PHOENIX VH

Direct Fired Burner

Specification Sheet
Models VH015 – VH040

Algas-SDI Making Fuel Gases Easier to Use

NG | LPG | SNG | CNG | RNG

Model Specifications

Parameter		VH015		VH025		VH040	
Maximum Input, BTU/hr		150,000		250,000		400,000	
Minimum Input, BTU/hr		15,000		25,000		40,000	
Combustor Type High-velocity (HV), Medium-velocity (MV)		HV	MV	HV	MV	HV	MV
Inlet Fuel Pressure, "w.c.	Natural Gas	13.0	7.5	12.0	6.0	9.4	5.1
Inlet Air Pressure, "w.c. 10% excess air at maximum input	Natural Gas	17.0	11.0	16.0	10.0	14.7	9.4
High fire Visible Flame Length, inches Measured from the outlet end of the combustor	Natural Gas	9	11	12	14	14	18
Approximate Flame Velocity, ft/s Approximately 10% excess air at maximum output		440	270	440	260	540	320
Maximum Operating Temperature, °F	Alloy combustor	1,750					
	Ceramic combustor	2,500					
	Refractory combustor	2,800					
Maximum Combustion Air Temperature, °F For higher temperatures contact Algas-SDI		300					
Flame Detection	Flame Rod	For operating temperatures up to 2,200°F					
	UV Scanner	½" or ¾" NPT adapters					
Fuels For any other mixed gas, contact Algas-SDI		Natural gas					
Burner Weight, lbs	Alloy combustor	20					
	Ceramic combustor	22					
	Refractory combustor	35					

- All information is based on laboratory testing in neutral (0"w.c) pressure chamber.
- Different chamber conditions may affect the data.
- All inputs based upon standard conditions; 1 atmosphere, 70°F, and higher heating values (HHV).
- For applications other than standard conditions, contact Algas-SDI.
- Algas-SDI reserves the right to change the design and/or configuration of Algas-SDI products.

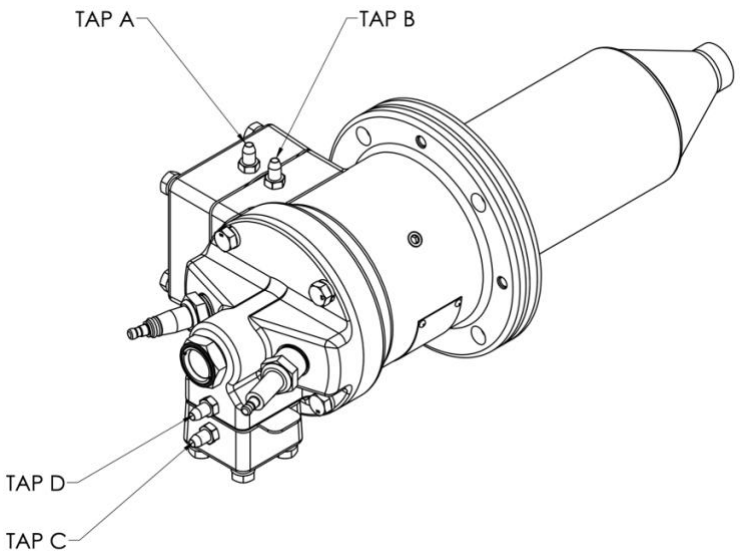
Setup Specifications

ΔP Across Orifice vs. Input (On-ratio operation)

					Input BTU/hr		
			Taps	Orifice Size (mm)	75,000	112,500	150,000
VH015	**ΔP Across Orifice** ("w.c. ± 5%)	Natural Gas	C-D	7.0	1.0	2.5	3.6
		Air	A-B	23.0	1.4	3.7	5.5
					125,000	187,500	250,000
VH025	**ΔP Across Orifice** ("w.c. ± 5%)	Natural Gas	C-D	9.1	0.7	1.6	3.1
		Air	A-B	29.0	1.2	2.9	5.0
					200,000	300,000	400,000
VH040	**ΔP Across Orifice** ("w.c. ± 5%)	Natural Gas	C-D	10.8	1.1	2.4	4.3
		Air	A-B	37.0	1.3	3.2	5.0

