Vitotherm

Vitotherm

VGIs 100- 1500
VGOIs 100-1500

Learn more about the products and services offered by Vitotherm B.V.

We proudly present our brochure that shows the result of 60 years of dedication to building the best and most efficient burner systems, for our worldwide customers in horticulture, industry, domestic buildings and asphalt production.

Our experts work daily to design and build the best and most efficient burner systems suitable for (bio)oil, (bio)gas and LPG.

With our network of field service engineers we offer installation & 24-7 support across the globe, making our burner systems within reach for you.

Passion for burners.

Vitotherm

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Burner solutions

Mono-block

Mono-block burners are compactly built industrial burner systems that are an excellent choice for easy installment and perfect saving room.

Key benefits of the mono-block burner are the ease of assembly of the burner system as well as the ease of disassembly to perform smooth maintenance.

All Vitotherm's burners carry the CE and EAC marks.

Our Mono-block burner solutions come with a gas control line and control panel. Please consult page 15.

Performance data

This section contains the standard performance data of a MONO-block burner in metric units.

MONO-BLOCK LOW NOX GAS BURNER

- Control Modulating
- NG**
- Max. height 1640 ft./500 mtr.
- Power 3x480V/60Hz***

Type	Boiler capacity (93% eff)			Burner Input		Gas pressure		Max boiler backpresure		Motor / drive power		Turn down	Consumption	
	kCal	HP	kW	kW	MMBTU	mbar	PSI	mbar	"wc	kW	HP	Gas	Gas m3	Gas ft3
VGIs-100	1,000,000	119	1163	1250	4	100-300	1,45-4,35	10	4.0	2.2	3.0	1:5	142	5015
VGIs-150	1,500,000	178	1745	1875	6	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	213	7522
VGIs-200	2,000,000	237	2326	2500	9	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	284	10029
VGIs-250	2,500,000	296	2908	3125	11	100-300	1,45-4,35	10	4.0	5.5	7.5	1:5	355	12537
VGIs-300	3,000,000	356	3489	3750	13	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	426	15044
VGIs-350	3,500,000	415	4071	4375	15	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	487	17198
VGIs-400	4,000,000	474	4652	5000	17	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	568	20059
VGIs-450	4,500,000	534	5234	5625	19	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	639	22566
VGIs-500	5,000,000	593	5815	6250	21	100-300	1,45-4,35	12	4.8	15.0	20.4	1:7	710	25073
VGIs-600	6,000,000	711	6978	7500	26	100-300	1,45-4,35	13	5.2	18.5	25.2	1:7	852	30088
VGIs-700	7,000,000	830	8141	8750	30	200-300	2,90-4,35	14	5.6	22	29.9	1:8	994	35103
VGIs-800	8,000,000	948	9304	10000	34	300	4.35	15	6.0	30	40.8	1:8	1136	40117
VGIs-1000	10,000,000	1186	11630	12500	43	300	4.35	17	6.8	37	50.4	1:10	1420	50147
VGIs-1250	12,000,000	1423	13956	15000	51	300	4.35	17	6.8	45	61.2	1:10	1704	60176

MONO-BLOCK LOW NOX GAS & EMERGENCY BACK-UP OIL BURNER

The back-up two-stage oil firing set enables the burner to run on oil for short periods of time (max. 48 hours) in emergency situations (e.g. a gas supply blockage). The back-up set can provide 80% of the burner's regular power. When this option is present in the system, a fuel control switch is added to the control panel

- Control: Gas Modulating / Oil (80%) Two Stage
- NG**
- Max. height 1640 ft./500 mtr.
- Power 3x480V/60Hz***

