

PIPE SIZES		
	1 UNIT	2 UNITS
RAYTHERM		
181-401	1-1/2"	2"
514-824	2"	3"
926-1826	2-1/2"	3"
2100-4001	3"	4"
MVB		
503-754	2"	3"
1003-2004	2-1/2"	4"
2503-4003	4"	6"
HI DELTA		
HD101-HD401	1-1/2"	2"
302-902	2"	3"
992-2342	2-1/2"	4"

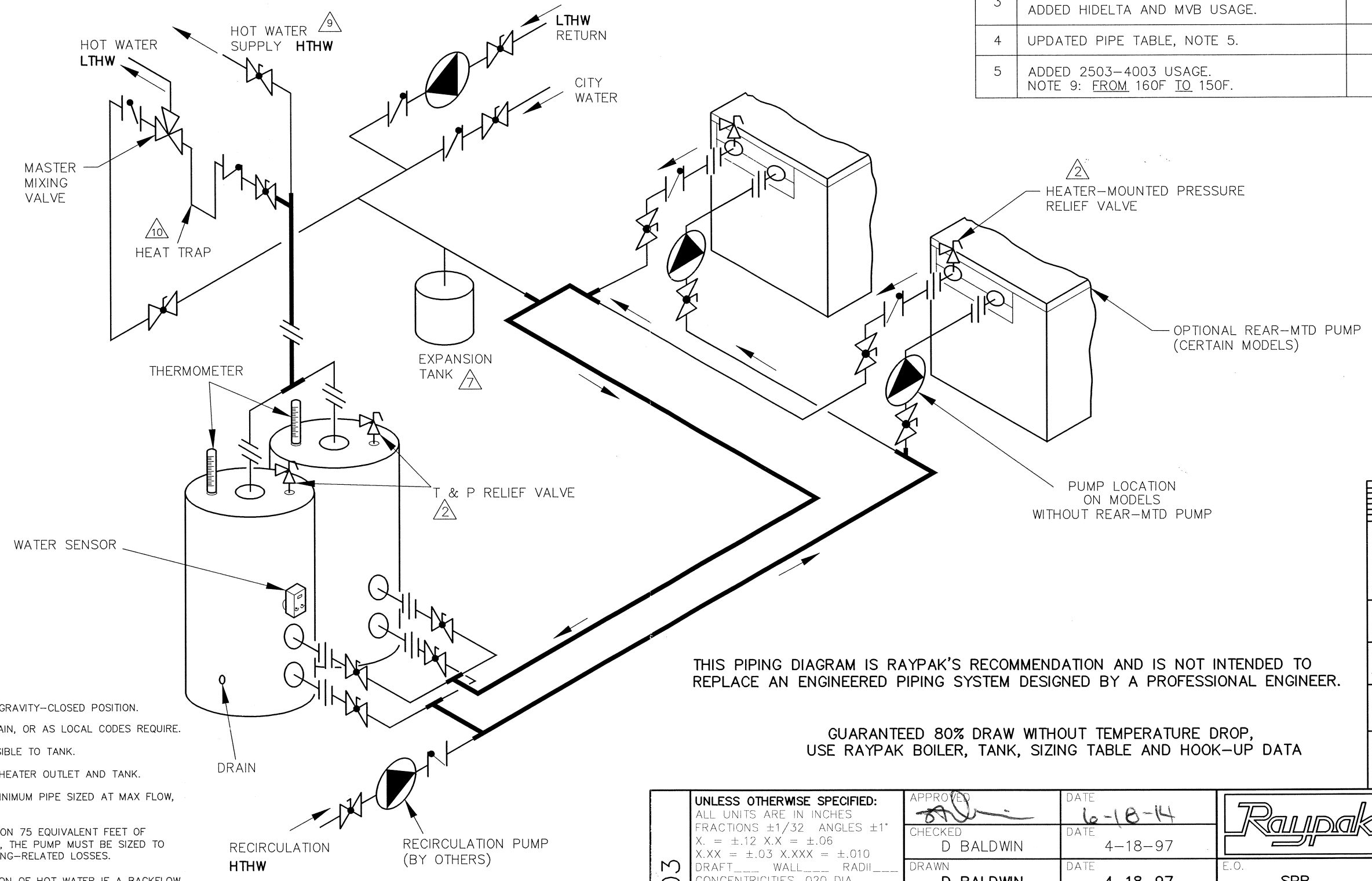
8103					5
REVISIONS					
REV	DESCRIPTION	E.O.	BY	DATE	CHECK
3	UPDATED FORMAT. ADDED NOTE 10. ADDED HDELTA AND MVB USAGE.		DRB	3-2-09	—
4	UPDATED PIPE TABLE, NOTE 5.		KA	6-6-13	DRB
5	ADDED 2503-4003 USAGE. NOTE 9: FROM 160F TO 150F.		KA	6-4-14	<i>AK</i>

