



**INDUSTRIAL  
BURNER CATALOG**

**GAS-AIR**

**GAS-AIR-OXYGEN**

**GAS-OXYGEN**



22 DELAWANNA AVENUE • CLIFTON (DELAWANNA), NEW JERSEY 07014 • Area Code 201 - 779-6158





GLASS FIRE BURNERS are widely used in the manufacture of miniature Tubes, Flourescent and Incandescent Lamps.



BURNERS are also used in the Neon Sign Industry, and in the Jewelry Line.



BURNERS may be used wherever a concentration of heat is required for preheating, shaping, sealing, cut-off and annealing.



BURNERS may be used with mixed natural gas, Propane Gas and Natural Gas.

New Burners will help increase production and reduce shrinkage.

We also provide a burner cleaning and repair service.

**TERMS:** Net 30 to customers with established credit . . . otherwise C.O.D.

All prices F.O.B. our plant, Clifton, N.J., and are subject to change without notice.

Burners designated Gas - Oxygen can also be used with Gas - Air - Oxygen and vice-versa.

Gas - Air burners can be used with a slight amount of Oxygen.

If you are presently using a burner, mixer, or valve and cannot find it's number in our catalog, please send us a sample or blue-print of the burner and a J & P equivalent will be submitted.

**NOTE:**

Flame and Focal lengths designated throughout catalog are adjustable to shorter or longer lengths with a properly sized mixer.

*Should you find use for our products at some other time rather than now - may we suggest placing our Catalog with your other catalogs for future - and handy - reference. Thank you.*

**LIMITED WARRANTY**

J. & P. Machine and Tool Company warrants each part manufactured by it to be free of defective material and workmanship. This warranty does not extend to any of our products which have been subjected to misuse, neglect, accident, improper installation, unauthorized modifications, use in violation of instructions by us or for purposes not designed.



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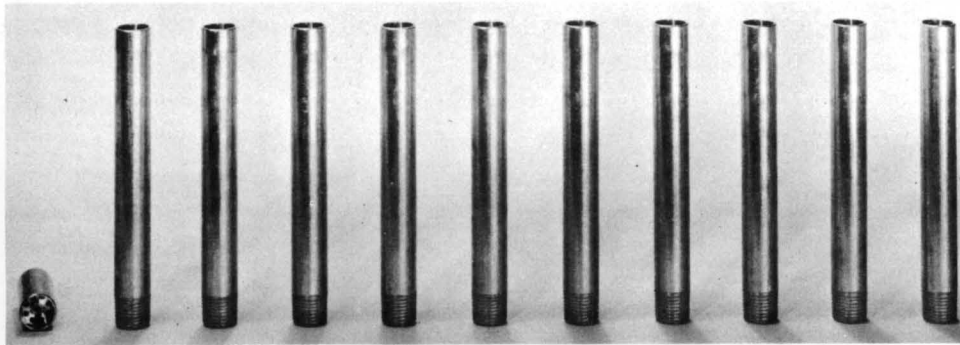
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**GAS-AIR**  
**NEEDLE POINT GLASS FIRES "J" TYPE 3-1/4" LONG**



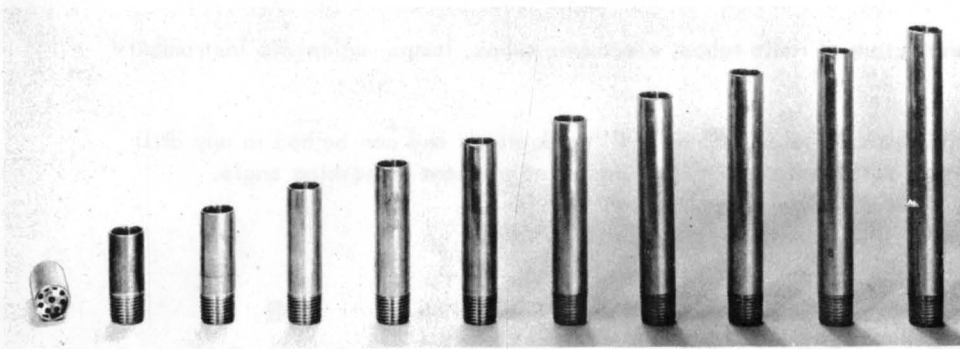
D70J D60J D56J D55J D53J D52J D49J D47J D44J D33J

The "J" type burner is identical to the "JC" type in all respects except the brass insert. Flexibility can be had by using ball joints. These "J" type burners range in length from 1" to 3-1/4" at 1/4" graduations.

Burners for Natural Gas or Propane Gas.

J & P No. Model	Center Hole Drill Size	Burner Body Size	Male Thread	Focal Length	Flame Length	Material
D70J	#70	13/32" Dia.	1/8" N.P.T.	3/8"	1"	Brass
D60J	#60	13/32" Dia.	1/8" N.P.T.	1-3/4"	3-3/4"	"
D56J	#56	13/32" Dia.	1/8" N.P.T.	2-1/2"	5"	"
D55J	#55	13/32" Dia.	1/8" N.P.T.	2-3/4"	5"	"
D53J	#53	13/32" Dia.	1/8" N.P.T.	3-1/2"	6-1/8"	"
D52J	#52	13/32" Dia.	1/8" N.P.T.	2-3/4"	6"	"
D49J	#49	13/32" Dia.	1/8" N.P.T.	3"	6-1/2"	"
D47J	#47	13/32" Dia.	1/8" N.P.T.	2-3/4"	5-1/2"	"
D44J	#44	13/32" Dia.	1/8" N.P.T.	2-1/2"	5-1/4"	"
D33J	#33	13/32" Dia.	1/8" N.P.T.	3-1/4"	5-1/4"	"

**GRADUATED TYPE BURNERS FROM 1" TO 3-1/4"**



D49 1" D49A 1 1/4" D49B 1 1/2" D49C 1 3/4" D49D 2" D49E 2 1/4" D49F 2 1/2" D49G 2 3/4" D49H 3" D49J 3 1/4"

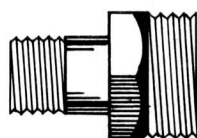
Graduated glass fire tips without brass inserts are supplied in lengths ranging from the 1" to 3 1/4" and can be had in any drill sizes as shown above. For this type it is also advisable to use BALL JOINTS.

Burners for Natural Gas or Propane Gas.

The above burners can be had in 5/16-27 Female Thread, Standard length 1" Long, designate "FE" - For example: D49FE, D55FE, etc. Special lengths furnished if desired.

**J & P #7 BALL JOINT**

1/4" NPT x 1/4" FPT  
 Ball Joint Also Available - Designate J & P #14



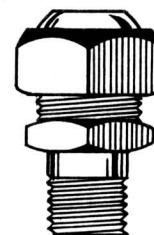
BODY



BALL



HEX. NUT



J & P #7



1/8" PIPE THREAD. 1-3/16" OVERALL LENGTH  
 #7 BALL JOINT AVAILABLE IN STAINLESS STEEL



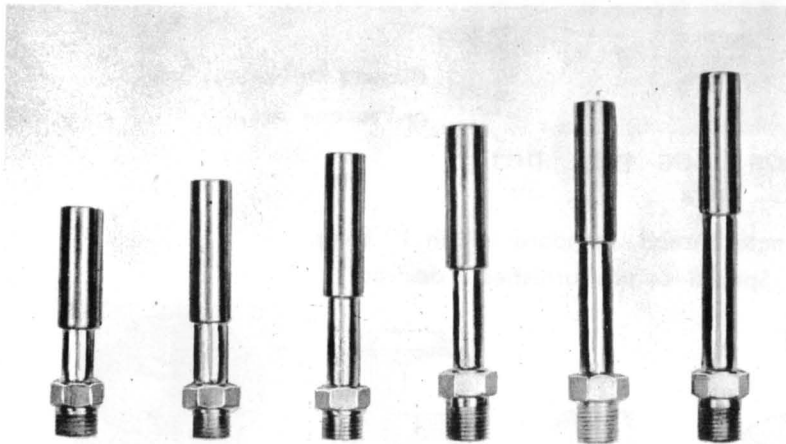
GAS-AIR  
**NEEDLE POINT GLASS FIRES "JC" TYPE 3-1/4" LONG**



D70JC    D60JC    D56JC    D55JC    D53JC    D52JC    D49JC    D47JC    D44JC    D33JC

Glass Fire Tips are used in the manufacture of radio tubes, electronic tubes, lamps, scientific instruments, and by the neon industry.

Tips with brass insert range in length from 2" to 3-1/4" at 1/4" graduations and can be had in any drill size as shown above. The brass insert enables flexibility and easier adjustment at working angle.



D49DC 2"    D49EC 2 1/4"    D49FC 2 1/2"    D49GC 2 3/4"    D49HC 3"    D49JC 3 1/4"

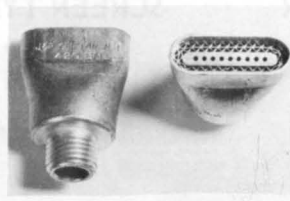
FOR  
 NATURAL GAS  
 OR  
 PROPANE GAS



# FISHTAIL BURNERS GAS - AIR



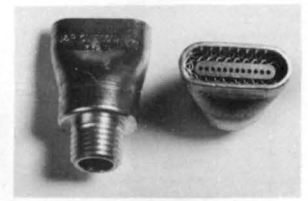
420-CN



420-BN



420-DN



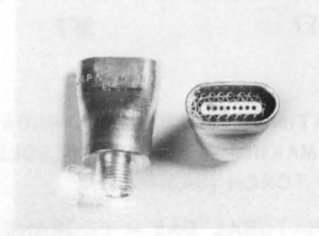
332-N



104-N



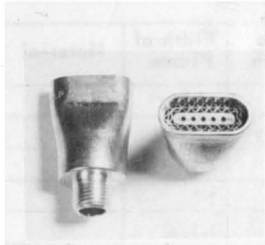
81-N



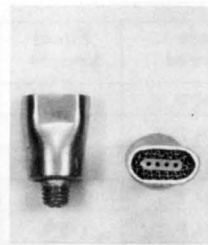
81-BN



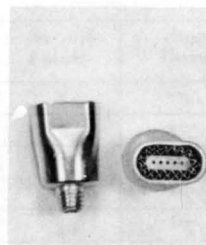
81-QN



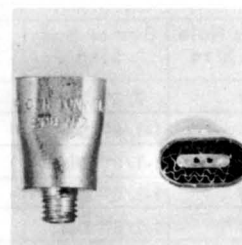
81-WN



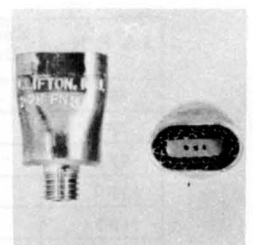
228-N



228-FN



228N2

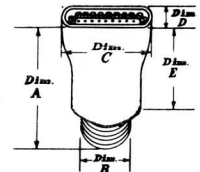


228FN3

These Fishtail Burners are recommended where a hot localized flame is desired. They are adaptable to many uses including the manufacture of Radio Tubes, Soldering, Annealing, Sealing, Preheating and Tipping off.

Fishtail Burners with 1/4" NPT also available in 1/8" NPT and are recommended for use with the #7 Ball Joints, or #14 Ball Joint.

Fishtail Burners are also recommended for Glass Forming in the manufacture of Electronic Tubes, Neon Signs and Scientific Apparatus.



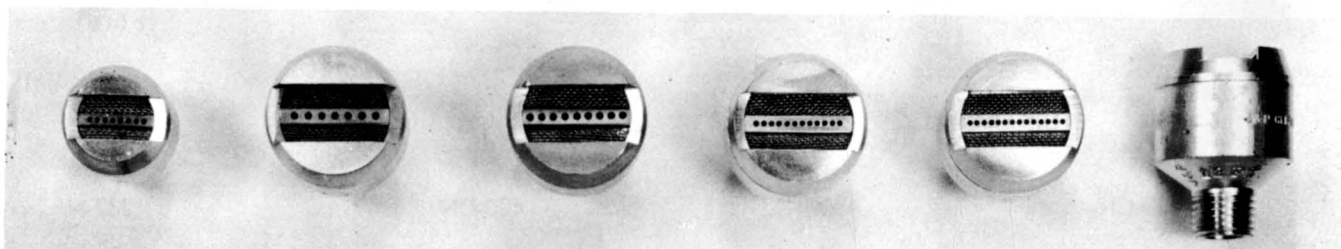
Burner No.	No. of Center Holes	Port Hole Drill Size	Dim. A	Male Thread Dim. B	Dim. C	Dim. D	Dim. E	Focal Width	Maximum Length	Type of Flame
228F	5	71	31/32"	1/4-27	25/64"	9/32"	3/4"	3/8"	3"	Parallel
228N	4	64	31/32"	1/4-27	39/64"	21/64"	3/4"	3/8"	2"	Divergent
228FN	5	71	31/32"	1/4-27	5/8"	23/64"	3/4"	5/16"	3"	Parallel
228FN3	3	71	31/32"	1/4-27	5/8"	23/64"	3/4"	3/16"	1"	Divergent
228N2	2	64	31/32"	1/4-27	39/64"	21/64"	3/4"	3/16"	1-3/4"	Divergent
81N	9	64	1-3/8"	1/8"NPT	7/8"	13/32"	1-1/16"	13/16"	2-1/4"	Divergent
81BN	8	64	1-3/8"	1/8"NPT	7/8"	13/32"	1-1/16"	7/16"	4"	Parallel
81QN	6	59	1-3/8"	1/8"NPT	7/8"	13/32"	1-1/16"	7/16"	3-1/4"	Parallel
81WN	5	60	1-3/8"	1/8"NPT	7/8"	13/32"	1-1/16"	3/8"	3-1/2"	Parallel
104N	7	54	1-1/2"	1/4"NPT	1-1/16"	13/32"	1-1/8"	1"	2-1/2"	Divergent
332N	12	64	1-1/2"	1/4"NPT	1-1/16"	13/32"	1-1/8"	1"	2-1/4"	Divergent
332DN	8	60	1-1/2"	1/4"NPT	1-1/16"	13/32"	1-1/8"	31/64"	3-1/2"	Parallel
332FN	10	61	1-1/2"	1/4"NPT	1-1/16"	13/32"	1-1/8"	1"	2"	Divergent
420BN	9	57	1-19/32"	1/4"NPT	1-3/16"	13/32"	1-3/16"	21/32"	2-1/4"	Parallel
420CN	9	54	1-19/32"	1/4"NPT	1-3/16"	13/32"	1-3/16"	1-1/4"	2-1/4"	Divergent
420DN	14	64	1-19/32"	1/4"NPT	1-3/16"	13/32"	1-3/16"	1-3/16"	2-1/8"	Divergent
420RN	14	68	1-19/32"	1/4"NPT	1-3/16"	13/32"	1-3/16"	1-3/16"	2-1/4"	Divergent
420SN	9	53	1-19/32"	1/4"NPT	1-3/16"	13/32"	1-3/16"	1-1/4"	2-1/4"	Divergent
589B	4	64	1-7/32"	1/4-27						Burner with flame retention baffle



# ROUND FISHTAIL BURNERS-DIVERGENT FLAME

NATURAL GAS-AIR

SCREEN TYPE



9F5

7F7

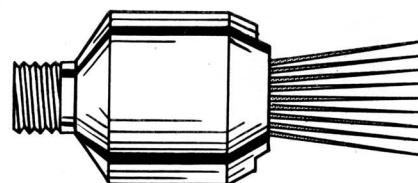
9F7

12F7

14F7

BURNERS FOR PREHEATING - SHAPING - ANNEALING - BEAD MAKING - STEM MAKING - BRAZING - SOLDERING CAN BE USED ON HAND TORCH (GAS-AIR)

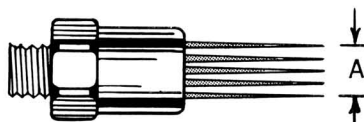
BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS



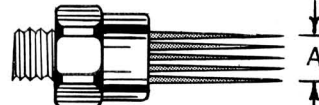
J&P 9F5

J & P No.	Center Hole Drill Size	Burner Body Size	Length Overall	No. of Holes	Male Thread	Focal Length	Flame Length	Width of Flame	Material
9F5	#64	7/8" Dia.	1-1/4"	9	1/8" N.P.T.	3/8"	2"	11/16"	Brass
7F7	#54	1-1/8" Dia.	1-1/2"	7	1/4" N.P.T.	1"	2-1/2"	1-1/4"	"
9F7	#55	1-1/8" Dia.	1-1/2"	9	1/4" N.P.T.	1/2"	2"	1-1/4"	"
12F7	#64	1-1/8" Dia.	1-1/2"	12	1/4" N.P.T.	1/2"	2"	1"	"
14F7	#64	1-1/8" Dia.	1-1/2"	14	1/4" N.P.T.	1/2"	2"	1-1/4"	"
7F7P	#54	1-1/8" Dia.	1-1/2"	7	1/8" N.P.T.	1"	2-1/2"	1-1/4"	"
9F7P	#55	1-1/8" Dia.	1-1/2"	9	1/8" N.P.T.	1/2"	2"	1-1/4"	"
12F7P	#64	1-1/8" Dia.	1-1/2"	12	1/8" N.P.T.	1/2"	2"	1"	"
14F7P	#64	1-1/8" Dia.	1-1/2"	14	1/8" N.P.T.	1/2"	2"	1-1/4"	"

## GAS - AIR BURNERS (SCREEN TYPE)



J&P 531



J&P 531-S



J&P 5T

BURNERS FOR PREHEATING - SEALING AND SOLDERING.

