

Capacity Range:
4,500 to 1,325,000 BTU/hr (1 to 350 kW)



Hijectors

Hijectors are designed to use high pressure gas (up to 35 psig) to entrain all the air needed to make a complete combustible mixture and to deliver it to the burners at the highest possible pressure.

How It Works

Hijectors are designed along thoroughly proven lines, but the external arrangement of the parts has been changed to permit incorporation of several refinements that benefit the installation and maintenance engineer. By reversing the usual operation of the air shutter and locating it on the body, the following advantages occur:

- Orifice spud may be removed without disconnecting piping
- Overall length of the unit is materially cut down
- Orifice and air entrainment noises reduced
- Air entrainment noises reduced
- Shutter cannot get lost even when backed out of the way

A mounting boss with tapped holes simplifies mounting the Hijector solidly on a furnace or appliance.

To secure the best operation when using high pressure gas, the relation between burner area and orifice area must be correct and the right size Hijector must be used. Piping between Hijector and burners should be large enough and straight enough to prevent undue loss of mixture pressure.

Where high pressure gas is available, Hijectors eliminate the need for air blowers or pressure air for combustion jobs, and are simple to install, inexpensive to use and easy to operate.

Applications

- Complete combustible air/gas mixtures



Diverse Combustion Technologies. One Reliable Source.

Hijector Capacity Table – Manufactured & Mixed Gases

Kind of Gas Average BTU	Coke Oven Gas 500-550		Carb. Water Gas 500-550		Mixed Nat. – Mfd. Gas 750-850	
Specific Gravity	0.42		0.55		0.60	
Air/Gas Ratio	4.7/1		4.5/1		7.5/1	
Gas Pressure	10 psig		10 psig		15 psig	
Mixture Pressure	3.4" W.C.		3-4" W.C.		2.1" W.C	
Gas Capacity	Catalog Number	Approx. Burner Area* Sq. In.	Catalog Number	Approx. Burner Area* Sq. In.	Catalog Number	Approx. Burner Area* Sq. In.
40	6H-65	0.080	6H-63	0.070	6H-66	0.129
60	6H-61	0.100	6H-56	0.110	6H-57	0.218
80	6H-56	0.141	6H-54	0.155	8H-55	0.318
100	8H-54	0.198	6H-53	0.181	8H-54	0.357
125	8H-52	0.263	8H-51	0.229	10H-53	0.417
150	8H-50	0.320	8H-49	0.273	10H-51	0.530
175	10H-48	0.377	8H-47	0.315	12H-49	0.629
200	10H-46	0.427	10H-44	0.377	12H-5/64	0.719
250	10H-42	0.570	10H-41	0.471	12H-44	0.870
300	12H-40	0.626	10H-37	0.552	16H-3/32	1.040
350	12H-37	0.705	12H-34	0.628	16H-38	1.220
400	12H-34	0.804	12H-31	0.735	20H-7/64	1.410
450	16H-32	0.877	12H-30	0.844	20H-33	1.500
500	16H-1/8	1.020	16H-29	0.945	20H-31	1.700
550	16H-29	1.210	16H-28	1.010	20H-30	1.940
600	16H-28	1.290	16H-26	1.110	24H-29	2.180
650	20H-26	1.410	16H-24	1.180	24H-28	2.330
700	20H-24	1.510	16H-21	1.290	24H-27	2.440
750	20H-21	1.590	20H-18	1.400	24H-25	2.630
800	20H-21	1.660	20H-18	1.470	24H-23	2.800
850	20H-19	1.800	20H-17	1.530		
900	20H-18	1.870	20H-15	1.660		
950	24H-17	1.950	20H-13	1.750		
1000	24H-16	2.040	20H-12	1.830		
1100	24H-13	2.230	20H-8	2.020		
1200	24H-10	2.440	24H-5	2.160		
1300	24H-7	2.650	24H-3	2.360		
1400	24H-5	2.750	24H-1	2.650		
1500			24H-15/64	2.800		
1600			24H-B	2.950		

