RAY OIL BURNER COMPANY

Since 1872

1301 San Jose Avenue, San Francisco 12, California

Atlantic Seaboard Div., 629 Grove St., Jersey City 2, N. J. *Distributors in All Principal Cities of the World*

RAY FORCED DRAFT PACKAGED BURNERS



Scotch Marine application

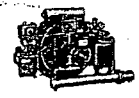


Type for water tube boilers

A factory assembled unit-readily applied to any type of boiler designed for forced draft operation. Fully automatic operation on oil, gas or combination gas-oil.
The combination gas-oil unit includes a rotary oil burner, integrated ring type gas burner, secondary air control with a forced draft fan, windbox, refractory support ring, completely wired enclosed control cabinet and pre-piping completely factory assembled for quick and easy installation to the boiler.
Oil components may be selected to burn any grade of oil with the secondary air control providing increased efficiency even with the difficult-to-burn catalytic residual #6 fuel oils. Sizes 1 to 10. Maximum capacities—40 to 750 developed output horsepower.

RAY COMBINATION OIL-GAS BURNERS

ARC-MODEL 550. Consists of a rotary type oil burner of Ray conventional design coupled with a gas housing for low pressure gas. The gas burner parts provide for the introduction of gas in a manner which fully utilizes the energy in the high pressure air supplied by the rotary burner fan. Gas and primary air are intimately combined, in two stages, before mixing with the secondary air which is introduced through a vaned annular opening concentric with the nozzle. Change-over requires less than one minute. Available to burn any grade of oil; 9 sizes with capacities to 31,500,000 Btu/hr. Gravity type to 48,000,000 Btu/hr.
TYPE PCP. Fully automatic combination gas-oil burner of the pressure atomizing type. Available in three sizes with capacities from 560,000 to 4,200,000, Btu/hr. High speed 3450 rpm models available for forced draft operation. Also available for straight gas operation, as type PG.



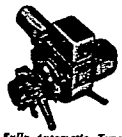
ARC-144 Model 550 for heavy oil and Low Pressure Gas



Type PCP for #2 oil or lighter and Low Pressure Gas

RAY DOMESTIC AND STEAM TURBINE BURNERS

RAY PRESSURE ATOMIZING OIL BURNERS. Fully automatic for #2 oil or lighter. 4 sizes with capacities from 1 to 30 gph. Pedestal or Flange mounting. All types have electric ignition interrupted or constant. AC or DC. Electronic controls are standard on all models above 7 gph capacity. High speed 3450 rpm models availiable for forced draft operation.



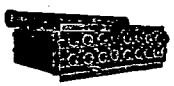
Fully Automatic, Type JP, #2 or lighter oil



Steam Turbine Drive, Type TC, all grades oil. Tested and approved for U. S. Navy Service

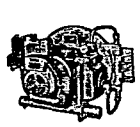
RAY INSHOT GAS BURNERS

Multi-jet atmospheric type gas burners with high flexibility in nozzle number, arrangement and capacity, permitting high input ratings in limited space. For commercial and industrial application with natural or induced draft. Available in 36 different jet arrangements with capacities from 99 to 7512 cfh.



Size 2, IC-29

RAY HORIZONTAL ROTARY OIL BURNERS



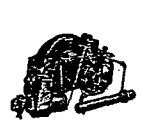
Type AR-144 Size 10 for No. 6 oil. Available in 10 sizes from 2 to 210 gph. Fully automatic.



Fully Automatic Type AR-134, for No. 5 oil



Type BR-144, Belt Drive, Fully Automatic, Available in 8 sizes. Capacities from 1 to 110 gph.



Type ARJP, Fully Automatic for heavy oil where gas for ignition not available

Built in fully automatic, semi-automatic and manual types; in sizes from 7 to 1000 Boiler hp, 230 to 37,000 lbs/hr, to burn all grades of fuel oil.
Standard models include both direct and belt drives—the latter being recommended for use where other than 50 or 60 cycles AC, or only DC is available. Types for diesel electric or gas electric ignition; pump or gravity feeds. Direct drive types include a steam turbine driven model.
Most fully automatic types for heavy oil incorporate the Ray Dual Pump and Reservoir, with the Ray VISCOSITY Valve, a patented, exclusive feature which automatically meters the correct amount of fuel at all times, regardless of changes in viscosity of the oil due to temperature variations. All larger sizes employ dual ignition system, consisting of dual high-voltage transformers, dual electric ignitors and dual gas valves. Fully automatic burners include as standard equipment electronic pilot and flame failure control as required by code.