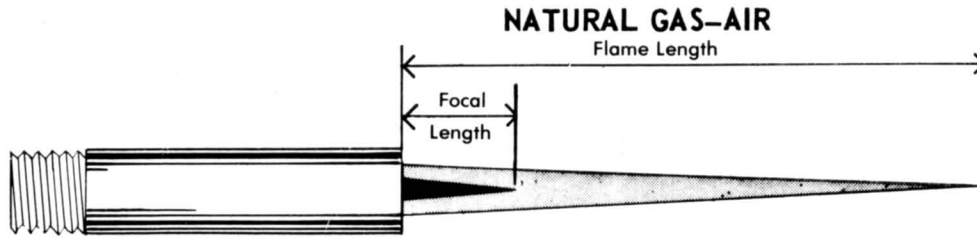
CENTER TO CENTER OUTSIDE HOLE "A"

BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS



J & P No.	Shade of Flame	Center Hole Drill Size	Burner Body Size	No. of Holes	Burner Length	Male Thread	Focal Length	Flame Length	C to C Outside Hole "A"	Material
531	Parallel	#68	1/2" Hex.	5	7/8"	1/4"-27	1/4"	1-3/4"	1/4"	Brass
436	Parallel	#64	1/2" Hex.	4	7/8"	1/4"-27	1/4"	1-3/4"	1/4"	"
4F	Divergent	#64	1/2" Hex.	4	7/8"	1/4"-27	1/4"	1-3/4"	13/64"	"
526	Parallel	#64	1/2" Hex.	5	7/8"	1/4"-27	1/4"	1-5/8"	1/4"	"
236F	Divergent	#64	1/2" Hex.	2	7/8"	1/4"-27	1"	3-1/4"	1/16"	"
331	Parallel	#68	1/2" Hex.	3	7/8"	1/4"-27	1/2"	1-1/2"	3/16"	"
531-S	Parallel	#68	1/2" Hex.	5	11/16"	1/4"-27	1/4"	1-3/4"	1/4"	"
4FS	Divergent	#64	1/2" Hex.	4	11/16"	1/4"-27	1/4"	1-1/2"	1/4"	"
5T	Parallel	#70	7/16" Hex.	5	15/16"	1/4"-27	1/4"	1"	1/4"	"
531B	Parallel	#68	1/2" Dia.	5	1-1/2"	1/8"NPT	1/4"	1-3/4"	1/4"	Brass
531D	Parallel	#68	1/2" Dia.	5	2"	1/8"NPT	1/4"	1-3/4"	1/4"	Brass

# NEEDLE POINT GLASS FIRE TIPS

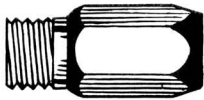


J & P No.	Center Hole Drill	Burner Body Size	Male Thread	Focal Length	Flame Length	Material
G-140	#60	13/32" Dia.	1/8" N.P.T.	1-1/2"	2-3/4"	Brass
G-152	#55	13/32" Dia.	1/8" N.P.T.	2"	5"	"
G-159	#53	13/32" Dia.	1/8" N.P.T.	2-1/2"	6"	"
G-163	#52	13/32" Dia.	1/8" N.P.T.	2-1/2"	6"	"
G-173	#49	13/32" Dia.	1/8" N.P.T.	3"	6-3/4"	"
G-178	#47	13/32" Dia.	1/8" N.P.T.	2-3/4"	5-1/2"	"
G-186	#44	13/32" Dia.	1/8" N.P.T.	2-1/2"	5-3/4"	"
G-1113	#33	13/32" Dia.	1/8" N.P.T.	2-1/2"	5"	"
G-1101	#38	13/32" Dia.	1/8" N.P.T.	1-3/4"	5"	"
G-1116	#32	13/32" Dia.	1/8" N.P.T.	4"	7"	"

BURNER LENGTH		
A - 1-1/4" Long	D - 2" Long	G - 2-3/4" Long
B - 1-1/2" Long	E - 2-1/4" Long	H - 3" Long
C - 1-3/4" Long	F - 2-1/2" Long	J - 3-1/4" Long

ORDER BY  
LETTER  
TO SPECIFY  
BURNER  
LENGTH

ABOVE BURNERS ALSO AVAILABLE IN 1" LENGTH



J&P G73



J&P P4G

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material
P4G	#60	7/16" Hex.	1-1/4"	1/8" N.P.T.	1-1/4"	2-1/4"	Brass
G73	#49	7/16" Hex.	1"	1/8" N.P.T.	3"	6-3/4"	"
P3G	#55	7/16" Hex.	1-1/4"	1/8" N.P.T.	2-1/4"	4-1/4"	Brass

BURNERS FOR PREHEATING  
SHAPING - SOLDERING  
SEALING AND CUT OFF

GEAR TYPE PILOTING BURNERS  
BURNERS FOR MIXED NATURAL GAS  
PROPANE GAS - NATURAL GAS



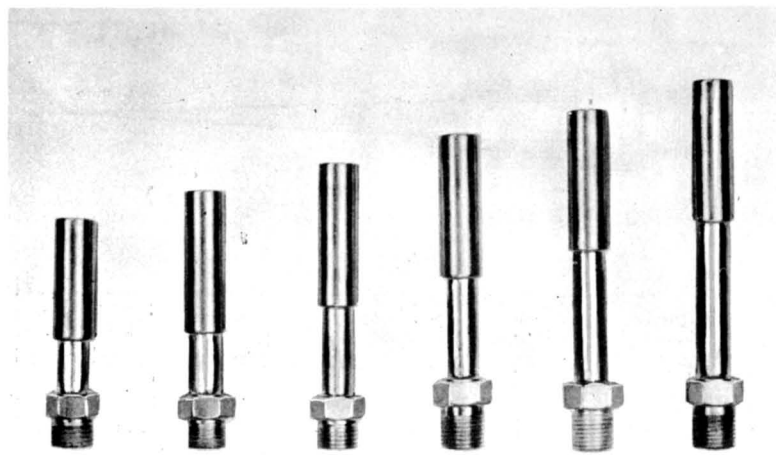
GAS-AIR  
**NEEDLE POINT GLASS FIRES "JC" TYPE 3-1/4" LONG**  
**GEAR TYPE**



G128JC   G140JC   G146JC   G152JC   G159JC   G163JC   G173JC   G178JC   G186JC   G1113JC

Glass Fire Tips are used in the manufacture of radio tubes, electronic tubes, lamps, scientific instruments, and by the neon industry.

Tips with brass insert range in length from 2" to 3-1/4" at 1/4" graduations and can be had in any drill size as shown above. The brass insert enables flexibility and easier adjustment of working angle.

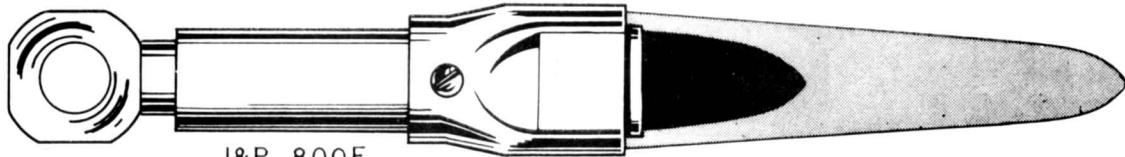


G173DC   G173EC   G173FC   G173GC   G173HC   G173JC  
 2"   2 1/4"   2 1/2"   2 3/4"   3"   3 1/4"

FOR  
 NATURAL GAS  
 OR  
 PROPANE GAS

# SOFT FLAME BURNERS

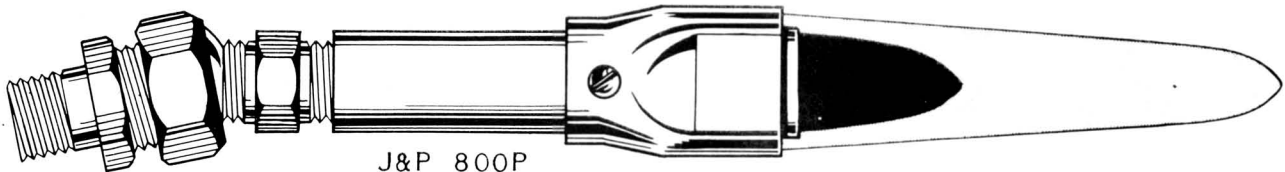
## FLOOD FIRE FOR NATURAL GAS-AIR



J&P 800F

J & P No.	Burner Body Size	Burner Length	Focal Length	Flame Length	Available with or without	Material
800F	9/16" Dia.	4-1/4"	2-3/4"	7"	3/4" BALL TYPE on 1 End	Brass
800	"	3-1/16"	"	"	"	Brass

## SOFT FLAME FLOOD FIRE FOR NATURAL GAS-AIR



J&P 800P

J & P No.	Burner Body Size	Focal Length	Flame Length	Burner Length	Material
800P	9/16" Dia.	5"	8"	4-1/8" with #7 Ball Joint	Brass

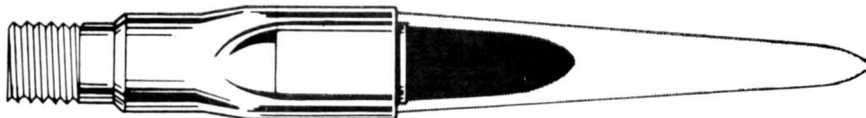
## SOFT FLAME BURNERS - PREHEATING OR SHARP FLAME



J&P P-28

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material
P-28	#28	1/2" Dia.	1-5/8"	1/8" N.P.T.	2"	5"	Brass

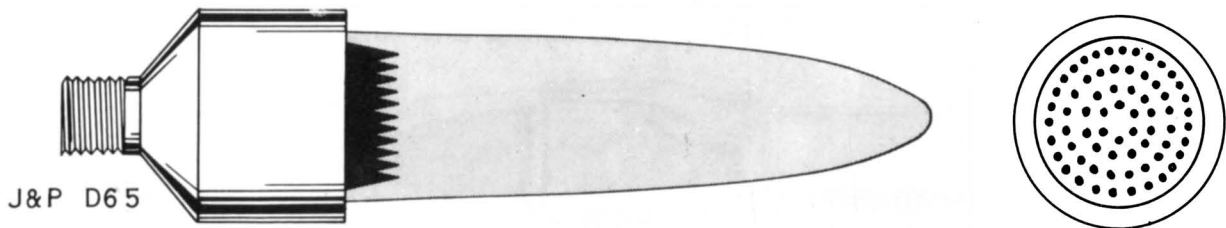
## FLOOD FIRE BURNER



J&P 800D

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material
800D	—	1/2" Dia.	2"	1/8" N.P.T.	2-3/4"	5"	Brass

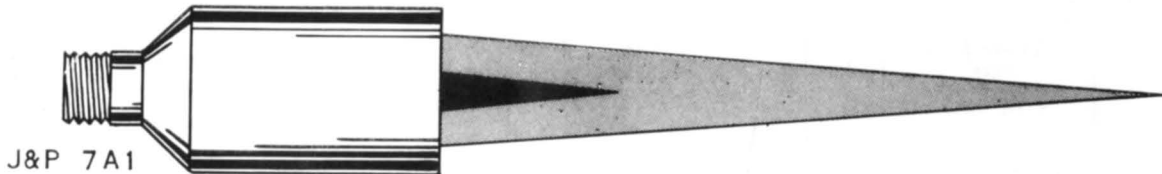
**FOR NATURAL GAS-AIR**



J & P No.	Burner Body Size	Burner Length	Male Thread	Material
D-77	1 1/2"	1 3/4"	1/4" F.P.T.	Brass
D-65	1-1/8"	1-1/2"	1/8" N.P.T.	Brass
D-30	7/8" Dia.	1-7/16"	1/8" N.P.T.	"
D-29	3/4" Dia.	1-5/8"	1/8" N.P.T.	Brass

BURNERS CAN BE USED FOR ANNEALING, PREHEATING, OR GLAZING

**OPEN FLAME BURNERS**  
NATURAL GAS-AIR



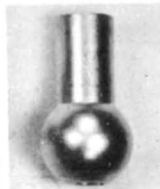
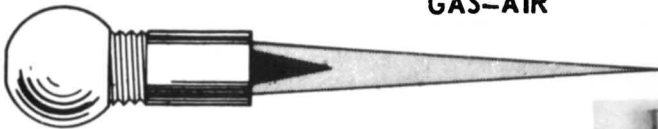
J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material
7A1	#7	7/8" Dia.	1-7/8"	1/8" N.P.T.	3"	8"	Brass
7A2	15/64	7/8" Dia.	1-7/8"	1/8" N.P.T.	3"	8-1/2"	"
7A4F	#7	7/8" Dia.	1-7/8"	7/16-24 FEM.	3"	8"	"
7A5	7/32	7/8" Dia.	1-7/8"	1/8" N.P.T.	3"	8"	"
G7P	#7	3/4" Dia.	1-3/4"	1/8"NPT	2-3/4"	7"	"
G7N	#7	"	"	7/16-24 FEM.	"	"	"

BURNER CAN BE USED FOR PREHEATING OR ANNEALING

BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS

**BASING MACHINE BURNERS**

GAS-AIR BALL ON END



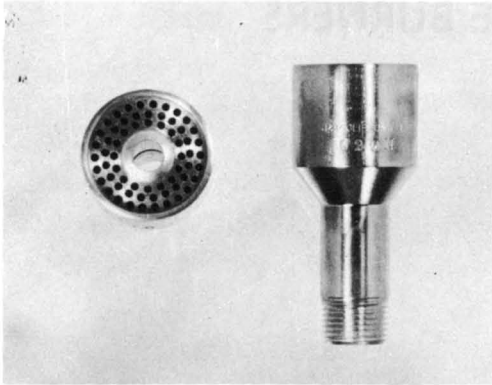
J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length with Ball	5/8" Ball on End	Focal Length	Flame Length	Material
12A	#55	13/32" Dia.	1-1/4" Overall	"	1-1/4"	1-1/2"	Brass
52D	#53	13/32" Dia.	1-1/8" Overall	"	1-3/4"	4"	Brass
00	#53	1/2" Dia.	1-5/16" Overall	"	2"	6"	CRS

BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS

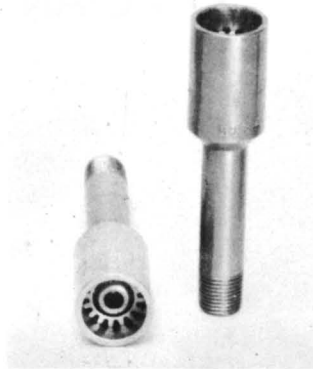
**J&P MACHINE & TOOL COMPANY** BURNERS AND MIXERS



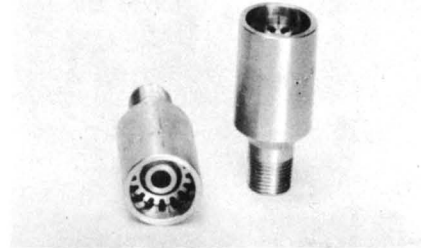
# OPEN FLAME BURNER HEADS GAS - AIR



622N



626N

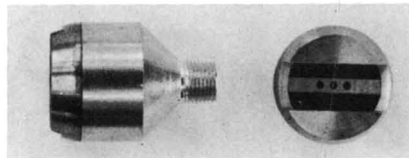


G26

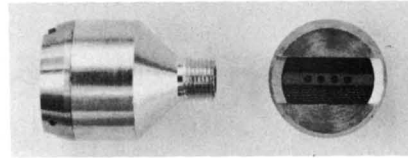
J & P No.	Port Hole Drill Size	Overall Length	Flame Length	Male Thread	Material
622N	19/64"	2-3/4"	9-3/8"	3/8" N.P.T.	Brass
626N	#18	2-3/4"	6"	1/8" N.P.T.	"
657N	#29	2-3/4"	4-1/16"	1/8" N.P.T.	"
G-26	#26	1-5/8"	5"	1/8" N.P.T.	"
G-26C	#18	1-5/8"	6"	1/8" N.P.T.	"

OPEN FLAME BURNERS ARE USED FOR SOFT AND SILVER SOLDERING - ANNEALING AND HEATING GLASS.

## ROUND SCREEN TYPE BURNERS - PARALLEL FLAME NATURAL GAS - AIR      1-1/8" DIA. BODY



J & P 359C



J & P 459C

### GAS - AIR BURNERS (SCREEN TYPE)

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	Male Thread	C to C Outside Hole	Focal Length	Flame Length	Material
259C	#53	1-1/8" Dia.	1-1/2"	2	1/8" N.P.T.	1/8"	2"	5"	Brass
359C	#53	1-1/8" Dia.	1-1/2"	3	1/8" N.P.T.	1/4"	2"	7"	"
452C	#55	1-1/8" Dia.	1-1/2"	4	1/8" N.P.T.	3/8"	1-3/4"	5"	"
459C	#53	1-1/8" Dia.	1-1/2"	4	1/8" N.P.T.	3/8"	1-3/4"	5"	"
559C	#53	1-1/8" Dia.	1-1/2"	5	1/8" N.P.T.	11/16"	1-3/4"	4"	"
B259C	#53	1-1/8" Dia.	1-1/2"	2	1/8" N.P.T.	3/8"	2"	5"	"
C459C	#53	1-1/8" Dia.	1-1/2"	4	1/8" N.P.T.	11/16"	1-3/4"	5"	"
A355C	#54	1-1/8" Dia.	1-1/2"	3	1/8" N.P.T.	3/8"	2"	7"	"
555C	#54	1-1/8" Dia.	1-1/2"	5	1/8" N.P.T.	3/4"	1-3/4"	4"	"
C936C	#64	1-1/8" Dia.	1-1/2"	9	1/8" N.P.T.	1/2"	3/4"	5"	"
936C	#64	1-1/8" Dia.	1-1/2"	9	1/8" N.P.T.	11/16"	3/4"	5"	"

Model A - B - C - E type burners are used on special machines for Sealing and Cutting of stems.

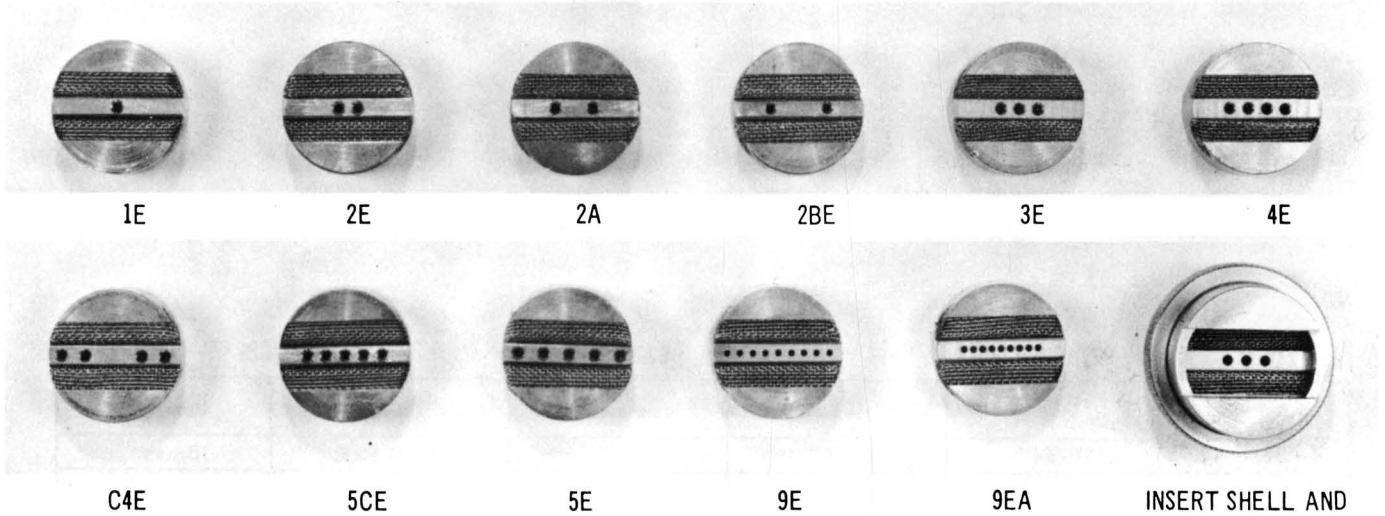
These burners are designed for use with gas and air. The model A - B - C - E Burner is effectively used on crossfires.

Above burners can be made to your specifications with regard to number of port holes, distance between holes and size of port holes.

Inserts shown on page 12.

All parts are interchangeable and can be ordered separately for replacement. Burners also available with 1/4" NPT.

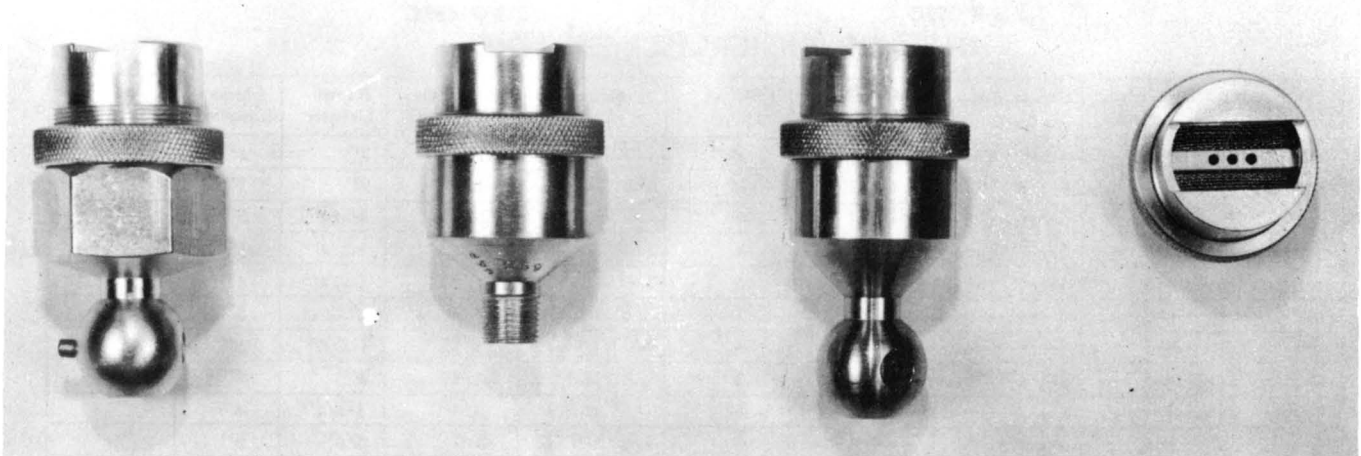
## 7/8" DIA. INSERTS FOR MODEL A - ET - C AND E BURNERS



Insert Shell and Ring Assembly can be made to your specifications with regard to number of port holes, distance between holes and size of port holes.