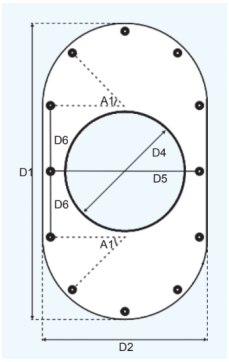
Type	Boiler capacity (93% eff)			Burner Input		Gas pressure		Max boiler backpresure		Motor / drive power		Turn down		Consumption		
	kCal	HP	kW	kW	MMBTU	mbar	PSI	mbar	"wc	kW	HP	Gas	Oil	Gas m3	Gas ft3	Oil(kg/h)
VGOIs-100	1,000,000	119	1163	1250	4	100-300	1,45-4,35	10	4.0	2.2	3.0	1:5	1:2	142	5015	84
VGOIs-150	1,500,000	178	1745	1875	6	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:2	213	7522	126
VGOIs-200	2,000,000	237	2326	2500	9	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:2	284	10029	168
VGOIs-250	2,500,000	296	2908	3125	11	100-300	1,45-4,35	10	4.0	5.5	7.5	1:5	1:2	355	12537	210
VGOIs-300	3,000,000	356	3489	3750	13	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:2	426	15044	252
VGOIs-350	3,500,000	415	4071	4375	15	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:2	487	17198	294
VGOIs-400	4,000,000	474	4652	5000	17	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:2	568	20059	336
VGOIs-450	4,500,000	534	5234	5625	19	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:2	639	22566	378
VGOIs-500	5,000,000	593	5815	6250	21	100-300	1,45-4,35	12	4.8	15.0	20.4	1:7	1:2	710	25073	420
VGOIs-600	6,000,000	711	6978	7500	26	100-300	1,45-4,35	13	5.2	18.5	25.2	1:7	1:2	852	30088	504
VGOIs-700	7,000,000	830	8141	8750	30	200-300	2,90-4,35	14	5.6	22	29.9	1:8	1:2	994	35103	588
VGOIs-800	8,000,000	948	9304	10000	34	300	4.35	15	6.0	30	40.8	1:8	1:2	1136	40117	672
VGOIs-1000	10,000,000	1186	11630	12500	43	300	4.35	17	6.8	37	50.4	1:10	1:2	1420	50147	840
VGOIs-1250	12,000,000	1423	13956	15000	51	300	4.35	17	6.8	45	61.2	1:10	1:2	1704	60176	1008

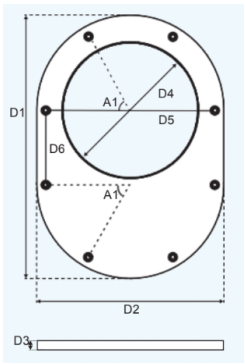
MONO-BLOCK LOW NOX GAS & LONG TERM OIL DUAL FUEL BURNER

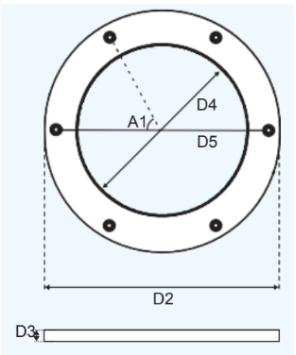
- Control: Gas and Oil (80%) Modulating
- NG**
- Max. height 1640 ft./500 mtr.
- Power 3x480V/60Hz***

Type	Boiler capacity (93% eff)			Burner Input		Gas pressure		Max boiler backpresure		Motor / drive power		Turn down		Consumption		
	kCal	HP	kW	kW	MMBTU	mbar	PSI	mbar	"wc	kW	HP	Gas	Oil	Gas m3	Gas ft3	Oil(kg/h)
VGOIs-100	1,000,000	119	1163	1250	4	100-300	1,45-4,35	10	4.0	2.2	3.0	1:5	1:5	142	5015	84
VGOIs-150	1,500,000	178	1745	1875	6	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:5	213	7522	126
VGOIs-200	2,000,000	237	2326	2500	9	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:5	284	10029	168
VGOIs-250	2,500,000	296	2908	3125	11	100-300	1,45-4,35	10	4.0	5.5	7.5	1:5	1:5	355	12537	210
VGOIs-300	3,000,000	356	3489	3750	13	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:5	426	15044	252
VGOIs-350	3,500,000	415	4071	4375	15	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:5	487	17198	294
VGOIs-400	4,000,000	474	4652	5000	17	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:5	568	20059	336
VGOIs-450	4,500,000	534	5234	5625	19	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:5	639	22566	378
VGOIs-500	5,000,000	593	5815	6250	21	100-300	1,45-4,35	12	4.8	15.0	20.4	1:7	1:5	710	25073	420
VGOIs-600	6,000,000	711	6978	7500	26	100-300	1,45-4,35	13	5.2	18.5	25.2	1:7	1:5	852	30088	504
VGOIs-700	7,000,000	830	8141	8750	30	200-300	2,90-4,35	14	5.6	22	29.9	1:8	1:5	994	35103	588
VGOIs-800	8,000,000	948	9304	10000	34	300	4.35	15	6.0	30	40.8	1:8	1:5	1136	40117	672
VGOIs-1000	10,000,000	1186	11630	12500	43	300	4.35	17	6.8	37	50.4	1:10	1:5	1420	50147	840
VGOIs-1250	12,000,000	1423	13956	15000	51	300	4.35	17	6.8	45	61.2	1:10	1:5	1704	60176	1008

