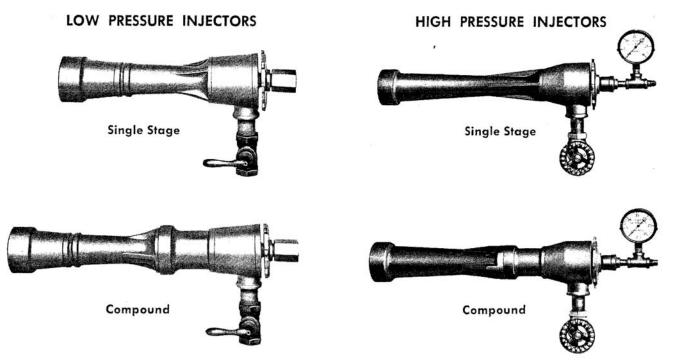
## Eclipse Atmospheric

# Injectors



Eclipse Atmospheric Injectors are simple, low cost, adjustable mixers designed to provide an air/gas mixture to one or more burners. Atmospheric injectors use the kinetic energy of a stream of gas to entrain part or all of the air required for combustion.

Two series of injectors are available; "Low Pressure", for use with gases up to 28"w.c. and "High Pressure", for gases from 1 psig to 30 psig. Both are available as either "Single Stage" or "Compound" units depending on the type of gas used. Compound Injectors employ an additional sleeve which assists in entrainment for higher BTU gases.

Standard orifice spuds are made of brass, but steel or other material can also be furnished for use with gases containing sulphur or other corrosive gases. The orifices listed are standard sizes. However, they can be drilled to any desired size or furnished blank. To prevent delays in shipment, the customer should specify either the orifice size desired, or the type and pressure of the gas to be used. Orifice size will be determined by the factory if no size is specified by the customer.

#### Low Pressure Injectors (Up to 28"w.c.)

Low Pressure Injectors entrain 30 to 50% of the combustion air required (depending upon the type of system) but sufficient secondary air should be provided around the burner outlet to complete combustion. Low pressure, single stage injectors are suggested for use with low and medium BTU gases up to 1200 BTU.

For gases from 1200 BTU to 3300 BTU, a compound injector should be used.

These mixers feature an adjustable air shutter and an integral gas flow adjusting needle. They can be purchased with or without a gas shut-off cock. Single stage injectors are available in sizes from 1/2" to 5". Compound injectors can be purchased in sizes from 1" to 5".

## High Pressure Injectors (1 to 30 psig)

Eclipse High Pressure Injectors are designed to entrain all or part of the air required for combustion and deliver the mixture to the burner or burner manifold at a high enough pressure to prevent backfiring. These mixers can maintain a constant air/gas ratio throughout a range of turndown. High pressure, single stage injectors can be used for low and medium BTU gases up to 1100 BTU. Either a single stage or compound injector can be used for gases from 750 to 1100 BTU. For gases above 1100 BTU, a compound injector should be used.

Gas flow adjustment is provided by an external needle valve at the gas inlet. Air flow is adjusted by an integral air shutter. These mixers can be purchased with or without the gas adjusting valve and gas pressure gauge. Single stage injectors are available in sizes from 3/4" to 5". Compound injectors are available in sizes from 1" to 5".

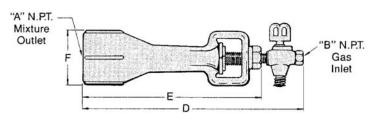
#### Low Pressure Injectors (Capacities, CFH)

Single Stage Injectors				Compound Injectors					
Catalog	Mixture	xture Nat. Gas Std. Orifice Ca		Catalog	Propane & Butane	Std. Orifice Size			
Number	Outlet	BTU/hr*	Size	Number	BTU/hr**	Propane	Butane		
TR-2	1/2"	10,000	#55	-	-	-	-		
TR-3A	3/4"	12,000	#54	-	-	-	-		
T-3	3/4"	16,000	#38	-	-	-	-		
T-4A	1"	20,000	#49	-	-	-	-		
T-4	1"	25,000	7/64"	T-40	27,000	#50	#53		
T-5	1-1/4"	40,000	9/64"	T-50	45,000	#42	#47		
TR-6	1-1/2"	55,000	5/32"	TR-60	62,000	#31	#37		
TR-8	2"	90,000	13/64"	TR-80	100,000	#29	#30		
TR-10	2-1/2"	140,000	9/32"	TR-100	155,000	#18	#27		
TR-12	3"	200,000	3/8"	TR-120	220,000	#9	#18		
TR-16	4"	340,000	7/16"	TR-160	375,000	1/4"	#3		
TR-20	5"	540,000	9/16"	TR-200	590,000	#1	15/64"		
	1	1				1			

