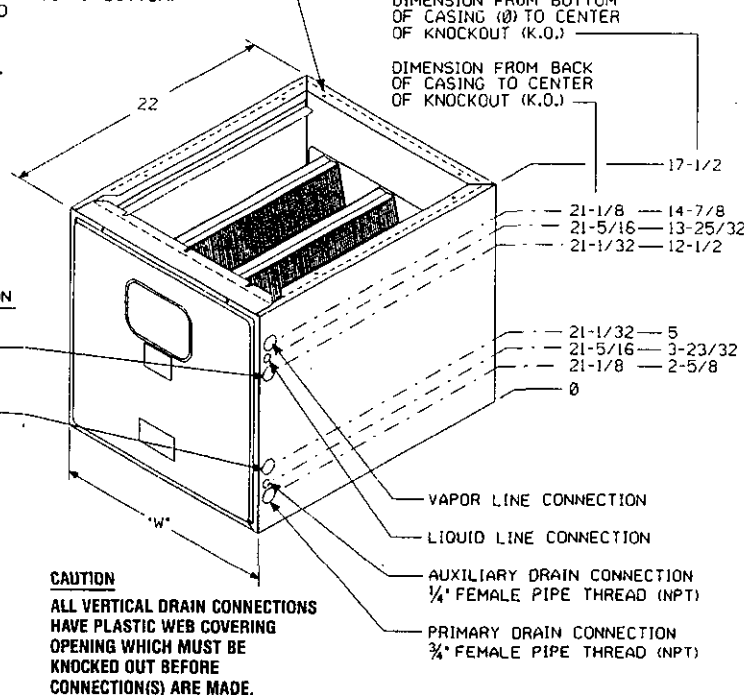
PRIMARY ¾" F.N.P.T.

DRAIN CONN.'S MUST EXIT BOTTOM.

REFRIGERANT CONN.'S MUST EXIT TOP SIDE.

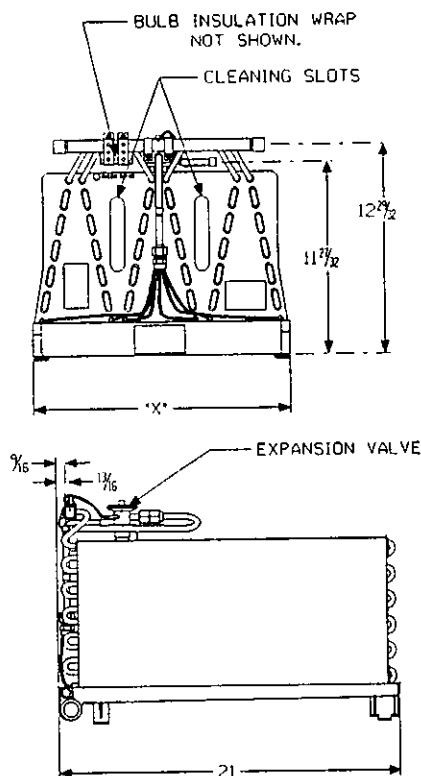
REQUIRES ADDITION OF HORIZONTAL DRAIN PAN. (FACTORY OR FIELD INSTALLED)

DUCT FLANGES MUST BE FORMED & PERFORATION. (TOP & BOTTOM)



UNIT DIMENSIONS & WEIGHTS—RCGA-/RCHA- CASED AND UNCASSED COILS

MODEL NUMBER	UNIT WIDTH (IN.)		CONNECTION SIZE (IN.)		UNIT WEIGHT (LBS.)					
	UNCASSED COIL "X" IN.	STANDARD CASED COIL "W" IN.	SWEAT		UNCASSED COIL		STANDARD CASED COIL		CASED COIL WITH HORIZ. DRAIN PAN	
			LIQUID I.D.	SUCTION I.D.	WT.	SHIP WT.	WT.	SHIP WT.	WT.	SHIP WT.
RCGA-/RCHA-24	12 ¹ / ₄	14	3/8	3/4	16	18	33	35	35	37
RCGA-/RCHA-36	15 ³ / ₄	17 ¹ / ₂		3/4	21	23	40	42	42	44
RCGA-/RCHA-48	19 ¹ / ₄	21		7/8	27	30	47	50	49	52
RCGA-/RCHA-60	22 ³ / ₄	24 ¹ / ₂		7/8	33	36	55	58	57	61



UNIT MAY BE INSTALLED UPFLOW, DOWNFLOW, HORIZONTAL RIGHT OR LEFT HAND AIR SUPPLY.