MODEL A BURNER HEX. BODY WITH 3/4" BALL  
 MODEL ET BURNER 1/8" N.P.T.  
 MODEL E " ROUND TYPE WITH 3/4" BALL

## COMPLETE BURNER ASSEMBLY MODEL A - ET - E NATURAL GAS - AIR



Model A - BMT  
Burner  
Hex. Body  
with 3/4" Ball

Model ET  
Burner  
1-1/8" Dia.  
1/8" N.P.T.

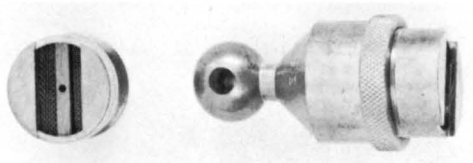
Model E  
Burner  
Round Type  
with 3/4" Ball

Insert Shell  
and Ring  
Assembly  
with model  
3E Insert

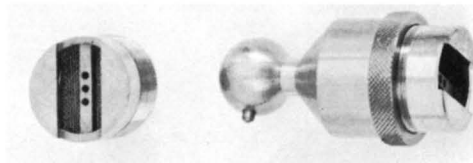
Model's A and E available with adjusting screw and nut at ball end. Please specify when ordering if desired.

# BMT TYPE ROUND SCREEN BURNERS

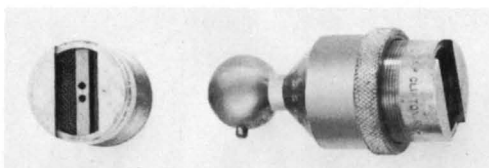
## NATURAL GAS-AIR



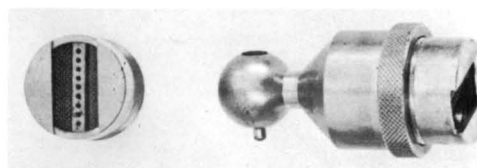
159E



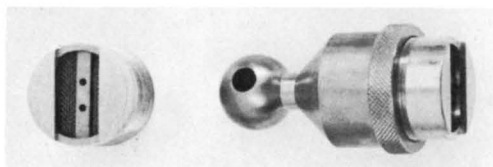
359E



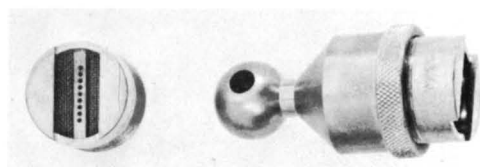
259E



936E



A259E



A936E

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	C to C Outside Hole	3/4" Ball On Hand	Focal Length	Flame Length	Material
359E	#53	1-1/8" Dia.	2-3/8"	3	1/4"	"	2"	7"	Brass
A259E	#53	1-1/8" Dia.	2-3/8"	2	1/4"	"	2"	7"	Brass
259E	#53	1-1/8" Dia.	2-3/8"	2	1/8"	"	2"	7"	Brass
159E	#53	1-1/8" Dia.	2-3/8"	1		"	2"	7"	Brass
A936E	#64	1-1/8" Dia.	2-3/8"	9	1/2"	"	3/4"	5"	Brass
936E	#64	1-1/8" Dia.	2-3/8"	9	11/16"	"	3/4"	5"	Brass

Model E Type Burners are used on Special machines for Sealing and cutting of stems.

Preheating – shaping and annealing.

These burners are designed for use with Gas-Air. The Model E Burner is effectively used on crossfires.

All Parts are interchangeable and can be ordered separately for replacement.

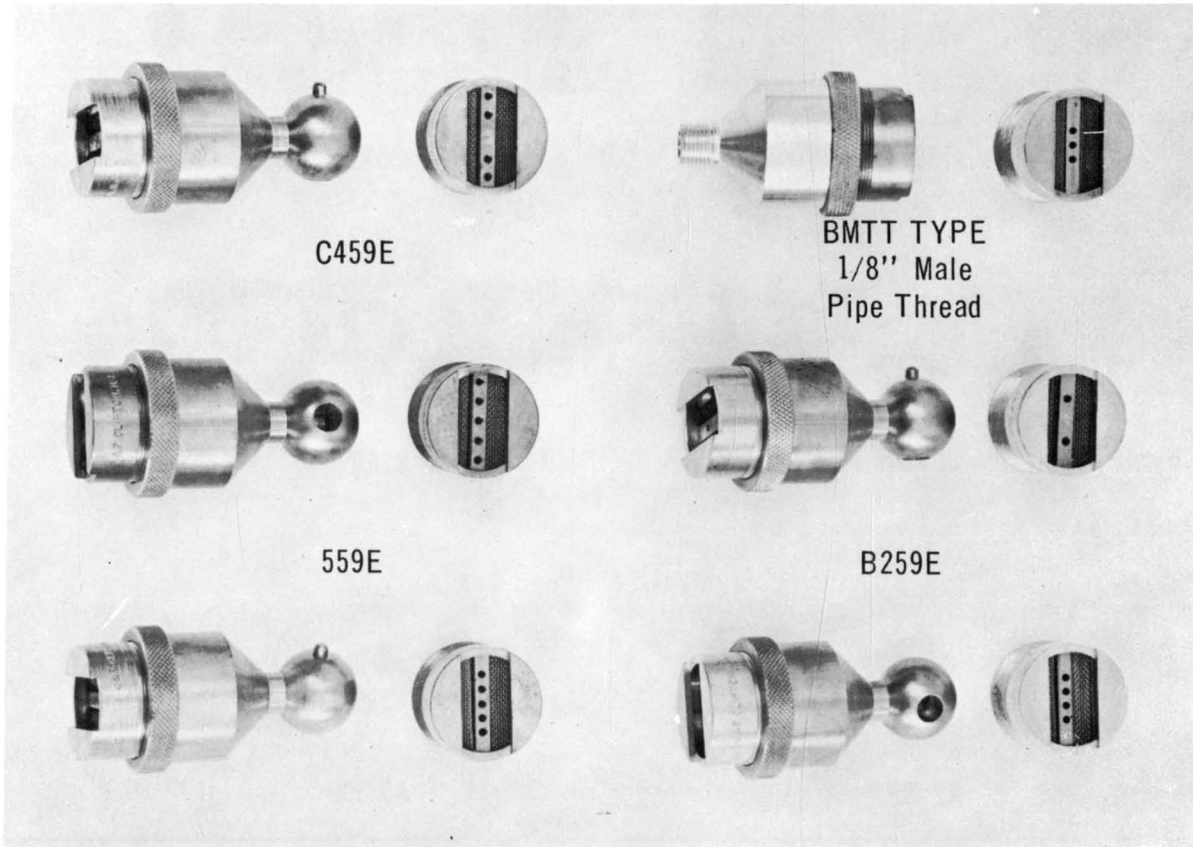
Inserts shown on page 12.

Above burners can be made to your specifications with regard to number of port holes, distance between holes and size of port holes.



# BMT TYPE ROUND SCREEN BURNERS

## NATURAL GAS - AIR



C559E

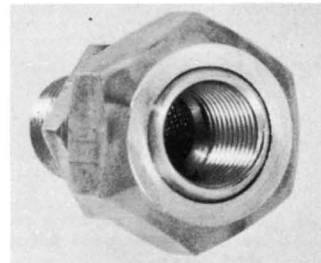
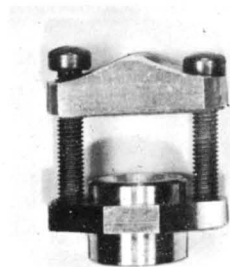
459E

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	C to C Outside Hole	3/4" Ball on End	Focal Length	Flame Length	Material
559E	#53	1-1/8" Dia.	2-3/8"	5	11/16"	"	1-3/4"	4"	Brass
459E	#53	1-1/8" Dia.	2-3/8"	4	3/8"	"	1-3/4"	5"	Brass
C459E	#53	1-1/8" Dia.	2-3/8"	4	11/16"	"	1-3/4"	5"	Brass
B259E	#53	1-1/8" Dia.	2-3/8"	2	3/8"	"	2"	7"	Brass
C559E	#53	1-1/8" Dia.	2-3/8"	5	1/2"	"	1-3/4"	4"	Brass

INSERT SHOWN ON PAGE 12 .

Above burners can be made to your specifications with regard to number of port holes, distance between holes and size of port holes.

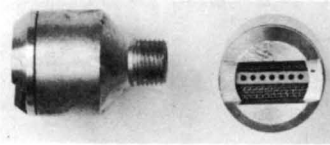
**G**  
**SWIVEL BALL HOLDER**  
 1/8" FPT  
 (ALSO AVAILABLE  
 WITH 1/8" MPT)



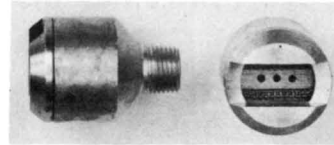
#7 Ball Joint  
 with 1/8 Male  
 Pipe Thread  
 and 1/8 Female  
 Pipe Thread.

# ROUND SCREEN TYPE BURNERS

NATURAL GAS-AIR



J & P 736B



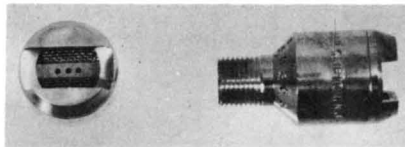
J & P 359B

7/8" DIA. BODY

J & P No. Model	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	Male Thread	C to C Outside Hole	Focal Length	Flame Length	Material
255B	#54	7/8" Dia.	1-1/4"	2	1/8" N.P.T.	1/8"	1-3/4"	4-1/2"	Brass
540B	#60	7/8" Dia.	1-1/4"	5	1/8" N.P.T.	1/2"	1/2"	2"	"
546B	#56	7/8" Dia.	1-1/4"	5	1/8" N.P.T.	1/2"	3/4"	2"	"
536B	#64	7/8" Dia.	1-1/4"	5	1/8" N.P.T.	5/16"	1/2"	2"	"
736B	#64	7/8" Dia.	1-1/4"	7	1/8" N.P.T.	15/32"	1/2"	1-3/4"	"
836B	#64	7/8" Dia.	1-1/4"	8	1/8" N.P.T.	7/16"	1/2"	1-3/4"	"
346B	#56	7/8" Dia.	1-1/4"	3	1/8" N.P.T.	1/4"	3/4"	2"	"
352B	#55	7/8" Dia.	1-1/4"	3	1/8" N.P.T.	3/16"	1-1/2"	4"	"
359B	#53	7/8" Dia.	1-1/4"	3	1/8" N.P.T.	1/4"	2"	5"	"
552B	#55	7/8" Dia.	1-1/4"	5	1/8" N.P.T.	3/8"	1-3/4"	4"	"
455B	#54	7/8" Dia.	1-1/4"	4	1/8" N.P.T.	3/8"	1-1/2"	6"	"
641B	#59	7/8" Dia.	1-1/4"	6	1/8" N.P.T.	7/16"	1/2"	2"	"

BURNERS FOR PREHEATING - SHAPING - ANNEALING - BEAD MAKING - STEM MAKING  
 BURNERS FOR MIXED NATURAL GAS & PROPANE GAS - NATURAL GAS  
 INSERT SHOWN ON PAGE 16.

NATURAL GAS-AIR



J & P 336A

3/4" DIA. BODY

J & P No. Model	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	Male Thread	C to C Outside Hole	Focal Length	Flame Length	Material
242A	#58	3/4" Dia.	1-1/4"	2	1/8" N.P.T.	13/64"	3/4"	2-3/4"	Brass
336A	#64	3/4" Dia.	1-1/4"	3	1/8" N.P.T.	5/32"	3/4"	2-3/4"	"
536A	#64	3/4" Dia.	1-1/4"	5	1/8" N.P.T.	5/16"	3/8"	2"	"
342A	#58	3/4" Dia.	1-1/4"	3	1/8" N.P.T.	5/32"	3/4"	2-3/4"	"
542A	#58	3/4" Dia.	1-1/4"	5	1/8" N.P.T.	5/16"	1/2"	2"	"

Burners for Preheating - Shaping - Annealing - Bead Making - Stem Making - can be used on Hand Torch (Gas-Air)  
 Burners for Mixed Natural Gas - Propane Gas - Natural Gas  
 Above burners can be made to your specifications with regard to number of port holes, distance between holes and size of port holes.

## SPARE PARTS FOR MODEL A-ET-C AND E BURNERS



AA



A



B



C



D



E



F

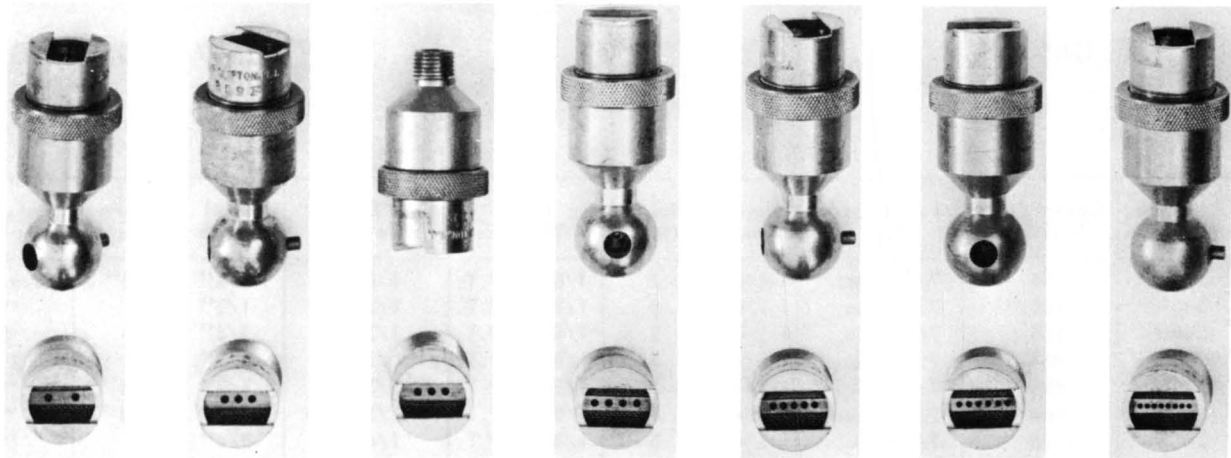
A- Burner Nozzle Sleeve Ball Body 1-1/8" Dia.  
 AA-Burner Nozzle Sleeve Ball Body 1-1/8" Hex.  
 B- Burner Nozzle Sleeve

C- Burner Nozzle Lock Nut  
 D- Burner Screen Retainer

E- Burner Screen Spacer  
 F- Burner Screen

# MT TYPE ROUND SCREEN BURNERS

NATURAL GAS-AIR 7/8" DIA. BODY



A259P

359P

MTT TYPE  
1/8 Male  
Pipe Thread

455P

552P

641P

836P

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	C to C Outside Hole	3/4" Ball on End	Focal Length	Flame Length	Material
255-P	#54	7/8" Dia.	2-5/16"	2	1/8"	"	1-3/4"	4-1/2"	Brass
259-P	#53	7/8" Dia.	2-5/16"	2	1/8"	"	2"	5"	Brass
346-P	#56	7/8" Dia.	2-5/16"	3	1/4"	"	3/4"	2"	Brass
359-P	#53	7/8" Dia.	2-5/16"	3	1/4"	"	2"	5"	Brass
455-P	#54	7/8" Dia.	2-5/16"	4	3/8"	"	1-1/2"	6"	Brass
536-P	#64	7/8" Dia.	2-5/16"	5	5/16"	"	1/2"	2"	Brass
552-P	#55	7/8" Dia.	2-5/16"	5	3/8"	"	1-3/4"	4"	Brass
736-P	#64	7/8" Dia.	2-5/16"	7	15/32"	"	1/2"	1-3/4"	Brass
836-P	#64	7/8" Dia.	2-5/16"	8	7/16"	"	1/2"	1-3/4"	Brass
641-P	#59	7/8" Dia.	2-5/16"	6	7/16"	"	1/2"	2"	Brass
A259-P	#53	7/8" Dia.	2-5/16"	2	1/4"	"	2"	5"	Brass
B259-P	#53	7/8" Dia.	2-5/16"	2	3/8"	"	2"	5"	Brass

Burners for Preheating - Shaping - Annealing - Bead Making - Stem Making - Burners for Mixed Natural Gas - Propane Gas - Natural Gas

Above burners can be made to your specifications with regard to number of port holes, distance between holes and size of port holes. Available with adjusting screw and nut at ball end if desired.

## 5/8" DIA. INSERTS FOR MODEL B and MODEL P BURNERS



1P

2P

3P

2A

2AP

4P

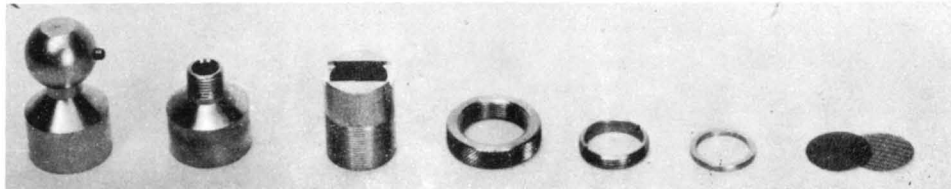
5CP

5P

6P

7P

8P



A

B

C

D

E

F

G

A - Burner Nozzle Sleeve Ball Body  
 B - Burner Nozzle Sleeve Body 1/8 P. T.  
 C - Burner Nozzle Sleeve  
 D - Burner Nozzle Lock Nut

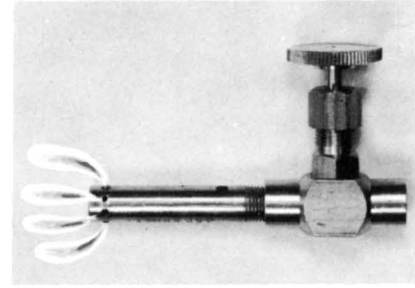
E - Burner Screen Retainer  
 F - Burner Screen Spacer  
 G - Burner Screen



## PILOT BURNERS

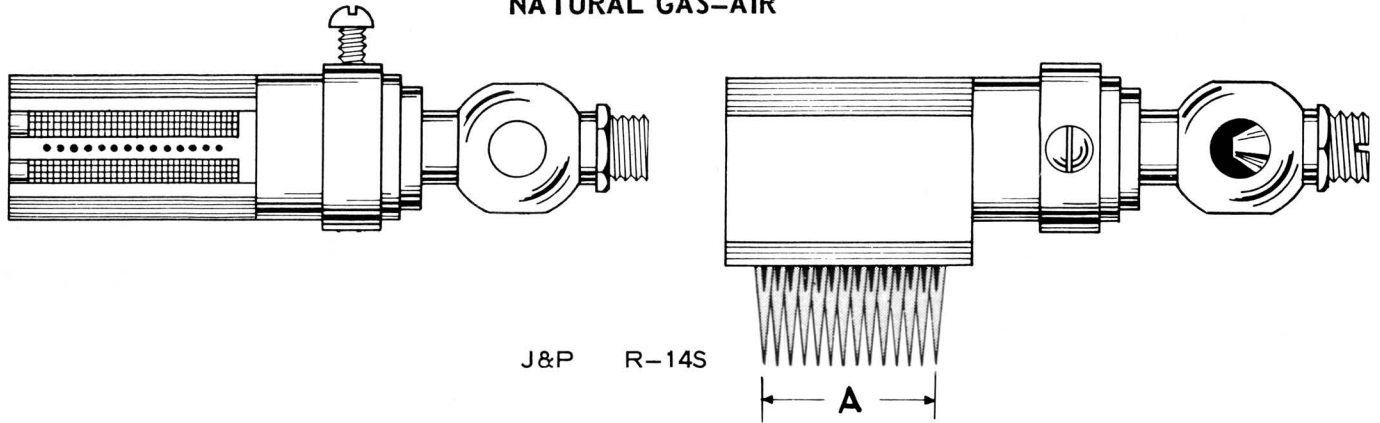


J & P 450  
PILOT BURNER



J & P NO. P76  
PILOT BURNER  
WITH J & P VIC VALVE

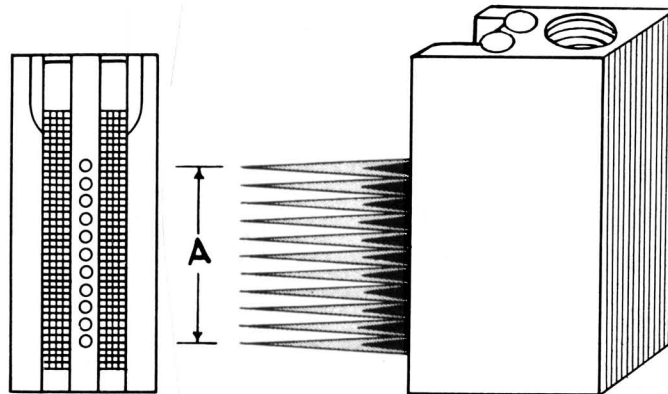
## RECTANGULAR SCREEN TYPE RIBBON BURNERS NATURAL GAS-AIR



J&P R-14S

J & P No.	Center Hole Drill Size	Burner Body Size	No. of Holes	Burner Length	C to C Outside Hole "A"	3/4" Ball on 1 end	Focal Length	Flame Length	Material
R-14S	#67	3/4" x 1"	14	3-1/8"	7/8"	"	1/2"	1-1/4"	Brass