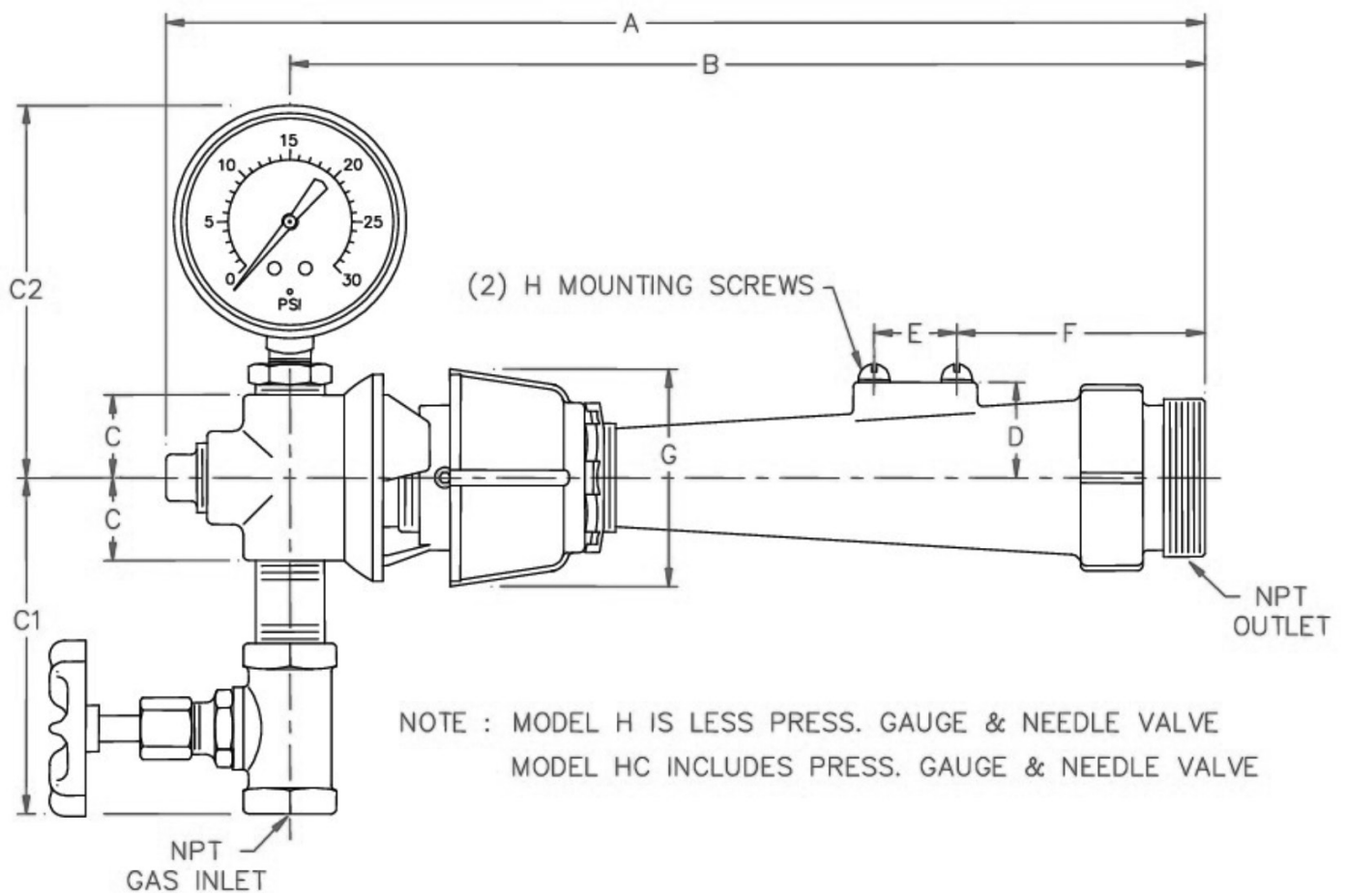
Hijector Capacity Table – Natural Gas and Propane