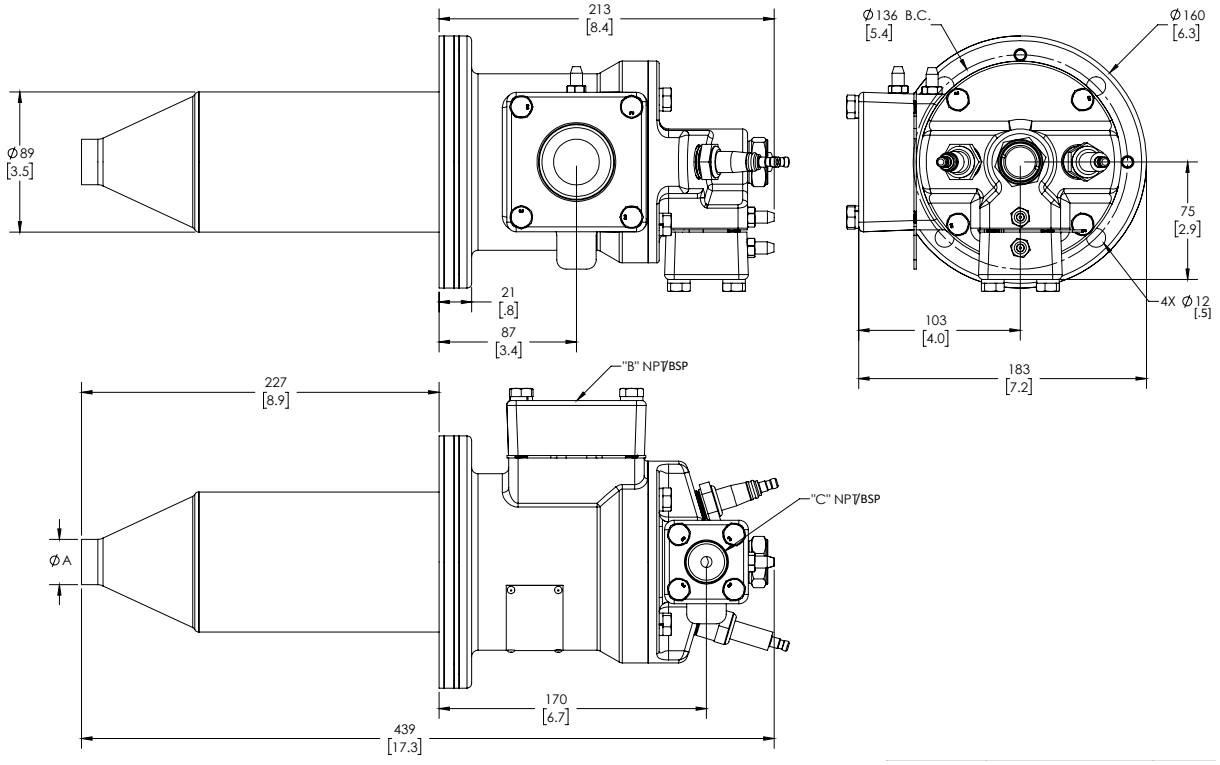
- Plumbing of air and gas will affect accuracy of orifice readings.
- Information is based on acceptable/industry-established air and gas piping practices.