ALL OPENINGS IN CASING ARE KNOCKOUTS.

REFRIGERANT, & DRAIN K.O.'S ARE TYPICAL BOTH SIDES OF CABINET.

HORIZONTAL APPLICATION

CONDENSATE DRAIN

AUXILIARY

3/4" F.N.P.T.

PRIMARY

3/4" F.N.P.T.

DRAIN CONN.'S MUST EXIT BOTTOM.

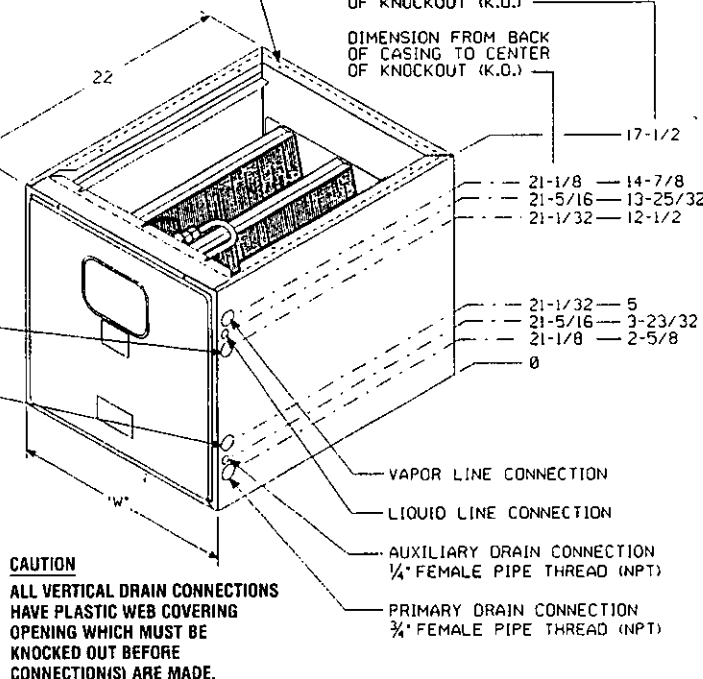
REFRIGERANT CONN.'S MUST EXIT TOP SIDE.

REQUIRES ADDITION OF HORIZONTAL DRAIN PAN, (FACTORY OR FIELD INSTALLED)

DUCT FLANGES MUST BE FORMED & PERFORATION. (TOP & BOTTOM)

DIMENSION FROM BOTTOM OF CASING (Ø) TO CENTER OF KNOCKOUT (K.O.)

DIMENSION FROM BACK OF CASING TO CENTER OF KNOCKOUT (K.O.)



RCBA-/RCGA-/RCHA- SUPPLY & RETURN AIR DIMENSIONS

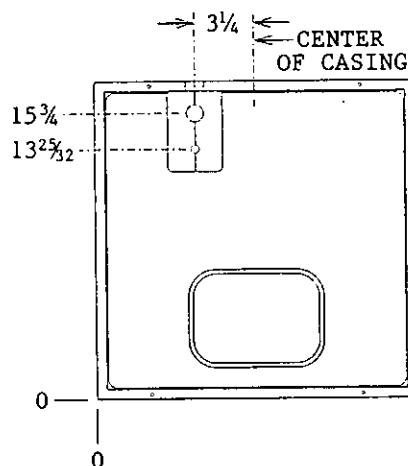
UPFLOW/HORIZONTAL

CABINET WIDTH		14"	17.5"	21"	24.5"
SUPPLY AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 5/8"	19 5/8"	19 5/8"	19 5/8"
RETURN AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 7/8"	19 7/8"	19 7/8"	19 7/8"

DOWNFLOW

CABINET WIDTH		14"	17.5"	21"	24.5"
SUPPLY AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 7/8"	19 7/8"	19 7/8"	19 7/8"
RETURN AIR	"W"	13"	16 1/2"	20"	23 1/2"
	"D"	19 5/8"	19 5/8"	19 5/8"	19 5/8"

"G(-)" FRONT CONNECTION FOR RCBA-/RCGA-/RCHA-



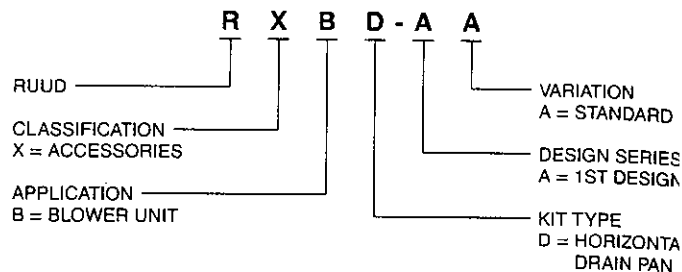
PHYSICAL DATA

COIL MODEL NUMBER	APPROX. DESIGN AIRFLOW RANGE (CFM)	FACE AREA (SQ. FT.)	FINS/IN.	NUMBER OF SLABS
RCBA-/RCGA-/RCHA-24**A	600-800	5.07	18	4
RCBA-/RCGA-/RCHA-36**A	1000-1200	7.60		6
RCBA-/RCGA-/RCHA-48**A	1400-1600	10.13		8
RCBA-/RCGA-/RCHA-60**A	2000	12.67		10

ACCESSORIES

HORIZONTAL DRAIN PAN KIT RXBD-AA

This horizontal drain pan accessory is for installation in cased indoor cooling and heat pump coils. This accessory allows an upflow/downflow coil to be converted for horizontal application. The same drain pan fits all RCBA-/RCGA-/RCHA- coils.



RCBA- HORIZONTAL INDOOR COIL ASSEMBLY

Figure 1.
Indoor Coil and Drain Pan Set-Up for
Horizontal Left Hand Air Supply.