Kind of Gas Average BTU	Natural Gas 950-1200		Propane 2500		Burner Area Data
Specific Gravity	0.65		1.52		<i>* Burner areas shown in capacity tables are based on discharge coefficient of 100%. These areas should be multiplied by one of the following factors according to the type of burner used with the Hijector.</i>
Air/Gas Ratio	10/1		24/1		
Gas Pressure	25 psig		25 psig		
Mixture Pressure	1.8" W.C.		0.8" W.C.		
Gas Capacity CFH	Catalog Number	Approx. Burner Area* Sq. In.	Catalog Number	Approx. Burner Area* Sq. In.	
10	6H-78	0.050	6H-76	0.202	<i>Flame retaining of piloted burners and blast tips. Also pepper box type tunnel burners.</i>
15	6H-76	0.080	6H-73	0.293	
20	6H-74	0.103	8H-70	0.404	
30	6H-70	0.159	8H-66	0.560	<i>Factor = 1.3</i>
40	16H-68	0.195	10H-61	0.780	<i>Annular or single port type, round or flat nose tunnel burners.</i>
50	8H-64	0.262	12H-57	0.943	
60	8H-61	0.308	12H-3/64	1.130	<i>Factor = 1.3</i>
70	8H-59	0.338	16H-55	1.380	
80	10H-57	0.372	16H-54	1.550	<i>Venturi type steel tunnel burners.</i>
90	10H-3/6	0.443	16H-53	1.810	
100	10H-55	0.543	16H-1/16	2.000	<i>Factor = 0.8</i>
120	10H-54	0.610	20H-21	2.290	
140	12H-53	0.712	20H-50	2.500	
160	12H-52	0.813	20H-5/64	3.120	
180	12H-51	0.905	24H-45	3.440	
200	16H-50	0.986	24H-44	3.780	
220	16H-49	1.080	24H-43	4.050	
240	16H-5/6	1.230			
260	16H-46	1.320			
280	16H-45	1.350			
300	20H-44	1.490			
320	20H-43	1.590			
340	20H-42	1.760			
360	20H-41	1.860			
380	20H-40	1.930			
400	20H-39	2.000			
450	24H-36	2.280			
500	24H-34	2.480			
550	24H-32	2.710			
600	24H-31	2.900			

Hijector Capacity Multiple Table

Gas Pressure Listed	For Pressures Other Than Listed							
	5#	10#	15#	20#	25#	30#	35#	40#
10#	0.709	1.000	1.220	1.410	1.58	1.73	1.87	2.00
15#	0.578	0.815	1.000	1.150	1.29	1.41	1.53	1.63
20#	0.447	0.631	0.775	0.895	1.00	1.09	1.18	1.26

Dimensions



Dimensions

Catalog Numbers		Outlet Pipe Size NPT	Inlet Pipe Size NPT	A	B	C	C1	C2	D	E	F	G	H	Weight without NV and Press. Gauge (lbs)
With NV and Press. Gauge	Without NV and Press. Gauge													
6HC	6H	¾	3/8	7-1/4	13/16	3-7/16	4/14	---	---	---	2-3/8	2-3/8	---	2.5
8HC	8H	1	3/8	9-1/16	13/16	3-7/16	4-1/4	7/8	1	2-1/8	2-3/8	2-3/8	¼"-20	3.5
10HC	10H	1-1/4	½	11-9/16	1	4-1/16	4-1/2	1-1/8	1	2-3/4	2-5/8	2-5/8	¼"-20	5.0
12HC	12H	1-1/2	½	12-9/16	1	4-1/16	4-1/2	1-3/16	1	3	2-5/8	2-5/8	¼"-20	6.0
16HC	16H	2	¾	16-3/8	1-3/8	4-3/4	5	1-1/2	1	3-1/4	3-5/8	3-5/8	¼"-20	12.0
20HC	20H	2-1/2	¾	19-5/16	1-3/8	4-3/4	5	1-13/16	1	3-5/8	3-5/8	3-5/8	¼"-20	17.0
24HC	24H	3	1	23-7/16	1-1/2	5-3/4	5-3/16	2-1/16	1-1/2	4-3/4	4-1/4	4-1/4	3/8"-16	22.0



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