Electric Furnace KF/KFS Series

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

Model Code:

KF/KFS	20	20	
A	B	C	D

A: Series
B: 20 - 208V 24 - 240V
48 - 480V
C: Kilowatts
D: 1 or 3 -phase

c UL us LISTED

- Heavyduty open-coil element
- Direct drive motor
- Up to 3-speed motor
- Standard 24 Volt control
- Horizontalor verticalmount
- Insulated discharge cabinet
- Baked enamel finish
- Fan relay
- Silent contactors
- Sequenced elements
- Dual inlet blower
- 60 Amp disconnect protection (KFS)
- Manual reset limit on 20 kW and larger
- Welded galvanized steel construction
- Thermally protected motor
- Replaceable filter
- Mobile home approved

MADE IN USA

The KFS Series Electric Furnace

The KFS Series furnace is the quietest and most compact unit available in its class. Ideal for residential applications, and yet powerful enough for commercial and process heating applications as well. It's the perfect choice for both new and replacement installations. The compact design allows it to be installed in either upflow, downflow or horizontal applications. Featuring a maintenance free blower, an insulated cabinet for quiet operation, and heavy gauge coiled nickel-chromium wire heating elements, the KFS furnace will provide years of trouble-free operation.

Engineering Specifications

Contractor shall supply and install KFS Series electric furnaces manufactured by King Electrical Mfg. Company. Furnaces shall be of the wattage and voltage as indicated on the plans.

Transformer: Each furnace is equipped with a heavy-duty low voltage (24 Volt) transformer for the thermostat control circuit.

Contactor or Time Delay Sequencer: Actuates heating element banks at random intervals to minimize electrical surges in compliance with E.E.I. and N.E.M.A. standards.

Heating Elements: Quick heating, long life Ni-Chrome elements are sized to provide proper watt density for maximum heat dissipation by fan-forced air convection currents.

Terminal Block: For field wiring (optional special order) KFSTB

Air Filter: Convenient access for replacement of standard 16" x 20" x 1" filter.

Overcurrent Protection: 208 and 240 volt KFS models have 60 amp circuit breakers. 480, 208 and 240 volt KF models have terminal blocks. Internal 60 amp fusing is provided for KF models over 48 amps.

Limit Control: Integral automatic high temperature limit control in each heating element bank prevents the delivery of air at unsafe temperatures. 20-35 kW use a manual reset limit control to completely shut the furnace off should an over temperature occur.

Fan Relay: Heavy-duty dual speed fan relay is standard with furnaces for air conditioning or summer fan operation.

Low Voltage Terminal Block: 24 Volt control screw terminals

Approvals: UL (E48864)

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Dimensional Data

The height of the KFS furnace is the only dimension that changes.
Please refer to selection chart to determine the size of the unit.

Accessories

MODEL	UPC	DESCRIPTION	WEIGHT (lbs.)
KFS-4PJB	20185	* 4-Pole Jumper Bar - 15kW to 20kW	.05
KFS-6PJB	20184	* 6-Pole Jumper Bar - 25kW to 30kW	.05
KFSSB	20182	1" discharge sub base	5
KFS-Q02C	20181	Small Cooling Cabinet 16" L x 22" W x 19½" H - 13 lbs.	25
KFS-Q03C	20180	Large Cooling Cabinet 18" L x 22" W x 19½" H - 15 lbs.	25
KFS-DT	20186	Transition from 14" x 14" Outlet to 12" round	25

* For single strike connection

DIMENSIONAL CLEARANCE	
Cabinet Sides	1 in.
Cabinet Front	0 in.
Exhaust duct within 3 feet of furnace	1 in.
Return Air Plenum	0 in.

Options

ADD SUFFIX:	DESCRIPTION
-JB	15 kW to 30 kW, 1-Phase
-1/3HP	1/3 HP Motor & Blower - 3 kW to 18 kW
-1/2HP	1/2 HP Motor & Blower - 3 kW to 35 kW
-2S1	Two Stage Control, 1-Phase Models (see quick selection guide)
-2S3	Two Stage Control, 3-Phase Models (5 kW increments only)
*-3S1	Three Stage Control, 1-Phase Models
-1/5 ECM	1/5 hp Electronically Controlled Motor
-1/3 ECM	1/3 hp Electronically Controlled Motor

Factory Installed Options

ADD SUFFIX:	DESCRIPTION
-DS40	40 Amp, 3-Pole Disconnect Switch w/ Padlock Provision
-DS60	60 Amp, 3-Pole Disconnect Switch w/ Padlock Provision
-DS80	80 Amp, 3-Pole Disconnect Switch w/ Padlock Provision

Air Flow Chart

MOTOR HP (rpm)	MOTOR SPEED							
	MOTOR LOAD		LOW		MED		HIGH	
	VOLTAGE	AMPS	CFM	FPM	CFM	FPM	CFM	FPM
1/5 (1075 rpm)	230 380 / 460[1]	3.4 1.7	775	570	860	630	1000[1]	735
1/3 (1075 rpm)	230 380 / 460[2]	3.2 1.7	1100[2]	810	1250	920	1540[2]	1130
1/2 (1075 rpm)	230 380 / 460[2]	3.8 1.9	1250	920	1540	1130	1750[3]	1285
MOTOR WIRE COLOR			RED		BLUE		BLACK	

*Air Volume = Cubic Feet Per Minute (CFM) *Air Velocity = Feet Per Minute (FPM)

[1]Single speed only [2]Low & High speed only [3]High speed only

Q02C

	LENGTH	WIDTH	HEIGHT	WEIGHT
Q02C	16	22	19.5	13
Q03C	18	22	19.5	15

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Internal Diagram - *exploded view*