RAY BURNER HOURLY CAPACITY RATINGS

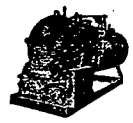
Burner Size	Approx. Shipping Wt.	Oil Capacity U. S. Gallons		Equivalent Boiler HP		Equivalent Lbs. Steam Generated†		Heat Capacity Input Thou. Btu Oil or 1000 Btu Gas		Equivalent Sq. Ft Steam Radiation	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
JP	1/4	1	2	3	9	110	335	140	430	440	1300
1-P†	1/4	4	7	12	22	430	755	560	1000	1750	3060
3-P††	1/4	7	18	22	55	755	1950	1000	2500	3060	7900
3-P†	1/4	14	30	45	95	1510	3240	1960	4200	6120	12140
0	1/4*	2	5	7	16	220	580	300	750	938	2340
1	1/4	4	11	13	35	460	1370	600	1660	1880	5180
2	1/4**	5	15	17	50	580	1740	750	2250	2340	7020
3	1/2**	8	25	27	83	930	2900	1200	3750	3760	11720
5	1	10	35	33	116	1160	4050	1500	5250	4680	16400
6	1 1/4	12	50	40	165	1400	5800	1800	7500	5620	23500
7	2	15	70	50	230	1740	8100	2250	10500	7020	32800
8	3	25	110	83	365	2900	13700	3750	16500	11700	51500
9	5	35	150	118	500	4050	17400	5250	22500	16408	70500
10	7 1/2	50	210	165	700	5800	24400	7500	31500	23400	98280
13	7 1/2	75	320	250	1000	8700	37000	11250	48000	35100	149580

NOTE: These ratings are predicated upon specific conditions of draft and furnace volume. It may be permissible, under desirable conditions, to operate at higher rates, or advisable under restricted conditions, to operate at reduced rates. Heating capacities are based upon 150,000 Btu per gal of oil for rotary burners and 140,000 Btu per gal of oil for pressure atomizing burners and upon an overall boiler efficiency of 75 percent.
† Steam capacity based on steam F and A 212 F. * ⅓ hp on belt driven models.
** ¾ hp on belt driven models. †† Motor hp may be increased for forced draft operation.

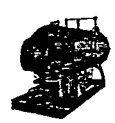
YORK-SHIPLEY, INC.

MAIN OFFICES AND PLANT, YORK, PA.

OIL AND/OR GAS-FIRED YORK-S POWER EQUIPMENT FOR INDUSTRY



STEAM-PAK



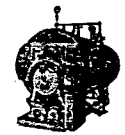
HOT WATER BOILERS



YORK-POWER PAKETTE



FIRE-PAK



SCOT-PAK



YORK-POWER BURNER

STEAM-PAK GENERATORS

High or low pressure steam. No. 3, 5 or 6 oil and/or gas firing. Fully automatic operation

Model No.	Nominal HP	Steam Lbs/Hr	EDR Sq Ft Steam	H In.	W In.	L In.
SPH-10	10	345	1397	44¾	35	82-1¼
SP-83A-15	15	525	2100	58½	47¼	90¼
SP-83A-20	20	690	2780	58½	47¼	90¼
SP-54A-30	30	1025	4250	58½	47¼	118
SP-40	40	1380	5583	71½	59¾	122
SP-50	50	1725	7000	71½	61¾	137
SP-60	60	2070	8375	71½	61¾	153½
SP-75	75	2587.5	10469	78	71¾	151½
SP-80-O.S.	80	2760	11160	78	71¾	151½
SP-100-O.S.	100	3450	13958	78	71¾	151½
SP-100	100	3450	13958	85¼	75½	165½
SP-125	125	4312.5	17447	85¼	75½	195½
SP-56-150	150	5175	20937	88¼	80	187½
SP-200	200	6900	27916	115¼	101¾	210
SP-250	250	8625	34895	115½	101¾	247½
SP-300	300	10350	41874	118	102¾	247½
SP-350	350	12080	48900	118	102¾	277½
SP-400	400	13800	55800	125	107¼	259¾
SP-500	500	17250	69800	133	114¼	256½
SP-600	600	20700	83700	133	114¼	292

YORK-POWER HOT WATER BOILERS

Designed specifically for hot water heating applications. No. 3, 5, and 6 oil and/or gas-firing. Fully automatic operation.