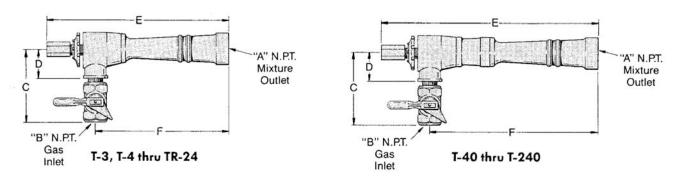
<sup>\* 1040</sup> BTU Natural gas, 0.65 sp.gr., 7"w.c. inlet pressure

\*\* 1.52 sp.gr. propane at 11"w.c. inlet pressure or 1.95 sp.gr. butane at 15"w.c. inlet pressure

#### **Dimensions**



TR-2, TR-3A, TR-4A



Catalog								
Number	Gas Cock	Gas Cock	Α	В	C	D	E	F
TR-2	300262	300266	1/2"	1/8"	-	6-9/16"	5-1/4"	-
TR-3A	300263	300267	3/4"	1/4"	-	8-1/4"	6-3/4"	1-7/8"
T-3	300202	200228	3/4"	3/8"	3-1/2"	1-3/8"	8-15/16"	7-3/8"
TR-4A	300257	300258	1"	1/4"	-	8-1/4"	6-3/4"	1-7/8"
T-4	300203	300229	1"	3/4"	4-15/16"	1-13/16"	11-1/8"	8-3/4"
T-5	300205	300231	1-1/4"	3/4"	5-1/8"	2"	12-1/2"	10-3/16"
TR-6	300043	300003	1-1/2"	3/4"	5-1/8"	2"	11-9/16"	9-1/4"
TR-8	300044	300004	2"	1"	6-1/4"	2-5/8"	13-1/4"	10-3/4"
TR-10	300045	300005	2-1/2"	1	6-3/16"	2-5/8"	16-1/4"	13-3/4"
TR-12	300046	300006	3"	1-1/4"	6-1/8"	2-3/4"	18-1/2"	15-13/16"
TR-16	300047	300007	4"	1-1/4"	7"	3-1/2"	22-11/16"	19-3/16"
TR-20	300048	300008	5"	1-1/4"	7-7/8"	4-1/8"	31-5/16"	27-7/8"
	ł	I	Con	npound Inje	ctors	I	•	
T-40	300204	300230	1"	3/4"	5-7/16"	1-13/16"	13-1/8"	10-3/4"
T-50	300206	300232	1-1/4"	3/4"	5-5/8"	2"	14-7/8"	12-9/16"
TR-60	300063	300023	1-1/2"	3/4"	5-5/8"	2"	14-7/16"	12-1/8"
TR-80	300064	300024	2"	1"	7"	2-5/8"	16-1/4"	13-3/4"
TR-100	300065	300025	2-1/2"	1"	6-15/16"	2-5/8"	20-5/16"	17-13/16"
TR-120	300066	300026	3"	1-1/4"	6-5/8"	2-3/4"	23-5/16"	20-5/8"
TR-160	300067	300027	4"	1-1/4"	7"	3-1/2"	27-5/8"	24-1/8"
TR-200	300068	300028	5"	1-1/4"	7-7/8"	4-1/8"	38-13/16"	34-3/4"

NOTE: All dimensions are in inches.

## High Pressure Injectors (Capacities, CFH)

	Single	e Stage Injectors	Compound Injectors				
Catalog	Mixture Outlet	CFH		Catalog	CFH		
Number		Coke Oven Gas*	Natural Gas**	Number	Natural Gas**	Propane***	
TR-3HA	3/4"	6.2	8.4	-	-	-	
H-3	3/4"	50	17	-	-	-	
TR-4HA	1"	6.2	8.4	-	-	-	
H-4	1"	100	22.5	H-40	25	-	
H-5	1-1/4"	175	90	H-50	100	25	
H-6	1-1/2"	250	135	H-60	150	50	
H-8	2"	550	225	H-80	250	100	
H-10	2-1/2"	850	405	H-100	450	150	
H-12	3"	1300	585	H-120	650	200	
H-16	4"	2500	1080	H-160	1200	400	
H-20	5"	3500	1620	H-200	1800	600	