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Ordering Information

MODEL	PHASE	KILO WATTS	BTU (000)	VOLTS	*AMPS	CIRCUIT PROTECTION L1 L2	L3 L4	L5 L6	L7 L8	75°C WIRE SIZING L1 L2	L3 L4	L5 L6	L7 L8	# OF ELEMENTS	MOTOR VOLTS	MOTOR HP	TEMPERATURE RISE LOW	MED.	HIGH	HEIGHT	WT. (lbs)
KFS2003-1	1	3	10.2	208	17.8	20				#10				1	208	1/5	12°	11°	9°	30½"	57
KFS2404-1	1	4	13.6	240	20	20				#10				1	240	1/5	16°	15°	13°	30½"	57
KFS2005-1	1	5	17.1	208	27.2	40				#8				1	208	1/5	20°	18°	16°	30½"	57
KFS2405-1	1	5	17.1	240	24.2	30				#10				1	240	1/5	20°	18°	16°	30½"	57
KF4805-1	1	5	17.1	480	12.1	15				#14				1	480	1/5	20°	18°	16°	30½"	57
KFS2006-1	1	6	20.5	208	32.2	40				#8				2	208	1/5	24°	22°	19	30½"	57
KFS2408-1	1	8	27.3	240	37	50				#6				2	240	1/5	32°	30°	25°	30½"	65
KFS2010-1	1	10	34.1	208	51.4	60				#6				2	208	1/5	41°	37°	32°	30½"	65
KFS2410-1	1	10	34.1	240	45	60				#6				2	240	1/5	41°	37°	32°	30½"	65
KF4810-1	1	10	34.1	480	22.5	30				#10				2	480	1/5	41°	37°	32°	30½"	65
KFS2412-1	1	11.5	39.2	240	51.3	40	30			#8	#10			2	240	1/5	47°	42°	36°	30½"	65
KF4812-1	1	11.5	39.2	480	25.7	40				#8				2	480	1/5	47°	42°	36°	30½"	65
KFS2015-1	1	15	51.2	208	75.5	40	60			#8	#6			3	208	1/5	61°	55°	47°	30½"	74
KFS2415-1	1	15	51.2	240	65.9	30	60			#10	#6			3	240	1/5	61°	55°	47°	30½"	74
KF4815-1	1	15	51.2	480	32.9	50				#6				3	480	1/5	61°	55°	47°	30½"	74
KFS2418-1	1	17.25	58.8	240	75.2	40	60			#8	#6			3	240	1/5	70°	63°	55°	30½"	74
KF4818-1	1	17.25	58.8	480	37.6	50				#6				3	480	1/5	70°	63°	55°	30½"	74
KFS2020A-1	1	20	68.3	208	99.5	60	60			#6	#6			4	208	1/5	81°	73°	63°	37½"	76
KFS2420A-1	1	20	68.3	240	86.7	60	60			#6	#6			4	240	1/5	81°	73°	63°	37½"	76
KF4820A-1	1	20	68.3	480	43.4	60				#6				4	480	1/5	81°	73°	63°	37½"	76
KFS2020-1	1	20	68.3	208	99.4	60	60			#6	#6			4	208	1/3	57°	51°	41°	37½"	76
KFS2420-1	1	20	68.3	240	86.5	60	60			#6	#6			4	240	1/3	57°	51°	41°	37½"	76
KF4820-1	1	20	68.3	480	43.4	60				#6				4	480	1/3	57°	51°	41°	37½"	76
KFS2422-1	1	22.5	76.8	240	96.9	60	60			#6	#6			4	240	1/3	57°	51°	41°	37½"	76
KF4822-1	1	22.5	76.8	480	48.6	60				#6				4	480	1/3	57°	51°	41°	37½"	76
KFS2025-1	1	25	85.3	208	123.4	30	60	60		#10	#6	#6		5	208	1/3	72°	63°	51°	37½"	81
KFS2425-1	1	25	85.3	240	107.4	30	60	60		#10	#6	#6		5	240	1/3	72°	63°	51°	37½"	81
KF4825-1	1	25	85.3	480	53.8	20	60			#12	#6			5	480	1/3	72°	63°	51°	37½"	81
KFS2030-1	1	30	102.4	208	147.4	60	60	60		#6	#6	#6		6	208	1/3	86°	76°	62°	37½"	85
KFS2430-1	1	30	102.4	240	128.2	60	60	60		#6	#6	#6		6	240	1/3	86°	76°	62°	37½"	85
KF4830-1	1	30	102.4	480	65.7	30	60			#10	#6			6	480	1/3	86°	76°	62°	37½"	85
KFS2435-1	1	34.5	117.7	240	146.9	15	60	60	60	#14	#6	#6	#6	6	240	1/3	99°	87°	71°	37½"	85
KF4835-1	1	34.5	117.7	480	73.6	40	60			#8	#6			6	480	1/3	99°	87°	71°	37½"	85

MODEL	PHASE	KILO WATTS	BTU (000)	VOLTS	*AMPS	CIRCUIT PROTECTION L1 / L2 / L3	75°C WIRE SIZING L1 / L2 / L3	# OF ELEMENTS	MOTOR VOLTS	MOTOR HP	TEMPERATURE RISE LOW	MED.	HIGH	HEIGHT	WT. (lbs)
KFS2405-3	3	5	17.1	240	15.4	20	#12	1	240	1/5	20°	18°	16°	30½"	57
KF4805-3	3	5	17.1	480	7.7	10	#14	1	480	1/5	20°	18°	16°	30½"	57
KFS2009-3	3	9	30.7	208	28.3	40	#8	3	208	1/5	37°	33°	28°	30½"	74
KFS2410-3	3	10	34.1	240	27.4	40	#8	2	240	1/5	41°	37°	32°	30½"	74
KF4810-3	3	10	34.1	480	13.7	20	#12	2	480	1/5	41°	37°	32°	30½"	74
KFS2012-3	3	11.25	38.4	208	34.6	40	#8	3	208	1/5	46°	41°	35°	30½"	74
KFS2412-3	3	12	40.9	240	32.3	40	#8	3	240	1/5	47°	42°	36°	30½"	74
KF4812-3	3	12	40.9	480	16.1	20	#12	3	480	1/5	47°	55°	36°	30½"	74
KFS2015-3	3	15	51.2	208	43.5	60	#6	3	208	1/5	61°	55°	47°	30½"	74
KFS2415-3	3	15	51.2	240	45	50	#6	3	240	1/5	61°	55°	47°	30½"	74
KF4815-3	3	15	51.2	480	21.4	30	#10	3	480	1/5	61°	63°	47°	30½"	74
KFS2418-3	3	17.25	58.8	240	44.8	60	#6	3	240	1/5	70°	63°	55°	30½"	74
KF4818-3	3	17.25	58.8	480	22.4	40	#8	3	480	1/5	70°	51°	55°	30½"	74
KFS2420-3	3	20	68.3	240	51.3	70	#6	4	240	1/3	57°	51°	41°	37½"	76
KF4820-3	3	20	68.3	480	25.7	30	#12	4	480	1/3	57°	56°	41°	37½"	74
KFS2022-3	3	22.5	76.8	208	65.5	100	#3	6	208	1/3	64°	61°	46°	37½"	85
KFS2424-3	3	24	81.6	240	60.9	75	#4	6	240	1/3	69°	61°	49°	37½"	85
KF4824-3	3	24	81.6	480	30.5	50	#6	6	480	1/3	69°	63°	49°	37½"	85
KFS2425-3	3	25	85.3	240	63	75	#4	5	240	1/3	72°	63°	51°	37½"	85
KF4825-3	3	25	85.3	480	32	50	#6	5	480	1/3	72°	76°	51°	37½"	85
KFS2030-3	3	30	102.4	208	86.5	110	#2	6	208	1/3	86°	76°	62°	37½"	85
KFS2430-3	3	30	102.4	240	75.3	100	#3	6	240	1/3	86°	76°	62°	37½"	85
KF4830-3	3	30	102.4	480	37.3	50	#6	6	480	1/3	86°	76°	62°	37½"	85
KFS2435-3	3	34.5	117.7	240	86.2	110	#2	6	240	1/3	99°	87°	71°	37½"	85
KF4835-3	3	34.5	117.7	480	43	60	#6	6	480	1/3	99°	87°	71°	37½"	85

MADERA™ FloWise® 16-1/2" H
1.6/1.1 GPF DUAL FLUSH TOILET SY
with EV
SELECTRONIC® FL

BARRIER FREE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

MADERA™ FloWise® 16-1/2" HEIGHT 1.6/1.1 GPF DUAL FLUSH TOILET SYSTEM with EVERCLEAN®

❑ **3461.576** 16-1/2" Height Top Spud Bowl and Selectronic® Flush Valve

BOWL:
- Floor mount elongated flushometer valve toilet
- Vitreous china
- High Efficiency. Operates in the range of 1.1 gpf to 1.6 gpf (4.2 Lpf to 6.0 Lpf)
- Permanent EverClean® surface inhibits the growth of stain- and odor-causing bacteria, mold, and mildew on the surface
- 10" or 12" rough-in
- 16-1/2" rim height for accessible application
- Condensation channel
- Powerful direct-fed siphon jet action
- Fully glazed 2-1/8" trapway
- 10" x 12" water surface area
- 1-1/2" inlet spud
- 100% factory flush tested
- Less toilet seat
- Model 3461.001

SELECTRONIC® FLUSH VALVE:
- Light flush (1.1 gpf) if user is in detection zone for less than 60 seconds
- Standard flush (1.6 gpf) if user is in detection zone for 60 seconds or more
- Factory-Installed CR-P2 Lithium Battery
- Self-Cleaning Piston with integral wiper spring significantly reduces clogging and maintenance
- Selectronic® Proximity System with universal sensor provides hygienic, "hands free" operation
- State-of-the-Art Electronics prevent ghost flushing
- Dezincification Resistant semi-red brass alloy
- Fully Mechanical Manual Override Button can flush the valve without power
- Fail-Safe: Valve automatically closes upon loss of power or water pressure and does not need to be reset
- Adjustable Sanitary Flush cleans the fixture & maintains the trap seal.
- Chemical Resistant EPDM Seals for extended life
- Adjustable Tailpiece for rough-in flexibility
- Can be installed left or right handed
- Model 6065.761

Includes:
- 047007-0070A Inlet Spud (furnished with bowl)
- 481310-1002 Bolt caps with retainers (furnished with bowl)
- 1" I.P.S. angle stop with back-flow protection and vandal resistant cap
- 1" Sweat solder kit including cover tube and wall flange
- 1-1/2" High back pressure vacuum breaker, spud coupling and flange

SEE REVERSE FOR ROUGHING-IN DIMENSIONS

High-Efficiency Toilet Systems:
- 20.8% water savings when compared to a 1.6 gpf toilet system

System MaP* Score:
- 1,000 grams of miso @ 1.1 and 1.6 gpf

* Maximum Performance (MaP) testing performed by IAPMO R&T Lab. MaP Report conducted by Veritec Consulting, Inc. and Koeller and Company.

Battery Life:
- 4 years @ 4,000 flushes per month

Operating Pressure:
25 psi (flowing) - 80 psi (static)

Flow Requirement:
25gpm (94.6 L/min.)

Nominal Fixture Dimensions:
718 x 356 x 419mm (28-1/4" x 14" x 16-1/2")

To Be Specified:
❑ Color: ❑ White
❑ Seat:
- ❑ American Standard #5901.100 Heavy duty open front less cover
- ❑ American Standard #5905.100 Extra heavy duty open front less cover

EVERCLEAN® Surface

WATER EFFICIENT PRODUCT

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MADERA™ FloWise® 16-1/2" HEIG
1.6/1.1 GPF DUAL FLUSH TOILET SYST
with EVERCL
SELECTRONIC® FLUSH V

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BARRIER FREE

Fixture Compliance Certifications - Meets or Exceeds the Following Specifications:

- ASME A112.19.2-2008 / CSA B45.1-08 for Vitreous China Fixtures

Valve Listings:

- ASSE 1037
- ANSI/ASME A112.19.2
- ADA Compliant

*Note: The Critical Line (-C-L-) on Vacuum Breaker must typically be a minimum of 6" (152mm) above fixture. Consult Codes for details.

VALVE LEFT or RIGHT HAND INSTALLATION

MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USABLE BUILDING FACILITIES - CHECK LOCAL CODES.

NOTES:
TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON THE FLUSHOMETER VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR SUPPLY ROUGHING.
THIS TOILET DESIGNED TO ROUGH-IN AT A MINIMUM DIMENSION OF 254MM (10") AND A MAXIMUM DIMENSION OF 305MM (12") FROM FINISHED WALL TO C/L OF OUTLET.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

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WALL MOUNTED SINGLE METERING FA

Z80300

TAG _____

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Inspections Division
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Date: 02/22/18

Engineering Specifications: Zurn AquaSpec® Z80300-DZR
Polished chrome plated wall mounted single slow-closing metering faucet with flanged 1/2" BSP female inlet, a vandal-resistant color-coded brass handle, a 0.5 GPM [1.9L] pressure compensating aerator (complying with ANSI A112.18.1 Standard for flow), easy adjustable cycle time, preset to 5 to 10 seconds at 80 PSI(550 kPa).

WaterMark
AS/NZS 3718
WMKA21242
SAI Global

LOGO TO BE
LASER ETCHED

Note: *All dimensions are for reference only. Do not use for pre-plumbing*

OPTIONAL ACCESSORIES

Suffix	Description
No options required.	

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733
Phone: 1-716-665-1132 ♦ Fax: 1-716-665-1135 ♦ World Wide Web: www.zurn.com
In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

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AQUASPEC® FAUCETS

MODEL - Z80300-XL SERIES
WALL MOUNTED SINGLE METERING FAUCET

TECHNICAL INFORMATION

FLOW: 0.25 GPC MAXIMUM; PRESET AT FACTORY TO 10 TO 15 SECONDS @ 80 PSI ADJUSTABLE
MAXIMUM PRESSURE: 80 PSI
MAXIMUM TEMPERATURE: 140º F
- CAN USE QUARTER TURN CERAMIC DISK CARTRIDGE

IMPORTANT **THE WATER SUPPLY LINES MUST BE THOROUGHLY FLUSHED BEFORE INSTALLATION TO PREVENT FOREIGN MATTER AND DEBRIS FROM CLOGGING AND/OR DAMAGING INTERNAL COMPONENTS**

* INSTALLATION INSTRUCTIONS

1. THE WATER SUPPLY LINE MUST BE THOROUGHLY FLUSHED BEFORE FAUCET INSTALLATION.
2. REMOVE FAUCET BODY FROM CARTON AND MOUNT TO 1/2" NPT FITTING.
3. TURN SUPPLY WATER ON AND OPERATE THE FAUCET WHILE CHECKING FOR LEAKS
4. INSTALL AERATOR ADAPTOR (#5) AND AERATOR (#6) INTO FAUCET AND HAND TIGHTEN.
5. METERING CARTRIDGE IS FACTORY PRESET FOR A 10 TO 15 SECOND CYCLE AT 80 PSI, IF ADJUSTMENT IS NECESSARY, SEE "ADJUSTING THE CYCLE TIME" SECTION (PAGE 2).

ZURN INDUSTRIES, LLC ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733
Phone: 1-800-997-3876 ♦ Fax: 1-919-775-3541 ♦ www.zurn.com
In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

Form # CF1558 Date: 1/6/11
C.N. No. 127262 Rev.

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MAINTENANCE

1. YOUR ZURN AQUASPEC FAUCET HAS A HIGHLY POLISHED NICKEL CHROME PLATED FINISH. CLEAN WITH SOAI WATER OR A MILD CLEANER WHICH IS SAFE FOR CHROME PLATING. DO NOT USE ACIDS OR TOILET BOWL CLE AS THEY WILL DAMAGE THE FINISH.

2. METERING CARTRIDGE (#3) REMOVAL AND REPLACEMENT (SEE SERVICE VIDEO AT WWW.ZURN.COM/OPERATIONS/AQUASPEC/PAGES/SERVICEVIDEOMENU.ASP)

   2.1. REMOVE COLORED INDEX BUTTON (#1C) FROM HANDLE (#1A)

   2.2. LOOSEN SET SCREW (#1B) IN HANDLE WITH 3/32" ALLEN WRENCH

   2.3. PULL UP ON HANDLE TO REMOVE FROM STEM (#2C) OF HANDLE NUT ASSEMBLY (#2)

   2.4. REMOVE HANDLE NUT ASSEMBLY (#2) USING 1-1/8" HEX 6-POINT SOCKET

   2.5. REMOVE METERING CARTRIDGE (#3) BY LIFTING OUT OF FAUCET BODY (#4). IT MAY BE NECESSARY TO OPEN THE SUPPLY STOP SLIGHTLY TO ALLOW WATER PRESSURE TO PUSH THE METERING CARTRIDGE UPWARD.

   2.6 INSPECT METERING CARTRIDGE (#3) FOR WORN PARTS, DAMAGED PARTS AND ANY CONTAMINATION THAT MAY BE PREVENTING THE METERING CARTRIDGE FROM MOVING FREELY OR SEATING. OTHER THAN CLEANING ANY TRAPPED DEBRIS, THERE ARE NO SERVICEABLE PARTS IN THE METERING CARTRIDGE. CONTAMINATED OR DAMAGED METERING CARTRIDGE ASSEMBLIES SHOULD BE REPLACED.