COMBUSTOR MOUNTING FLANGE



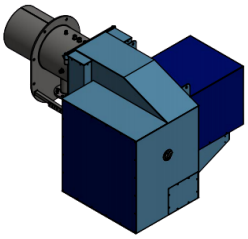


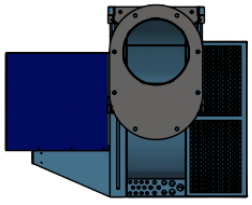


Art.Nr.	Burner type	D1 (in)	D2 (in)	D3 (in)	D4 (in)	D5 (in)	D6 (in)	A1 (deg)	Nuts (ISO)
100168	VG(O) Is-	44	24	15/32	20	22	9	45	M16
	1250	19/64	39/64		9/32	1/4	27/32		
100167	VG(O) Is-	44	24	15/32	18	22	9	45	M16
	1000	19/64	39/64		5/16	1/4	27/32		
100166	VG(O) Is-	32	22	15/32	16	20	9	60	M16
	700-800	31/64	41/64		11/32	9/32	27/32		
100165	VG(O) Is-	26	18	15/32	14	16	7 7/8	60	M16
	450-500-600	37/64	45/64		11/64	11/32			
100164	VG(O) Is-	26	18	15/32	12	16	7 7/8	60	M16
	350-400	37/64	45/64		13/32	11/32			
100163	VG(O) Is-	-	13	15/32	10	12	-	60	M12
	200-250-300		25/32		53/64	13/32			
100162	VG(O)Is-	-	13	15/32	9	12	-	60	M12
	150		25/32		29/64	13/32			
100161	VG(O) Is-	-	13	15/32	8	12	-	60	M12
	100		25/32		17/64	13/32			