Pressure Tap Locations



Product Dimensions – Alloy Combustor

mm [inches]

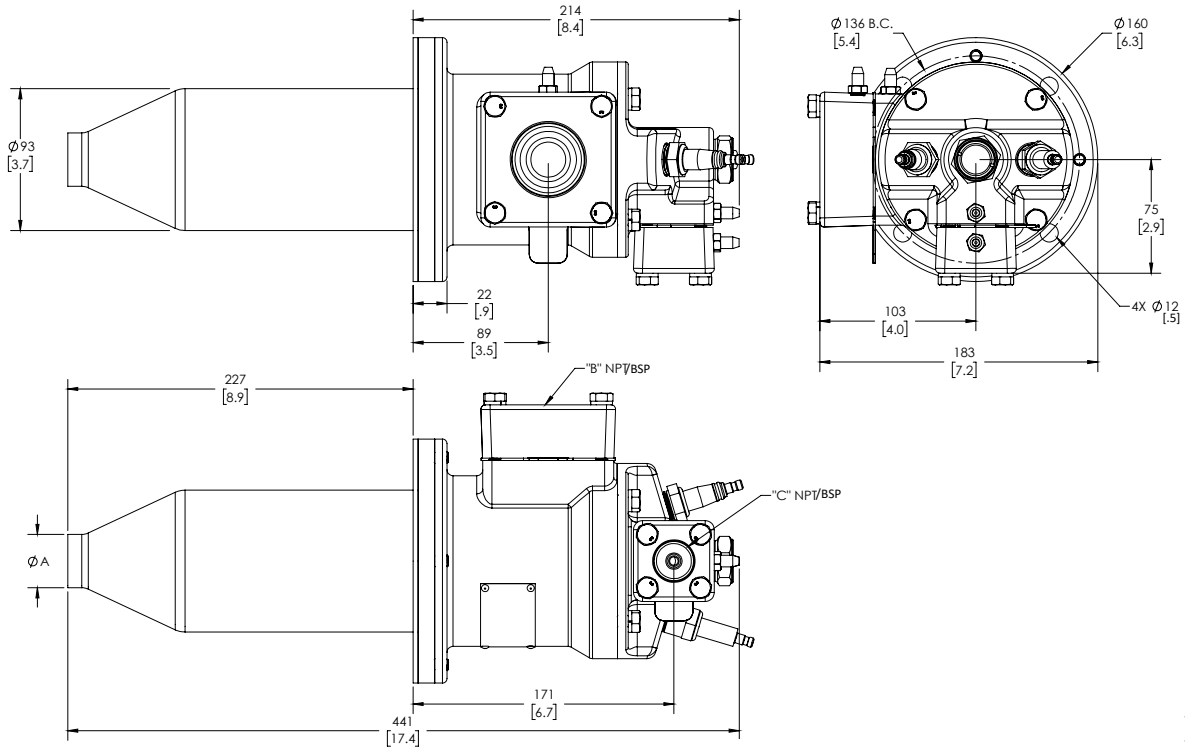


Model	Combustor outlet diameter* ("A")		Air inlet ("B")	Fuel inlet ("C")
	High Velocity	Medium Velocity		
VH015	Ø25.0 [1.0]	Ø32.0 [1.3]	1.5"	0.5"
VH025	Ø32.0 [1.3]	Ø42.0 [1.7]	1.5"	0.5"
VH040	Ø42.0 [1.7]	Ø60.0 [2.4]	2.0"	0.75"

* Inside dimension of the combustor outlet

Product Dimensions – Ceramic Combustor

mm (inches)