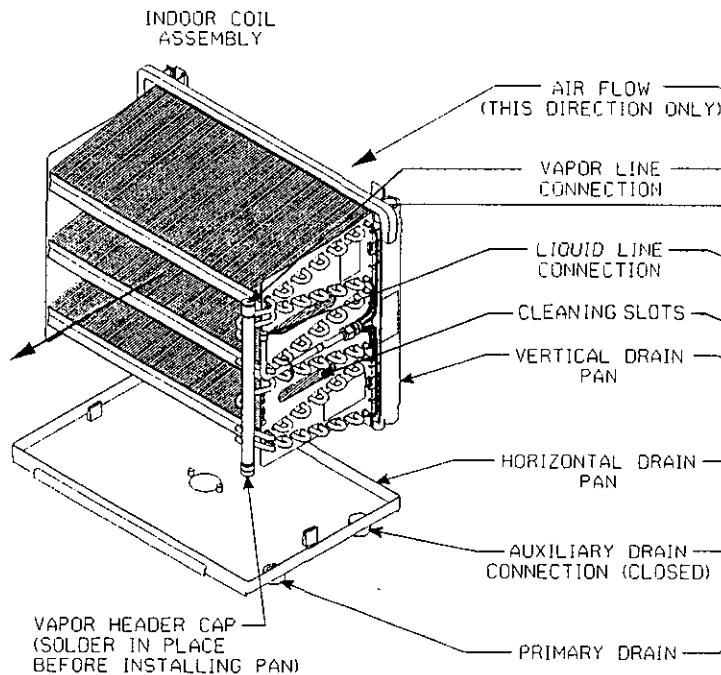
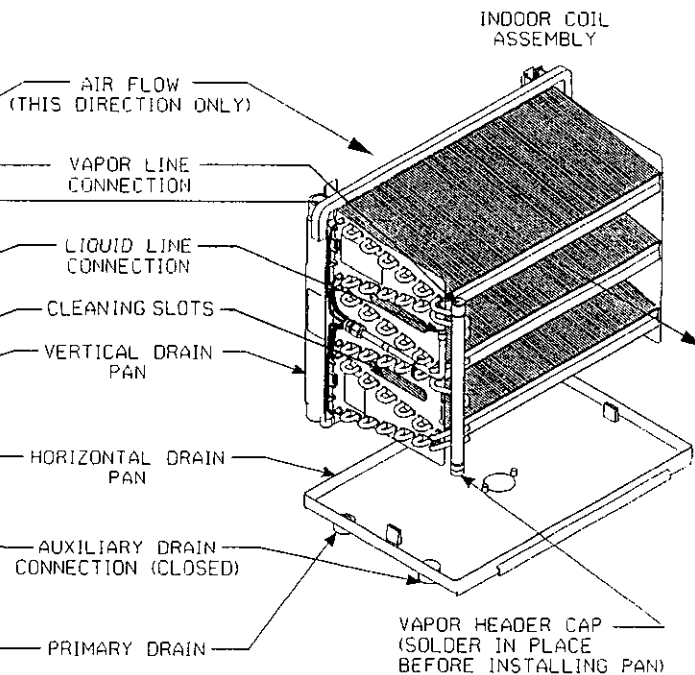
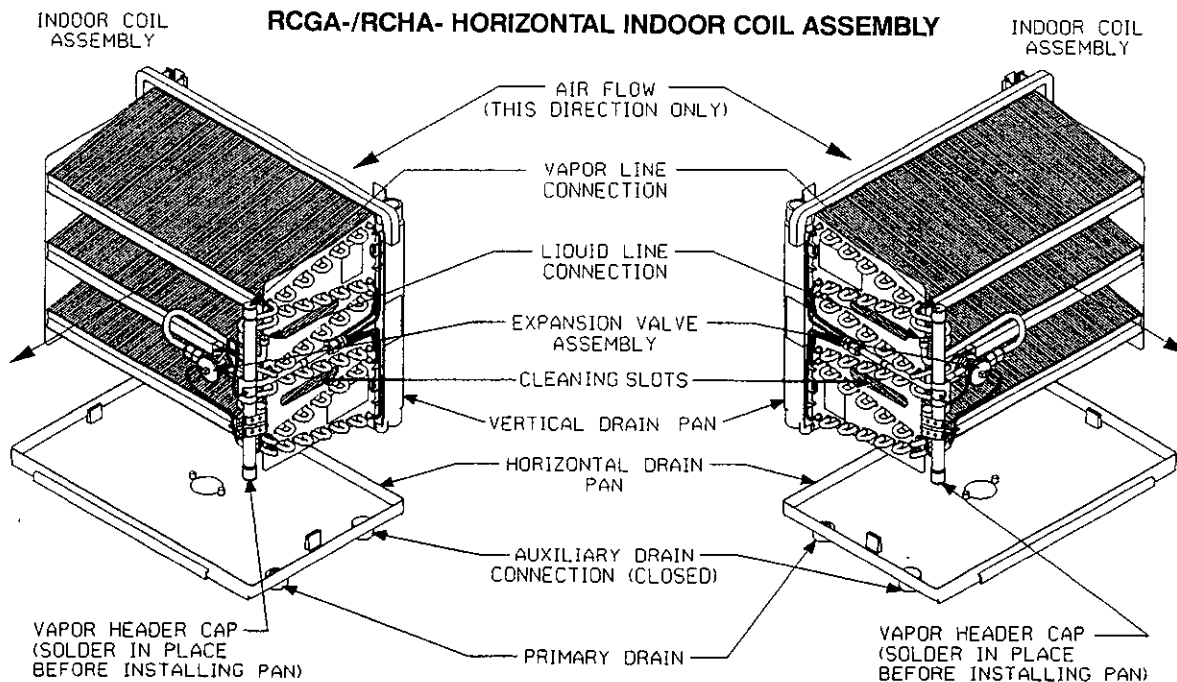


Figure 2.
Indoor Coil and Drain Pan Set-Up for
Horizontal Right Hand Air Supply.