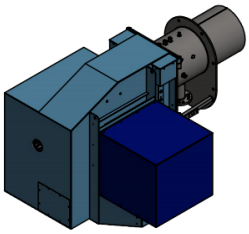
Larger capacities on request*

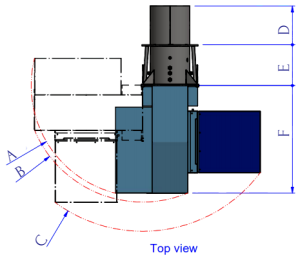
Overall dimensions



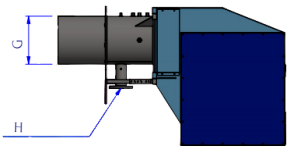


Back view

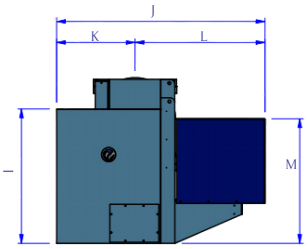




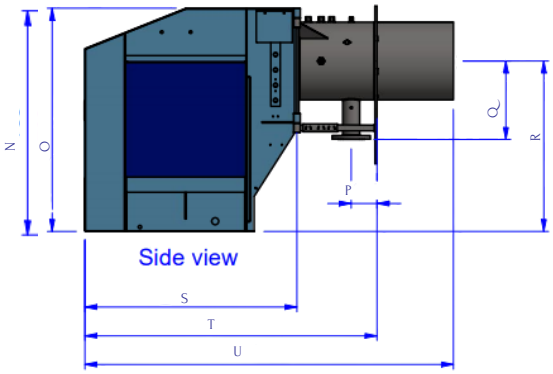
Top view



Side view



Front view



Side view

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
VGOIs-100	R874	R912	R1007	400	420	855	Ø201	ANSI50 / DN50	676	915	375	540	558	792	782	135	287	616	855	1275	1675
VGOIs-150	R874	R912	R1007	400	420	855	Ø231	ANSI50 / DN50	676	915	375	538	558	793	782	135	300	617	855	1275	1675
VGIOs-200	R874	R912	R1007	400	420	855	Ø267	ANSI65 / ANSI80 DN65 / DN80	676	915	375	540	558	791.5	781.5	135	340	616	855	1275	1675
VGOIs-250+300	R937	R979	R1118	400	420	915	Ø267	ANSI65 / ANSI80 DN65 / DN80	716	1025	410	615	648	-	857	135	340	667	915	1335	1735
VGOIs-350	R1040	R1104	R1191	400	420	1023	Ø306	ANSI65 / ANSI80 DN65 / DN80	836	1075	442	633	696	-	1007	135	360	771	1023	1443	1843
VGOIs-400	R1040	R1104	R1327	400	420	1023	Ø306	ANSI65 / ANSI80 DN65 / DN80	836	1235	442	793	708	-	1006.5	135	360	771	1023	1443	1843
VGOIs-450+500	R1039	R1104	R1327	400	420	1023	Ø351	ANSI65 / ANSI80 DN65 / DN80	836	1235	442	793	707	-	1007	135	381	771	1023	1443	1843
VGOIs-600	R1145	R1202	R1426	400	420	1110	Ø351	ANSI65 / ANSI80 DN65 / DN80	956	1416	560	857	807	-	1166.5	135	380	891	1110	1530	1930
VGIOs-700	R1145	R1202	R1426	400	420	1110	Ø406	ANSI65 / ANSI80 DN65 / DN80	956	1416	560	856	807	-	1167	135	410	891	1110	1530	1930
VGOIs-800	R1145	R1202	R1503	400	420	110	Ø406	ANSI65 / ANSI80 DN65 / DN80	956	1486	560	926	887	-	1167	135	410	891	1110	1530	1930
VGIOs-1000	R1313	R1366	R1590	400	470	1270	Ø456	ANSI100 / DN100	1006	1581	633	946	937	1543	1257	185	420	980	1270	1740	2140
VGIOs-1250	R1313	R1366	R1589	400	470	1270	Ø506	ANSI100 / DN100	1006	1581	633	948	937	1543	1257	185	445	980	1270	1740	2140

Duo-block

Duo-block burners are composed out of two units, connected by an air duct to transport the combustion air preheated in the burner unit towards the fan unit.

Key benefits of this setup are that the fan can be installed flexibly, which helps to significantly reduce noise levels in the boiler room.

All Vitotherm's burners carry the CE and EAC marks.

Our Duo-block burner solutions come with a gas control line and control panel. Please consult page 15..

Performance data

This section contains the standard performance data of a DUO-block burner in metric units.

DUO-BLOCK LOW NOX GAS BURNER

- Control Modulating
- NG**
- Max. height 1640 ft./500 mtr.
- Power 3x480V/60Hz***

