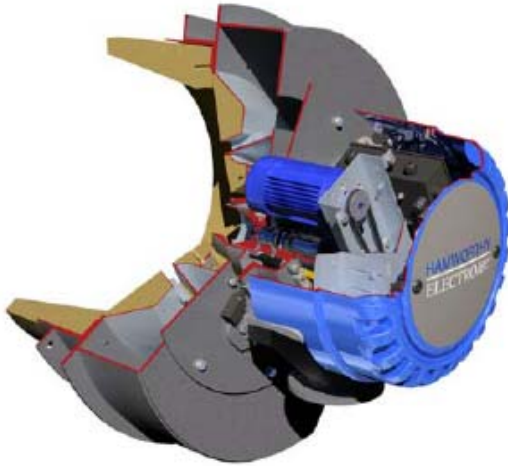


ELECTROtec™ Rotary Cup Burner



Hamworthy Combustion's ELECTROtec Rotary Cup burner is a product designed to incorporate state of the art combustion technology – offering significant performance enhancements over any other non-volumetric oil metering burner.

The ELECTROtec offers an integral volumetric electronic liquid fuel management system* and electronic air/fuel ratio control - ensuring optimum combustion efficiency for the most demanding operational requirement while minimising energy use and maintenance costs.

Reliable Performance

- 1.9 - 29 MW boiler input
- Overall combustion performance enhanced through the ELECTROlink electronic modulation system fitted as standard
- Consistent and reliable operation through a volumetric electronic liquid fuel management system
- Capable of burning heavy fuel oils at much lower temperatures and pressures than equivalent pressure atomised burners
- Low noise levels
- Variable speed compound fan available to reduce power absorption at lower boiler loadings (optional)
- Constant velocity design windbox for improved air distribution and performance over entire turn-down range

- Capable of operating on oil ring main pressures from 0.2 to 4 barg
- Ability to burn wide range of fuels
- No re-calibration of burner required when switching between liquid fuels
- Excellent turn-down ratios for gas and as oil firing
- Local oil meter (optional)
- Low NOx recirculated flue gas version available
- Mechanical cam and linkage version is available
- Based on proven Hamworthy Rotary Cup combustion technology

Safety

- Automatic double shut-off valves employed for all fuel supplies including ignitor
- Designed to comply with all relevant standards e.g. BS.EN., DIN, Marine Classification Societies etc.

Quality

- ISO 9001:2000

Certification

- Russian Certification (Gosgortekhnadzor)
- Ukrainian Certification

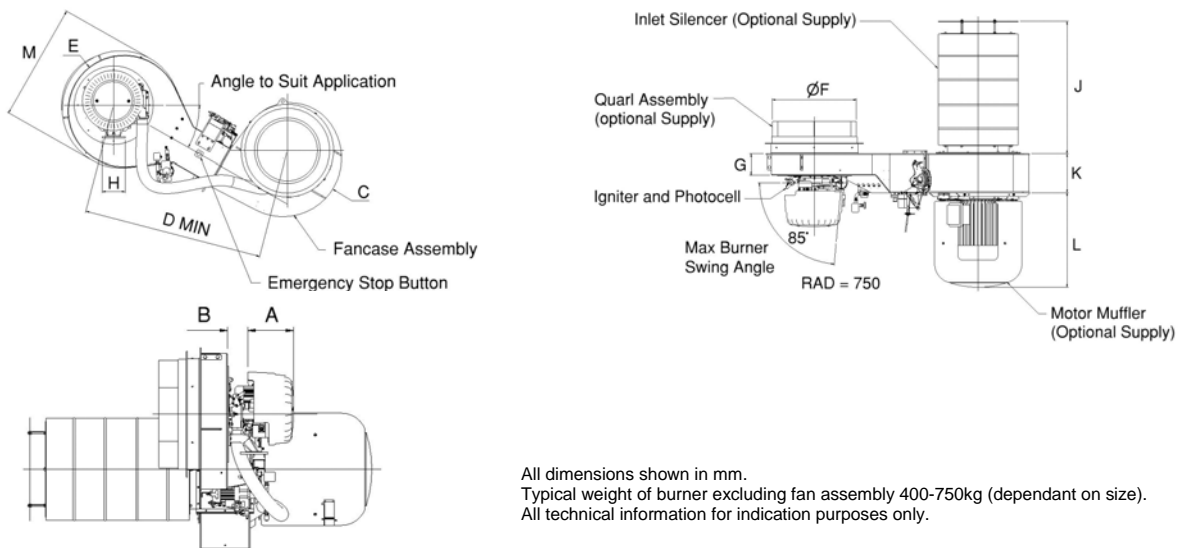
Complete Combustion Flexibility

Capable of burning virtually all liquid fuels, including marine sludge and chemical wastes, the Hamworthy Combustion range of Rotary Cup burners are currently operating on shell and water tube industrial boilers and marine auxiliary boilers worldwide – as well as on various process and drier applications.

In order to achieve the large degree of flexibility associated with this burner, the ELECTROtec has been designed to offer a number of variables. By incorporating separate drives for the rotary cup and primary fan, atomisation can be optimised for any fuel.

- Oil and gas burners can easily be converted to dual fuel
- Suitable for firing in both horizontal and vertical downshot positions
- The gas version is also capable of firing vertically upwards
- Same burner machine, for either oil or dual fuel with the same application principle for gas only version

ELECTROtec ER Burner: Typical Arrangement



All dimensions shown in mm.
 Typical weight of burner excluding fan assembly 400-750kg (dependant on size).
 All technical information for indication purposes only.

BURNER SIZE	A	B	C rad	D	E rad	F dia	G	H dia	J	K	L	M
ER 5-11	355	70	412	1302	408	635	181	200	1068	480	800	810
ER 12-20	355	70	478	1436	478	730	198	220	1366	481	800	945
ER 22-30	355	70	563	1645	565	857	221	220	1366	555	1080	1125
ER 35-50	355	70	563	1830	580	972	288	220	1668	675	1080	1290

Standard Burner Capacity Chart

BURNER MODEL	MAX. FUEL REQUIREMENTS					THERMAL OUTPUT	BOILER OUTPUT @ 83% GROSS EFFICIENCY				
	FUEL OIL			GAS			STEAM F & AT 100°C		HOT WATER		
	Litres/hr	Imp. Gal./hr	Kg/hr	m. ³ /hr	Ft. ³ /hr		Kg/hr	lb/hr	Gcal/hr	Btu/hr.	MW
									Net	Millions	
ER5/1.9	170	38	159	179.0	6322	1.87	2476	5458	1.335	5.297	1.552
ER7/2.5	227	50	211	238.7	8429	2.49	3301	7277	1.780	7.063	2.070
ER8/3.1	284	63	264	298.4	10537	3.11	4126	9096	2.225	8.829	2.587
ER10/3.7	341	75	317	358.0	12644	3.74	4951	10915	2.670	10.594	3.105
ER11/4.1	375	83	349	393.8	13908	4.11	5446	12007	3.415	11.654	3.415
ER12/4.5	414	91	385	434.4	15341	4.53	6007	13244	3.240	12.854	3.767
ER15/5.4	496	109	461	520.3	18376	5.43	7196	15863	3.880	15.397	4.512
ER17/6.3	577	127	537	606.3	21411	6.33	8384	18483	4.521	17.940	5.258
ER20/7.2	659	145	613	692.2	24445	7.23	9572	21103	5.162	20.482	6.003
ER22/8.1	741	163	689	778.1	27480	8.13	10760	23722	5.803	23.025	6.748
ER25/9.0	827	182	769	868.8	30683	9.07	12015	26488	6.479	25.709	7.535
ER30/10.9	996	219	826	1045.5	36921	10.92	14457	31872	7.796	30.935	9.066
ER35/12.7	1155	254	1074	1212.6	42821	12.66	16768	36966	9.042	35.879	10.515
ER40/14.5	1318	290	1226	1384.4	48890	14.46	19144	42206	10.324	40.965	12.006
ER45/16.4	1491	328	1387	1565.8	55296	16.36	21653	47736	11.677	46.333	13.579
ER50/18.2	1659	365	1543	1742.5	61534	18.20	24095	53121	12.994	51.559	15.110
ER60/21.8	1991	438	1848	2090.0	83797	21.83	28886	63683	15.576	61.810	18.114
ER70/25.5	2323	511	2156	2438.0	86096	25.46	33701	74296	18.171	72.110	21.134
ER80/29.1	2650	583	2459	2786.0	98396	29.10	38515	84910	20.767	82.413	24.153
						#	#	#	\$	#	#

= BASED ON GROSS CV OF FUEL \$ = BASED ON NET CV OF FUEL
 This table is based upon Fuel Oil Gross CV of 42588kj/kg and SG at atomising temperature of 0.93.
 Natural Gas Gross CV of 38.563 MJ/m³. Gas volume @ 15° C and 1013 mbar.

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Incorporating:
 PEABODY ENGINEERING
 AIROIL - FLAREGAS
 CHENTRONICS

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Hamworthy Combustion Engineering Limited reserve the right to make changes and improvements which may necessitate alteration to the specification without prior notice