   2.7 REVERSE STEPS 2.1 THROUGH 2.5 FOR RE-ASSEMBLY. METERING CARTRIDGE (#3) WILL SIT SLIGHTLY ABOVE BODY (#4) PRIOR TO MOUNTING OF HANDLE NUT ASSEMBLY. TIGHTEN CAP (#2F) WITH 1-1/8" HEX 6-POINT SOCKET UNTIL NO WATER IS LEAKING FROM UNDER THE HANDLE NUT ASSEMBLY WHEN THE FAUCET IS RUNNING. HOLD DOWN HANDLE (#1A) WHILE TIGHTENING SET SCREW (#1B) TO ENSURE PROPER SEATING

ADJUSTING THE CYCLE TIME ON ZURN METERING FAUCET

(SEE SERVICE VIDEO AT WWW.ZURN.COM/OPERATIONS/AQUASPEC/PAGES/SERVICEVIDEOMENU.ASP)

1. METERING FAUCETS ARE FACTORY PRESET FOR A 10 TO 15 SEC. CYCLE AT 80 PSI.

2. ACTUATE FAUCET 3 TO 5 TIMES TO REMOVE ANY TRAPPED AIR IN THE SUPPLY LINE OR FAUCET

3. REMOVE HANDLE (#1) PER INSTRUCTIONS IN MAINTENANCE SECTION 2.1 THROUGH 2.3 TO EXPOSE ADJUSTMENT NUT (#2E)

4. INCREASE CYCLE TIME BY TIGHTENING ADJUSTMENT NUT (#2E) 1/2 TURN CLOCKWISE. DECREASE CYCLE TIME BY LOOSENING ADJUSTMENT NUT 1/2 TURN COUNTERCLOCKWISE. CHECK FOR DESIRED CYCLE TIME BY ACTUATING FAUCET WITH HANDLE (#1) IN PLACE ON STEM (#2C)

REPLACEMENT PARTS

HANDLE NUT ASSEMBLY	G60561
METERING CARTRIDGE ASSEMBLY	G61754
HANDLE ASSEMBLY	G60522

* Installation Instructions are revised frequently.
Please access website for the latest revision.

Form # CF1558 Date: 1/6/11
C.N. No. 127262 Rev.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

Z80300 PICTURED

Item	Part Number	Description	Qty.
1	G60522	Metering Handle Assembly	1
1A	60601003	Metering Handle	1
1B	62705001	Set Screw	1
1C	G60558	Metering Index Buttons H, C, T	1
	60460001	Hot Index	1
	60460002	Cold Index	1
	60460003	Tempered Index	1
2	G60561	Handle Nut Assembly	1
2A	60465001	E-Ring	1
2B	60464001	Spring Seat	1
2C	60451003	Stem	1
2D	60447001	Spring	1
2E	60446001	Adjustment Nut	1
2F	60452001	Cap	1
2G	60456001	Stem Housing	1
2H	62499107	O-Ring	1
2i	60458001	O-Ring Retainer	1
3	G61754	Valve Sleeve/Poppet Assembly	1
3A	58155020	O-Ring	1
3B	81241001	Washer	1
4	61676008	Body, Single Flanged Wall Sink	1
5	93558001	Aerator Adaptor	1
6	60440001	0.5 GPM [1.9L] Vandal-Resistant Pressure Compensating Spray Outlet	1

Form # CF1558 Date: 1/6/11
C.N. No. 127262 Rev.

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Approved with Conditions
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METERING FAUCET TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
No water dispensing from faucet.	Supply stops not open.	Open supply stops.
	Spray outlet (item 6) contaminated.	Remove spray outlet (item 6) to clean and/or replace.
Faucet is shutting off too quickly	Timing nut (item 2E) requires adjustment.	Remove handle (item 1) using 3/32" Allen wrench. Rotate timing nut (item 2E) down (CW) to lengthen handle stroke and increase cycle time.
	Metering cartridge (item 3) is damaged.	Replace metering cartridge (item 3) G61754 per Installation and Maintenance guide, page 2
Faucet is running too long or will not shut off	Timing nut (item 2E) requires adjustment.	Remove handle (item 1) using 3/32" Allen wrench. Rotate timing nut (item 2E) up (CCW) to shorten handle stroke and decrease cycle time.
	Metering cartridge (item 3) is overly contaminated or damaged.	Replace metering cartridge (item 3) G61754 per Installation and Maintenance guide, page 2
	Spray outlet (item 6) is not installed <u>or</u> incorrect spray outlet (item 6) installed.	Install 1.0 GPM or 0.5 GPM spray outlet (item 6). Facuet may not shut off with flow rate > 1.0 GPM.
	Handle nut (item 2) is not adequately tightened	Tighten handle nut (item 2) using 1-1/8" hex 6 point socket to create seal and seat metering cartridge. Do not over tighten.

Form # CF1558 Date: 1/6/11
C.N. No. 127262 Rev.

WELL-X-TR

Diaphragm Well Tanks: WX-100, 200 and 30

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

150 PSIG Working Pressure

Construction

Shell	High Strength Steel
Diaphragm	Heavy Duty Butyl
Liner	Antimicrobial
System Connection	Stainless Steel
Finish	Tuf-Kote™ HG Blue
Water Circulator	Turbulator™
Air Valve	Projection Welded
Factory Precharge	38 PSIG (2.6 bar)

Performance

Maximum Operating Temperature	200°F (93°C)
Maximum Working Pressure	150 PSIG (10.3 bar)
Maximum Relief Valve Setting	125 PSIG (8.6 bar)
Warranty	7 Year

Application

- Controls pump cycling in residential well water systems.
- Can be installed indoors or outdoors.

In-Line Models

Model Number	Tank Volume		Max. Acceptance Factor	A Tank Height		B Tank Diameter		System Connection (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	Lbs	Kg
WX-101	2.0	8	0.45	13	330	8	203	¾	5	2
WX-102	4.4	17	0.55	15	381	11	279	¾	9	4
2x WX-103	7.6	29	0.43	22	559	11	279	¾	15	7
WX-104	10.3	39	1.00	18	457	15	381	1	20	9
WX-200	14.0	53	0.81	22	559	15	381	1	22	10

Available in gray. Use suffix G.

Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Height		B Tank Diameter		C Sys. Conn. Centerline		D Stand Diameter		System Conn. (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	mm	In	mm	In	Lbs	Kg
WX-201	14.0	53	0.81	25	635	15	381	1 19/32	40	12	304	1	25	11
WX-202	20.0	76	0.57	32	813	15	381	1 19/32	40	12	304	1	32	15
WX-202XL	26.0	98	0.44	39	991	15	381	1 19/32	40	12	304	1	39	18
WX-203	32.0	121	0.35	47	1194	15	381	1 19/32	40	12	304	1	47	21
WX-205	34.0	129	1.00	30	762	22	559	1 15/16	49	20½	521	1¼	57	26
WX-250	44.0	167	0.77	36	914	22	559	1 15/16	49	20½	521	1¼	65	29
WX-251	62.0	235	0.55	47	1194	22	559	1 15/16	49	20½	521	1¼	87	39
WX-255	81.0	306	0.41	57	1448	22	559	1 15/16	49	20½	521	1¼	109	49
WX-252*	86.0	326	0.39	62	1575	22	559	1 15/16	49	20½	521	1¼	107	49
WX-302	86.0	326	0.54	47	1194	26	660	2 1/16	52	20½	521	1¼	106	48
WX-350	119.0	450	0.39	62	1575	26	660	2 1/16	52	20½	521	1¼	146	66

*WX-252: Maximum Working Pressure: 100 PSIG. Avaliable in Blue only. Available in Tan and Gray. Use suffix T or G.

All dimensions and weights are approximate.

