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## Interesting Facts



- Barcodes were originally created to identify railroad cars.
- Henry Ford started the Kingsford Charcoal Company. He used wood scraps from the crates his suppliers used to ship parts for his cars to make the charcoal.
- The BIC pen was created by Marcel Bich. He used his name less the "h" to avoid any possible mispronunciation.

## Oct Dates to Remember

- Oct 2 - ASPE Product Show
- Oct 8 - Columbus Day
- Oct 17 - ASPE Meeting
- Oct 31 - AEE/ASHRAE Energy Expo
- Oct 31 - Halloween 



Ryan Company, Inc.  
3361 Republic Ave  
St. Louis Park, MN 55426  
Phone (952) 915-6475  
Fax (952) 915-6480  
[www.ryancompanyinc.com](http://www.ryancompanyinc.com)

## FEATURED Products

### Linkageless Controls

Forced draft burners have historically used interconnected linkages to control the air/fuel ratio. This method has worked for many years, but it is inefficient and can produce varying results.

Linkageless Controls utilize individual servo motors that are directly mounted to the air damper, gas butterfly valve and oil metering valve and are controlled via an electronic interface. The result is improved burner performance as well as a system that has greater repeatability than a standard linkage system. And because each servo motor is independently controlled, separate operating curves produce the highest efficiency possible for each fuel.

We typically recommend using one of the following linkageless systems:

- Honeywell Controlinks
- Siemens LMV

## Boiler Chart

As we have so many boilers to choose from, I have created a selection chart to hopefully make it easier to decide what boiler to use. Click chart to see full size version sorted by efficiency.