Type	Boiler capacity (93% eff)			Burner Input		Gas pressure		Max boiler backpresure		Motor / drive power		Turn down	Consumption	
	kCal	HP	kW	kW	MMBTU	mbar	PSI	mbar	"wc	kW	HP	Gas	Gas m3	Gas ft3
VGIs-100	1,000,000	119	1163	1250	4	100-300	1,45-4,35	10	4.0	2.2	3.0	1:5	142	5015
VGIs-150	1,500,000	178	1745	1875	6	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	213	7522
VGIs-200	2,000,000	237	2326	2500	9	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	284	10029
VGIs-250	2,500,000	296	2908	3125	11	100-300	1,45-4,35	10	4.0	5.5	7.5	1:5	355	12537
VGIs-300	3,000,000	356	3489	3750	13	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	426	15044
VGIs-350	3,500,000	415	4071	4375	15	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	487	17198
VGIs-400	4,000,000	474	4652	5000	17	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	568	20059
VGIs-450	4,500,000	534	5234	5625	19	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	639	22566
VGIs-500	5,000,000	593	5815	6250	21	100-300	1,45-4,35	12	4.8	15.0	20.4	1:7	710	25073
VGIs-600	6,000,000	711	6978	7500	26	100-300	1,45-4,35	13	5.2	18.5	25.2	1:7	852	30088
VGIs-700	7,000,000	830	8141	8750	30	200-300	2,90-4,35	14	5.6	22	29.9	1:8	994	35103
VGIs-800	8,000,000	948	9304	10000	34	300	4.35	15	6.0	30	40.8	1:8	1136	40117
VGIs-1000	10,000,000	1186	11630	12500	43	300	4.35	17	6.8	37	50.4	1:10	1420	50147
VGIs-1250	12,000,000	1423	13956	15000	51	300	4.35	17	6.8	45	61.2	1:10	1704	60176
VGIs-1500	15,000,000	1779	17448	18750	64	300	4.35	18	7.2	55	74.9	1:10	2130	75220
VGIs-1500	16,200,000	1921	18844	20000	68	300	4.35	18	7.2	75	102.1	1:10	2272	80235

DUO-BLOCK LOW NOX GAS & EMERGENCY BACK-UP OIL BURNER

- Control: Gas Modulating / Oil (80%) Two Stage
- NG**
- Max. height 1640 ft./500 mtr.
- Power 3x480V/60Hz***

Type	Boiler capacity (93% eff)			Burner Input		Gas pressure		Max boiler backpresure		Motor / drive power		Turn down		Consumption		
	kCal	HP	kW	kW	MMBTU	mbar	PSI	mbar	"wc	kW	HP	Gas	Oil	Gas m3	Gas ft3	Oil(kg/h)
VGOIs-100	1,000,000	119	1163	1250	4	100-300	1,45-4,35	10	4.0	2.2	3.0	1:5	1:2	142	5015	84
VGOIs-150	1,500,000	178	1745	1875	6	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:2	213	7522	126
VGOIs-200	2,000,000	237	2326	2500	9	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:2	284	10029	168
VGOIs-250	2,500,000	296	2908	3125	11	100-300	1,45-4,35	10	4.0	5.5	7.5	1:5	1:2	355	12537	210
VGOIs-300	3,000,000	356	3489	3750	13	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:2	426	15044	252
VGOIs-350	3,500,000	415	4071	4375	15	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:2	487	17198	294
VGOIs-400	4,000,000	474	4652	5000	17	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:2	568	20059	336
VGOIs-450	4,500,000	534	5234	5625	19	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:2	639	22566	378
VGOIs-500	5,000,000	593	5815	6250	21	100-300	1,45-4,35	12	4.8	15.0	20.4	1:7	1:2	710	25073	420
VGOIs-600	6,000,000	711	6978	7500	26	100-300	1,45-4,35	13	5.2	18.5	25.2	1:7	1:2	852	30088	504
VGOIs-700	7,000,000	830	8141	8750	30	200-300	2,90-4,35	14	5.6	22	29.9	1:8	1:2	994	35103	588
VGOIs-800	8,000,000	948	9304	10000	34	300	4.35	15	6.0	30	40.8	1:8	1:2	1136	40117	672
VGOIs-1000	10,000,000	1186	11630	12500	43	300	4.35	17	6.8	37	50.4	1:10	1:2	1420	50147	840
VGOIs-1250	12,000,000	1423	13956	15000	51	300	4.35	17	6.8	45	61.2	1:10	1:2	1704	60176	1008