Job Name _____ Notes _____

Engineer _____

Contractor _____

P.O. No. _____

Sales Rep. _____

Model No. _____

CERTIFIED TO NSF/ANSI 61

MADE IN USA

LOW-LEAD

ANTIMICROBIAL PROTECTION™

TURBULATOR™

Amtrol Inc., 1400 Division Road, West Warwick, RI 02893 USA T: 401.884.6300 **www.amtrol.com**

MC 4400 (01/17)

WELL-X-TR

Diaphragm Well Tanks: WX-100, 200 and 300 Series with Du

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

150 PSIG Working Pressure

Construction

Shell	High Strength Steel
Diaphragm	Heavy Duty Butyl
Liner	Antimicrobial
System Connection	Stainless Steel
Finish	Tuf-Kote™ HG Blue
Water Circulator	Turbulator™
Air Valve	Projection Welded
Factory Precharge	38 PSIG (2.6 bar)

Performance

Maximum Operating Temperature	200°F (93°C)
Maximum Working Pressure	150 PSIG (10.3 bar)
Maximum Relief Valve Setting	125 PSIG (8.6 bar)
Warranty	7 Year

Application

- Controls pump cycling in residential well water systems.
- Can be installed indoors or outdoors.
- DuraBase stand is rugged and will never corrode. Patented.

Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Height		B Tank Diameter		C Sys. Conn. Centerline		D Stand Diameter		System Conn. (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	mm	In	mm	In	Lbs	Kg
WX-201D	14.0	53	0.81	25	635	15	381	1 11/16	43	15 3/8	391	1	25	11
WX-202D	20.0	76	.057	32	813	15	381	1 11/16	43	15 3/8	391	1	32	15
WX-202XLD	26.0	98	0.44	39	991	15	381	1 11/16	43	15 3/8	391	1	39	18
WX-203D	32.0	121	0.35	47	1194	15	381	1 11/16	43	15 3/8	391	1	47	21
WX-205D	34.0	129	1.00	30	762	22	559	2	51	22	559	1 1/4	57	26
WX-250D	44.0	167	0.77	36	914	22	559	2	51	22	559	1 1/4	65	29
WX-251D	62.0	235	0.55	47	1194	22	559	2	51	22	559	1 1/4	87	39
WX-255D	81.0	306	0.41	57	1448	22	559	2	51	22	559	1 1/4	109	49
WX-302D	86.0	326	0.54	47	1194	26	660	2	51	22	559	1 1/4	106	48
WX-350D	119.0	450	0.39	62	1575	26	660	2	51	22	559	1 1/4	146	66

Available in Tan and Gray. Use suffix T or G.

All dimensions and weights are approximate.

Job Name _____ Notes _____

Engineer _____

Contractor _____

P.O. No. _____

Sales Rep. _____

Model No. _____

CERTIFIED TO NSF/ANSI 61

MADE IN USA

LOW-LEAD

ANTIMICROBIAL PROTECTION™

TURBULATOR

WELL-X-TR

Diaphragm Well Tanks: Underground, Wall Hung and Pump Stand

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

150 PSIG Working Pressure

Construction

Shell	High Strength Steel
Diaphragm	Heavy Duty Butyl
Liner	Antimicrobial
System Connection	Stainless Steel
Finish	Tuf-Kote™ HG Blue
Water Circulator	Turbulator™
Air Valve	Projection Welded
Factory Precharge	38 PSIG (2.6 bar)

Performance

Maximum Operating Temperature	200°F (93°C)
Maximum Working Pressure	150 PSIG (10.3 bar)
Maximum Relief Valve Setting	125 PSIG (8.6 bar)
Warranty	7 Year

Application

- Controls pump cycling in residential well water systems.

Undergound Models (BLACK)

Model Number	Tank Volume		Max. Acceptance Factor	A Tank Height		B Tank Diameter		System Connection (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	Lbs	Kg
WX-200UG	14	53	0.81	23	584	15	381	1	22	10
WX-202UG	20	76	0.57	30	762	15	381	1	30	14
WX-250UG	44	167	0.77	33	838	22	559	1¼	60	27
WX-251UG	62	235	0.55	44	1118	22	559	1¼	83	38

Wall Hung Model for VFD Systems

Model Number	Tank Volume		Max. Acceptance Factor	A Tank Height		B Tank Diameter		System Connection (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	Lbs	Kg
WX-102VFD	4.4	17	0.55	15	381	12	305	¾	13	6

Pump Stand Models

Model Number	Tank Volume		Max. Acceptance Factor	A Tank Height		B Tank Width		System Connection (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	Lbs	Kg
WX-102PS	4.4	17	0.55	12	305	15	381	¾	13	6
WX-105PS	5.3	20	0.80	12	305	18	457	¾	15	7
WX-110PS	7.4	28	0.56	12	305	23	584	¾	18	8
WX-200PS	14.0	53	0.81	16	406	22	559	1	29	13
WX-202PS	20.0	76	0.57	16	406	30	762	1	35	16
WX-202H	20.0	76	0.57	16	406	30	762	1	33	15

All dimensions and weights are approximate.

Job Name _____ Notes _____

Engineer _____

Contractor _____

P.O. No. _____

Sales Rep. _____

Model No. _____

CERTIFIED TO NSF/ANSI 61

MADE IN USA

LOW-LEAD

ANTIMICROBIAL PROTECTION™

TURBULATOR™

Amtrol Inc., 1400 Division Road, West Warwick, RI 02893 USA T: 401.884.6300 **www.amtrol.com**

MC 4400 (01/17)

WELL-X-TR

Diaphragm Well Tanks: WX-200PA and WX-300PA Series with PRO AC

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

150 PSIG Working Pressure

Construction

Shell	High Strength Steel
Diaphragm	Heavy Duty Butyl
Liner	Antimicrobial
System Connection	Stainless Steel NPTF
Finish	Tuf-Kote™ HG Blue
Water Circulator	Turbulator™
Air Valve	Projection Welded
Factory Precharge	38 PSIG (2.6 bar)

Performance

Maximum Operating Temperature	200°F (93°C)
Maximum Working Pressure	150 PSIG (10.3 bar)
Maximum Relief Valve Setting	125 PSIG (8.6 bar)
Warranty	7 Year

Application

- Controls pump cycling in residential well water systems.
- Can be installed indoors or outdoors.
- PRO ACCESS provides piped to stand convenience for faster installation.

Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Height		B Tank Diameter		C Sys. Conn. Centerline		D Stand Diameter		System Conn. (NPTF)	Shipping Weight	
	Gal	Lit		In	mm	In	mm	In	mm	In	mm	In	Lbs	Kg
WX-202PA	20.0	76	0.57	32	813	15	381	1 19/32	40	12	304	1	33	15
WX-202XLPA	26.0	98	0.44	39	991	15	381	1 19/32	40	12	304	1	40	18
WX-203PA	32.0	121	0.35	47	1194	15	381	1 19/32	40	12	304	1	48	22
WX-205PA	34.0	129	1.00	30	762	22	559	1 15/16	49	12	304	1¼	59	27
WX-250PA	44.0	167	0.77	36	914	22	559	1 15/16	49	20½	521	1¼	67	30
WX-251PA	62.0	235	0.55	47	1194	22	559	1 15/16	49	20½	521	1¼	88	40
WX-255PA	81.0	306	0.41	57	1448	22	559	1 15/16	49	20½	521	1¼	111	50
WX-302PA	86.0	326	0.54	47	1194	26	660	2 1/16	52	20½	521	1¼	108	49
WX-350PA	119.0	450	0.39	62	1575	26	660	2 1/16	52	20½	521	1¼	148	67

Available in Tan and Gray. Use suffix T or G.

All dimensions and weights are approximate.

