HTS 450 S/90.85

SILICON CARBIDE BURNER CONE

HTS 450 S/90 - HV Ø85

Maximum output [kW]		450
Fuel pressure at maximum capacity [mbar] (measured at $P_{1.F}$ – pag. 2)	Natural gas (8250 kcal/Nm^3)	82
	LPG (22500 kcal/Nm^3)	
Air pressure at maximum capacity [mbar] (measured at $P_{1.A}$ – pag. 2)	Natural gas (8250 kcal/Nm^3)	94
	LPG (22500 kcal/Nm^3)	
Flame length at maximum capacity [mm] (measured at the end of the burner body)	Natural gas (8250 kcal/Nm^3)	700
	LPG (22500 kcal/Nm^3)	
Flame speed from maximum capacity [m/s] (with 20% excess of air)	High speed	133
Flame detection	Ionization flame detection electrode or UV cell	
Fuel	Natural gas (LPG and other fuel on request)	

All information is based on laboratory tests in a neutral pressure chamber. Different conditions and chamber sizes can affect the data.
All information is based on a standard combustor design. Modifications to the combustor will alter performance and pressures.
All data are based on gross calorific values.
All information is based on tests conducted on generally acceptable air and gas piping systems.
Data reported in this technical sheet are subject to change without notice.
Performance data and dimensions are guidelines only and are not binding.
ELCO reserves the right to modify the construction and / or configuration of its products at any time