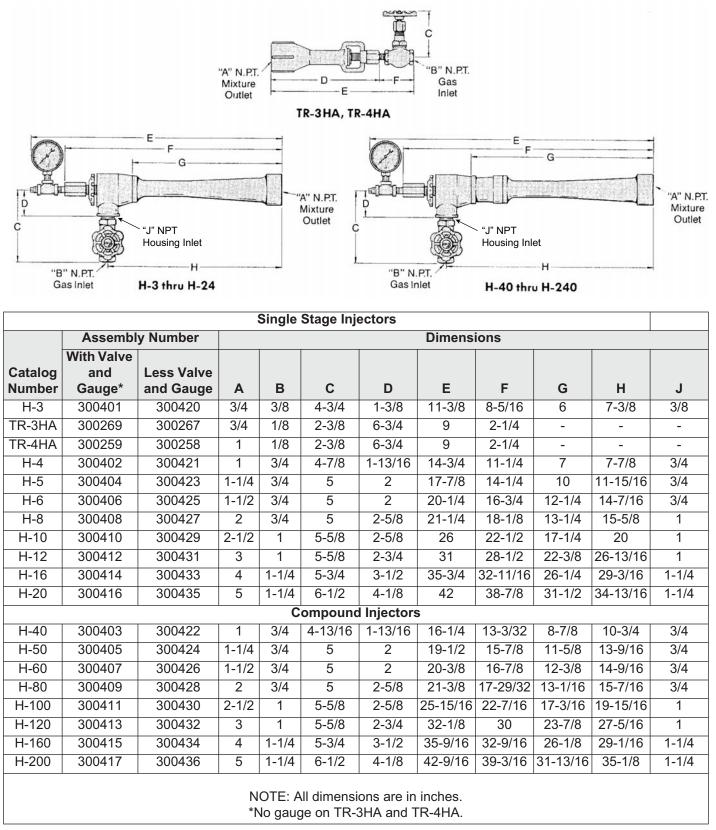
NOTE: All dimensions are in inches.

\* 595 BTU Coke Oven Gas, 0.42 sp.gr. at 10 psig inlet pressure.

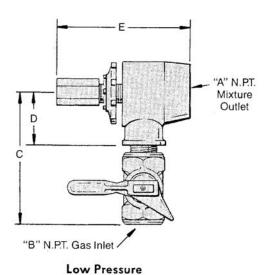
\*\*1040 BTU Natural Gas, 0.65 sp.gr. at 25 psig inlet pressure.

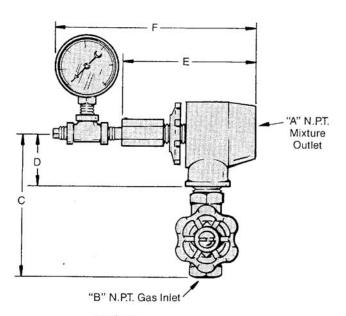
\*\*\*2500 BTU Propane Gas, 1.55 sp.gr. at 25 psig inlet pressure.

#### **Dimensions**



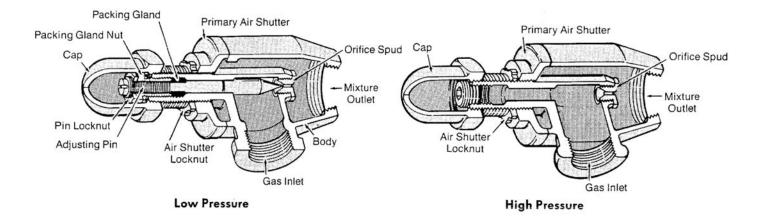
## Mixer Heads





High Pressure

Low Pressure										
	Assembl	y Number	Dimensions							
Catalog	With Gas	Less Gas								
Number	Cock	Cock	A	В	C	D	E	F		
NS-3	300101	300116	3/4	3/8	3-1/2	1-3/8	4	-		
NS-4	300103	300118	1	3/4	4-15/16	1-13/16	5-13/16	-		
NS-5	300105	300120	1-1/4	3/4	5-1/8	2	5-5/8	-		
NS-6	300107	300122	1-1/2	3/4	5-1/8	2	6	-		
NS-8	300109	300124	2	1	6-1/4	2-5/8	6-3/8	-		
NS-10	300111	300126	2-1/2	1	6-3/16	2-9/16	6-1/4	-		
NS-120	300112	300127	3	1-1/4	6-1/8	2-1/2	7-7/16	-		
NS-160	300113	300128	4	1-1/4	7	3-3/8	8-3/16	-		
NS-200	300114	300129	5	1-1/4	7-7/8	4-1/4	9-1/8	-		
			High P	ressure	•					
HO-3	300311	300301	3/4	3/8	4-3/4	1-7/8	3-3/8	5-3/8		
HO-4	300312	300302	1	3/4	4-7/8	1-7/8	5-1/4	8-3/4		
HO-5	300313	300303	1-1/4	3/4	5	2	5-1/4	8-7/8		
HO-6	300314	300304	1-1/2	3/4	5	2	4-7/8	7-3/4		
HO-8	300315	300305	2	1	5	2	5-3/4	9-1/4		
HO-10	300316	300306	2-1/2	1-1/4	5-5/8	2-5/8	6	9-1/2		
HO-120	300317	300307	3	1-1/4	5-5/8	2-5/8	6-1/4	8-3/4		
HO-160	300318	300308	4	1-1/4	5-3/4	2-3/4	7-3/8	10-7/8		
HO-200	300319	300309	5	1-1/4	6-1/2	3-1/2	7	10-1/4		
NOTE: All dimensions are in inches.										







#### Offered By: Power Equipment Company 2011 Williamsburg Road Richmond, Virginia 23231 Phone (804) 236-3800 Fax (804) 236-3882

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