Job Name _____ Notes _____

Engineer _____

Contractor _____

P.O. No. _____

Sales Rep. _____

Model No. _____

CERTIFIED TO NSF/ANSI 61

MADE IN USA

LOW-LEAD

ANTIMICROBIAL PROTECTION™

TURBULATOR

PERFORMANCE™

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

The new degree of comfort.™

PERFORMANCE™ tankless electric water heaters offer continuous hot water quick and on demand for single point-of-use or multiple applications

Performance Features

- On demand, consistent and endless hot water
- Compact and stylish with digital temperature control in increments of 1°F ranging from 80°F to 140°F*
- 99.8% Energy efficient
- Robust copper immersion heating elements with brass top increases durability and are threaded for easy replacement
- Simple Installation
- Digital temperature display
- External controls to adjust temperature in increments of 1°F*

Applications

- Whole-Home – up to 6 GPM
- Water-Saver Shower Head – 1.5 GPM
- Standard Shower Head – 2.0 GPM
- Standard Hand Sink – 0.5 GPM
- Kitchen Sink – 1 to 2 GPM
- Bath Tub – ≥ 4 GPM
- Dishwasher – 1 to 2 GPM
- Washing Machine – 1 to 1.5 GPM

Average Gallons Per Minute (GPM) based on 2010 Plumbing Standards

Warranty

- 5-Year heating chamber and 1-year parts limited warranty

See written warranty for complete details

RETEX-04
RETEX-06

RETEX-08
RETEX-11
RETEX-13

RETEX-18

RETEX-24
RETEX-27

RETEX-36

*RETEX-04 and RETEX-06 only show output temperature and are non-thermostatically controlled

MODEL NUMBER	TEMPERATURE RISE °F								
	0.5 GPM	1.0 GPM	1.5 GPM	2.0 GPM	2.5 GPM	3.0 GPM	4.0 GPM	5.0 GPM	6.0 GPM
RETEX-04	48°	–	–	–	–	–	–	–	–
RETEX-06	75°	37°	–	–	–	–	–	–	–
RETEX-08	–	55°	36°	27°	22°	18°	–	–	–
RETEX-08 (derated 208V performance)	79°	40°	27°	20°	–	–	–	–	–
RETEX-11	–	75°	50°	38°	30°	25°	–	–	–
RETEX-11 (derated 208V performance)	–	56°	37°	28°	–	–	–	–	–
RETEX-13	–	89°	59°	44°	36°	30°	22°	–	–
RETEX-13 (derated 208V performance)	–	69°	46°	34°	–	–	–	–	–
RETEX-18	–	+	82°	62°	49°	41°	31°	25°	–
RETEX-18 (derated 208V performance)	–	90°	60°	45°	36°	30°	–	–	–
RETEX-24	–	+	+	82°	66°	55°	41°	33°	27°
RETEX-24 (derated 208V performance)	–	+	+	60°	48°	40°	30°	24°	20°
RETEX-27	–	+	+	92°	74°	62°	46°	37°	31°
RETEX-27 (derated 208V performance)	–	+	+	68°	55°	45°	34°	27°	23°
RETEX-36	–	+	+	+	98°	82°	62°	49°	41°
RETEX-36 (derated 208V performance)	–	+	+	91	73°	61°	45°	36°	30°

+ Temperature electronically limited setting on adjustable thermostat on front cover

Intertek

Tested and certified by the Water Quality Association against NSF/ANSI 372 for lead free compliance.

See specifications chart on next page.

The new deg

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

PERFORMANCE™ tankless electric water heaters

RETEX-04, RETEX-06

Unique Features:
- External Digital Display – shows outlet temperature
- Durable Copper Immersion single heating element, field serviceable
- Simple Installation – 3 Foot electric cable included; Bottom 1/2" NPT water connections

RETEX-08, RETEX-11 RETEX-13

Unique Features:
- External Adjustable Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Durable Copper Immersion two heating elements, field serviceable
- Simple Installation – 3 Foot electric cable included; Side 1/2" compression water connections

RETEX-18

Unique Features:
- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion two heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections

RETEX-24,RETEX-27

Unique Features:
- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion three heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections

RETEX-36

Unique Features:
- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion four heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections

PERFORMANCE™ Tankless Electric Specifications

DESCRIPTION	FEATURES							ROUGHING IN DIMENSIONS (SHOWN IN INCHES)				
MODEL NUMBER	kW	AMPS	RECOMMENDED BREAKER SIZE	VOLTAGE	RECOMMENDED WIRE SIZE (CU)	MIN. FLOW (GPM)	MAX. FLOW (GPM)	HEIGHT	WIDTH	DEPTH	WATER CONN.	SHIP WEIGHT (LBS.)
120V 1 HEATING CHAMBER												
RETEX-04	3.5	29A	(1x30) A	120	10 AWG	0.3	4.8	5-7/8	10-7/8	2-3/4	1/2 NPT	4.5
240V* 1 HEATING CHAMBER												
RETEX-06	5.5	29A	(1x30) A	220	10 AWG	0.3	4.8	5-7/8	10-7/8	2-3/4	1/2 NPT	4.5
RETEX-08	8.0	33A	(1x40) A	240	8 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	7
RETEX-08 (derated 208V performance)*	5.8	28A	(1x40) A	208	8 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	7
RETEX-11	11.0	46A	(1x50) A	240	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5
RETEX-11 (derated 208V performance)*	8.2	29A	(1x50) A	208	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5
RETEX-13	13.0	54A	(1x60) A	240	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5
RETEX-13 (derated 208V performance)*	10.1	49A	(1x60) A	208	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5
240V* 2 HEATING CHAMBERS												
RETEX-18	18.0	75A	(2x40) A	240	8 AWG	0.3	7.0	18-1/4	14-1/2	3-1/2	3/4 NPT	14.78
RETEX-18 (derated 208V performance)*	13.3	64A	(2x40) A	208	8 AWG	0.3	7.0	18-1/4	14-1/2	3-1/2	3/4 NPT	14.78
240V* 3 HEATING CHAMBERS												
RETEX-24	24.0	100A	(3x40) A	240	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8
RETEX-24 (derated 208V performance)*	17.5	84A	(3x40) A	208	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8
RETEX-27	27.0	112A	(3x40) A	240	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8
RETEX-27 (derated 208V performance)*	20.0	96A	(3x40) A	208	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8
240V* 4 HEATING CHAMBERS												
RETEX-36	36.0	150A	(4x40) A	240	8 AWG	0.3	8.0	18-1/4	21-5/8	3-1/2	3/4 NPT	22.7
RETEX-36 (derated 208V performance)*	26.6	127A	(4x40) A	208	8 AWG	0.3	8.0	18-1/4	21-5/8	3-1/2	3/4 NPT	22.7

* 240V units can be used on 208V single phase with 25% reduced temperature output. Please note per UL standards the rating plate and installation instructions will all be according to a 240V applied voltage. Check with local officials prior to derating the electrical infrastructure.

12/16 FORM NO. THD-PTE

The new deg

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/22/18

PERFORMANCE™ **tankless electric water heaters**

Product Specifications (all models)		
	Rated Pressure	25 PSI min., 150 PSI max.
	Certifications	ETL Listed to UL 499 and CSA
	Std. Temp. Settings	120°F (Adjustable 80°F-140°F)
	Temp. Accuracy	+/–1° at steady state flow
	Turn-On	0.3 GPM

Suggested Specifications
Unit shall have copper clad immersion heating element(s) with brass terminations for increased durability. External temperature control and display adjustable in 1° increments with a range of 80°-140°F. Display shall be capable of displaying setpoint temperature in Celsius or Fahrenheit temperature scales. Unit shall utilize a flow meter with a 0.3 gpm activation point and manage power based on actual flow rate and inlet temperature. Values should be processed 60 times per second. Unit shall be WQA certified lead free, certified to UL499 and CSA22.2.