DUO-BLOCK LOW NOX GAS & LONG-TERM OIL DUAL FUEL BURNER

- Control: Gas and Oil (80%) Modulating
- NG**
- Max. height 1640 ft./500 mtr.
- Power 3x480V/60Hz***

Type	Boiler capacity (93% eff)			Burner Input		Gas pressure		Max boiler backpresure		Motor / drive power		Turn down		Consumption		
	kCal	HP	kW	kW	MMBTU	mbar	PSI	mbar	"wc	kW	HP	Gas	Oil	Gas m3	Gas ft3	Oil(kg/h)
VGOIs-100	1,000,000	119	1163	1250	4	100-300	1,45-4,35	10	4.0	2.2	3.0	1:5	1:5	142	5015	84
VGOIs-150	1,500,000	178	1745	1875	6	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:5	213	7522	126
VGOIs-200	2,000,000	237	2326	2500	9	100-300	1,45-4,35	10	4.0	4.0	5.4	1:5	1:5	284	10029	168
VGOIs-250	2,500,000	296	2908	3125	11	100-300	1,45-4,35	10	4.0	5.5	7.5	1:5	1:5	355	12537	210
VGOIs-300	3,000,000	356	3489	3750	13	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:5	426	15044	252
VGOIs-350	3,500,000	415	4071	4375	15	100-300	1,45-4,35	12	4.8	7.5	10.2	1:6	1:5	487	17198	294
VGOIs-400	4,000,000	474	4652	5000	17	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:5	568	20059	336
VGOIs-450	4,500,000	534	5234	5625	19	100-300	1,45-4,35	12	4.8	11.0	15.0	1:6	1:5	639	22566	378
VGOIs-500	5,000,000	593	5815	6250	21	100-300	1,45-4,35	12	4.8	15.0	20.4	1:7	1:5	710	25073	420
VGOIs-600	6,000,000	711	6978	7500	26	100-300	1,45-4,35	13	5.2	18.5	25.2	1:7	1:5	852	30088	504
VGOIs-700	7,000,000	830	8141	8750	30	200-300	2,90-4,35	14	5.6	22	29.9	1:8	1:5	994	35103	588
VGOIs-800	8,000,000	948	9304	10000	34	300	4.35	15	6.0	30	40.8	1:8	1:5	1136	40117	672
VGOIs-1000	10,000,000	1186	11630	12500	43	300	4.35	17	6.8	37	50.4	1:10	1:5	1420	50147	840
VGOIs-1250	12,000,000	1423	13956	15000	51	300	4.35	17	6.8	45	61.2	1:10	1:5	1704	60176	1008
VGOIs-1500	15,000,000	1779	17448	18750	64	300	4.35	18	7.2	55	74.9	1:10	1:5	2130	75220	1261
VGOIs-1500	16,200,000	1921	18844	20000	68	300	4.35	18	7.2	75	102.1	1:10	1:5	2272	80235	1345

COMBUSTOR MOUNTING FLANGE & OVERALL DIMENSIONS (ON DEMAND)

Larger capacities on request*

Guaranteeing customer success by customization

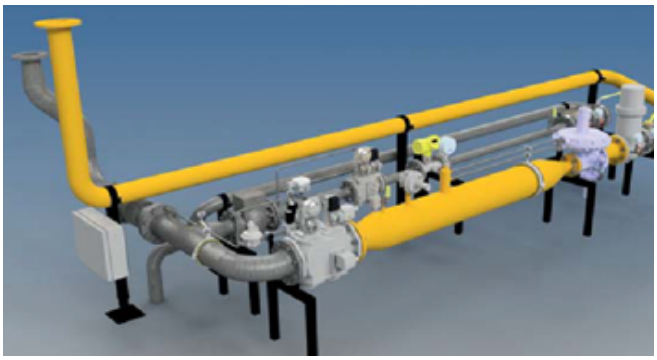
An important part of our success can be explained through the ability of Vitotherm´s engineers to customize our burner systems to all of our customer´s specific requirements.