RCGA-/RCHA- HORIZONTAL INDOOR COIL ASSEMBLY



ACCESSORIES (continued)

INTERNAL COUPLER ACCESSORY RXBA-AA AND RXBA-AB

This internal coupler accessory is for installation in cased indoor cooling and heat pump coils. This allows a nominal size coil to be installed in the next larger size casing to be used on a gas or oil furnace. **NOTE: This accessory is for installation in coil casings to fit gas or oil furnaces only—this accessory must not be used on electric furnaces or heat pump air handlers.** The RXBA-AA can be ordered factory installed by both designating the next size larger casing width and by designating a "with adapter" (B) in the coil model number.

PLENUM ADAPTER ACCESSORY RXBA-AC AND RXBA-AD

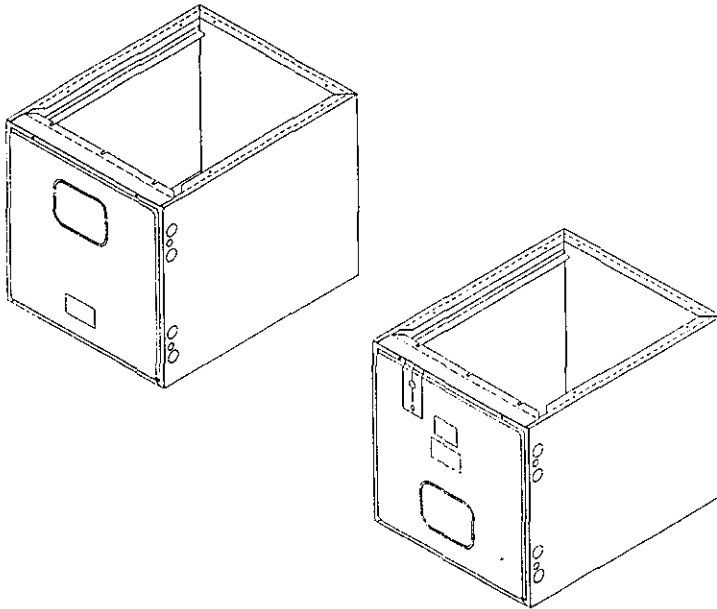
This plenum adapter accessory is for installation on cased indoor cooling and heat pump coils. This allows a nominal size cased coil to be installed on the next smaller size gas or oil furnace. **NOTE: This accessory is for installation on coil casings to fit gas or oil furnaces only—this accessory must not be used on electric furnaces or heat pump air handlers.** The RXBA-AC (Upflow Only) can be ordered factory installed by designation as "with adapter" (B) in the coil model number. The RXBA-AD for Downflow/Horizontal applications can be ordered separately through the order center.

PLENUM ADAPTER ACCESSORY RXBA-AE

This plenum adapter accessory is for use with the 24.5" wide cased indoor cooling and heat pump coils. This allows a 24.5" wide cased coil to be installed on a 28" wide oil furnace.

R	X	B	A - A	A
COUPLING COMBINATIONS				
COIL TO CASING				
CASING TO FURNACE				
CODE	NOMINAL COIL BTUH	CASING WIDTH	FURNACE WIDTH	INTERNAL/EXTERNAL
A	24,000 36,000 48,000	17.5" 21.0" 24.5"	17.5" 21.0" 24.5"	Internal
B	24,000 36,000	21.0" 24.5"	21.0" 24.5"	Internal
C	36,000 48,000 60,000	17.5" 21.0" 24.5"	14.0" 17.5" 21.0"	External Upflow Only
D	36,000 48,000 60,000	17.5" 21.0" 24.5"	14.0" 17.5" 21.0"	External Downflow/Horizontal
E	60,000	24.5"	28.0"	External
DESIGN SERIES A = 1ST DESIGN				
KIT TYPE A = COUPLER/COMBINATION (ADAPTORS)				
APPLICATIONS B = BLOWER UNITS				
CLASSIFICATION X = ACCESSORIES				
RUUD				

RXBC- INDOOR COIL CASING



UNIT DIMENSIONS & WEIGHTS—RXBC- INDOOR COIL CASINGS

MODEL NUMBER	WIDTH "W" IN.	HEIGHT IN.	DEPTH IN.	UNIT WEIGHT (LBS.)	SHIP WT.
RXBC-A14	14	17 1/2	22	17	19
RXBC-A17	17 1/2			19	21
RXBC-A21	21			20	23
RXBC-A24	24 1/2			22	25