Make	Model	Type	Style	Boilers By Eff-Type		Max Eff	Medium	Max Press Avail (PSI)	Fuels
				Input Range (MBH)	Max				
Fulton	Pulse - PHW	Condensing	Main	500	2000	99%	Water	160	Nat, LP or Combination
Fulton	Pulse - QT	Condensing	Firetube	1400	2000	99%	Water	160	Nat, LP or Combination
Fulton	Vantage - VTG	Condensing	Firetube	1000	4000	99%	Water	160	Nat, LP, Oil or Combination
LES	VI Series	Condensing	Firetube	750	2000	97%	Water	100	Nat or LP
Lochinvar	Intelli-fin	Condensing	Watertube	1500	2000	97%	Water	160	Nat or LP
Lochinvar	Knight	Condensing	Watertube	80	500	93%	Water	160	Nat or LP
Lochinvar	Power-fin	Non-Condensing	Watertube	500	2000	87%	Water	160	Nat or LP
Bryan	HECLM	Non-Condensing	Watertube	900	3000	85%	Water	250	Nat or LP
Bryan	HERV	Non-Condensing	Watertube	3500	8000	85%	Water	250	Nat or LP
Fulton	MMPW	Non-Condensing	Firetube	1600	6200	85%	Water	160	Nat, LP, Oil or Combination
Lochinvar	Efficiency +	Non-Condensing	Watertube	150	300	85%	Water	160	Nat or LP
Lochinvar	Copper-fin II	Non-Condensing	Watertube	400	3070	85%	Water	160	Nat or LP
Bryan	RV	Non-Condensing	Watertube	3500	8000	84%	Water	250	Nat, LP, Oil or Combination
Bryan	RV	Non-Condensing	Watertube	8500	21000	84%	Water	250	Nat, LP, Oil or Combination
Burham	Series CW	Non-Condensing	Firetube	816	4082	84%	Water	30	Nat, LP, Oil or Combination
Fulton	ICWX	Non-Condensing	Firetube	167	1200	84%	Water	160	Nat, LP, Oil or Combination
Lochinvar	Solution	Non-Condensing	Watertube	45	260	84%	Water	160	Nat or LP
Bryan	DR	Non-Condensing	Watertube	450	850	83%	Water	250	Nat, LP, Oil or Combination
LES	VW Series	Non-Condensing	Firetube	200	3300	83%	Water	100	Nat, LP, Oil or Combination
LES	HW Series	Non-Condensing	Firetube	480	4820	83%	Water	80	Nat, LP, Oil or Combination
Bryan	DR	Non-Condensing	Watertube	450	850	82%	Water	300	Nat, LP, Oil or Combination
Burham	Series 4FW	Non-Condensing	Firetube	528	7000	82%	Water	160	Nat, LP, Oil or Combination
Burham	Series 3W	Non-Condensing	Firetube	1674	41850	82%	Water	125	Nat, LP, Oil or Combination
Burham	Series 4SL	Non-Condensing	Firetube	1674	41850	82%	Water	150	Nat, LP, Oil or Combination
Lochinvar	Copper-fin	Non-Condensing	Watertube	315	2065	81%	Water	160	Nat, LP, Oil or Combination
Bryan	CLM	Non-Condensing	Watertube	1200	3000	80%	Water	250	Nat, LP, Oil or Combination
Fulton	ICW	Non-Condensing	Firetube	167	2500	80%	Water	160	Nat, LP, Oil or Combination
Fulton	Pulse - PHP	Non-Condensing	Firetube	500	700	86%	Steam	150	Nat or LP
Fulton	Pulse - PVL	Non-Condensing	Firetube	500	750	86%	Steam	15	Nat or LP
Fulton	Pulse - PVL	Non-Condensing	Firetube	750	1150	86%	Steam	15	Nat or LP
Fulton	MVP	Non-Condensing	Firetube	1600	6200	85%	Steam	300	Nat or LP
Burham	Series CL	Non-Condensing	Firetube	816	4082	84%	Steam	15	Nat, LP, Oil or Combination
Fulton	ICX	Non-Condensing	Firetube	167	1200	84%	Steam	300	Nat or LP
LES	HP Series	Non-Condensing	Firetube	480	4430	83%	Steam	15	Nat, LP, Oil or Combination
Bryan	RV	Non-Condensing	Watertube	3500	8000	82%	Steam	300	Nat, LP, Oil or Combination
Bryan	RW	Non-Condensing	Watertube	8500	21000	82%	Steam	300	Nat, LP, Oil or Combination
Burham	Series 4FL	Non-Condensing	Firetube	528	7000	82%	Steam	15	Nat, LP, Oil or Combination
Burham	Series 3L	Non-Condensing	Firetube	1674	41850	82%	Steam	150	Nat, LP, Oil or Combination
Burham	Series 4SL	Non-Condensing	Firetube	1674	41850	82%	Steam	150	Nat, LP, Oil or Combination
Bryan	CLM	Non-Condensing	Watertube	1200	3000	80%	Steam	300	Nat, LP, Oil or Combination
Fulton	ICS	Non-Condensing	Firetube	167	2500	80%	Steam	300	Nat or LP



## Featured Job

### Canterbury Park - Shakopee, MN

Engineer: KFI

Mechanical Contractor: Owens

Installed: Fall 2006

Equipment:

- (2) Burnham 4FW675 Firebox Water Boilers with Gordon Piatt R12 Burners with Siemens LMV Linkageless Controls Each Firing at 5650 MBH
- (1) Fulton Vantage VTG3000 Condensing Water Boiler Firing at 3000 MBH



Great example of a baseload system utilizing standard efficiency firebox boilers along with a high efficiency condensing baseload boiler. Condensing boiler shown above circled in red.

## What NOT To Do

Occasionally we run across some interesting stuff at jobsites. Just for clarification, these would be examples of what not to do.



Why fix it, just add more sealant!



Why doesn't my water heater work?



English



Aldrich



RYAN COMPANY, INC • 3361 Republic Ave • St Louis Park, MN 55426  
(952) 915-6475 PH • (952) 915-6480 FX • [www.ryancompanyinc.com](http://www.ryancompanyinc.com)