### BURNERS FOR FLAT PRESS STEM MAKING



J&P 1138 RS

J & P No.	Center Hole Drill Size	Burner Body Size Rect.	Burner Length	No. of Holes	Female Thread	C to C Outside Hole "A"	Focal Length	Flame Length	Material
1138RS	#62	3/4" x 1"	1-3/4"	11	1/4" F.P.T.	1"	3/8"	1-1/4"	Brass
1343RS	#57	3/4" x 1"	2"	13	1/4" F.P.T.	1-13/64"	3/8"	1-1/4"	"
2243RS	#57	3/4" x 1"	3"	22	1/4" F.P.T.	2-3/32"	3/8"	1-1/4"	"

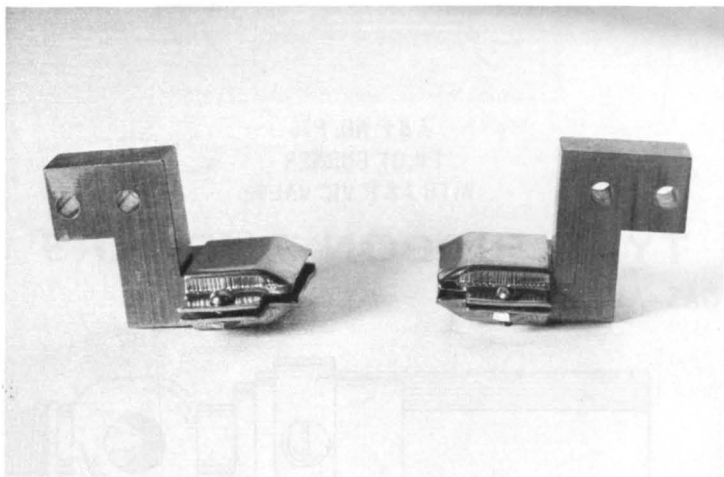
### BURNERS FOR PREHEATING OR BEAD MAKING

BURNERS FOR MIXED GAS - PROPANE GAS - NATURAL GAS  
FEED HOLE ALSO CAN BE PROVIDED FROM BACK.

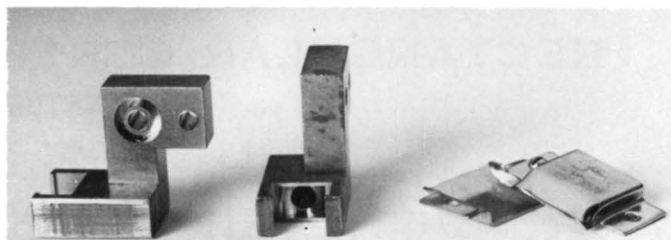
# MACHINE & TOOL COMPANY

**BURNERS  
AND MIXERS 17**

J & P Tipping Torch Burners,  
7 Hole Gas-Air Screen Type.  
Parts may be ordered separately  
if desired.



J&P #202LH J&P #201RH



A B C



D E F

**NATURAL GAS-AIR**

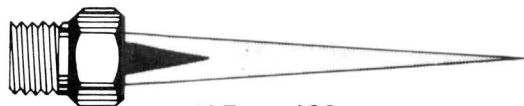


J&P 1

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Thread Size	Focal Length	Flame Length	Material
1	#59	5/16" Hex.	5/8"	1/4-27	1/2"	1-1/4"	Brass
9	#70	5/16" Hex.	5/8"	1/4-27	3/8"	1"	"

BURNERS FOR BEAD MAKING – PREHEATING OR SEALING  
FOR HAND TORCH TIP OFF BURNER MIXED GAS OR NATURAL GAS

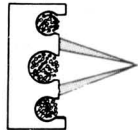
**NATURAL GAS-AIR**



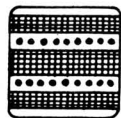
J&P 12C

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material
12C	#57	7/16" Hex	9/16"	1/8" N.P.T.	3/4"	1-1/2"	Brass
1N	#56	3/8 " Hex	17/32"	1/4"-27	1/2"	1-3/4"	Brass

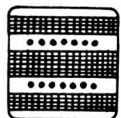
# 5/8" SQ. GRID BURNER INSERTS



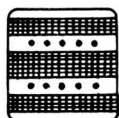
Flame of  
Double  
Row



No. 212  
18 Holes  
Double  
Row



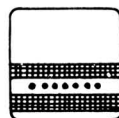
No. 211  
14 Holes  
Double  
Row



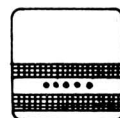
No. 208  
10 Holes  
Double  
Row



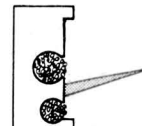
No. 206  
9 Holes  
Single  
Row



No. 205  
7 Holes  
Single  
Row



No. 200  
5 Holes  
Single  
Row



Flame of  
Single  
Row

These burners are 5/8" square with a 3/32" Radius on the corners and are used on stem head and sealing machines.

They are supplied with holes ranging from one to nine in a single row and two to eighteen in double rows, and can be made to your specifications with regard to number of holes, distance between holes, and size of port holes.

## 5/8" SQ. GRID BURNER INSERTS Single Row - 7° Angle

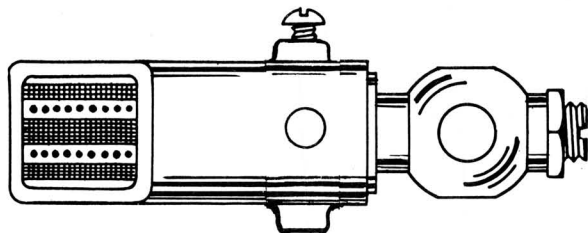
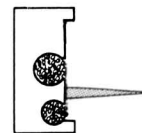
Grid Burner No.	No. of Holes	Port Hole Drill Size	C to C Outside Hole	Material
199	5	#66	1/4"	Brass
200	5	#66	21/64"	"
203	5	#66	11/32"	"
204	7	#66	3/8"	"
205	7	#66	1/2"	"
206	9	#66	17/32"	"

## 5/8" SQ. GRID BURNER INSERTS Double Row - 14°

Grid Burner No.	No. of Holes	Port Hole Drill Size	C to C Outside Hole	Material
207	10	#66	1/4"	Brass
208	10	#66	21/64"	"
209	10	#66	11/32"	"
210	14	#66	3/8"	"
211	14	#66	1/2"	"
212	18	#66	17/32"	"

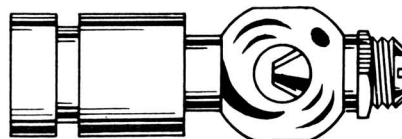
## 5/8" SQ. GRID BURNER INSERTS Single Row - Parallel Flame

Grid Burner No.	No. of Holes	Port Hole Drill Size	C to C Outside Hole	Material
213	4	#66	3/16"	Brass
215	5	#66	3/16"	"
216	5	#66	11/32"	"
217	7	#66	3/8"	"
218	7	#66	1/2"	"
219	9	#66	17/32"	"



Complete Grid Burner with Manifold

3/4" BRASS BALL BODY WITH ADJUSTING SCREW AND NUT



BURNER SLEEVE

3/4" BALL WITH ADJUSTABLE SCREW AND NUT

Burner Sleeve "A"



Note: If burners are to be used with Gas - Air - Oxygen specify Prefix OX.

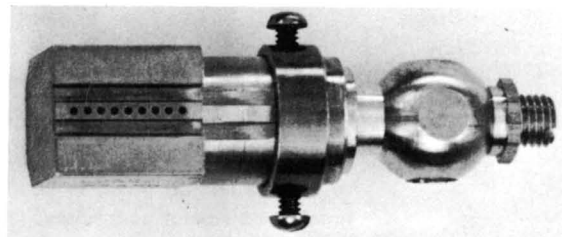
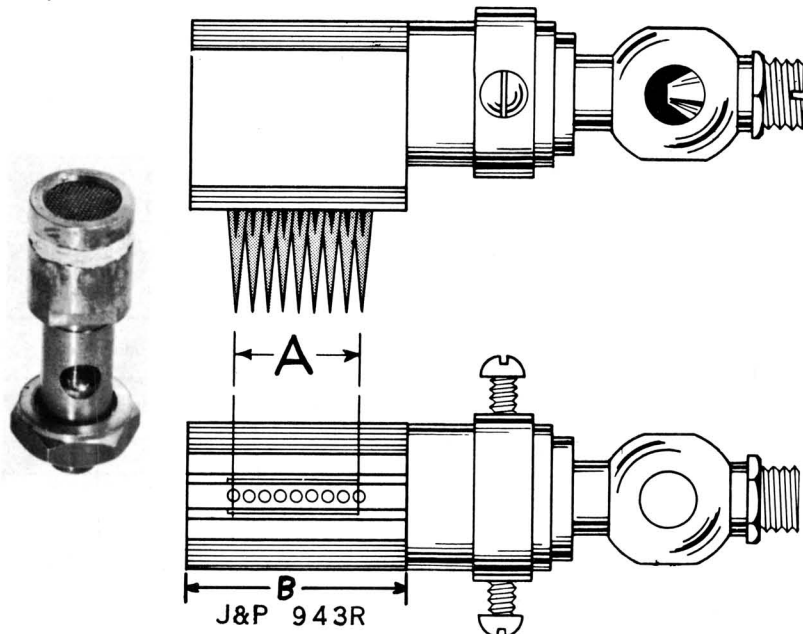
Example: 5-Holes #66 Drill Port #OX203.



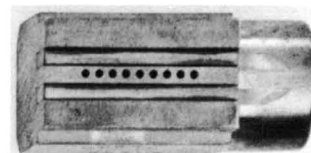
# RECTANGULAR BURNERS

Burner sleeve illustrated is interchangeable with ball type sleeve for these burners. Ball sleeve supplied unless otherwise requested.

**GAS-AIR-OXYGEN**



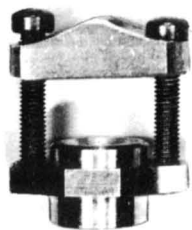
J & P 943RN



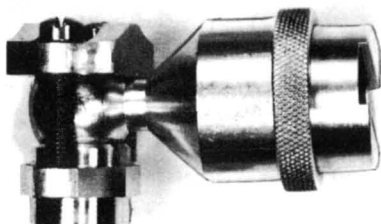
J & P 943RF

J & P No.	Center Hole Drill Size	Burner Body Size	No. of Holes	Burner Length Without Sleeve	C to C Outside Hole "A"	3/4" Ball on 1 end	Focal Length	Flame Length	Dimension "B"	Material
440R	#60	3/4" x 1"	4	1-3/4"	15/64"	"	3/16"	1-1/4"	3/4"	Brass
540R	#60	3/4" x 1"	5	1-3/4"	5/16"	"	3/16"	1-1/4"	3/4"	Brass
643R	#57	3/4" x 1"	6	1-3/4"	25/64"	"	3/16"	1-1/4"	3/4"	Brass
943R	#57	3/4" x 1"	9	2"	5/8"	"	1/4"	1"	1-1/8"	Brass
943RN	#57	3/4" x 1"	9	1-3/4"	5/8"	"	1/4"	1"	15/16"	Brass
843R	#57	3/4" x 1"	8	1-3/4"	35/64"	"	1/4"	1"	3/4"	Brass
340R	#60	3/4" x 1"	3	1-3/4"	5/32"	"	3/16"	1-1/4"	3/4"	Brass
743R	#57	3/4" x 1"	7	1-3/4"	15/32"	"	1/4"	1"	3/4"	Brass
943RF	#57	3/4" x 1"	9	1-5/8"	5/8"	1/8" FPT	1/4"	1"	1-1/8"	Brass

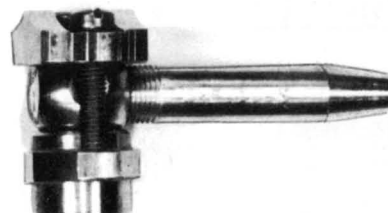
## SWIVEL BALL HOLDER ASSEMBLY



"G"  
SWIVEL BALL HOLDER  
1/8" FPT  
(ALSO AVAILABLE  
WITH 1/8" MPT)



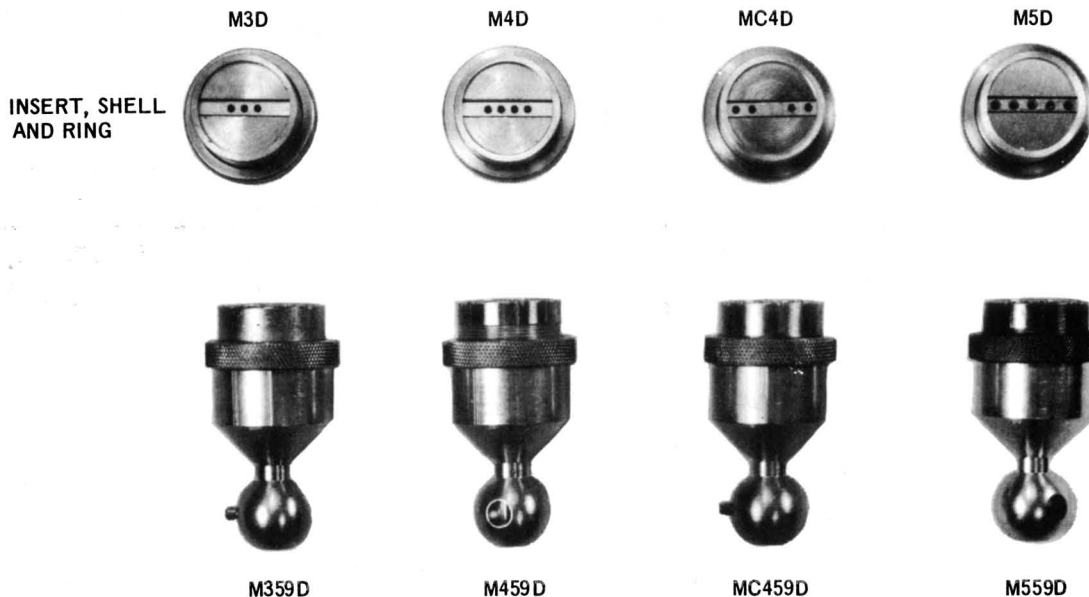
SWIVEL BALL HOLDER WITH  
MODEL 359E BURNER  
GAS-AIR



SWIVEL BALL HOLDER WITH  
MODEL 152N BURNER  
GAS-AIR-OXYGEN

# BURNERS WITH MILLED TYPE INSERTS

1-1/8" DIA. BODY - GAS - AIR - OXYGEN

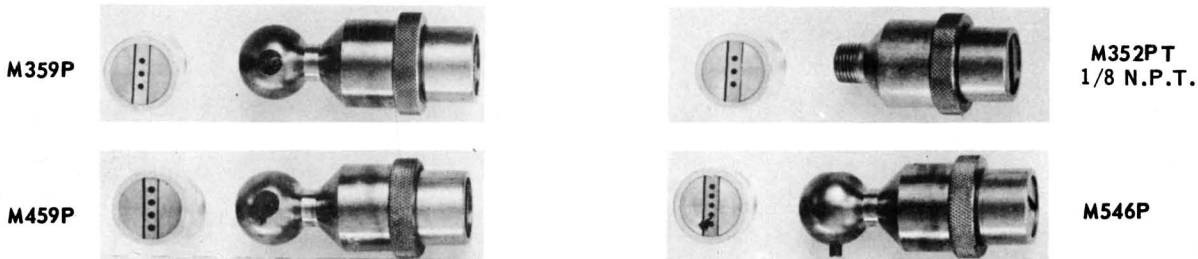


J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	C to C Outside Hole	3/4" Ball on End	Focal Length	Flame Length	Material
M259-D	#53	1-1/8" Dia.	2-3/8"	2	1/8"	"	2"	5"	Brass
M359-D	#53	1-1/8" Dia.	2-3/8"	3	1/4"	"	2"	7"	"
M459-D	#53	1-1/8" Dia.	2-3/8"	4	3/8"	"	1-3/4"	5"	"
MC459-D	#53	1-1/8" Dia.	2-3/8"	4	11/16"	"	1-3/4"	5"	"
M559-D	#53	1-1/8" Dia.	2-3/8"	5	11/16"	"	1-3/4"	5"	"
M946-D	#56	1-1/8" Dia.	2-3/8"	9	39/64"	"	3/4"	2"	"

BURNERS FOR MIXED NATURAL GAS - NATURAL GAS

Model "D" Type Burners are used on special machines for Sealing and Cutting of Stems. These burners are designed for use with Gas-Air-Oxygen. Model "D" Burner is effectively used on crossfires. All parts are interchangeable and can be ordered separately for replacement.

7/8" DIA. BODY - GAS - AIR - OXYGEN



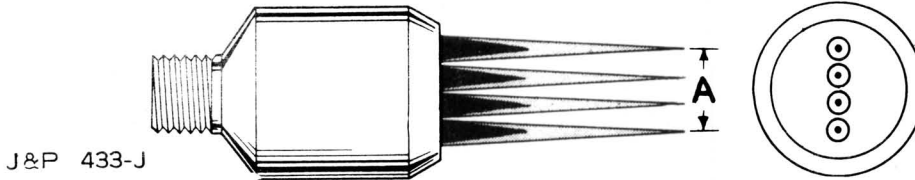
J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	C to C Outside Holes	3/4" Ball On End	Focal Length	Flame Length	Material
M743P	#57	7/8" DIA	2-5/16"	7	29/64"	"	3/4"	2"	Brass
M359P	#53	7/8" Dia.	2-5/16"	3	1/4"	"	1-1/2"	4"	Brass
M459P	#53	7/8" Dia.	2-5/16"	4	3/8"	"	1-3/4"	5"	Brass
M546P	#56	7/8" Dia.	2-5/16"	5	3/8"	"	3/4"	2"	Brass

All parts are interchangeable and can be ordered separately for replacement.

Above burners can be made to your specifications with regard to number of port holes, distance between holes, and size of port holes.