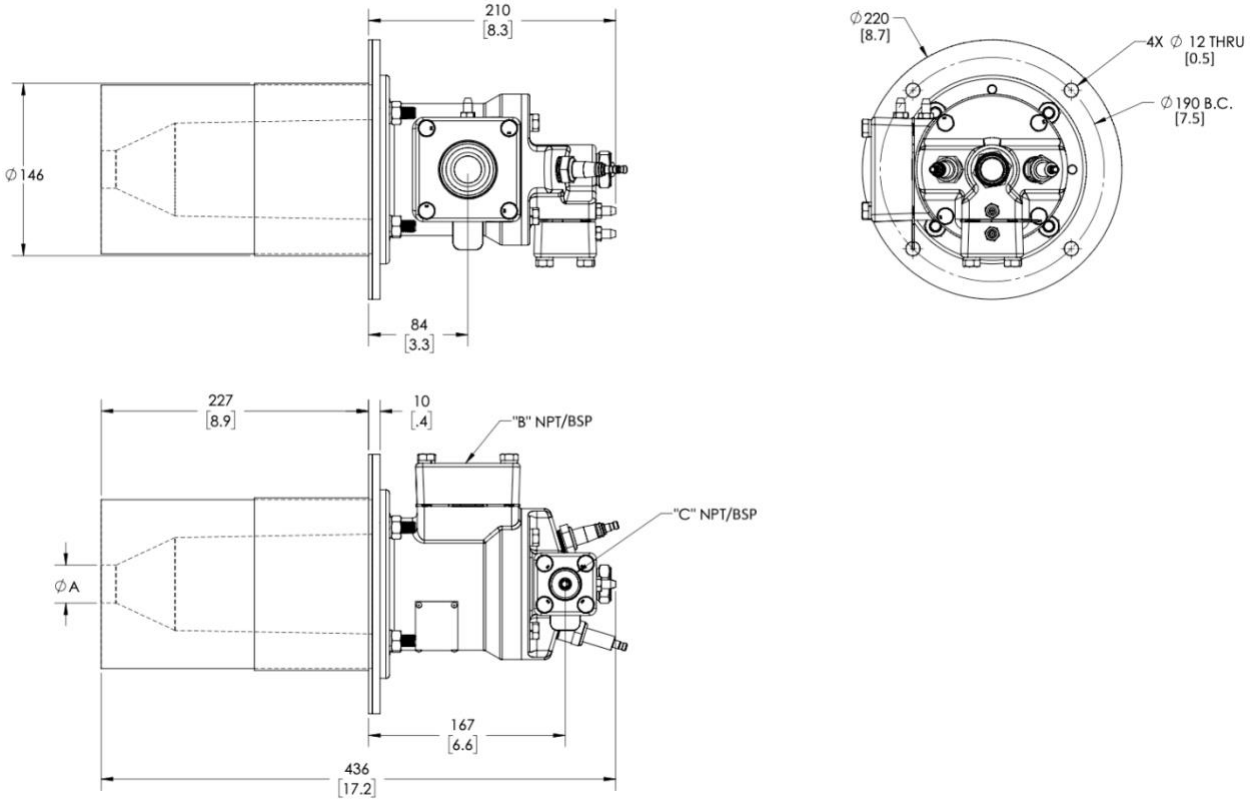


Model	Combustor outlet diameter* (“A”)		Air inlet (“B”)	Fuel inlet (“C”)
	High Velocity	Medium Velocity		
VH015	Ø25.0 [1.0]	Ø32.0 [1.3]	1.5”	0.5”
VH025	Ø32.0 [1.3]	Ø42.0 [1.7]	1.5”	0.5”
VH040	Ø42.0 [1.7]	Ø60.0 [2.4]	2.0”	0.75”

* Inside dimension of the combustor outlet

Product Dimensions – Refractory Combustor

mm (inches)



Model	Combustor outlet diameter* ("A")		Air inlet ("B")	Fuel inlet ("C")
	High Velocity	Medium Velocity		
VH015	Ø25.0 [1.0]	Ø32.0 [1.3]	1.5"	0.5"
VH025	Ø32.0 [1.3]	Ø42.0 [1.7]	1.5"	0.5"
VH040	Ø42.0 [1.7]	Ø60.0 [2.4]	2.0"	0.75"

* Inside dimension of the combustor outlet

Algas-SDI International, LLC
20224 66th Ave S.
Kent, Washington 98032
USA

Ph.: +1.206.789.5410
Fax.: +1.206.789.5414

www.algas-sdi.com