Over the years, this has helped many companies to reach optimal efficiency and to boost our team´s creativity to build the perfect solution for you. Our team is more than happy to discuss your specific requirements for a tailored proposal.

Gas control line

Gas pressure reducer

A gas pressure reducer is usually a customized solution; Vitotherm staff have the necessary expertise to design and supply gas control lines.



For average gas volumes
Industrial spring-loaded gas pressure reducer, complete with outflow pipe and measurement cables, customized or designed for any required supply pressure, output pressure and volume.

For large gas volumes
Industrial gas-controlled gas pressure reducer, complete with outflow pipe and measurement cables, customized or designed for any required supply pressure, output pressure and volume.

Both gas lines can be delivered with a gas meter with an electronic volume corrector (EVC) – a MID certificate is also possible

Fuels

Vitotherm has a proven track record in delivering bio-gas related projects. These have included projects with gas released during ground drilling - all delivered to the customers satisfaction.

Vitotherm is also the partner you can count on when it comes to solutions for other gas types such as natural gas, LPG, LNG, bio-gas, fuel oil No. 2.

Control Panels

Control panels

The burner's standard control panel has the CE hallmark and complies with all applicable requirements related to the security of boilers and burner systems.

Customer-specific control mechanisms can also be designed and manufactured based on customer wishes and applicable regulations. This can involve visualization, security technology or the customers own wishes for switching devices. Vitotherm has all the know-how needed to do this.

BMS's

We can manufacture all types of control panels in compliance with locally applicable requirements. Examples include CSA/UL/EAC/AGA/CCC.

Combustor

Combustor

Vitotherm designs and supplies combustors for boilers with a capacity of 1 to 22 MW for burners with forced combustion air.

Our combustors offer the lowest NOx emission levels and optimal efficiency. The excess air needed to burn gas is controlled in order to minimize it. In fact, results of less than 1% oxygen are no exception. Thanks to performance like this, you can save at least 1 to 1.5% in gas consumption.

Combination of multiple fuels

The combustor is constructed in such a way as to enable fuel combinations, for instance natural gas and biogas. In our Tri Fuel models, such as LNG/LPG/Diesel for example, it is possible to switch fully automatically between the various fuel types.

Oil-fueled feature

The Vitotherm combustor can be expanded with a modulating or high/low oil feature as Dual Fuel model.

External smoke gas re-circulation

The Vitotherm FGR model uses a frequency drive gas fan controlled by a pressure sensor on output pressure and an adjustable control valve to add just the right amount of smoke gas to the combustion in order to reduce NOx emissions.

This solution is used for systems with a combustion chamber of limited size or in cases where an exceptionally low NOx emission level is required.

In addition to the familiar suction through the combustion air fan, this Vitotherm FGR is an excellent alternative that also offers the following advantages:

- No influence on the characteristic of the combustion air fan and increasing of the engine power.
- No oxygen decreases when injecting, thereby enabling more stable and controllable combustion.

Adjustable combustion curve using a servomotor through the BMS.

Retrofit

Vitotherm can also offer customer-specific expert advice on low-NOx retrofit solutions for your existing boiler system.

Optional components

Optional components

Optional components can be added to the burner to adapt it to special circumstances or add new functions.

Vitopack

The Vitopack is a premade installation that integrates a gas train, a gas line adapter with butterfly valve, a control panel and a frequency drive. Vitopack 1 is the standard configuration.

Vitopack 2 is also available, and includes a blast tube mounting with refractory and pre-wiring of the boiler. Both configurations come with the option of being fully pre-wired, with connections to all parts of the burner system.

Vitotherm gas line adapter

A Vitotherm gas line adapter connects the gas train to the burner head. Vitotherm offers the option of a custom design that fits your installation.
The gas line adapter is made of powder-coated steel. A standard delivery includes all components necessary for installation (bolts, nuts, rings, gaskets).