DESIGN SERIES	COIL CASING	BLOWER UNIT	ACCESSORY	RUUD
R	X	B	C - A	14 I
INSULATION I = Insulated Blank = Uninsulated CABINET WIDTH 14 = 14" 21 = 21" 17 = 17.5" 24 = 24.5" DESIGN SERIES A = 1st Design C = Front Connection COIL CASING BLOWER UNIT ACCESSORY RUUD				

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 warranty.

Any Part One (1) Year

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

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

RUUD AIR CONDITIONING DIVISION

P.O. Box 17010, Fort Smith, Arkansas 72917-7010



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

	SHOWN	ACCEPTED	DEFICIENT	N/A
15. LOCATION OF FLOODWAY BOUNDARY/HAZARD AREA				
16. FRESH WATER WETLANDS				X
17. PARKING AREAS	X			
18. FACILITY & CONNECTIONS; WATER/SEWER/GAS/ELEC.	X			
19. PLANTINGS, SEEDLINGS, SCREENINGS, FENCES, SIGNS				
20. STREETS	X			
21. CURBING				X
22. DESCRIPTION OF ALTERATIONS/REL. OF WATERCOURSE				X
23. PRIOR APPR: ARMY CORP. (D.E.P.) WETLANDS, ETC.			X	X
24. DAM SAFETY				X
25. SOIL CONSERVATION SERVICE				
26. PLANNING BOARD				

PLOT PLAN REVIEW

	DATE	APPROVED	REJECTED
SIGNATURE	1/26/91	H. P. ...	
REVISED			
REVISED			
REVISED			
FIELD CHECK			
REVISED			
REVISED			
REVISED			
MUNICIPAL ENGINEER			
REVISED			
REVISED			
REVISED			

PLOT PLAN REVIEW CHECK LIST

TOWNSHIP OF BRICK

BLOCK: 982 LOT: 29 DATE RECEIVED: 1/18/95

ADDRESS:

APPLICANT: JOE NIEMCZYK PHONE:

CONTRACTOR: JOE NIEMCZYK (OWNER) PHONE:

ADDRESS: 656 HARBOR RD, BRICK, N.J. SUBDIVISION:

TYPE OF WORK: NEW RESIDENTIAL DWELLING ZONING APPROVAL:

REVIEW: FLOOD ZONE IDENTIFIED BY FIRM A-S ELEV. 6.0

PANEL # _____ MAP# _____ DATED: _____

FEMA LETTER RECEIVED: YES NO

	X SHOWN	ACCEPTED	DEFICIENT	N/A
1. SITE PLAN &/OR SURVEY SIGNED & SEALED	X			
2. DRAW TO A SCALE OF NOT LESS THAN 1"=100'	X			
3. EXISTING ELEVATIONS (NGVD IN FLOOD ZONES)	X			
4. SIDE PROPERTY LINES & DWELLING & PROP. CORNERS	X			
5. STREET GUTTER, TOP CURB & CENTER LINE ELEV.	X			
6. CONTOURS; 1' INCREMENTS/IF ELEV. FLUCTUATES 2'	X			
7. ADJACENT DWELLING CORNERS	X			
8. PROPOSED GRADING	X			
9. GARAGE/1ST FLOOR/CRAWL SPACE/BASEMENT ELEV.	X			
10. LOT GRADING/FILLING & FINAL ELEVATION	X			
11. METHOD OF DRAINING	X			
12. FLOOD OPENINGS SIZED & PLACED			X	
13. DRIVEWAY WIDTH/TYPE & DRAINAGE	X			
14. DIMENSIONS/ACREAGE OF PARCEL IN QUESTION	X			

FLOOD ZONE ELEVATION CERT REQUIRED

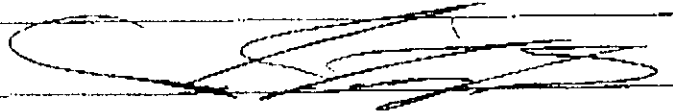
8-8-95

Building Dept. Township of Brick,

To Whom It May Concern,

I'm sending this letter to Authorize the
change of plumbing permit to another contractor.
The new contractor is VALENTINE Plumbing &
Heating Lic #6026.

bb site 656 HARBOUR Rd.
Brick, N.J.



