



BURNER SPEC & DATA SHEET

SERIES TCII™ **RIELLO “R” BURNERS** **FOR OIL, GAS, AND GAS/OIL**

STANDARD EQUIPMENT

Oil Burners:

1. 2-Stage operation on Models TCII-04 through TCII-16 boilers.
2. Full modulation on Models TCII-17 and TCII-18 boilers.
3. Burner mounted controls with on/off control switch, and terminal strip.
4. 30 second prepurge / 12 second post-purge.
5. Direct spark ignition

Gas Burners:

1. Lo-Hi-Off operation on Models TCII-04 and TCII-07.
2. Lo-Hi- Lo operation on Models TCII-08 through TCII-18 boilers.
3. Burner mounted controls with on/off control switch, and terminal strip.
4. 30 second prepurge / 12 second post-purge.
5. Pilot ignition.

Combination Gas/Oil Burners:

1. 2-Stage operation for oil and gas on Models TCII-04 through TCII-07 boilers.
2. 2-Stage operation for oil and full modulation for gas on Models TCII-08 through TCII-16.
3. Burner mounted controls with on/off control switch, and terminal strip.
4. 30 second prepurge / 12 second post-purge.
5. Pilot ignition on gas, direct spark ignition oil.

OPTIONAL EQUIPMENT

1. Full modulation for boilers with standard 2-Stage operation (gas only).
2. Automatic fuel changeover on combination gas/oil burners.
3. Air flow switch on oil burners.
4. Step-down control circuit transformer and control circuit fuse.
5. Controls to comply with FM, Former IRI, CSD-1, and other codes. Contact your Peerless® Representative or PB Heat, LLC for availability.
6. Various combustion controls. Contact your local Peerless® Representative or PB Heat, LLC for availability.
7. Various burner motor voltages: 120/1/60, 208-230/460/3/60, and others.

RIELLO MODEL "R" BURNER FOR OIL, GAS, AND GAS/OIL

BOILER MODEL	INPUT (1)		OVERFIRE PRESSURE IN. W.C. (2)	STANDARD BURNER MODEL			COMBUSTION HEAD SETTINGS (3)		
	OIL MBH	GAS MBH		OIL	GAS	GAS/OIL	GAS	OIL	GAS/OIL
TCII-04	7.9	1143	0.34	RL 28/2	RS 28/M	RLS 28	6.0	5.0	5.0
TCII-05	10.2	1458	0.35	RL 38/2	RS 38/M	RLS 38	5.0	4.0	5.0
TCII-06	12.2	1773	0.36	RL 50/2	RS 50/M	RLS 50	4.0	5.0	4.0
TCII-07	14.4	2088	0.37	RL 50/2	RS 50/M	RLS 50	6.0	6.0	6.0
TCII-08	16.6	2403	0.38	RL 70/2	RS 70/M	RLS 70	5.0	4.0	5.0
TCII-09	18.8	2718	0.39	RL 70/2	RS 70/M	RLS 70	8.0	6.0	6.0
TCII-10	21	3033	0.40	RL 100/2	RS 100/M	RLS 100	3.0	2.0	2.0
TCII-11	23	3348	0.41	RL 100/2	RS 100/M	RLS 100	4.0	4.0	4.0
TCII-12	25.5	3663	0.43	RL 100/2	RS 100/M	RLS 100	6.0	5.0	6.0
TCII-13	27.5	3978	0.44	RL 100/2	RS 100/M	RLS 100	8.0	7.0	8.0
TCII-14	29.5	4293	0.45	RL 130/2	RS 130/M	RLS 130	6.0	5.0	7.0
TCII-15	32	4608	0.46	RL 130/2	RS 130/M	RLS 130	8.0	6.0	9.0
TCII-16	34	4923	0.47	RL 130/2	RS 130/M	RLS 130	9.0	8.0	9.0
TCII-17	36.5	5238	0.48	RL 190/M (4)	RS 190/M	RLS 190 (4)	9.0	9.0	9.0
TCII-18	38.5	5553	0.49	RL190/M (4)	RS 190/M	RLS 190 (4)	3.0	9.0	9.0

(1) Based on Commercial Standard Number 2 fuel oil with a heating value of 140,000 BTU/gal. and/or Natural Gas with a heating value of 1000 BTU/cubic foot and 0.60 specific gravity at a maximum altitude of 2000 feet above mean sea level. Consult the factory for higher altitudes or other fuels.