Model No.	Mfr. Cert. Rating HP	Mfr. Cert. Rating Sq Ft Water	Gross output 1000 BtuH	H In.	W In.	L In.
SPW-57-40	40	8,833	1340	81	63	109¾
SPW-57-50	50	11,167	1675	81	63	123¾
SPW-57-60	60	13,400	2010	81	63	137¾
SPW-57-80	80	20,100	3015	85	65½	151¾
SPW-57-100	100	23,833	3250	88	65½	171¾
SPW-57-125	125	27,916	4185	95	74¾	166½
SPW-57-150	150	34,500	5025	95	74¾	185¾
SPW-57-175	175	39,150	5862	103	80¾	221¾
SPW-57-250	250	55,833	8375	121	93	210¾
SPW-57-300	300	67,000	10,050	121	93	247¾
SPW-57-350	350	78,100	11,720	125	94¾	277¾
SPW-57-500	500	111,500	16,750	133	102	270½

YORK-POWER PAKETTES

High or low pressure steam or hot water. No. 3, 5 or 6 oil and/or gas firing. Fully automatic operation

Model No.	Nominal HP	EDR Sq Ft Steam	EDR Sq Ft Hot Water	H In.	W In.	L In.
Heavy Duty						
SP-57-A-20	20	2780	4000	69½	58¼	91¾
SP-57-A-30	30	4188	6700	69½	58¼	91¾
SP-57-A-40	40	5583	8933	69½	58¼	91¾
SP-57A-50	50	7000	11167	69½	58¼	91¾
Regular Duty						
SP-56-10	10	1397	2267	44¾	35	78¼
SP-56-15B	15	2100	3400	44¾	35	78¼
SP-83A-15	15	2100	3400	58½	43	85¾
SP-83A-20	20	2780	4500	58½	43	85¾
SP-54A-30	30	4188	6700	58½	41	118
SP-54-40	40	5583	8933	71½	51	109
SP-83-50	50	7000	11167	71½	61	137

FIRE-PAK BOILERS

Packaged fire-tube boilers for low pressure steam or hot water. No. 3, 5, or 6 oil and/or gas firing. Fully automatic operation.

Model No.	Mfrs Certified Rating HP	Mfrs Certified Rating Steam EDR Sq Ft	Mfrs Certified Rating Hot Water EDR Sq Ft	H In.	W In.	L In.
YFB3261	25	6830	7890	95	57	98
YFB3301	40	5575	9650	95	57	108
YFB3351	45	6400	10240	95	57	113
YFB401	51	7080	11320	95	57	124
YFB451	58	7810	12500	100	64	115
YFB501	63	8650	13850	100	64	124
YFB4891	90	12450	19900	104	70	143
YFB43106	102	14320	22750	104	70	158
YFB3491	121	16720	27040	115	78	154
YFB54126	125	17450	27900	118	76	162
YFB6008	150	20950	33500	126	83	163
YFB62117	150	20950	33500	132	83	182
YFB69119	225	31400	50300	126	83	255
YFB73137	200	28950	47200	132	85	194
YFB78140	343	47880	76500	140	103	207
YFB84127	415	58320	93200	172	108	201
YFB84140	485	67180	107500	176	109	215

SCOT-PAK BOILERS

Packaged scotch marine boilers for forced draft, natural draft or induced draft firing. No. 3, 5, & 6 fuel oil *and/or gas. Fully automatic.*

Model No.	Mfr. Certified Rating HP	Mfr. Certified Rating Sq Ft Steam	H In.	W In.	L In
YSM56-40	52	7290	73¾	58¾	117¾
YSM56-45	59	8220	73¾	58¾	126¾
YSM56-50	65	9125	73¾	58¾	143¾
YSM56-60	78	10920	78¾	64¾	123¾
YSM56-70	91	12750	78¾	64¾	154¾
YSM56-85	111	15500	84¾	70¾	157¾
YSM56-100	130	18220	84¾	70¾	175¾
YSM-56-125	163	22750	90¾	76¾	173¾
YSM-56-150	196	27350	90¾	76¾	196¾
YSM-56-175	225	31900	96¾	82¾	201¾
YSM-56-200	251	35450	96¾	82¾	221¾
YSM-56-250	326	45550	103¾	94¾	220¾
YSM-56-300	391	54600	114¾	103¾	223¾
YSM-56-350	400	55800	114¾	103¾	247

YORK-POWER BURNERS

Horizontal Rotary burners for conversion application. No. 2, 4, 5 or 6 oil and/or gas firing. Factory-coordinated fuel burning systems used with burners to provide fully automatic system.

Burner Model	Max GPH	EDR Sq Ft Steam at Boiler Efficiency of 60 percent	65 percent	70 percent	75 percent
A-18	6	2255	3440	3630	3920
A-45	15	5630	8085	6540	7320
A-80	20	7500	8170	8750	9750
B-100	33	12400	13430	14460	16120
B-125	45	16740	17080	18390	20488
C-175	60	22500	24360	26250	29250
C-225	75	28150	30495	32900	36650
D-300	100	37550	40600	43750	48750
D-400	135	50650	54800	59000	65700