Optional Inline Flow Regulator

- Enhanced outlet temperature control
- Install on the outlet side of the heater
- Limit maximum volume to the specified flow rate to ensure exiting temperature is within an acceptable range
- Flow Regulators for ½" and ¾" plumbing connections
- Flow range: 1 to 5 gallons per minute

RHEEM PART NUMBER	GPM RATING OF INSERTS PROVIDED	CONNECTION SIZE
RTE10001A	1.0, 1.5, 2.0	1/2" NPT
RTE10001B	2.0, 3.0, 4.0, 5.0	3/4" NPT

Suggested Sizing Guide

	COLD CLIMATE (INLET TEMP. 35-45°F)	WARM CLIMATE (INLET TEMP. 50-60°F)	HOT CLIMATE (INLET TEMP. 65-75°F)
RETEX-04	N/A	N/A	N/A
RETEX-06	N/A	N/A	N/A
RETEX-08	RTE10001A	RTE10001A	RTE10001A
RETEX-11	RTE10001A	RTE10001A	RTE10001A
RETEX-13	RTE10001A	RTE10001A	RTE10001A
RETEX-18	RTE10001B	RTE10001B	RTE10001B
RETEX-24	RTE10001B	RTE10001B	RTE10001B
RETEX-27	RTE10001B	RTE10001B	RTE10001B
RETEX-36	RTE10001B	RTE10001B	RTE10001B

Selection based on inlet temperature and an outlet temperature setting of 105°F

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

JHD-ADA-1200

ADA COMPLIANT

ACCESSORY GROUP

ADA COMPLIANT
AUTOMATIC HAND DRYER

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/22/18

SPECIFICATION

Constructed of stainless steel, the wall mounting plate shall be constructed of die-cast aluminum and the nozzle shall be consttructed of die-cast aluminum finished with epoxy paint finish. The cover shall be attached to the wall mounting plate with tamper-proof screws. Motor shall be a thermally-protected universal brush type motor operating at 13,000 RPM and delivering 70 CFM air flow at a velocity of 140 MPH (12.320 LFM). Dryer shall incorporate universal controls accepting 115 / 208 / 230 VAC input. Dryer will incorporate a chrome wire heating element protected by an automatic resetting thermal cutoff. Dryer shall be activated by an automatic infrared sensor with a 3-second run-on time and a 60 second vandal shut-off. Control board shall contain a heater control switch which can be controlled in either ON or OFF position. Dryer shall have an ingress protection rating of IP23. Hand dryer shall be certified to Underwriters Laboratories, Inc. standards for safety.

Electrical Specifications:

	110-120V	208V	220-240V
Amps	9.3	3.7	4.1
Watts	950	775	950
Hz	60 Hz	60 Hz	60 Hz

APPROVED FOR MANUFACTURING

MODEL NO.: **JHD-ADA-1200** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____

PRODUCT HIGHLIGHTS:

- Automatic infrared sensor activation with vandal
- resistant shutoff
- Simplifies installation and reduces installation costs.
- Up to 40% faster dry time than leading competitive
- surface mounted ADA- Dryers.
- Up to 70% less engery use than competitive dryers.
- ON/OFF heat control to customize comfort and
- energy savings.
- Automatic activation.
- HEPA filters help reduce airborne particulates.
- Ultra compact and contemporary design.
- Durable and vandal resistant.
- Surface-mounted ADA Compliant.
- IP23 rating - protection against harmful water ingress.
- ETL/US - Interek

TECHNICAL DATA

CONSTRUCTION:

Stainless steel cover with tamper-proof screws.
Die-cast aluminum wall mounting palte.
Nozzle of die-cast aluminum with epoxy paint finish.
Thermally-protected universal brush type motor operating at 13,000 RPM.
Chrome wire heating element protected by auto resetting thermal cutoff.

FINISH

Brushed stainless steel.

CONSTRUCTION

Brushed stainless steel

AIR FLOW RATE

70 CFM at velocity of 140 MPH (12,320 LFM).

A.D.A. COMPLIANT

Yes

B M I T T A L D A T A

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USADA1216A

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JHD-ADA-1200

ACCESSORY GROUP

ADA COMPLIANT
AUTOMATIC HAND DRYER

Reviewed for Code Compliance
Inspections Division
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P A R T S D A T A

Placement Insructions

- Hand dryers should be spaced at least 2 feet apart, near but not over the wash basin.
- On congested areas, dryers should be located to create a flow from wash basin to dryer to exit.
- Dryer should be mounted at least 18: above or away from reflective surfaces which may interfere with the automatic sensor operation.
- Dryer Quantity recommendation:
  - Average Traffic: (1) Dryer per (2) wash basins.
  - Heavy Traffice: (1) Dryer per wash basin.
  - Circular wash fountains - 54"- Industrial installations: (4) Dryers per sink.

Recommended mounting height from floor to dryer bottom edge:

Application	Height:
Men's Washrooms	46" (117 cm)
Women's Washrooms	44" (112 cm)
Children's Washroom-Ages 4 to 7	32" (81cm)
Children's Washroom-Ages 7 to 10	36" (91cm)
Children's Washroom-Ages 10 to 13	40" (102 cm)
Children's Washroom-Ages 13 to 17	44" (112 cm)
Handicap Mounting Height	37" (94 cm)

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LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

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Date: 02/22/18

FEATURES & SPECIFICATIONS

INTENDED USE — A general purpose and energy-efficient surface-mounted or suspended LED fixture, suitable for wet, damp and/or cold locations. For vapor-tight demanding environments where moisture or dust is a concern and where relatively low fixture mounting heights and wide fixture spacing are common. Typical applications include industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and food processing **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate. Click here for Acrylic-Polycarbonate Compatibility table for suitable use.**

CONSTRUCTION — One-piece 5VA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place NEMA 4X gasket. Approved as a wireway and for through wiring. Captive polymeric latches are standard. Stainless steel latches (#316) available as an option for food processing or more demanding applications.

Power connection is easily accomplished through pre-drilled holes at each end populated with wet location fittings for maximum flexibility. Fixture easily mounts to ceilings and other solid structures, or can be suspended with chain, cable or rod using stainless steel mounting brackets (included).

OPTICS — Injection molded, acrylic lens (.080" thick) provides high impact-resistance comparable to 100% DR. For L48 Medium Distribution, a UV stabilized polycarbonate diffuser is available (.080" thick) in clear or frosted for additional impact strength where vandal protection is desired.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

ELECTRICAL — Utilizes high-efficiency LEDs mounted to core circuit boards. High-efficiency drivers operate 120 thru 277V, 347V and 480V offered with 0-10 volt dimming, allowing granular control when coupled with wireless networking controls. Integral 6kV/3kA surge protection, tested in accordance to IEEE/ANSI standards.

INSTALLATION — Fixture can be ceiling or suspended mounted. Pre-punched stainless steel mounting brackets are included (two per luminaire) for easy field-attachment of bolts, screws and other mounting hardware. A covered ceiling is not required to maintain wet location listing or IP rating.

LISTINGS — CSA certified to UL and C-UL standards. Listed for wet locations in ambient temps ranging from -35°C (-31°F) to 25°C (77°F) when fixture is surface mounted or up to 45°C (113°F) when fixture is suspended at least 6" from ceiling. IP65, IP66 and IP67 rated. NSF splash-zone 2 certified and meets FDA/USDA guidelines. Nema 4X rated lens and housing. 1500 PSI hose-down. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Stock configurations are offered for shorter lead times:

Standard Part Number	Stock Part Number
FEM L48 4000LM LPAFL MD MVOLT GZ10 40K 80CRI	**FEM L48 4L MVOLT**
FEM L48 4000LM LPAFL MD MVOLT GZ10 50K 80CRI	**FEM L48 4L MVOLT 5K**

Low-Profile Enclosed and Gasketed Industrial

FEM LED

CEILING/SUSPENDED MOUNT

Deep Lens

Low profile with sensor

Low profile

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

FEM LED Low-Profile Enclosed and Gasketed

A+ Capable options indicated by this color background.