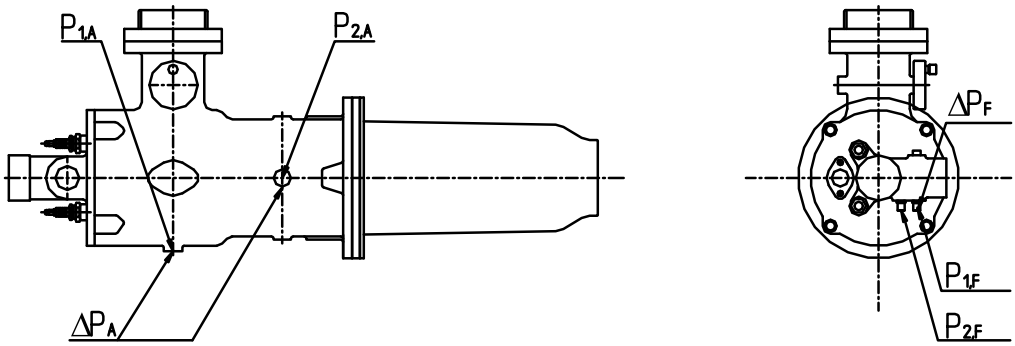
CHARACTERISTICS OF THE BURNER

Fuel 1: CH4
Fuel 1 diaphragm: Ø20

Fuel 2: LPG
Fuel 2 diaphragm: Ø15

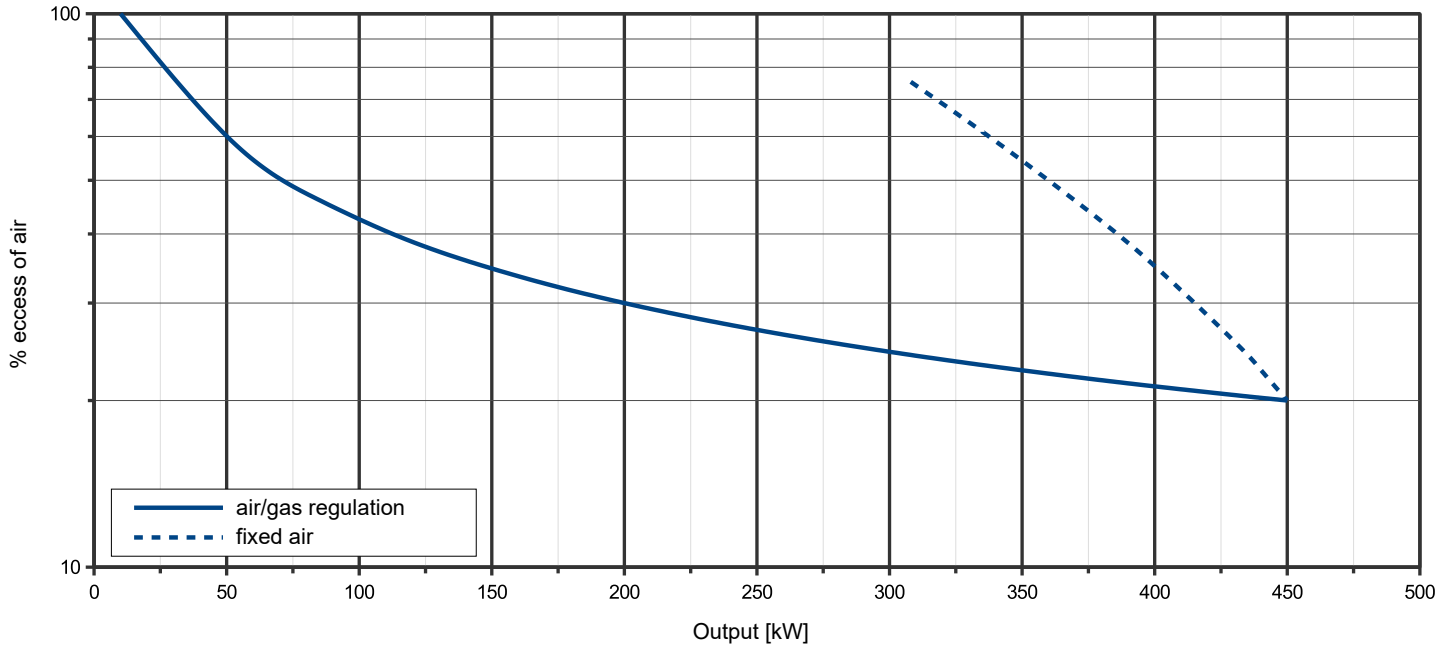
Comburent: Air
Comburent diap.: Ø100

Cone: Ø85



OPERATING RANGE

TYPICAL OPERATING RANGE



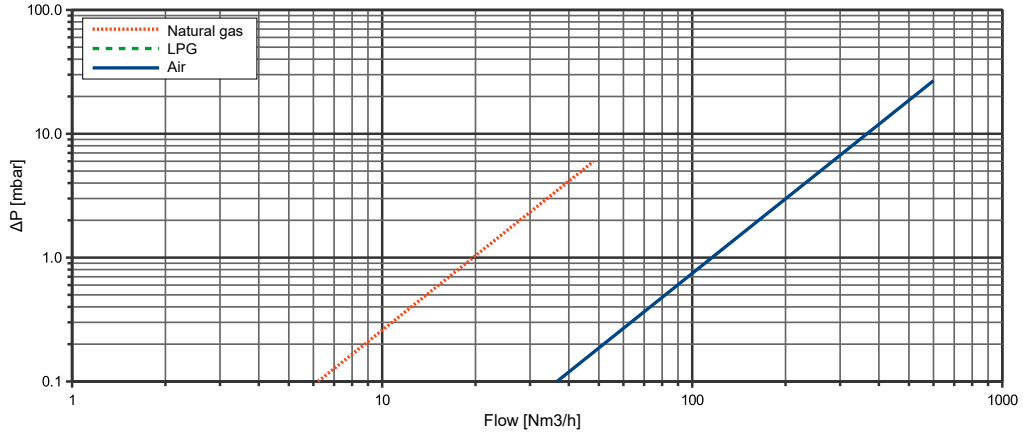
LEGENDA

Q_F Fuel flow
Q_A Air flow
$P_{1.F}$ Fuel pressure upstream the diaphragm
$P_{1.A}$ Air pressure upstream the diaphragm
$P_{2.F}$ Fuel pressure downstream the diaphragm
$P_{2.A}$ Air pressure downstream the diaphragm
ΔP_F Differential fuel pressure between ports 1 and 2
ΔP_A Differential air pressure between ports 1 and 2

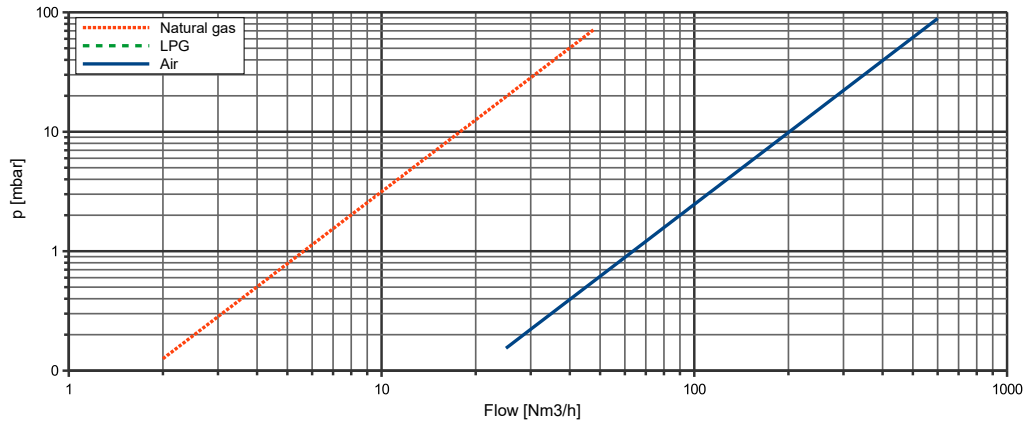
FLOW RATE CURVES

FUEL				
Q_F [Nm³/h]	$P_{1.F}$ [mbar]		ΔP_F [mbar]	
	Natural gas	LPG	Natural gas	LPG
2	0.13		0.01	
3	0.28		0.02	
6	1.13		0.09	
8	2.01		0.17	
10	3.15		0.26	
12	4.53		0.37	
14	6.17		0.51	
16	8.05		0.66	
18	10.19		0.84	
20	12.58		1.04	
22	15.23		1.25	
24	18.12		1.49	
26	21.26		1.75	
28	24.66		2.03	
30	28.31		2.33	
32	32.21		2.65	
34	36.36		2.99	
36	40.77		3.36	
38	45.42		3.74	
40	50.33		4.14	
42	55.49		4.57	
44	60.90		5.01	
46	66.56		5.48	
48	72.48		5.97	

