

# “AN” BURNER NOZZLES ATMOSPHERIC TYPE

MODEL: 3101-AN

Revision: 0

BULLETIN  
3101

## ATMOSPHERIC NOZZLES (Pilot Size)

AN Pilot Nozzles are made in four pipe sizes - 1/8”, 1/4”, 3/8” and 1/2”. These nozzles were specifically designed for Pilot Torches to have excellent flame retaining characteristics, and capacities almost as great as open pipes. Their turn-down characteristics are also good.

They may be used separately as nozzles or tips, arranged in groups, or on pipe burners.



## DESCRIPTION

AN Nozzles are open type burners designed for high capacities with good flame retention characteristics. High capacities are made possible by the large burner area in relation to the supply pipe size. AN Nozzles are scientifically designed to handle rich gas-air mixtures in high drafts using relatively low mixture pressures as normally developed by gas injectors.

Drilled pilot holes around the main burner opening keep the main burner flame from “blowing off” the burner nozzle. The sizes and location of the pilot holes in the AN Nozzles are accurately worked out so that each pilot flame stool is surrounded by secondary air. Increased draft actually improves the piloting effect as evidenced by installations which are operating as high as 0.5” W.C. draft.

AN Nozzles operate with a bushy rich flame handling mixtures carrying 20 to 60% of total combustion air in the mixture. Adequate draft must, of course, be available to supply the additional air as secondary air around the burner nozzle to complete combustion. Because of large port area and rich mixtures, AN Nozzles must be operated at relatively low mixture pressures. Where lean mixtures at higher pressures are required, use Pyronics FR Nozzles (Data Sheet 3102).

Because AN Burner capacities will vary with type of gas, gas pressure, air-gas mixture, and available draft, no burner capacities are shown in this data sheet. For capacities of Pyronics Gas Torches which include AN Nozzles, see Data sheet 3215. These capacities can be used as a guide in AN Nozzle applications.

**CAUTION:** Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



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**NOTICE:** Pyronics practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

# AN NOZZLES

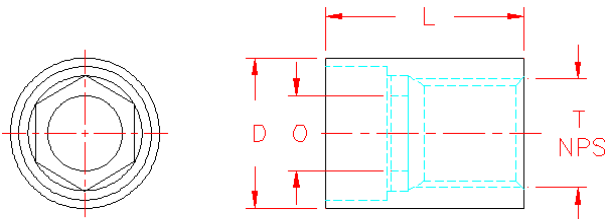
BULLETIN  
3101  
PAGE NO. 2

## APPLICATIONS

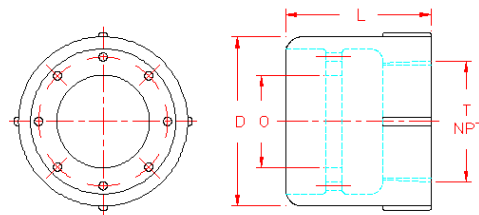
AN Nozzles are ruggedly made of cast iron with fifteen port areas and nine pipe sizes from 3/4" to 6". The #32 AN is available in three different port areas and the #48 AN in five port areas. For very small inputs, AN type pilot tips, 1/8" to 1/2" pipe sizes inclusive, are available in brass.

AN Nozzles with properly sized mixers are easily applied to air heaters, bake ovens, drying ovens, soft metal melting furnaces and to many special heating applications where suitable draft or adequate secondary air is normally available.

Multiple burner installations can be engineered with one Lojector per nozzle or a number of burner nozzles manifolded to a single Lojector.



1AN THRU 4AN



6AN THRU 48AN

## CATALOG DATA

Catalog Number	Burner Area Sq. In.	"T" Pipe Size	"D" Diameter	"L" Length	"O" Port Diameter	Net Weight
1 AN	0.050	1/8" NPS	5/8"	1"	1/4"	1 oz.
2 AN	0.095	1/4" NPS	3/4"	1-1/8"	11/32"	1 oz.
3 AN	0.160	3/8" NPS	1"	1-3/8"	1/2"	3 oz.
4 AN	0.250	1/2" NPS	1-1/8"	1-1/2"	9/16"	3 oz.
6 AN	0.55	3/4"	1-11/16"	1-9/16"	3/4"	.5 lb.
8 AN	0.80	1"	1-7/8"	1-3/4"	15/16"	.6 lb.
10 AN	1.35	1-1/4"	2-3/8"	2"	1-1/4"	1 lb.
12 AN	1.75	1-1/2"	2-5/8"	2-1/4"	1-7/16"	1.4 lb.
16 AN	2.90	2"	3-1/4"	2-7/16"	1-7/8"	2.2 lb.
20 AN	4.20	2-1/2"	3-7/8"	2-3/4"	2-1/4"	3.8 lb.
24 AN	6.20	3"	4-1/2"	3-1/8"	2-3/4"	4.5 lb.
321 AN	8.38	4"	5-7/8"	3-7/8"	3-1/4"	9.4 lb.
322 AN	10.72	4"	5-7/8"	3-7/8"	3-5/8"	9.4 lb.
323 AN	12.19	4"	5-7/8"	3-7/8"	3-7/8"	9.4 lb.
481 AN	14.16	6"	7-1/2"	4-1/2"	4-1/8"	11.8 lb.
482 AN	16.93	6"	7-1/2"	4-1/2"	4-1/2"	11.8 lb.
483 AN	20.63	6"	7-1/2"	4-1/2"	5"	11.8 lb.
484 AN	23.19	6"	7-1/2"	4-1/2"	5-3/8"	11.8 lb.
485 AN	25.35	6"	7-1/2"	4-1/2"	5-5/8"	11.8 oz.

## ORDERING INFORMATION

Please include the following information with your order:

1. Quantity each item ordered.
2. Catalog number for each item.
3. Kind of gas and pressure available.
4. Shipping instructions.