# JET TYPE BURNERS

## GAS-AIR-OXYGEN

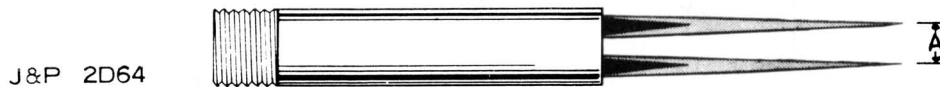


J&P 433-J

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	Male Thread	C to C Outside hole A	Focal Length	Flame Length	Material	Insert Style
433-J	#66	7/8" Dia.	1-1/2"	4	1/8" N.P.T.	7/16"	3/16"	1-1/2"	Brass	B
536-J	#64	1-1/8" Dia.	1-3/4"	5	1/8" N.P.T.	11/16"	1/4"	2"	"	B
642-J	#58	1-1/8" Dia.	1-3/4"	6	1/8" N.P.T.	23/32"	1/4"	2"	"	B

BURNERS FOR PREHEATING - SHAPING - ANNEALING - BEAD MAKING - STEM MAKING  
 BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS

## GAS-OXYGEN BURNERS



J&P 2D64

J & P No.	Center Hole Drill Size	Burner Body Size	No. of Holes	Burner Length	Male Thread	C to C Outside hole A	Focal Length	Flame Length	Material	Insert Style
2D64	#64	13/32" Dia.	2	2"	1/8" N.P.T.	5/32"	3/16"	2"	Brass	B

BURNERS FOR PREHEATING AND SEALING

## GAS-OXYGEN BURNER TIP



J&P P2

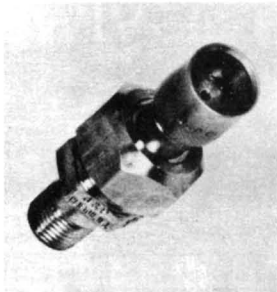
J&P 6C

J & P No.	Center Hole Drill Size	Burner Body Size	No. of Holes	Burner Length	Male Thread	C to C Outside hole A	Focal Length	Flame Length	Material	Insert Style
P-1	#77	5/16" Hex.	1"	35/64"	10/32 Fem.		1/8"	1"	Brass	A
P-2	#70	5/16" Hex.	2	5/8"	1/4-28	1/8"	1/8"	1-1/2"	Brass	A
6C	#70	1/4" Hex.	1	5/8"	1/4-28	-	1/8"	1-3/4"	Brass	A
6P	#70	1/4" Hex.	1	3/4"	1/4-28	-	1/8"	1-3/4"	Brass	A

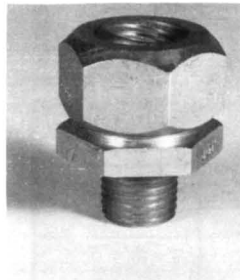
USED FOR SEALING, BEAD MAKING AND TIP-OFF

## BALL JOINTS

#7P  
Ball Joint  
with 00 Burner  
#55 Drill  
Port Hole



#7P  
Ball Joint with  
1/4-28 F Thread and  
1/8" Male Pipe Thread



#14 Ball Joint  
with 1/4" F.P.T.  
and 1/4" M.P.T.



#7B  
Ball Joint with  
1/4-28 F Thread and  
1/8" Male Pipe Thread



#7  
Ball Joint  
with 1/8" F.P.T.  
and 1/8" M.P.T.

## GAS-AIR-OXYGEN BURNER TIPS



J&P 5

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
5	#70	5/16" Hex.	5/8"	1/4-28	1/8"	1-1/2"	Brass	B
5B	#68	5/16" Hex.	5/8"	1/4-28	3/16"	2"	"	B
5C	#59	5/16" Hex.	5/8"	1/4-28	3/16"	4"	"	B
P5	#66	5/16" Hex.	5/8"	1/4-28	3/16"	1-1/2"	"	B
5X	#65	5/16" Hex.	5/8"	1/4-28	3/16"	1-3/4"	"	B
B1	#71	5/16" Hex.	5/8"	1/4-28	1/8"	1-1/4"	"	B
5L	#58	5/16" Hex.	5/8"	1/4-28	3/16"	4"	"	B

BURNERS FOR TIPPING OFF - SEALING - BEAD MAKING AND DIODE SEALING



J&P 6

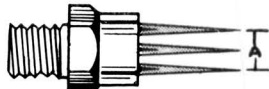
J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
6	#70	1/4" Hex	1/2"	1/4"-28	1/8"	1-1/2"	Brass	B
6A	#75	1/4" Hex	1/2"	1/4"-28	1/8"	1-1/4"	Brass	B
6B	#66	1/4" Hex	5/8"	1/4"-28	1/8"	1-1/2"	Brass	B
6D	#68	1/4" Hex	1/2"	1/4"-28	1/4"	4"	Brass	B
6G	#59	1/4" Hex	1/2"	1/4"-28	3/8"	3-1/2"	Brass	B
6H	#65	1/4" Hex	1/2"	1/4"-28	1/4"	7"	Brass	B
6J	#71	1/4" Hex	1/2"	1/4"-28	1/4"	3"	Brass	B
6K	#58	1/4" Hex	1/2"	1/4"-28	3/8"	3-1/2"	Brass	B
6M	#60	1/4" Hex	1/2"	1/4"-28	3/8"	3-1/2"	Brass	B
6R	#69	1/4" Hex	1/2"	1/4"-28	1/4"	3"	Brass	B
6T	#56	1/4" Hex	1/2"	1/4"-28	3/8"	3-1/2"	Brass	B
6U	#80	1/4" Hex	1/2"	1/4"-28	1/8"	1-3/4"	Brass	B
6V	#79	1/4" Hex	1/2"	1/4"-28	1/8"	1-3/4"	Brass	B
6W	#77	1/4" Hex	1/2"	1/4"-28	1/8"	2"	Brass	B

BURNERS FOR TIPPING - SEALING - BEAD MAKING

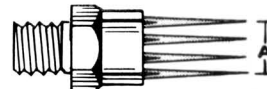
J&P NO. 5 AND J&P NO. 6 BURNERS MAY ALSO BE USED WITH GAS - OXYGEN

## TIP - OFF OR SEALING BURNERS

NATURAL GAS-AIR-OXYGEN-PARALLEL FLAME



J&P 3



J&P 4

J & P No.	Center Hole Drill Size	Body Burner Size	No. of Holes	Male Thread	Length Overall	C to C Outside Hole "A"	Focal Length	Flame Length	Material
2	#70	3/8" Hex.	2	1/4-28	5/8"	1/16"	1/8"	2"	Brass
3	#70	3/8" Hex.	3	1/4-28	5/8"	3/16"	1/8"	2"	"
4	#70	3/8" Hex.	4	1/4-28	5/8"	3/16"	1/8"	2"	"
4A	#70	3/8" Hex.	5	1/4-28	5/8"	13/64"	1/8"	2"	"
3P	#76	3/8" Hex.	3	1/4-28	5/8"	1/8"	1/8"	1"	"
3PL	#76	3/8" Hex.	3	1/4-28	7/8"	1/8"	1/8"	1"	"

BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS

# MACHINE & TOOL COMPANY

**BURNERS  
AND MIXERS**



# GAS-AIR-OXYGEN BURNERS



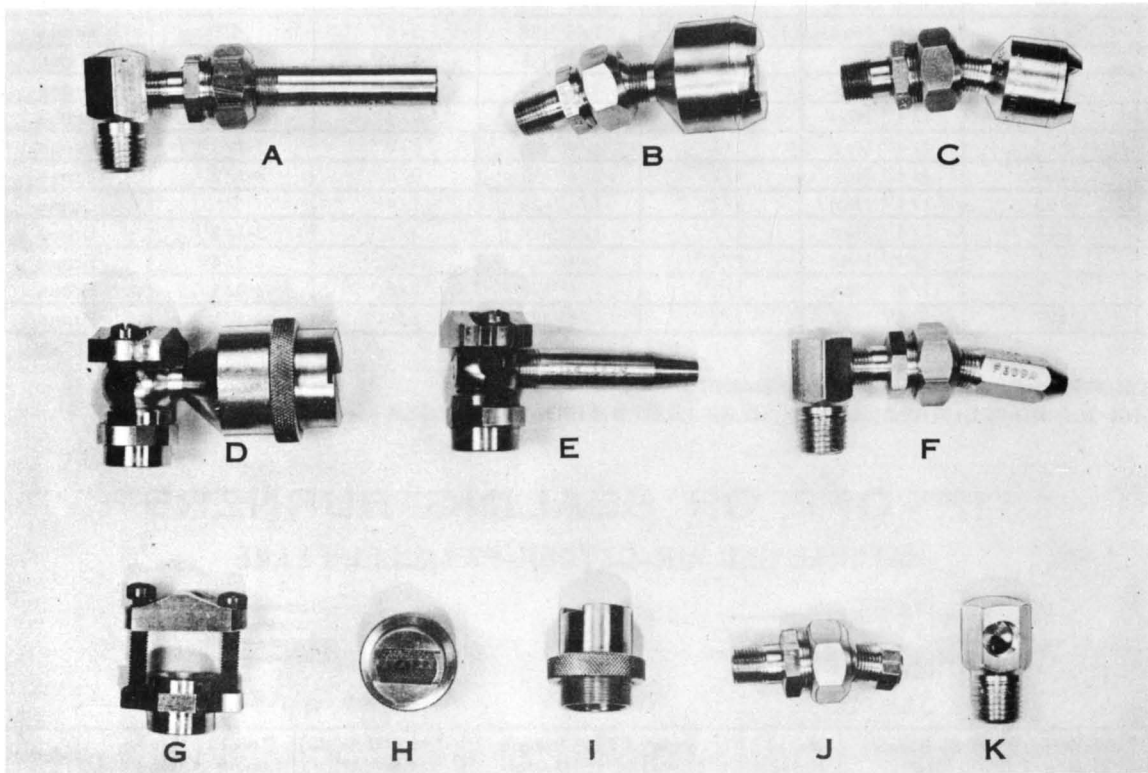
J & P 142-H



J & P 146-H

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
131-H	#68	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/8"	4"	Brass	C
142-H	#58	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/4"	6"	"	C
146-H	#56	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/4"	6"	"	C
152-H	#55	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	E
155-H	#54	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	E
163-H	#52	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	E
70-H	#50	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/2"	4-1/2"	"	E
C142-H	#58	7/16" Hex.	1-5/8"	1/8" N.P.T.	3/8"	7"	"	C
C146-H	#56	7/16" Hex.	1-5/8"	1/8" N.P.T.	3/8"	7"	"	C
E142-H	#58	7/16" Hex.	2"	1/8" N.P.T.	3/8"	7"	"	C
E146-H	#56	7/16" Hex.	2"	1/8" N.P.T.	3/8"	7"	"	E

PIN POINT BURNERS FOR PREHEATING - SHAPING - SEALING AND CUT OFF.  
 SPECIAL LENGTHS FURNISHED IF DESIRED  
 BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS



- A - HEX ELBOW #7 BALL JOINT 152D BURNER
- B - BALL JOINT WITH MODEL C BURNER
- C - BALL JOINT WITH MODEL B BURNER
- D - SWIVEL HOLDER WITH MODEL E BURNER
- E - SWIVEL HOLDER - 3/4" DIA. BALL WITH 152N BURNER
- F - HEX ELBOW #7 BALL JOINT WITH F300A BURNER
- G - SWIVEL HOLDER
- H - MODEL P - INSERT - SHELL AND RING. (Front View)
- I - MODEL P - INSERT - SHELL AND RING. (Side View)
- J - #7 BALL JOINT WITH 1/4 - 28 THREAD FEMALE ADAPTER
- K - HEX ELBOW - 1/4" PIPE THREAD INLET - 1/8" PIPE THREAD OUTLET

# GAS - AIR - OXYGEN BURNERS



J&P 4J2

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
3J1	#68	13/32" Dia.	2"	1/8" N.P.T.	1/8"	4"	Brass	H
4J2	#58	13/32" Dia.	2"	1/8" N.P.T.	1/4"	6"	"	J
4J6	#56	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	"	J
5J2	#55	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	"	J
6J3	#52	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	"	E
7J0	#49	13/32" Dia.	2"	1/8" N.P.T.	1/2"	7"	"	E
4J0	#60	13/32" Dia.	2"	1/8" N.P.T.	1/4"	5-1/2"	"	J

PIN POINT BURNERS FOR PREHEATING, SHAPING, SEALING, CUT OFF AND STEM MAKING



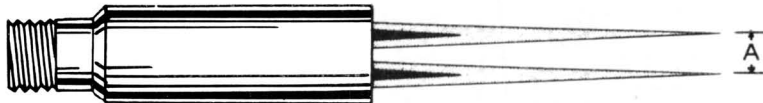
J&P 146E

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
146E	#56	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	Brass	C
136E	#64	13/32" Dia.	2"	1/8" N.P.T.	1/4"	5"	"	C
131E	#68	13/32" Dia.	2"	1/8" N.P.T.	1/4"	4-1/2"	"	C
140E	#60	13/32" Dia.	2"	1/8" N.P.T.	1/4"	5"	"	C
152N	#55	13/32" Dia.	2"	1/8" N.P.T.	3/8"	6"	"	F



J&P 152E

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
152E	#55	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	Brass	G
159D	#53	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7-1/2"	"	G
173E	#49	13/32" Dia.	2"	1/8" N.P.T.	1/2"	4-1/2"	"	E



J&P 246E



J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	No. of Holes	Male Thread	C to C Outside Hole "A"	Focal Length	Flame Length	Material	Insert Style
236E	#64	1/2" Dia.	2"	2	1/8" N.P.T.	13/64"	1/4"	3"	Brass	D
246E	#56	1/2" Dia.	2"	2	1/8" N.P.T.	13/64"	1/4"	3"	"	D
240E	#60	1/2" Dia.	2"	2	1/8" N.P.T.	13/64"	1/4"	3"	"	D

PIN POINT BURNERS FOR PREHEATING, SHAPING, SEALING, AND STEM MAKING  
13/64" CENTER TO CENTER OUTSIDE HOLE - "A"

## GAS-AIR-OXYGEN-DIVERGENT FLAME

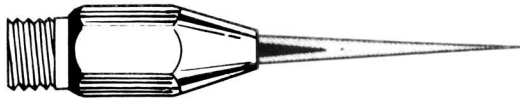


J & P 04P

J & P No.	Center Hole Drill Size	Burner Body Size	No. of Holes	Burner Length	Thread Size	Focal Length	Flame Length	Material
04P	#64	13/32" Dia.	4	1-1/4"	1/8" N.P.T.	1/8"	2"	Brass
04C	#64	13/32" Dia.	4	15/16"	1/4"-28	1/8"	2"	"
4LF	#70	13/32" Dia.	4	15/16"	1/4"-28	1/16"	1-1/2"	"

BURNERS FOR SEALING, GLAZING AND BEAD MAKING

### GAS-OXYGEN BURNER TIPS



J & P F43

### GAS-OXYGEN OR GAS-AIR-OXYGEN BURNER TIPS



J & P NV5

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
F31	#68	7/16" Hex.	1-3/8"	1/8" N.P.T.	1/8"	4"	Brass	H
F40	#60	7/16" Hex.	1-3/8"	1/8" N.P.T.	3/16"	5"	Brass	H
F43	#57	7/16" Hex.	1-3/8"	1/8" N.P.T.	3/16"	5"	Brass	H
F46	#56	7/16" Hex.	1-3/8"	1/8" N.P.T.	1/4"	6"	Brass	H
F52	#55	7/16" Hex.	1-3/8"	1/8" N.P.T.	1/4"	6"	Brass	H
H42	#58	7/16" Hex.	1-3/8"	1/8" N.P.T.	3/16"	5"	Brass	H
H52	#55	7/16" Hex.	1-3/8"	1/8" N.P.T.	3/16"	5-1/2"	Brass	H
NV1	#68	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/8"	4"	Brass	H
NV2	#66	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/4"	7"	Brass	H
NV3	#64	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/4"	7"	Brass	H
NV4	#62	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/16"	5"	Brass	H
NV5	#60	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/16"	5"	Brass	H
NV6	#58	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/16"	5"	Brass	H
NV7	#56	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/16"	5-1/2"	Brass	H

PIN POINT BURNERS FOR PREHEATING - SHAPING - SEALING - AND CUT OFF

### GAS-OXYGEN BURNER TIPS



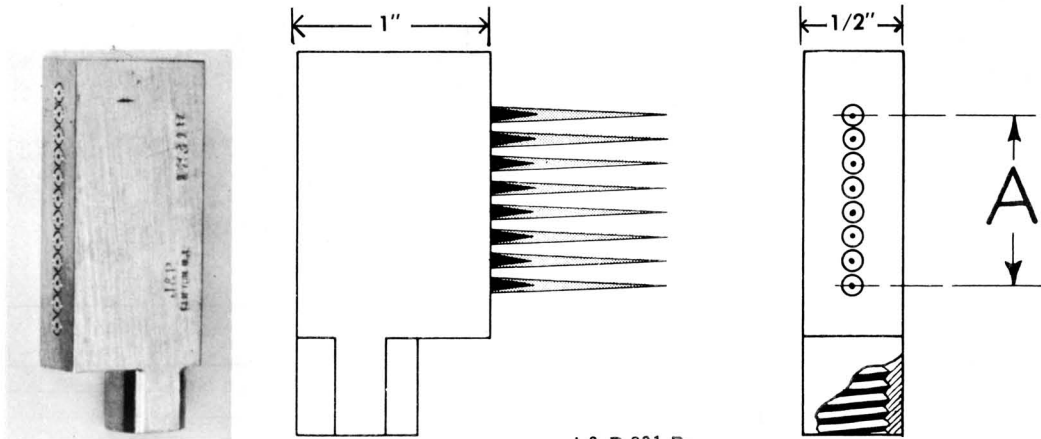
J & P 4C0

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
3C1	#68	13/32" Dia.	2"	1/8" N.P.T.	1/8"	4"	Brass	H
4C0	#60	13/32" Dia.	2"	1/8" N.P.T.	3/16"	5"	"	H
4C2	#58	13/32" Dia.	2"	1/8" N.P.T.	3/16"	5"	"	H
4C6	#56	13/32" Dia.	2"	1/8" N.P.T.	1/4"	6"	"	H
5C2	#55	13/32" Dia.	2"	1/8" N.P.T.	1/4"	6"	"	J
6C3	#52	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	"	E

BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS

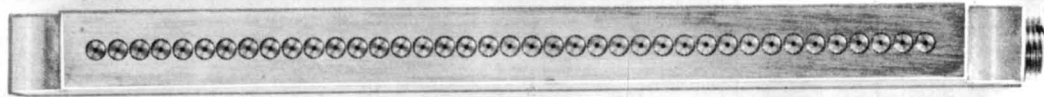
PIN POINT BURNERS FOR PREHEATING - SHAPING - SEALING and CUT OFF

# GAS-OXYGEN OR GAS-AIR-OXYGEN RECTANGULAR RIBBON BURNERS



J & P 1231R

J & P 831-R



J & P 3933R

J & P No.	Width of Flame "A"	Overall Length	Material
831-R	1"	2-1/16"	Brass
1131-R	1-7/16"	2-9/16"	"
1231-R	1-37/64"	2-9/16"	"
1831-R	2-7/16"	3-7/16"	"
1931-R	2-37/64"	3-9/16"	"
2131-R	2-55/64"	3-7/8"	"
2231-R	3"	4-1/16"	"
2431-R	3-19/64"	4-5/16"	"
2933-R	4"	5"	"
3133-R	4-19/64"	5-5/16"	"
3433-R	4-23/32"	5-3/4"	"
3633-R	5"	6"	"
3733-R	5-5/32"	6-1/8"	"
3933-R	5-7/16"	6-13/16"	"
4533-R	6-19/64"	7-5/8"	"
4631-R	6-7/16"	7-13/16"	"
4833-R	6-23/32"	8-1/16"	"

BURNERS FOR BEAD MAKING - SHAPING AND SEALING

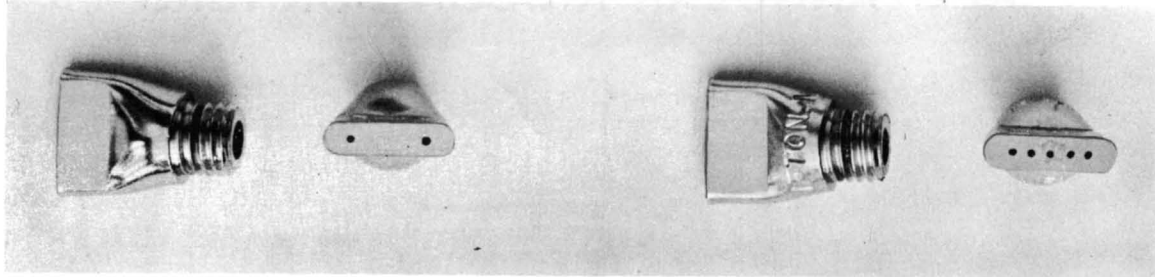
THE ABOVE BURNERS CAN BE HAD WITH DRILL SIZES FROM

# 68 - 67 - 66 - 65 - 64 - 63 - 62 - 61 and 60.

INSERT STYLE B



# UNPILOTED TYPE FISHTAIL BURNERS GAS-OXYGEN

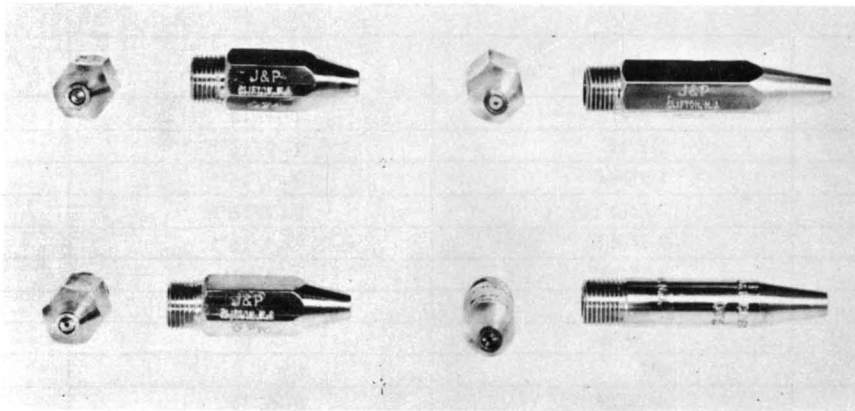


J&P 15A

J&P 0X5

J & P No.	No. of Holes	Drill Size	C to C Outside Hole	Male Thread	Parallel Flame	Material Chrome Plated
15A	2	#71	1/4"	1/4-28	"	Brass
15B	2	#58	1/4"	1/4-28	"	Brass
15C	3	#71	1/8"	1/4-28	"	Brass
15D	5	#80	1/4"	1/4-28	"	Brass
15E	3	#80	1/4"	1/4-28	"	Brass
15F	2	#80	1/4"	1/4-28	"	Brass
15G	5	#77	1/4"	1/4-28	"	Brass
15K	3	#71	1/4"	1/4-28	"	Brass
15L	2	#72	1/8"	1/4-28	"	Brass
1253	10	#71	39/64"	1/8 N.P.T.	"	Brass
UN3	3	#79	1/8"	1/4-28	"	Brass
UN5	5	#79	1/4"	1/4-28	"	Brass

OF4



OF1 Hex

OF5

OF1

## GAS-OXYGEN OR GAS-AIR-OXYGEN BURNERS

J & P Burner No.	Port Hole Size	Male Thread	Burner Length	Material	Insert Style
OF1	.043"	1/8" N.P.T.	2"	7/16" Hex. Brass	H
OF2	.043"	1/8" N.P.T.	1-1/2"	7/16" Hex. Brass	H
OF3	.031"	1/8" N.P.T.	2"	13/32" Round Brass	H
OF4	.043"	1/8" N.P.T.	1-3/8"	7/16" Hex. Brass	H
OF5	.018"	1/8" N.P.T.	2"	7/16" Hex. Brass	H
OF3-3	.028"	1/8" N.P.T.	3"	13/32" Round Brass	H
OF9	.028"	1/8" N.P.T.	2-1/2"	13/32" Round Brass	H
OF6	.038"	1/8" N.P.T.	1-5/8"	7/16" Hex. Brass	H
OF7	.043"	1/8" N.P.T.	1-3/4"	7/16" Hex. Brass	H
OF8	.046"	1/8" N.P.T.	2"	7/16" Hex. Brass	H

# GAS - OXYGEN TIPS



J & P H-4

J & P No.	Center Hole Drill Size	Burner Body Size	Length Overall	Thread	Focal Length	Flame Length	Material	Insert Style
H4	#55	7/16" Hex.	15/16"	5/16-27FEM.	1/4"	6"	Brass	E
H9	#65	1/4" Hex.	3/4"	10-32FEM.	3/16"	6"	"	B
53F	#53	7/16" Hex.	1"	5/16-32FEM.	1/4"	6"	"	E
60H	#60	7/16" Hex.	1"	1/8" F.P.T.	3/16"	4 1/2"	"	E

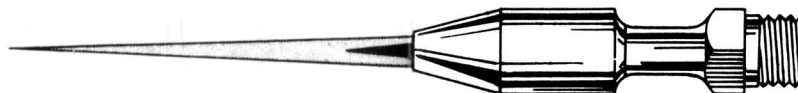
NEEDLE POINT GLASS FIRE TIPS FOR PREHEATING - SHAPING AND SEALING



J & P F142A



J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Thread	Focal Length	Flame Length	Material	Insert Style
1-H	#57	7/16" Hex.	1-3/4"	1/8" N.P.T.	3/8"	7"	Brass	E
2-H	#56	7/16" Hex.	2"	1/8" N.P.T.	3/8"	7"	"	E
3-H	#55	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	E
F142A	#58	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	C
F142C	#58	7/16" Hex.	1"	1/8" F.P.T.	3/8"	7"	"	C
F300B	#56	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	E
F300A	#55	7/16" Hex.	1-1/4"	1/8" N.P.T.	3/8"	7"	"	E
F301A	#49	7/16" Hex.	1-1/4"	1/8" N.P.T.	1/2"	4 1/2"	"	E
F301C	#49	7/16" Hex.	1"	1/8" F.P.T.	1/2"	4 1/2"	"	B
F300C	#55	7/16" Hex.	1"	1/8" F.P.T.	3/8"	7"	"	E
CF300A	#52	7/16" Hex.	1-1/4"	1/8" M.P.T.	3/8"	7"	"	E



J & P 31DC

J & P No.	Center Hole Drill Size	Burner Body Size	Length Overall	Male Thread	Focal Length	Flame Length	Material	Insert Style
31DC	#68	13/32" Dia.	2"	1/8" N.P.T.	1/4"	4"	Brass	B
46DC	#56	13/32" Dia.	2"	1/8" N.P.T.	1/4"	6"	"	E
52DC	#55	13/32" Dia.	2"	1/8" N.P.T.	3/8"	7"	"	E
40DC	#60	13/32" Dia.	2"	1/8" N.P.T.	1/4"	5"	"	E
43DC	#57	13/32" Dia.	2"	1/8" N.P.T.	1/4"	5"	"	E

DC Burners are made with Brass Insert for easy bending.

NEEDLE POINT GLASS FIRE TIPS FOR PREHEATING - SHAPING, SEALING AND STEM MAKING.

ALSO AVAILABLE IN 1/4" GRADUATION LENGTHS UP TO 3/4" LONG.

BURNERS FOR MIXED NATURAL GAS - PROPANE GAS - NATURAL GAS.

## GAS-OXYGEN TIPS



J&P 1

### SPECIFY FOR HOKE TORCHES

J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
1	#60	1/4" Hex.	7/8"	10-40	1/8"	4"	Brass	B
2	#56	1/4" Hex.	7/8"	10-40	1/4"	6"	"	B
3	#54	1/4" Hex.	7/8"	10-40	1/4"	7"	"	B
5	#50	1/4" Hex.	7/8"	10-40	1/4"	8"	"	D
70	#70	1/4" Hex.	7/8"	10-40	1/8"	1-1/2"	"	B

## GAS-OXYGEN TIPS for HAND TORCH

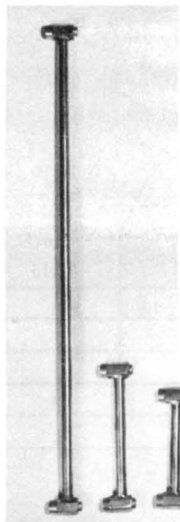


J&P 3A

### FOR NATIONAL TORCHES



J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Female Thread	Focal Length	Flame Length	Material	Insert Style
3A	#52	1/2" Hex.	1-1/4"	7/16-24	3/8"	7"	Brass	E
3A1	#60	1/2" Hex.	1-1/4"	7/16-24	3/16"	2-1/2"	Brass	E
3A2	#55	1/2" Hex.	1-1/4"	7/16-24	1/4"	2-1/2"	Brass	E
3A3	#56	1/2" Hex.	1-1/4"	7/16-24	1/4"	4-1/2"	Brass	E
OX42	#42	1/2" Hex.	1-1/2"	7/16-24	3/8"	8"	Brass	G
3AT	#52	1/2" Hex.	1-1/4"	3/8-40	3/8"	7"	Brass	E
7A	#53	1/2" Hex.	1-1/4"	7/16-24	3/8"	7"	Brass	E
3AP	#52	1/2" Hex.	1-1/4"	3/8-32	3/8"	7"	Brass	E
3A4	#51	1/2" Hex.	1-1/4"	7/16-24	3/8"	7"	Brass	E
3A5	#42	1/2" Hex.	1-1/4"	7/16-24	3/8"	8"	Brass	E



**A**  
Arms Made to C-C  
As requested

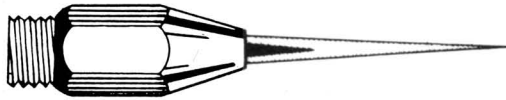


**C**  
Spring Clips



**B**  
OX Single  
Jet Glass  
Lathe Burners

# GAS - OXYGEN BURNERS



J&P C3P

J & P Burner No.	Port Hole Drill Size	Burner Body Size	Burner Length	Material	Insert Style
C8P	#70	7/16" Hex.	1-1/4"	Brass	C
C2P	#60	7/16" Hex.	1-1/4"	"	C
C3P	#57	7/16" Hex.	1-1/4"	"	C
C4P	#56	7/16" Hex.	1-1/4"	"	E
C5P	#55	7/16" Hex.	1-1/4"	"	E
C6P	#53	7/16" Hex.	1-1/4"	"	E
C7P	#49	7/16" Hex.	1-1/4"	"	E

ABOVE BURNERS WITH 1/8" N.P.T. MALE THREAD

## GAS - OXYGEN BURNER TIPS



J&P 5

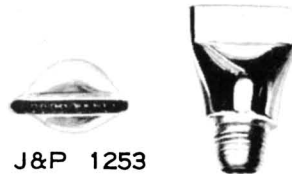
J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
5	#70	5/16" Hex	5/8"	1/4"-28	1/4"	3"	Brass	B
P5	#66	5/16" Hex	5/8"	1/4"-28	1/4"	7"	Brass	B
B1	#71	5/16" Hex	5/8"	1/4"-28	1/4"	3"	Brass	B
5C	#59	5/16" Hex	5/8"	1/4"-28	3/8"	3-1/2"	Brass	B
5X	#65	5/16" Hex	5/8"	1/4"-28	1/4"	7"	Brass	B
5S	#60	5/16" Hex	5/8"	1/4"-28	3/8"	3-1/2"	Brass	B
5K	#69	5/16" Hex	5/8"	1/4"-28	1/4"	3"	Brass	B
5M	#56	5/16" Hex	5/8"	1/4"-28	3/8"	3-1/2"	Brass	B
5J	#80	5/16" Hex	5/8"	1/4"-28	1/8"	1-3/4"	Brass	B
5G	#79	5/16" Hex	5/8"	1/4"-28	1/8"	1-3/4"	Brass	B
5F	#77	5/16" Hex	5/8"	1/4"-28	1/8"	2"	Brass	B
5R	#75	5/16" Hex	5/8"	1/4"-28	1/8"	2"	Brass	B

ABOVE BURNERS CAN ALSO BE USED WITH HYDROGEN-OXYGEN

## UNPILOTED TYPE FISHTAIL BURNERS GAS-OXYGEN



J&P OX5



J&P 1253

J & P No.	No. of Holes	Drill Size	C to C Outside Hole	Male Thread	Parallel Flame	Material Chrome Plated
02X	2	#72	1/8"	1/4-28"	"	Brass
03X	3	#79	5/64"	1/4-28"	"	Brass
OX5	5	#71	1/4"	1/4-28"	"	Brass
OX2	2	#71	1/4"	1/4-28"	"	Brass
OX4	4	#71	3/16"	1/4-28"	"	Brass
04X	4	#71	1/4"	1/4-28"	"	Brass
1253	10	#71	39/64"	1/8N.P.T.	"	Brass
OX5Y	5	#77	1/4"	1/4-28"	"	Brass
OX9	9	#71	3/8"	1/4-28"	"	Brass
OX3	3	#80	5/64"	1/4-28"	"	Brass
OX7	7	#71	9/32"	1/4-28"	"	Brass
OX3K	3	#80	1/4"	1/4-28"	"	Brass
OX6	6	#71	9/32"	1/4-28"	"	Brass

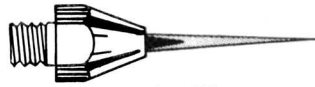
J&P UNPILOTED FISHTAIL BURNERS ARE RECOMMENDED FOR JOBS SUCH AS FINE CUTTING, FORMING, ETC., WHICH REQUIRE AN INTENSE, HIGHLY CONCENTRATED FLAME.

### MACHINE & TOOL COMPANY

**BURNERS  
AND MIXERS**



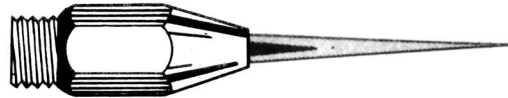
# GAS-OXYGEN STAINLESS STEEL BURNER TIPS



J & P X6



J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
X1	#56	5/16" Hex.	5/8"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
X2	#57	5/16" Hex.	5/8"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
X3	#60	5/16" Hex.	5/8"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
X4	#64	5/16" Hex.	5/8"	1/4-28	1/4"	7"	Stainless Steel	B
X23	#66	5/16" Hex.	5/8"	1/4-28	1/4"	7"	Stainless Steel	B
X6	#70	5/16" Hex.	5/8"	1/4-28	1/4"	3"	Stainless Steel	B
X7	#68	5/16" Hex.	5/8"	1/4-28	1/4"	4"	Stainless Steel	B
X8	#59	5/16" Hex.	5/8"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
X12	#65	5/16" Hex.	5/8"	1/4-28	1/4"	7"	Stainless Steel	B
X14	#71	5/16" Hex.	5/8"	1/4-28	1/4"	3"	Stainless Steel	B
X16	#58	5/16" Hex.	5/8"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
X17	#69	5/16" Hex.	5/8"	1/4-28	1/4"	3"	Stainless Steel	B
X18	#80	5/16" Hex.	5/8"	1/4-28	1/8"	1-3/4"	Stainless Steel	B
X19	#79	5/16" Hex.	5/8"	1/4-28	1/8"	1-3/4"	Stainless Steel	B
X20	#77	5/16" Hex.	5/8"	1/4-28	1/8"	2"	Stainless Steel	B
X22	#75	5/16" Hex.	5/8"	1/4-28	1/8"	2"	Stainless Steel	B



J & P ST2

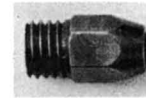


J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Material	Insert Style
ST1	#60	7/16" Hex.	1-1/4"	Stainless Steel	E
ST2	#56	7/16" Hex.	1-1/4"	Stainless Steel	E
ST3	#55	7/16" Hex.	1-1/4"	Stainless Steel	E
ST4	#53	7/16" Hex.	1-1/4"	Stainless Steel	E
ST5	#49	7/16" Hex.	1-1/4"	Stainless Steel	E
ST6	#51	7/16" Hex.	1-1/4"	Stainless Steel	E
ST7	#42	7/16" Hex.	1-1/4"	Stainless Steel	E

## GAS-OXYGEN STAINLESS STEEL BURNER TIPS



J & P 6S



J & P No.	Center Hole Drill Size	Burner Body Size	Burner Length	Male Thread	Focal Length	Flame Length	Material	Insert Style
8B	#69	1/4" Hex.	1/2"	1/4-28	3/16"	2"	Stainless Steel	B
8D	#68	1/4" Hex.	1/2"	1/4-28	1/4"	2-1/2"	Stainless Steel	B
6S	#70	1/4" Hex.	1/2"	1/4-28	3/16"	2"	Stainless Steel	B
6SL	#70	1/4" Hex.	3/4"	1/4-28	3/16"	2"	Stainless Steel	B
7D	#59	1/4" Hex.	1/2"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
7E	#66	1/4" Hex.	1/2"	1/4-28	1/4"	7"	Stainless Steel	B
7G	#65	1/4" Hex.	1/2"	1/4-28	1/4"	7"	Stainless Steel	B
7H	#71	1/4" Hex.	1/2"	1/4-28	1/4"	3"	Stainless Steel	B
7K	#58	1/4" Hex.	1/2"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
7L	#60	1/4" Hex.	1/2"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
7M	#56	1/4" Hex.	1/2"	1/4-28	3/8"	3-1/2"	Stainless Steel	B
7N	#80	1/4" Hex.	1/2"	1/4-28	1/8"	1-3/4"	Stainless Steel	B
7R	#79	1/4" Hex.	1/2"	1/4-28	1/8"	1-3/4"	Stainless Steel	B
7S	#77	1/4" Hex.	1/2"	1/4-28	1/8"	2"	Stainless Steel	B

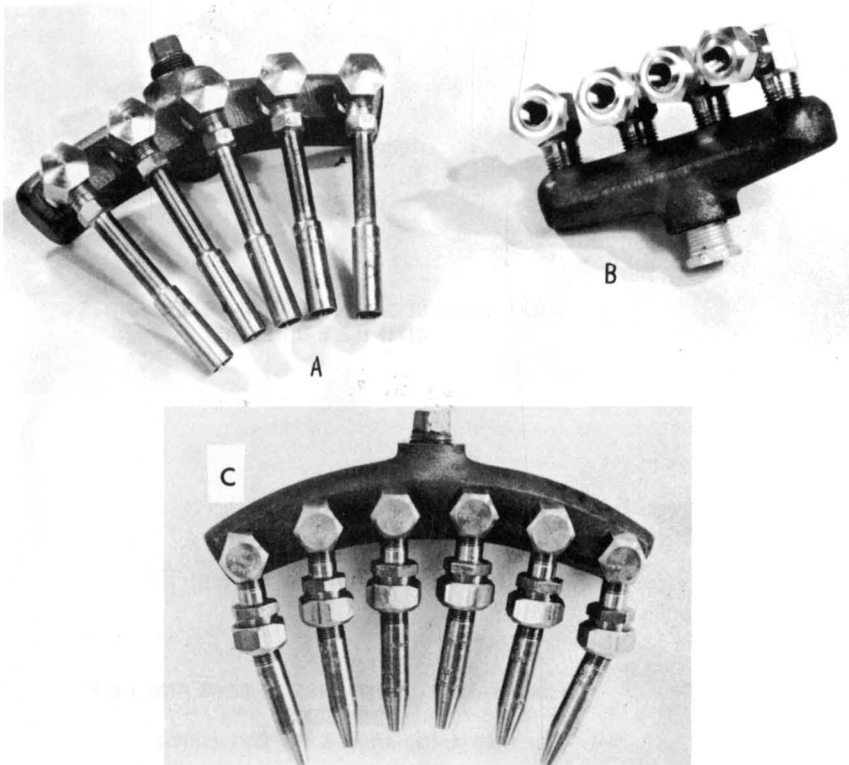
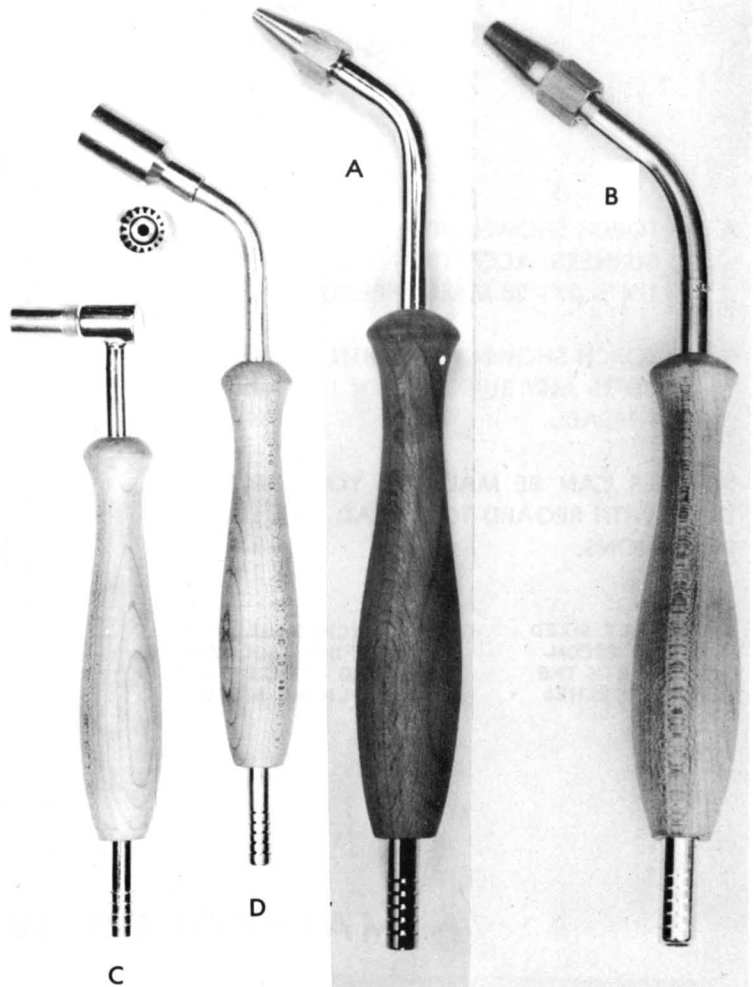
# SINGLE HEAD HAND TORCHES

GAS — OXYGEN  
OR  
GAS — AIR

- A — TORCH WITH T—40F 5/16-32 FEM. THREAD TIP.
- B — TORCH WITH #3A GAS-OXYGEN TIPS. OTHER BURNERS AVAILABLE FOR THIS TORCH ARE SHOWN ON PAGE 30.
- C — TORCH FOR ANY 1/8" NPT BURNER IN CATALOG.
- D — TORCH WITH G7N BURNER.