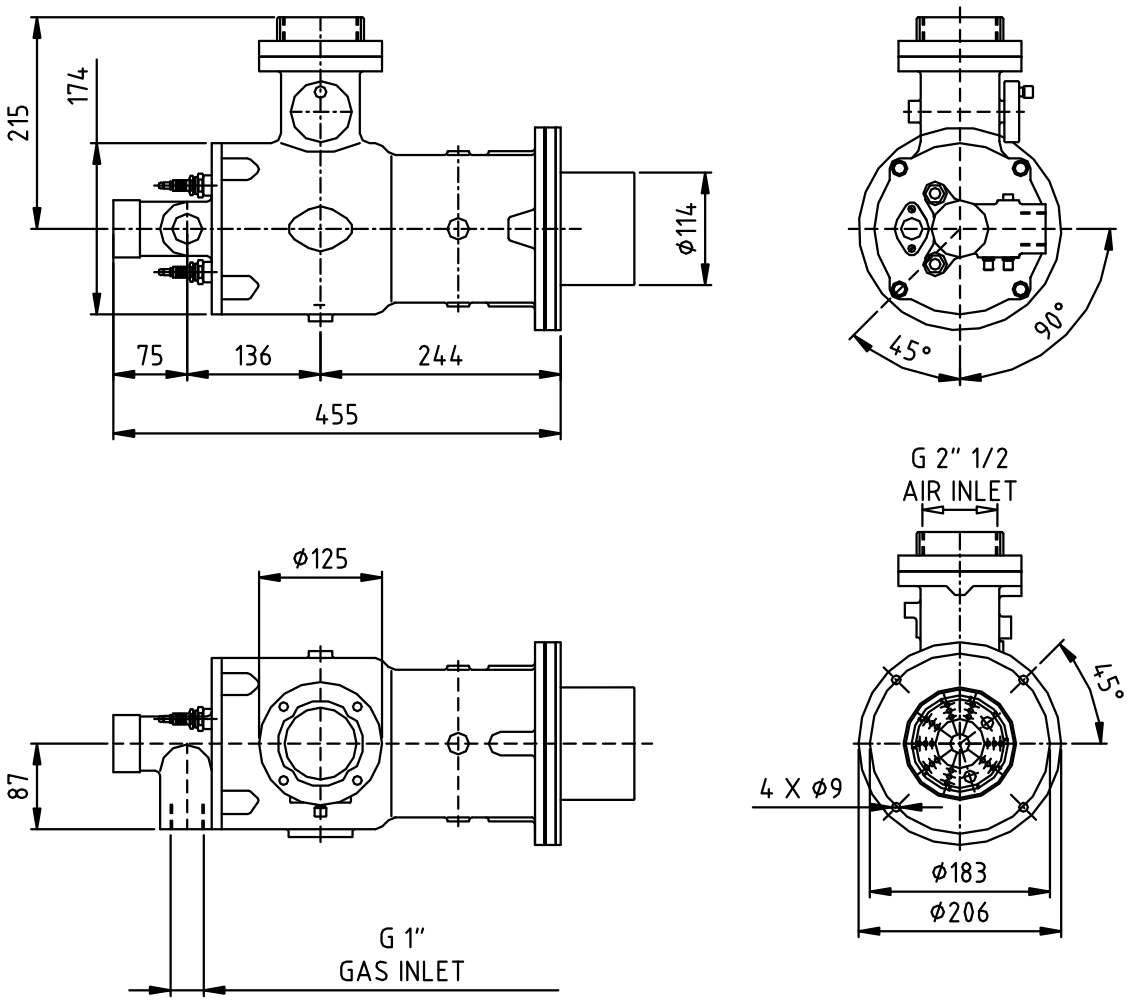
AIR		
Q_A [Nm³/h]	$P_{1.A}$ [mbar]	ΔP_A [mbar]
25	0.15	0.05
50	0.62	0.19
75	1.39	0.42
100	2.46	0.75
125	3.85	1.16
150	5.55	1.68
175	7.55	2.28
200	9.86	2.98
225	12.48	3.77
250	15.40	4.66
275	18.64	5.64
300	22.18	6.71
325	26.03	7.87
350	30.19	9.13
375	34.66	10.48
400	39.44	11.92
425	44.52	13.46
450	49.91	15.09
475	55.61	16.81
500	61.62	18.63
525	67.93	20.54
550	74.56	22.54
575	81.49	24.64
600	88.73	26.83



STATIC PRESSURE REQUIRED



DIMENSIONS [mm]



Silicon carbide burner cone: