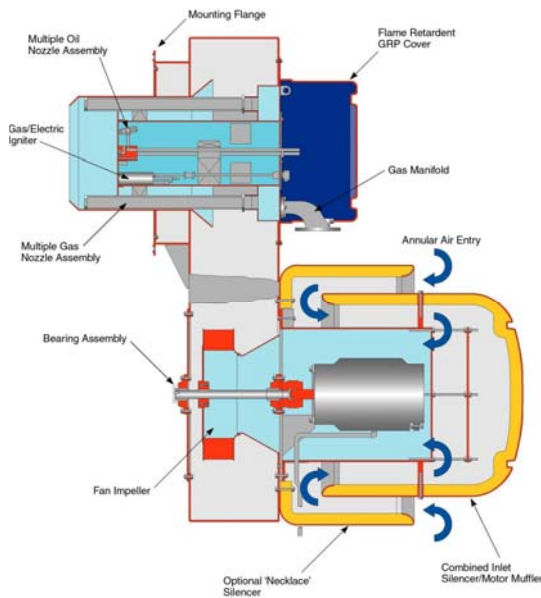


DATASHEET

Envirojet SL Low NOx Burner



Satisfying the Need for Low NOx Emissions



The Envirojet Series is a generation of low NOx burners from Hamworthy Combustion Engineering designed to provide low emission levels on gas and diesel fuels.

Proven technology from established low NOx ranges has culminated in performance characteristics which comfortably satisfy the most demanding of today's European emission requirements, without loss of efficiency - and will comply with the new Directives as they come into force.

Increasingly, nations across the globe are adopting greater responsibility for the environment, with some governments even offering tax incentives for consistently low emissions - the Envirojet Series provides the ideal solution.

Benefits of the Envirojet Series

Low NOx Emissions

Traditionally, low NOx emissions have been achieved through external recirculated flue gas systems (RFG), but these require the use of additional hardware such as a fan, ductwork and controls, adding to their complexity and capital cost.

Energy Efficient

Because the Envirojet does not require the use of RFG, a recirculation fan is not necessary, saving considerable amounts of energy. Also, the Envirojet burners have a unique 'slip stream' motor/fan arrangement, allowing smaller energy saving drive units to be used.

Fuel Efficient

The generous windbox volumes made available by this design ensure excellent air distribution and contribute to the burner's low excess air performance throughout the operating range.

Reduced Noise Levels

All burners have a combined motor muffler/silencer which, coupled with the use of smaller drive units, leads to significant reductions in noise levels.

Flexible & Compact Assembly

Envirojet burners can be used in angled or inverted configurations and are supplied fully assembled and pre-wired for quick and easy fitting to the appliance. Front air entry is used to achieve a reduced length combustion air system which ensures a neat, compact assembly.

Accurate Monitoring

All Envirojet burners have separate igniters with ultra violet monitoring of the pilot and main flame. Modulating versions incorporate a full PID (Proportional Integral Derivative) controller allowing very close pressure/temperature set points to be maintained. Management and supervisory controls are included in separately mounted panels.

Easy Maintenance

Atomisers, igniters and flame monitoring equipment are easily accessed for maintenance and the combustion head can be removed from the windbox as a single assembly without the need to remove the burner from the appliance.

Standards

BS799 - Part 4 1972
BS5885 - Part 1 1988
Machinery Directive (89/392/EEC)
Electromagnetic Compatibility Directive (89/336/EEC)
Low-Voltage Directive (73/23/EEC)
(Amending Directive 93/68/EEC)
EN676 and EN267

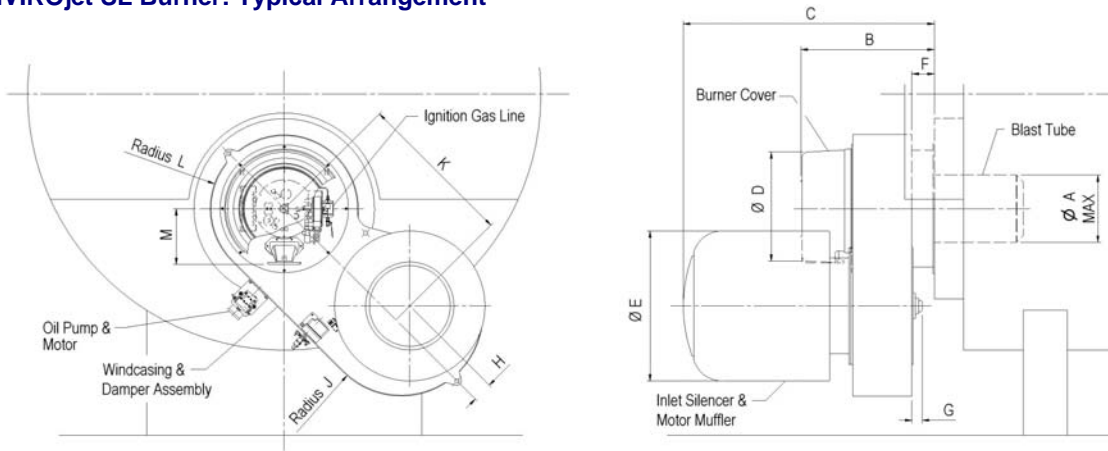
Maximum Application Flexibility

By opting for front-air entry and using a 'monobloc' assembly, application flexibility is maintained. This allows standardisation of the combustion air system providing excellent air distribution without the Envirojet burners' low excess air characteristics and low-emission performance - which are maintained throughout the operating range. In addition Blast Tube extensions are available for particular levels, applications.