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THIS PIPING DIAGRAM IS RAYPAK'S RECOMMENDATION AND IS NOT INTENDED TO REPLACE AN ENGINEERED PIPING SYSTEM DESIGNED BY A PROFESSIONAL ENGINEER.

GUARANTEED 80% DRAW WITHOUT TEMPERATURE DROP, USE RAYPAK BOILER, TANK, SIZING TABLE AND HOOK-UP DATA

KEY	
	PRESSURE RELIEF VALVE
	PUMP
	UNION
	CHECK VALVE
	BALL VALVE
	THERMOMETER

- NOTES:
1. PLUMB SWING CHECK VALVE IN GRAVITY-CLOSED POSITION.
 2. PIPE ALL RELIEF VALVES TO DRAIN, OR AS LOCAL CODES REQUIRE.
 3. LOCATE TEE AS CLOSE AS POSSIBLE TO TANK.
 4. INSTALL COLD WATER BETWEEN HEATER OUTLET AND TANK.
 5. SEE CHART "PIPE SIZES" FOR MINIMUM PIPE SIZED AT MAX FLOW, NOT TO EXCEED 7.5 FT/SEC.
 6. STANDARD PUMP SIZING BASED ON 75 EQUIVALENT FEET OF PIPING. IF DISTANCE IS GREATER, THE PUMP MUST BE SIZED TO ACCOMMODATE INCREASE IN PIPING-RELATED LOSSES.
 7. PROVIDE FOR THERMAL EXPANSION OF HOT WATER IF A BACKFLOW PREVENTER, CHECK VALVE, WATER METER OR PRESSURE-REDUCING VALVE IS INSTALLED IN THE COLD WATER LINE.
 8. PIPING BRANCHES ON BOTH HEATERS AND TANKS TO BE EQUIDISTANT TO PROVIDE BALANCED FLOW.
 9. IF HIGH-TEMP HOT WATER SETPOINT EXCEEDS 150F, SPECIFY "H" BOILERS INSTEAD OF "WH" WATER HEATERS.
 10. 24" HEAT SINK "U" REQUIRED PER RECOMMENDATIONS PER MFR OF 3-WAY MIXING VALVE.

ACAD: 8103.DWG
 HEATERS SHOWN REPRESENT VARIOUS MODELS. BECAUSE INDIVIDUAL MODELS WILL VARY IN DESIGN AND SIZING, SEE EACH SPECIFIC HEATER TYPE FOR DETAILS.

8103	UNLESS OTHERWISE SPECIFIED: ALL UNITS ARE IN INCHES FRACTIONS ±1/32 ANGLES ±1° X.X = ±.12 X.XX = ±.06 X.XX = ±.03 X.XXX = ±.010 DRAFT___ WALL___ RADII___ CONCENTRICITIES .020 DIA. SQUARENESS .015 IN./IN. BREAK EDGES .015 MAX. SURFACE FINISH PER ASME Y14.36M-1996	APPROVED <i>[Signature]</i>	DATE 6-18-14	 OXNARD, CALIFORNIA
	CHECKED D BALDWIN	DATE 4-18-97	E.O. SCALE SPR NONE	
	DRAWN D BALDWIN	DATE 4-18-97	SIZE B	THIS DRAWING SUBMITTED UNDER CONFIDENTIAL RELATIONSHIP, AS IT EMBODIES PROPRIETARY INFORMATION, WITH ALL RIGHTS RESERVED BY RAYPAK, INC.
	TITLE PIPING, UNI-TEMP 80: 2 HTRS, 2 V TANKS, 2 TEMP			
5	MAT'L.	SERIES/MODEL WH	DWG. NO. 8103	REV 5

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