(2) With 0.10 inches W.C. at the flue outlet and at Input.

(3) Start-up settings only. Final settings are to be determined using combustion analysis equipment.

(4) Reversing flame inversion kit (Riello part # 3010241) is required.

RIELLO MODEL "R" BURNER FOR OIL, GAS, AND GAS/OIL

BOILER MODEL	STANDARD COMBUSTION CONTROL		3450 RPM MOTOR HP		STANDARD VOLTAGE VOLTS/PHASE/HERTZ
	OIL	GAS OR GAS/OIL	OIL	GAS OR GAS/OIL	
TCII-04	LAL 2.25	LFL 1.335	1/2	1/2	115/1/60
TCII-05	LAL 2.25	LFL 1.335	1/2	1/2	115/1/60
TCII-06	LAL 2.25	LFL 1.335	3/4	3/4	230/3/60
TCII-07	LAL 2.25	LFL 1.335	3/4	3/4	230/3/60
TCII-08	LAL 2.25	LFL 1.335	1-1/2	1-1/2	230/3/60
TCII-09	LAL 2.25	LFL 1.335	1-1/2	1-1/2	230/3/60
TCII-10	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-11	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-12	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-13	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-14	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-15	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-16	LAL 2.25	LFL 1.335	3	3	230/3/60
TCII-17	LAL 2.25	LFL 1.335	5-1/2	5-1/2	230/3/60
TCII-18	LAL 2.25	LFL 1.335	5-1/2	5-1/2	230/3/60

RIELLO "R" BURNER - GAS BURNER CHARACTERISTICS

BOILER MODEL	GAS CONTROL TRAIN			GAS MANIFOLD PRESSURE (IN. W.C.)	
	SIZE (NPS)	INLET GAS PRESSURE (IN. W.C.)			
		MINIMUM	MAXIMUM	GAS	GAS/OIL
TCII-04	1-1/2	7.0	14.0	3.10	4.18
TCII-05	1-1/2	7.0	14.0	3.28	5.13
TCII-06	1-1/2	7.0	14.0	2.80	4.84
TCII-07	2	7.0	14.0	3.63	5.46
TCII-08	1-1/2	7.0	14.0	2.93	2.66
TCII-09	2	7.0	14.0	3.79	2.76
TCII-10	2	7.0	14.0	2.62	3.88
TCII-11	2-1/2	7.0	14.0	2.81	3.96
TCII-12	2-1/2	7.0	14.0	3.01	4.05
TCII-13	2-1/2	7.0	14.0	4.00	4.35
TCII-14	2-1/2	7.0	14.0	2.90	4.49
TCII-15	2-1/2	7.0	14.0	3.18	4.67
TCII-16	3	7.0	14.0	3.44	4.86
TCII-17	2	28	56	3.60	6.25
TCII-18	2	28	56	3.64	6.75

RIELLO MODEL "R" BURNER - BURNER CHARACTERISTICS FOR OIL FIRING

BOILER MODEL	OIL NOZZLES				PUMP PRESS. (PSIG)	RETURN PRESSURE		STANDARD FUEL UNIT		
	MFR	QTY	SIZE (GPH)	PATTERN		MINIMUM	MAXIMUM	MODEL	MANUF.	GEARSET (GPH)
TCII-04	Delavan	2	3.00	45°B	175	N/A	N/A	AL65C	Suntec	22
TCII-05	Delavan	2	4.00/3.50	45°B	175	N/A	N/A	AL65C	Suntec	22
TCII-06	Delavan	2	4.50	45°B	175	N/A	N/A	AL65C	Suntec	22
TCII-07	Delavan	2	5.50	45°B	175	N/A	N/A	AL65C	Suntec	22
TCII-08	Delavan	2	6.50/6.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-09	Delavan	2	7.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-10	Delavan	2	8.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-11	Delavan	2	9.00/8.50	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-12	Delavan	2	10.00/9.50	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-13	Delavan	2	11.00/10.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-14	Delavan	2	11.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-15	Delavan	2	12.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-16	Delavan	2	13.00	45°B	175	N/A	N/A	AJ4	Suntec	54
TCII-17	Bergonzo	1	A4-120	BPS	290	70-100	245	TA2	Suntec	150
TCII-18	Bergonzo	1	A4-130	BPS	290	70-100	245	TA2	Suntec	150

Primary simplex nozzle Delavan type B, alternate simplex nozzle Hago type P.

PB HEAT, LLC

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