Joseph Niemczyk

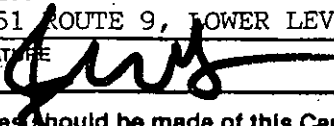
1-4-95

SECTION E CERTIFICATION

This certification is to be signed by a land surveyor, engineer, or architect who is authorized by state or local law to certify elevation information when the elevation information for Zones A1-A30, AE, AH, A (with BFE), V1-V30, VE, and V (with BFE) is required. Community officials who are authorized by local law or ordinance to provide floodplain management information, may also sign the certification. In the case of Zones AO and A (without a FEMA or community issued BFE), a building official, a property owner, or an owner's representative may also sign the certification.

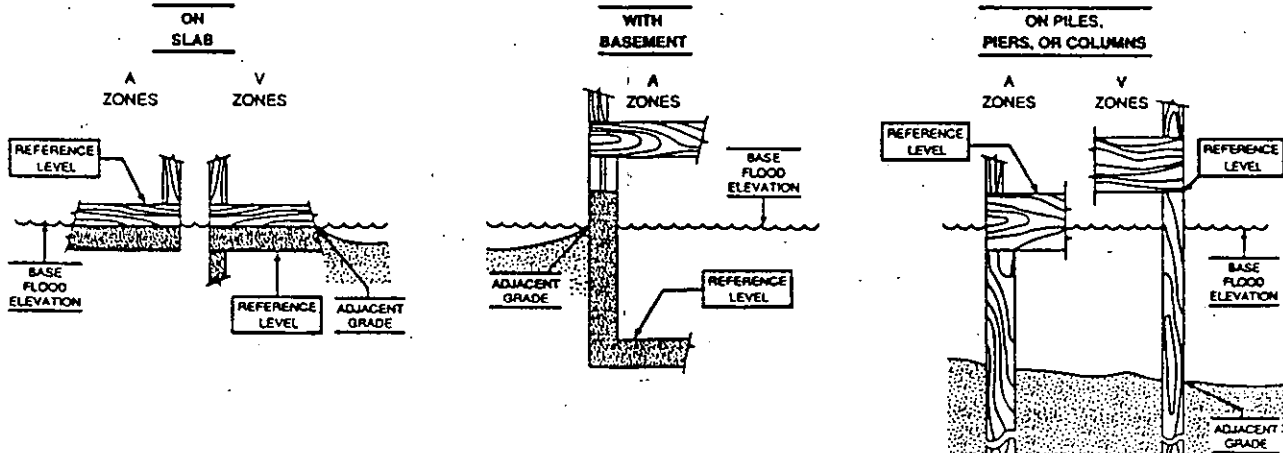
Reference level diagrams 6, 7 and 8 - Distinguishing Features-If the certifier is unable to certify to breakaway/non-breakaway wall, enclosure size, location of servicing equipment, area use, wall openings, or unfinished area Feature(s), then list the Feature(s) not included in the certification under Comments below. The diagram number, Section C, Item 1, must still be entered.

I certify that the information in Sections B and C on this certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

CERTIFIER'S NAME JOHN W. LORD		LICENSE NUMBER (or Affix Seal) N.J.P.E. & L.S. 32455	
TITLE PRESIDENT		COMPANY NAME LORD ENGINEERING GROUP	
ADDRESS 761 ROUTE 9, LOWER LEVEL	CITY LAKEWOOD	STATE NJ	ZIP 08701
SIGNATURE 		DATE 08/21/95	PHONE (908) 367-1650

Copies should be made of this Certificate for: 1) community official, 2) insurance agent/company, and 3) building owner.

COMMENTS: Some utilities are below finished floor level but they are above 6.0'.



The diagrams above illustrate the points at which the elevations should be measured in A Zones and V Zones.

Elevations for all A Zones should be measured at the top of the reference level floor.