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ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM L48 4000LM IMAFL WD MVOLT GZ10 40K 80CRI

Series	Length	Nominal Lumens	Diffuser	Distribution	Voltage	Driver	Color temperature	CRI
FEM	L48 48" [1]	3000LM 3,000 lumens 4000LM 4,000 lumens 6000LM 6,000 lumens 8000LM 8,000 lumens 10000LM 10,000 lumens	IMAFL Acrylic, lineal ribbed frosted lens IMACD Acrylic, clear deep lens IMAFD Acrylic, deep frosted lens LPAFL Acrylic, low profile frosted lens[3] LPACL Acrylic, low profile clear lens[3] LPPCL Polycarbonate, low profile clear lens[3] LPPFL Polycarbonate, low profile frosted lens[3]	MD Medium WD Wide [4]	MVOLT MVOLT 120 120V 277 277V 347 347V[5] 480 480V[5]	GZ10 0 - 10V dimming	30K 3000K 35K 3500K 40K 4000K 50K 5000K	80CRI 80 CRI 90CRI 90 CRI
	L96 96" [2]	9000LM 9,000 lumens 12000LM 12,000 lumens 15000LM 15,000 lumens 18000LM 18,000 lumens 20000LM 20,000 lumens						

Options

SF	Single fuse (available with 120, 277, 347)[6]	CS88	6' Brad Harrison 16/3 cord and straight blade plug set[6]	MSI10NWL	Low mount 360° integral motion sensor, wet location, On/Off operation[6]
DF	Double Fusing (available with 347, 480V)[6]	CS88L12	12' Brad Harrison 16/3 cord and straight blade plug set[6]	MSI102L3VWL	Low mount 360° integral motion sensor, wet location, High/Low operation (bi-level)[6]
BSL520	Bodine® emergency LED battery pack for -20°C and up[6,7]	CS88R	Brad Harrison receptacle	MSI10NWL DSCNWL	Low mount 360° integral motion sensor, wet location, On/Off operation for motion sensing, override Off due to daylight[6]
BGTD	Generator transfer device[6,8]	CS89	6' white cord, 16/3, no plug, wet location	MSI10XAWL DSCXAWL	Xpoint wireless integral motion sensor, On/Off operation for motion sensing, override Off due to daylight[6]
SPD	Surge protection device, additional 10kV/5kA[6]	CS89L12	12' white cord, 16/3, no plug, wet location	XAD	XPoint™ wireless controller, 0-10V dimming[6]
WLF	Wet location fitting (two outboard, top)	TRS	Tamper Resistant Torx® T10 screws		
WLFEND	Wet location fitting (one end)	DPMB	Dual pendant mounting bracket		
WLFEND2	Wet location fitting (both ends)	DL	Damp location		
		STSL	Stainless steel latches		

Accessories: *Order as separate catalog number.*

MHCH 36	Jack chain 36" (pair)
MHHK120	10' single leg air craft cable (ships as pair)
MHHK120SS	10' single leg air craft cable, stainless steel (ships as pair)
RK1T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

Notes

1 Available with 3000LM, 4000LM, 6000LM, 8000LM, and 10000LM lumen packages. Not available with WD when using low profile diffuser.
2 Available with 9000LM, 12000LM, 15000LM, 18000LM, and 20000LM. Not available with low profile diffuser options.
3 Not available with L96. Not available with L48 when ordering WD option.
4 Not availabe with L48 when ordering low-profile lens options.
5 Utilizes step-down transformer. Not available with BGTD.
6 Must specify voltage.
7 Not available with 347 or 480V. For use in ambient temperature -20°C and up.
8 Available with 120V or 277V only. For use in ambient environments up to 25C. Not available with L48 when ordering 10000LM lumen package. Not available with L96 when ordering 18000LM or 20000LM lumen packages.

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OPERATIONAL DATA

		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted (IMAFL)	Frosted (IMAFD, LPAFL, LPPFL)	Clear (IMACD, LPACL, LPPCL)
L48 Medium Distribution *test results reflect less than 1% difference between acrylic (clear/deep/ low profile) and polycarbonate (low profile) lens	Delivered Lumens at 30K 80CRI	3000LM	23	23	24	25	2972	3032	3071
		4000LM	31	30	31	32	4019	4100	4153
		6000LM	45	44	46	47	5925	6044	6122
		8000LM	69	67	70	71	7593	7746	7845
		10000LM	80	78	81	82	9781	9979	10107
	Delivered Lumens at 35K 80CRI	3000LM	23	23	24	25	3039	3100	3140
		4000LM	31	30	31	32	4109	4192	4246
		6000LM	45	44	46	47	6057	6179	6258
		8000LM	69	67	70	71	7762	7918	8020
		10000LM	80	78	81	82	9999	10201	10332
	Delivered Lumens at 40K 80CRI	3000LM	23	23	24	25	3086	3148	3189
		4000LM	31	30	31	32	4173	4257	4312
		6000LM	45	44	46	47	6151	6275	6356
		8000LM	69	67	70	71	7883	8042	8145
		10000LM	80	78	81	82	10155	10360	10493
	Delivered Lumens at 50K 80CRI	3000LM	23	23	24	25	3200	3264	3306
		4000LM	31	30	31	32	4326	4414	4470
		6000LM	45	44	46	47	6378	6506	6590
		8000LM	69	67	70	71	8173	8338	8445
		10000LM	80	78	81	82	10529	10741	10879

		Lumen packages	Wattage				Diffusers		
			120v	277v	347v	480v	Acrylic Lineal Frosted(IMAFL)	Acrylic Frosted(IMAFD)	Acrylic Clear (IMACD)
L96 Medium Distribution	Delivered Lumens at 30K 80CRI	9000LM	65	64	66	67	8718	8959	9072
		12000LM	88	86	89	90	11370	11685	11831
		15000LM	120	118	122	124	14263	14657	14841
		18000LM	145	141	146	148	16863	17330	17547
		20000LM	160	156	162	164	19313	19847	20096
	Delivered Lumens at 35K 80CRI	9000LM	65	64	66	67	8913	9159	9274
		12000LM	88	86	89	90	11624	11945	12095
		15000LM	120	118	122	124	14581	14984	15172
		18000LM	145	141	146	148	17239	17716	17938
		20000LM	160	156	162	164	19743	20289	20544
	Delivered Lumens at 40K 80CRI	9000LM	65	64	66	67	9051	9302	9419
		12000LM	88	86	89	90	11805	12131	12284
		15000LM	120	118	122	124	14808	15218	15409
		18000LM	145	141	146	148	17507	17992	18218
		20000LM	160	156	162	164	20051	20605	20864
	Delivered Lumens at 50K 80CRI	9000LM	65	64	66	67	9385	9644	9765
		12000LM	88	86	89	90	12239	12578	12736
		15000LM	120	118	122	124	15353	15778	15976
		18000LM	145	141	146	148	18152	18654	18888
		20000LM	160	156	162	164	20789	21364	21632

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DIMENSIONS

Specifications subject to change without notice.
All dimensions are inches (centimeters) unless otherwise indicated.

Weight (may vary with options or accessories)
FEML48: 11.9 lbs (5.397kg)
FEML96: 24.3 lbs (11.022kg)

Diffuser Type:
LPAFL
LPACL
LPPFL
LPPCL

Diffuser Type:
IMAFL

Diffuser Type:
IMAFD
IMACD

PHOTOMETRICS

See www.lithonia.com for photometry reports.

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Vinyl Hopper S

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Window illustrations are shown from the outside.