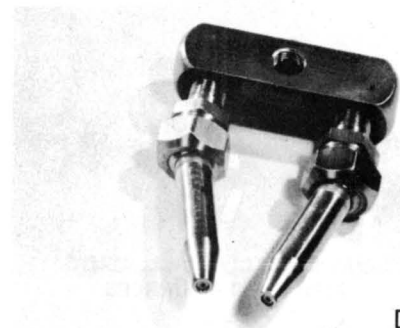
WOULD RECOMMEND TO  
USE A PROPERLY SIZED MIXER  
WITH FIRECHECK FOR THE ABOVE  
GAS — OXYGEN TORCHES.

TORCHES USED FOR TIPPING — SOLDERING  
BRAZING — ETC.



## MANIFOLDS

- A 5-WAY MANIFOLD — HEX ELBOWS WITH G173JC BURNERS
- B 4-WAY MANIFOLD — HEX ELBOWS AND BALL JOINTS
- C 6-WAY MANIFOLD, 3/8" INLET BOTTOM AND SIDE WITH HEX ELBOWS, BALL JOINTS, AND BURNERS.
- D 2-WAY MANIFOLD BALL JOINTS WITH 146E BURNERS.



# DOUBLE HEAD HAND TORCHES

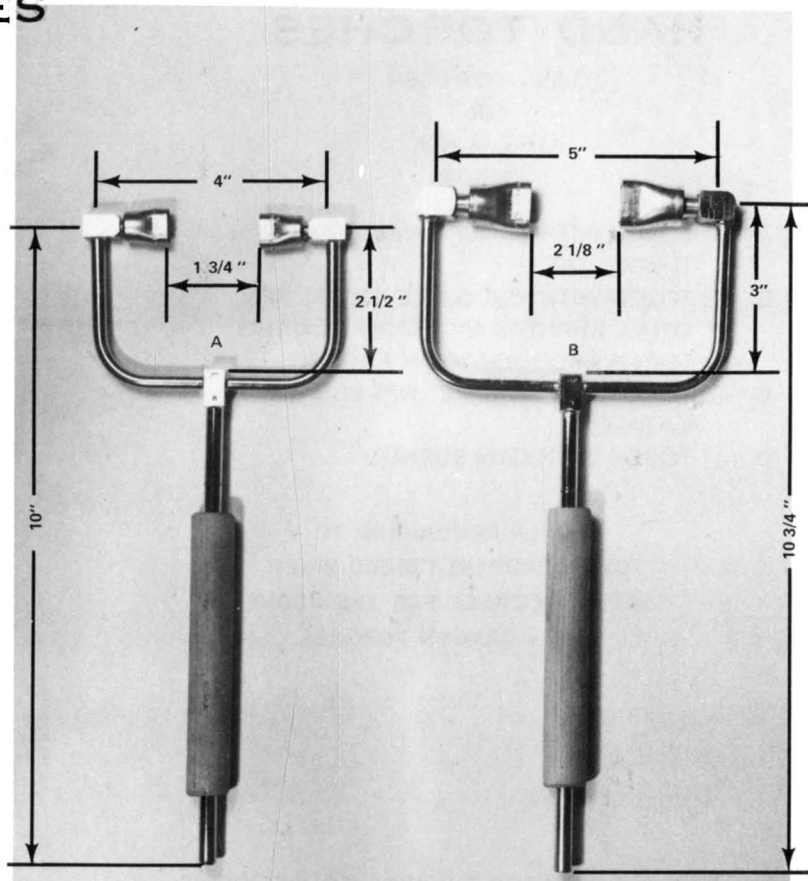
GAS — OXYGEN  
OR  
GAS — AIR

- A — TORCH SHOWN WITH #228FN OR 228N BURNERS. ACCEPTS ANY BURNER WITH 1/4" - 27 - 28 MALE THREAD.
- B — TORCH SHOWN WITH #81N BURNERS. ACCEPTS ANY BURNER WITH 1/8" NPT MALE THREAD.

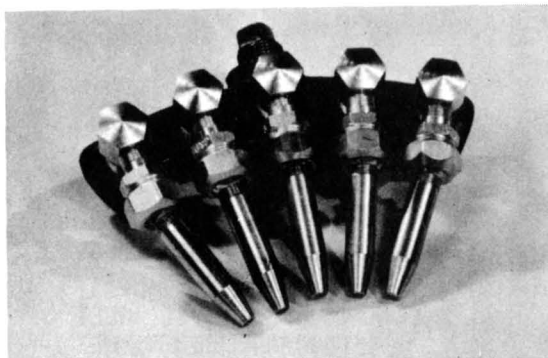
TORCHES CAN BE MADE TO YOUR SPECIFICATIONS WITH REGARD TO SPREAD AND THROAT DIMENSIONS.

A PROPERLY SIZED MIXER IS RECOMMENDED WITH THE ABOVE TORCHES

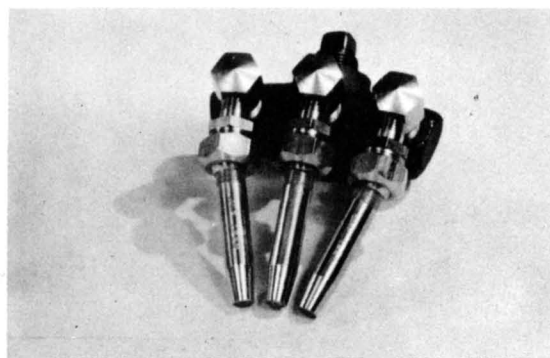
TORCHES USED FOR TIPPING — SOLDERING — SEALING — SPLICING & ETC.



## MANIFOLDS WITH BURNERS



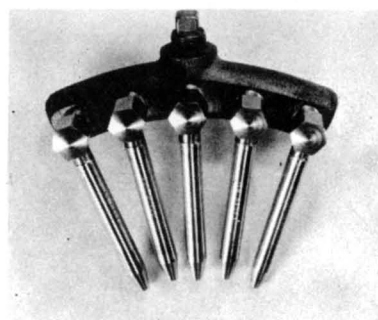
5-WAY MANIFOLD HEX ELBOWS — BALL JOINTS WITH NO. 4J2 BURNERS



3-WAY MANIFOLD HEX ELBOWS — BALL JOINTS WITH 152 E BURNERS



3-WAY MANIFOLD BALL JOINTS WITH F 300 A BURNERS



5-WAY MANIFOLD WITH HEX ELBOWS AND J & P BURNERS  
(Can be had with J & P 7 Ball Joints)

ABOVE MANIFOLDS AVAILABLE WITH OTHER J & P BURNERS

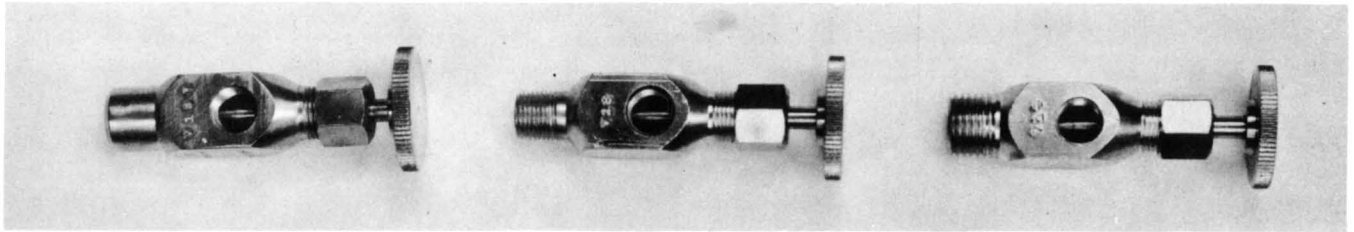


**MACHINE & TOOL COMPANY**

**BURNERS  
AND MIXERS**

# FINE CONTROL VALVES

## ANGLE VALVES



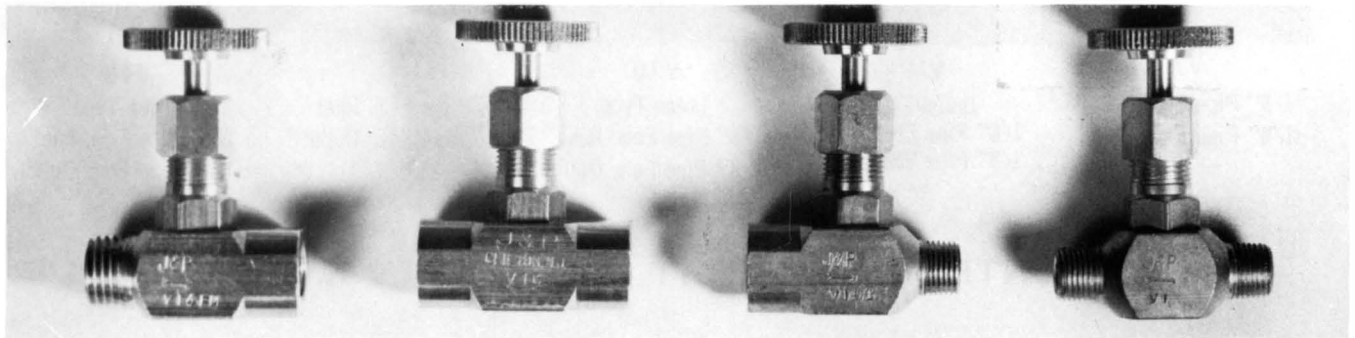
**V18F**  
1/8" Pipe Fem. Inlet  
1/8" Pipe Fem. Outlet

**V18**  
1/8" Pipe Male Inlet  
1/8" Pipe Fem. Outlet

**V14**  
1/4" Male Inlet  
1/8" Pipe Fem. Outlet

#V18C AVAILABLE WITH FINE TAPERED STEM AND 1/16" INLET HOLE (Similar to #V18)  
ALL ANGLE VALVES 5/8" SQ. x 1-15/16" LONG BODY. MATERIAL BRASS.

## STRAIGHT VALVES



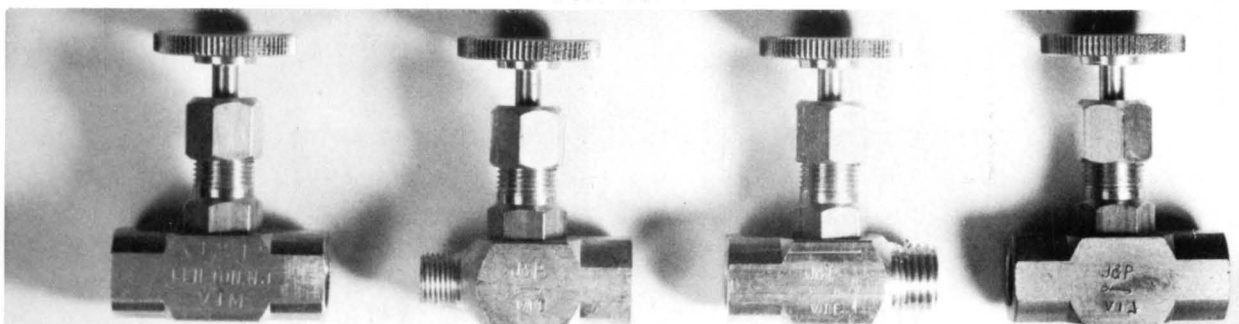
**V14FM**  
1/4" Pipe Male Inlet  
1/4" Pipe Fem. Outlet

**VIC**  
1/8" Pipe Fem. Inlet  
1/8" Pipe Fem. Outlet

**VIDT**  
1/8" Pipe Fem. Inlet  
1/8" Pipe Male Outlet

**V1**  
1/8" Pipe Male Inlet  
1/8" Pipe Male Outlet

## STRAIGHT VALVES



**VIM**  
1/4" Pipe Fem. Inlet  
1/4" Pipe Fem. Outlet

**VIT**  
1/8" Pipe Male Inlet  
1/8" Pipe Fem. Outlet

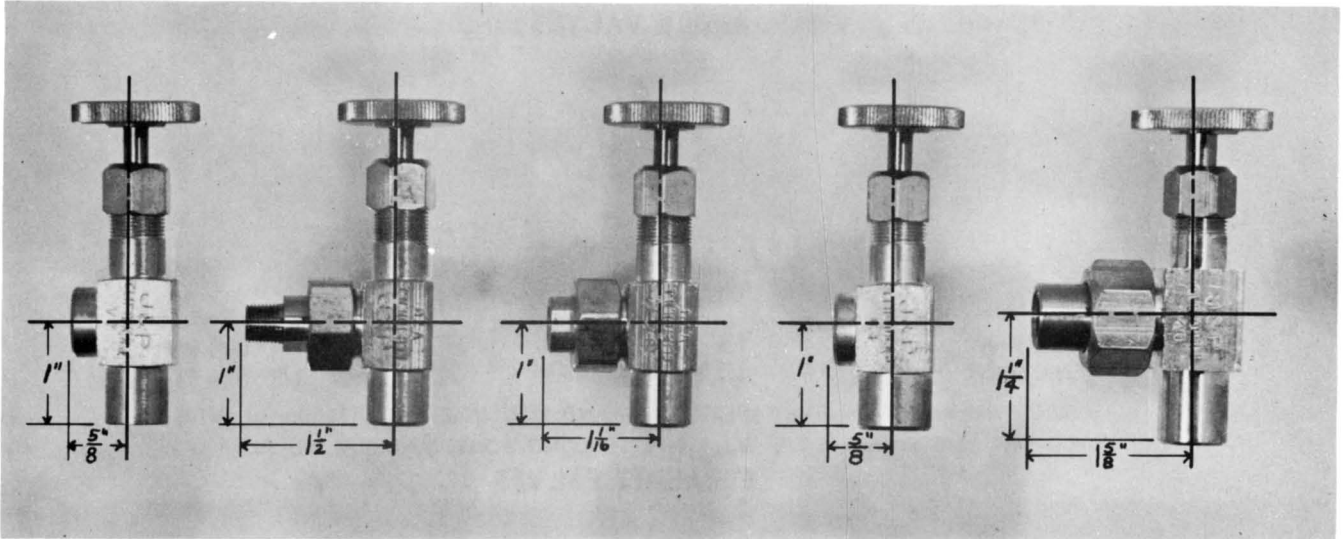
**VIE**  
1/4" Pipe Fem. Inlet  
1/4" Pipe Male Outlet

**VIA**  
1/8" Pipe Fem. Inlet  
1/4" Pipe Fem. Outlet

FINE CONTROL VALVES HAVE STAINLESS STEEL STEMS 40 THREADS PER INCH  
ALL STRAIGHT VALVES 5/8" SQ. x 1-1/2" LONG. MATERIAL BRASS.



## FINE CONTROL ANGLE VALVES - BRASS



**V7**  
1/8" Pipe Fem. Inlet  
1/8" Pipe Fem. Outlet

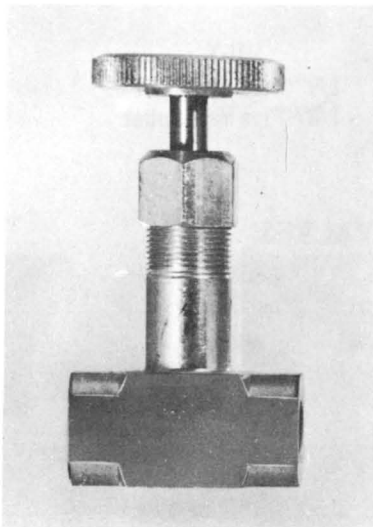
**V74**  
Union Type  
1/8" Pipe Fem. Inlet  
1/8" Pipe Male Outlet

**V7U**  
Union Type  
1/8" Pipe Fem. Inlet  
1/8" Pipe Fem. Outlet

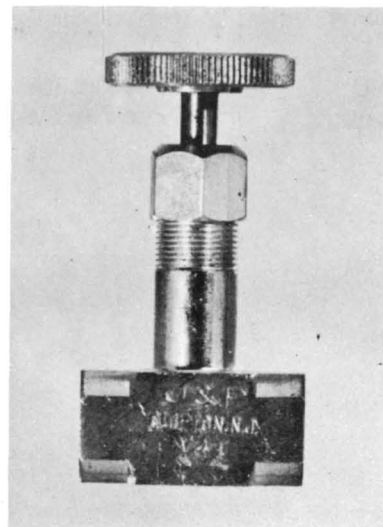
**V4**  
1/4" Pipe Fem. Inlet  
1/4" Pipe Fem. Outlet

**V4U**  
Union Type  
1/4" Pipe Fem. Inlet  
1/4" Pipe Fem. Outlet

## FINE CONTROL STRAIGHT THROUGH VALVES - BRASS



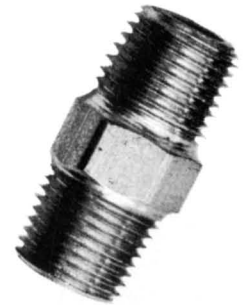
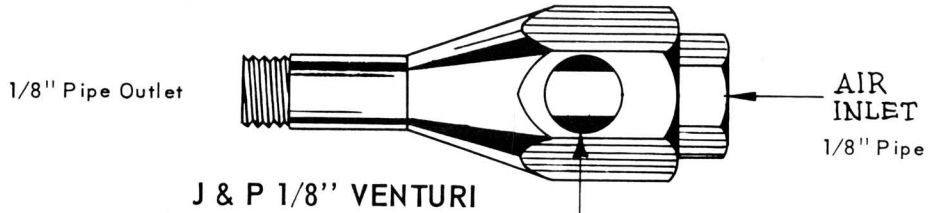
**V7T**  
1/8" Pipe Fem. Inlet  
1/8" Pipe Fem. Outlet



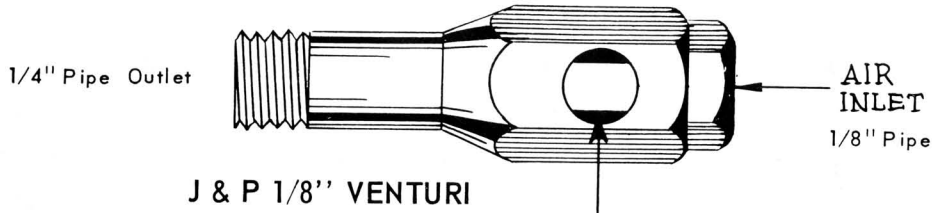
**V4T**  
1/4" Pipe Fem. Inlet  
1/4" Pipe Fem. Outlet