Elevations for all V Zones should be measured at the bottom of the lowest horizontal structural member.

ELEVATION CERTIFICATE
FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM

O.M.B. No 3067-0077
Expires May 31, 1993

ATTENTION: Use of this certificate does not provide a waiver of the flood insurance purchase requirement. This form is used only to provide elevation information necessary to ensure compliance with applicable community floodplain management ordinances, to determine the proper insurance premium rate, and/or to support a request for a Letter of Map Amendment or Revision (LOMA or LOMR). Instructions for completing this form can be found on the following pages.

SECTION A PROPERTY INFORMATION

BUILDING OWNER'S NAME Mr. Joseph Niemczyk, Jr.	FOR INSURANCE COMPANY USE
STREET ADDRESS (Including Apt., Unit, Suite and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER 656 Harbor Road	POLICY NUMBER
OTHER DESCRIPTION (Lot and Block Numbers, etc.) Block 982 Lot 29	COMPANY NAIC NUMBER
CITY Brick	STATE NJ
	ZIP CODE 08701

SECTION B FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM (See Instructions):

1. COMMUNITY NUMBER 345285	2. PANEL NUMBER 0005	3. SUFFIX D	4. DATE OF FIRM INDEX 07/15/92	5. FIRM ZONE A5	6. BASE FLOOD ELEVATION (in AO Zones, use depth) 6.0
--------------------------------------	--------------------------------	-----------------------	--	---------------------------	---

7. Indicate the elevation datum system used on the FIRM for Base Flood Elevations (BFE): ☐ NGVD '29 ☐ Other (describe on back)
8. For Zones A or V, where no BFE is provided on the FIRM, and the community has established a BFE for this building site, indicate the community's BFE: feet NGVD (or other FIRM datum—see Section B, Item 7).

SECTION C BUILDING ELEVATION INFORMATION

1. Using the Elevation Certificate Instructions, indicate the diagram number from the diagrams found on Pages 5 and 6 that best describes the subject building's reference level 8.
- 2(a). FIRM Zones A1-A30, AE, AH, and A (with BFE). The top of the reference level floor from the selected diagram is at an elevation of feet NGVD (or other FIRM datum—see Section B, Item 7).
- (b). FIRM Zones V1-V30, VE, and V (with BFE). The bottom of the lowest horizontal structural member of the reference level from the selected diagram, is at an elevation of feet NGVD (or other FIRM datum—see Section B, Item 7).
- (c). FIRM Zone A (without BFE). The floor used as the reference level from the selected diagram is feet above ☐ or below ☐ (check one) the highest grade adjacent to the building.
- (d). FIRM Zone AO. The floor used as the reference level from the selected diagram is feet above ☐ or below ☐ (check one) the highest grade adjacent to the building. If no flood depth number is available, is the building's lowest floor (reference level) elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown
3. Indicate the elevation datum system used in determining the above reference level elevations: ☒ NGVD '29 ☐ Other (describe under Comments on Page 2). (NOTE: If the elevation datum used in measuring the elevations is different than that used on the FIRM [see Section B, Item 7], then convert the elevations to the datum system used on the FIRM and show the conversion equation under Comments on Page 2.)
4. Elevation reference mark used appears on FIRM: ☐ Yes ☐ No (See Instructions on Page 4)
5. The reference level elevation is based on: ☐ actual construction ☐ construction drawings
(NOTE: Use of construction drawings is only valid if the building does not yet have the reference level floor in place, in which case this certificate will only be valid for the building during the course of construction. A post-construction Elevation Certificate will be required once construction is complete.)
6. The elevation of the lowest grade immediately adjacent to the building is: feet NGVD (or other FIRM datum—see Section B, Item 7).

SECTION D COMMUNITY INFORMATION

1. If the community official responsible for verifying building elevations specifies that the reference level indicated in Section C, Item 1 is not the "lowest floor" as defined in the community's floodplain management ordinance, the elevation of the building's "lowest floor" as defined by the ordinance is: feet NGVD (or other FIRM datum—see Section B, Item 7).
2. Date of the start of construction or substantial improvement 1/24/92