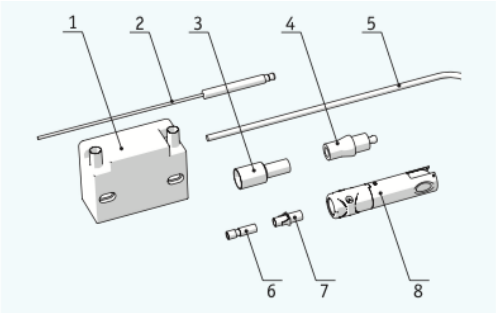
High pressure gas regulator set

3-8 bar to 200-300 mbar

A high-pressure gas regulator set can be added to a standard gas train to adapt it to higher gas supply pressures. The set can reduce supply pressures of 8-3 bar to 200-300 mbar.

Spareparts set

This set contains parts of the burner that are most likely to be replaced within 1 or 2 years.



1. Ignition unit
2. Ignition electrode
3. Cable connector (female)
4. Cable connector (male)

Gas train actuator heating elements

Heating elements can be placed on the actuator of the gas train. The heating elements keep the hydraulic oil in the actuator up to temperature in cold environments.
Vitotherm recommends including this option in an outdoor burner system or in a cold boiler house.

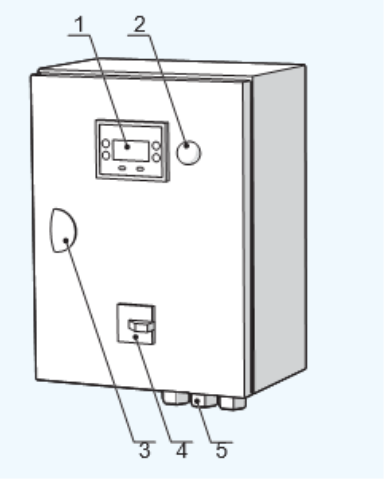
Flue gas valve circuit

A flue gas valve circuit controls the flue gas valve of CO2 systems equipped with a CO2 collector with multiple CO2 sources. The circuit closes the flue gas valve in the flue gas outlet to the CO2 collector when CO is detected in the flue gas of the system (e.g. when the burner is activated). This prevents CO from entering the CO2 collector.

Vitotherm CO detector

type VCD2 with sampling pump

A Vitotherm CO detector checks the flue gas that is transported from the burner to external applications (e.g. greenhouses) for carbon monoxide. The CO detector is mounted on the back of the boiler.



1. Interface & display
2. Failure feedback light
3. Key lock
4. Control switch
5. Cable connectors

O2 controller

LT3C

An O2 controller regulates the amount of O2 that is added to the fuel mixture. This compensates for differences in gas quality (caloric value) and improves the efficiency of the burner.

The O2 controller can be expanded with a CO controller. This allows the O2 controller to recognize the O2 breaking point after which CO is created and adjust the O2 percentage accordingly.

Facilities for a one-pass boiler

A one-pass boiler must be equipped with a safety circuit that prevents the flue gases and return water from becoming too cold. This can cause condensation to form in the flue gas pipes, causing corrosion damage.
The safety circuit consists of:

- An extra max. boiler temperature thermostat
- An extra low water level sensor

When this option is present in the system, a fuel control switch is added to the control panel.

Seaworthy packaging

If the burner needs to be shipped overseas, it can be packed in wooden crates treated according to ISPM 15.

Remote access monitoring

Vision Control

A server solution is available that enables remote access to information about the burner (e.g. measurement data, logs, error codes). This enables Vitotherm to monitor the burner and provide improved technical support.

Remote access monitoring is recommended for burners in remote locations.

Service

At Vitotherm...

We employ certified, highly qualified and above all, motivated staff to help customers like you every day, any time (24/7 support).

Our staff has been trained to be more than just service providers who maintain and inspect your burner system, they also cast a critical eye over boiler room set-ups, drawing on their own specialist knowledge about the layout and operation of such facilities.By providing advice on possible adjustments, they can help you to obtain optimal performance from your complete system. Important themes such as energy saving can also be discussed.

One of our key concerns at Vitotherm is ensuring the highest possible availability of systems, to guarantee production continuity and maximum efficiency this is why we are proud to be recognized for easy commissioning and maintenance in all our products.

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