Certification

- Russian Certification (Gosgortekhnadzor)
- Ukrainian Certification

ENVIROjet SL Burner: Typical Arrangement



BURNER SIZE	A	B	C	D	E	F	G	H	J	K	L	M	FAN (kW)	Weight (Approx)
SL6	344	845	1245	624	752	152	82	55	435	945	336	263	3 – 5.5	410 kg
SL7	444	845	1275	624	752	152	82	55	435	1025	434	309	5.5-11	470 kg
SL8	604	895	1580	624	892	152	84	134	557	1075	506	381	11-22	585 kg
SL9	652	905	1655	624	932	152	100	134	557	1075	506	381	27-34	640 kg

Note: Radius 'J' does not include necklace silencer option

Standard Burner Capacity Chart

BURNER MODEL	MAXIMUM FUEL REQUIREMENTS					BURNER THERMAL OUTPUT MW	BOILER OUTPUT				TYPICAL INSTALLED FAN MOTOR kW	TYPICAL NOISE LEVEL dB(A)	
	FUEL OIL			GAS			STEAM F & A 100 C		HOT WATER				BOILER THERMAL OUTPUT MW
	Litres / hr	Imp. Gal. / hr	Kg/hr	m ³ / hr	Ft ³ / hr		Kg / hr	Lb / hr	Gcal/hr Net	Btu/hr Millions			
SL6/1.9	175	38.4	150	177.1	6255	1.90	2511	5536	1.354	5.373	1.575	4	74
SL6/2.7	248	54.6	213	251.8	88.94	2.70	3571	7872	1.925	7.640	2.239	4	74
SL6/3.4	313	68.8	268	317.3	11207	3.40	4499	9919	2.426	9.627	2.822	4	74
SL6/4.1	377	82.9	324	382.4	13504	4.10	5421	11952	2.924	11.600	3.400	5.5	74
SL7/4.4	405	89.0	348	410.5	14497	4.40	5820	12831	3.139	12.454	3.650	5.5	74
SL7/5.1	469	103.2	403	476.0	16811	5.10	6749	14879	3.639	14.441	4.232	7.5	74
SL7/5.9	543	119.4	467	550.7	19449	5.90	7808	17214	4.211	16.708	4.897	7.5	74
SL7/6.9	635	139.7	546	644.4	22756	6.90	9136	20141	4.927	19.549	5.729	11	78
SL8/7.2	622	145.7	570	672.1	23734	7.20	9528	21006	5.138	20.388	5.975	11	77
SL8/8.5	782	172.0	672	793.4	28018	8.50	11248	24787	6.066	24.069	7.054	11	77
SL8/10.0	920	202.4	791	933.6	32970	10.0	13236	29180	7.138	28.323	8.301	13	77
SL8/12.0	1104	242.9	950	1120.4	39567	12.0	15885	35019	8.566	33.990	9.961	22	80
SL9/14.0	1288	283.4	1108	137.2	46146	14.0	18533	40858	9.994	39.657	11.622	34	82
						#	#	#	\$	#	#		@
SL10/16.0 SL10/18.5 SL10/21.0	This range of burners does not fit typical dimensions above. Please contact Hamworthy Combustion Engineering for further details.					16.0 18.5 21.0	This range of burners does not fit typical dimensions above. Please contact Hamworthy Combustion Engineering for further details.						

- Based on natural gas with a gross CV of 40.74 MJ/Nm³ and diesel fuel oil with a gross CV of 45.6 MJ/kg S.G.= 0.86.

\$ - Based on natural gas with a nett CV of 36.74 MJ/Nm³ and diesel fuel oil with a nett CV of 42.8 MJ/kg.

Note: Boiler output based on oil efficiency of 83% (gross) & 88.5% (nett). Gas efficiency of 81 % (gross) & 90% (nett).

For other fuel specifications consult Hamworthy Combustion Engineering.

Modulation:

Natural gas – high/low or fully modulating (mechanical or electronic).

Fuel oil – high/low or stepped modulation.

Fan power based on typical boiler pressure loss of 10 mbar. '@' - Noise levels refer to variable speed drive fan option @ 1 metre and are for burner only.

For further information on combustion equipment please contact the head office:

Hamworthy Combustion Engineering Limited

Fleets Corner

Poole Dorset BH17 0LA

Tel: +44 1202 662700

Fax: +44 1202 665333

Email: info@hamworthy-combustion.com

Website: http://www.hamworthy-combustion.com

©2008 Hamworthy Combustion Engineering Limited – All rights reserved

Packaged/Envirojet SL/April 2008/Rev. 2

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

HAMWORTHY
COMBUSTION

Incorporating:

PEABODY ENGINEERING
AIROIL - FLAREGAS
CENTRONICS