FINE CONTROL VALVES HAVE STAINLESS STEEL STEMS. 40 THREADS PER INCH

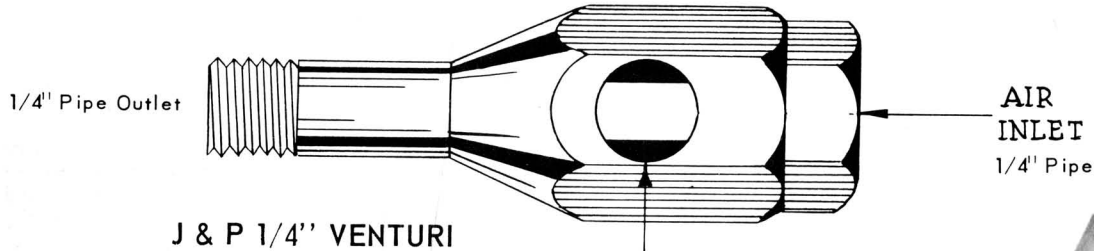
# J & P VENTURI'S



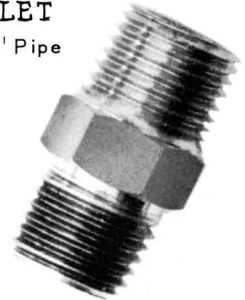
HEX NIPPLE  
1/8" N.P.T. BOTH ENDS



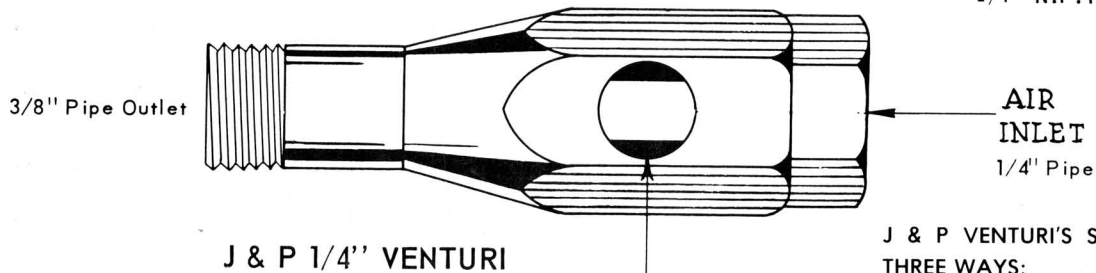
GAS INLET  
1/8" Pipe



GAS INLET  
1/4" Pipe



HEX NIPPLE  
1/4" N.P.T. BOTH ENDS



GAS INLET  
1/4" Pipe

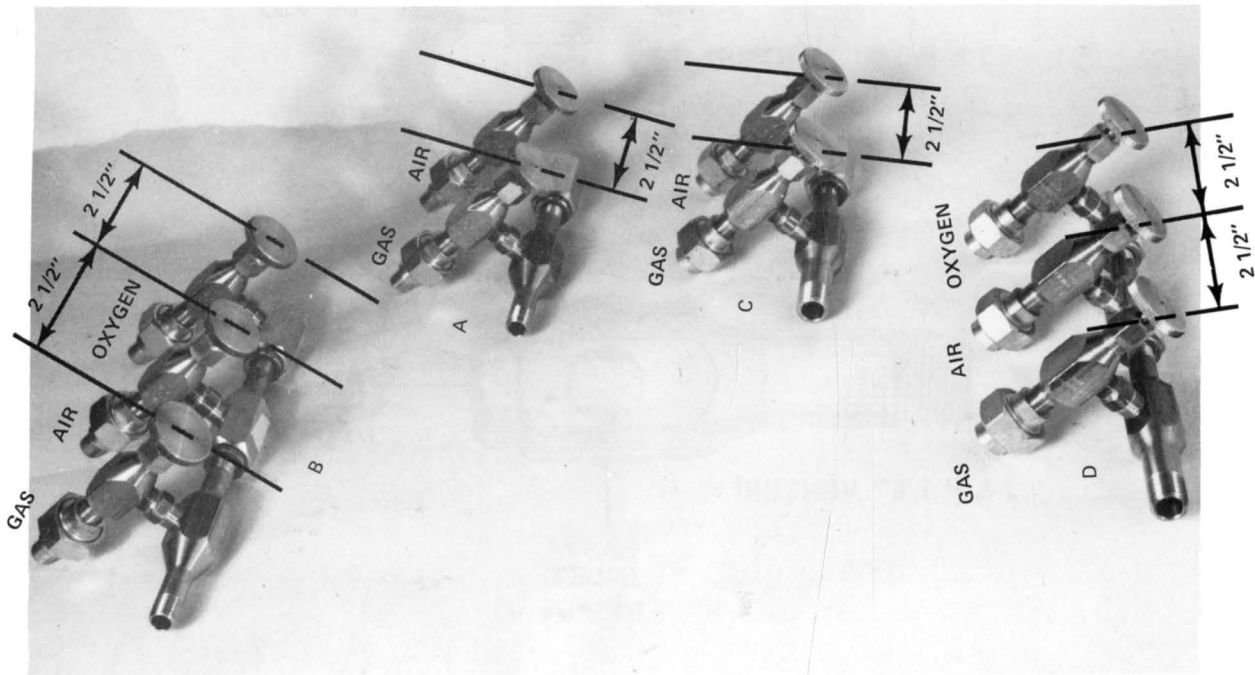
J & P VENTURI'S SUPPLIED IN ONE OF THREE WAYS:

- (1) Undrilled; (2) Minimum Drilling; (3) Drilled to size. Please Specify.

Supplied Undrilled Unless Requested Otherwise.

VENTURI'S AVAILABLE WITH OR WITHOUT 1/8" PIPE OR 1/4" PIPE HEX NIPPLES

# J & P MIXER ASSEMBLY WITH FINE CONTROL VALVES



\* When ordering mixers please specify the number of the burner and the amount of these burners each mixer will feed. Also specify manifold center distances. (Above illustrations show 2 1/2").

A - 1/8" MIXER 2-way Gas-Air with V18 Fine Control Valves and Type "U" Unions. Adjustable Type with 2", 2 1/2", 3", or 3 1/2" Manifold Centers. MIXER illustrated has 2 1/2" adjustable centers. This 2-way mixer also available for Gas-Oxygen.

B - 1/8" MIXER 3-way Gas-Air-Oxygen with V18 Fine Control Valves and Type "U" Unions. Adjustable Type with 2", 2 1/2", 3", or 3 1/2" manifold centers. MIXER illustrated has 2 1/2" adjustable centers.

C - 1/8" MIXER (1/4" Pipe Outlet x 1/8" Pipe Inlets) 2-way Gas-Air with V18 Fine Control Valves and Type "UF" Unions. Adjustable Type with 2", 2 1/2", 3", 3 1/2" Manifold centers. MIXER illustrated has 2 1/2" adjustable centers. This 2-way mixer also available for Gas-Oxygen.

D - 1/8" MIXER (1/4" Pipe Outlet x 1/8" Pipe Inlets) 3-way Gas-Air-Oxygen with V18 Fine Control Valves and Type "UF" Unions. Adjustable Type with 2", 2 1/2", 3", or 3 1/2" Manifold centers. MIXER illustrated has 2 1/2" adjustable centers.

1- Install a Fire Check of suitable capacity between the Venturi Mixer and the burners. The Fire Check does not prevent a flashback but retards combustion back into the mixture line in the event of a flashback.

2- Do not install any valves, cocks or restrictions other than a Fire Check between the Venturi Mixer and the burners.

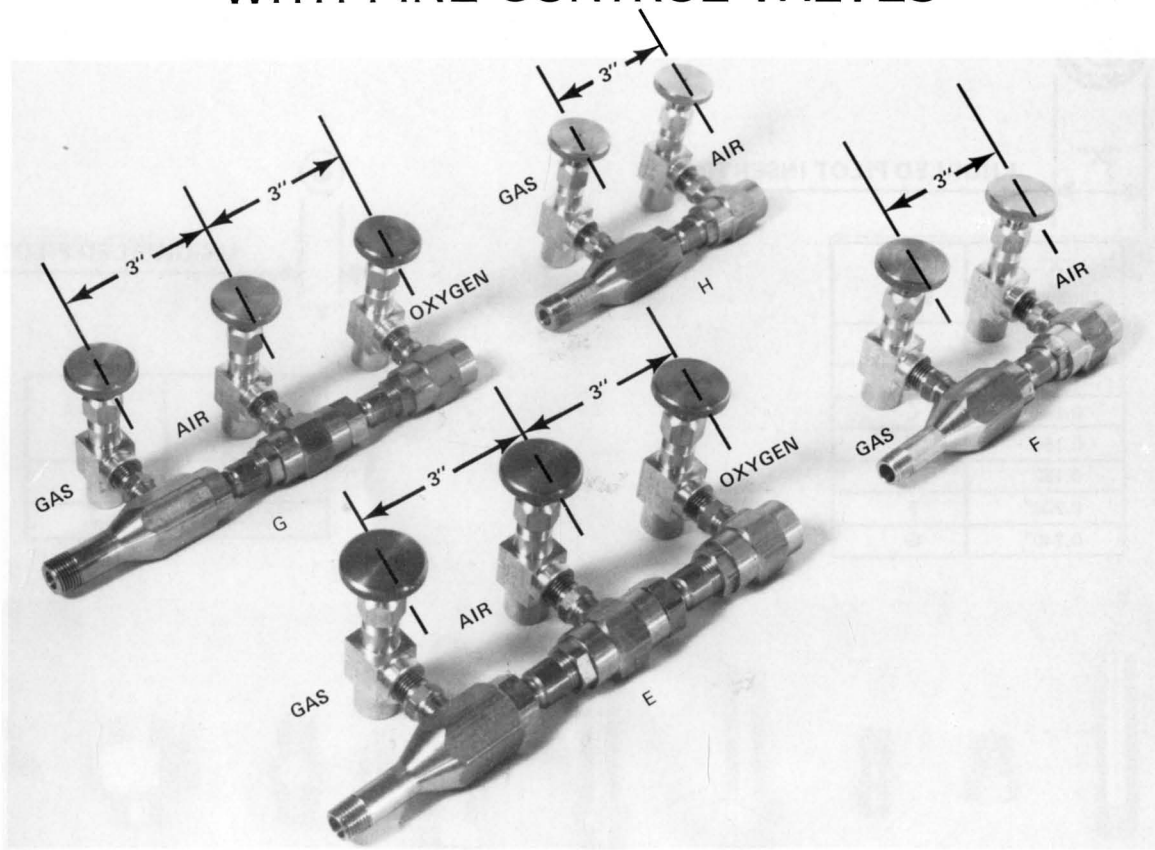
5- Improperly sized mixers will cause back pressure and interference in lines. This could lead to a fluctuation of the burners and if the back pressure is too great, eventually all the burners on the line would go out.

3- The Venturi Mixer should be placed as close as possible to the burners or burner manifold to avoid storing up too large a quantity of an explosive mixture.

4- The gas and oxygen should be shut-off immediately in the event of a flashback.  
All Valves have Stainless Steel Stems - 40 Threads per inch.

6- J&P Mixers supplied in one of three ways:  
(1) Undrilled; (2) Minimum Drilling; (3) Drilled to size. Please Specify. Supplied Undrilled Unless Requested Otherwise.

# J & P MIXER ASSEMBLY WITH FINE CONTROL VALVES



\* When ordering mixers please specify the number of the burner and the amount of these burners each mixer will feed. Also specify manifold center distances. (Above illustrations show 3'').

E - 1/4" MIXER 3-way Gas-Air-Oxygen with V4 Fine Control Valves. Adjustable Type 3" or 3 1/2" Manifold centers. MIXER illustrated has 3" adjustable centers.

F - 1/4" MIXER 2-way Gas-Air with V4 Fine Control Valves. Adjustable Type 3" or 3 1/2" Manifold centers. MIXER illustrated has 3" adjustable centers.

G - 1/4" MIXER (3/8" Pipe Outlet x 1/4" Pipe Inlets) 3-way Gas-Air-Oxygen with V4 Fine Control Valves. Adjustable Type 3" or 3 1/2" Manifold centers. MIXER illustrated has 3" adjustable centers.

H - 1/4" MIXER (3/8" Pipe Outlet x 1/4" Pipe Inlets) 2-way Gas-Air with V4 Fine Control Valves. Adjustable Type 3" or 3 1/2" Manifold centers. This mixer also available for Gas-Oxygen. MIXER illustrated has 3" adjustable centers.

1- Install a Fire Check of suitable capacity between the Venturi Mixer and the burners. The Fire Check does not prevent a flashback but retards combustion back into the mixture line in the event of a flashback.

2- Do not install any valves, cocks or restrictions other than a Fire Check between the Venturi Mixer and the burners.

5- Improperly sized mixers will cause back pressure and interference in lines. This could lead to a fluctuation of the burners and if the back pressure is too great, eventually all the burners on the line would go out.

3- The Venturi Mixer should be placed as close as possible to the burners or burner manifold to avoid storing up too large a quantity of an explosive mixture.

4- The gas and oxygen should be shut-off immediately in the event of a flashback. All Valves have Stainless Steel Stems - 40 Threads per inch.

6- J&P Mixers supplied in one of three ways: (1) Undrilled; (2) Minimum Drilling; (3) Drilled to size. Please Specify. Supplied Undrilled Unless Requested Otherwise.

# ADAPTERS AND SPARE PARTS

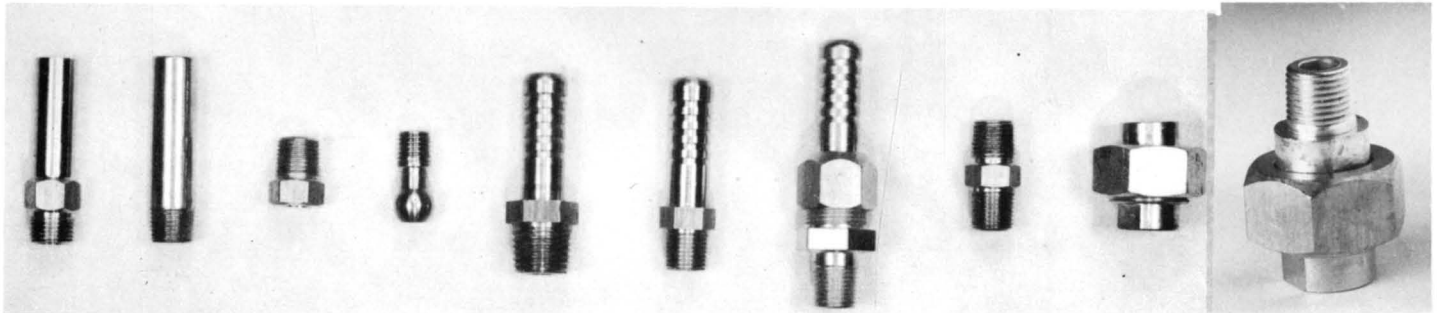


"X" Diameter	Insert Style
3/32"	A
1/8"	B
0.149"	C
0.166"	D
0.182"	E
0.204"	F
0.240"	G



"Y" Diameter	Insert Style
0.110"	H
0.125"	J

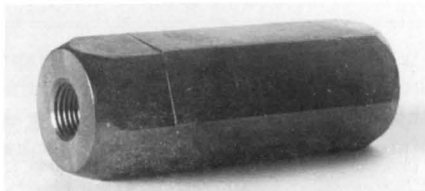
## SPARE PARTS



- |  |  |
|--|--|
| <p><b>A</b> - HEX. ADAPTER WITH 1/8" NPT MALE AND 1/4" - 27 FEM. THREAD</p> <p><b>B</b> - ADAPTER 13/32" DIA 1/8" NPT MALE AND 1/4" - 27 FEM. THREAD</p> <p><b>C</b> - SHORT HEX ADAPTER 1/8" NPT MALE AND 1/4" - 27 FEM. THREAD</p> <p><b>D</b> - 3/8" BALL WITH 5/16" - 27 MALE THREAD ON 1 END<br/>ALSO CAN BE HAD WITH<br/>9/16" BALL WITH 5/16" - 27 MALE THREAD ON 1 END</p> | <p><b>E</b> - BARBED FITTING 1/4" NPT 5/16" ID OR 3/8" ID HOSE or 1/4" ID Hose</p> <p><b>F</b> - BARBED FITTING 1/8" NPT 5/16" ID OR 3/8" ID HOSE or 1/4" ID Hose</p> <p><b>G</b> - SCREENED COUPLING 1/8" NPT 5/16" ID OR 3/8" ID<br/>HOSE ALSO AVAILABLE IN 1/4" NPT</p> <p><b>H</b> - 1/8" HEX NIPPLE</p> <p><b>UF</b> - 1/8" HEX UNION (AVAILABLE 1/4" FPT)</p> <p><b>U</b> - 1/8" HEX UNION WITH 1/8" FEMALE PIPE THREAD<br/>ON ONE END - OTHER END 1/8" MALE PIPE THREAD</p> |
|--|--|

## FIRECHECK

FC30



FC30 - 1/8" Female Pipe Thread

FC30 - 1/4" Female Pipe Thread



3/4" Diam. Ball  
with Pin and  
1/8" Female  
Pipe Thread



3/8" Ball  
with 1/4-27  
Female Thread  
on 1 End



#00 Burner  
#53 Drill  
Port Hole



5/8" Diam.  
Ball with  
1/4-28 Female  
Thread



#00 Burner  
with  
5/8" Diam.  
Ball  
#53 Drill  
Port Hole



SPARE PARTS FOR 1/8" AND 1/4" MIXERS SHOWN ON PAGES 38 AND 39

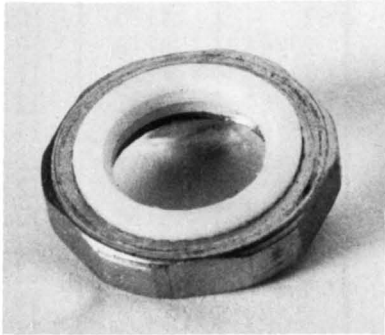
1/8" MIXER

A-



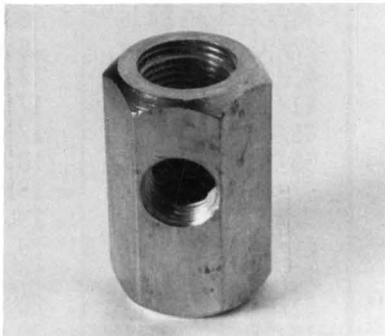
ORIFICE  
SPECIFY  
WHAT CENTER  
DISTANCE REQUIRED

B-



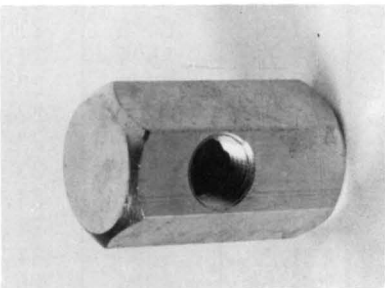
LOCK-NUT  
FOR C-C  
CONNECTOR (ORIFICE)

C-



AIR CHAMBER  
FOR 3-WAY MIXER  
(CENTER PIECE)

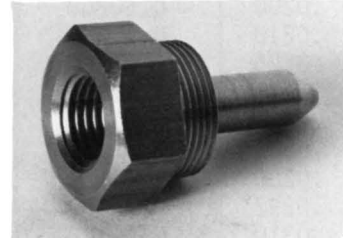
D-



AIR OR OXYGEN  
CHAMBER FOR 2  
OR 3 WAY MIXER  
(END PIECE)

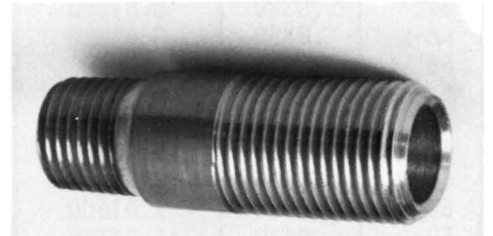
1/4" MIXER

E-



ORIFICE

F-



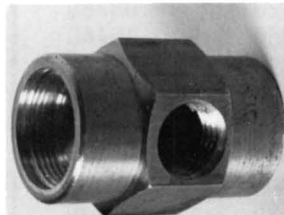
CONNECTING NIPPLE FOR  
ORIFICE — SPECIFY WHAT  
CENTER DISTANCE REQUIRED

G-



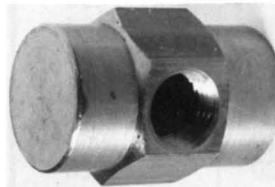
LOCK-NUT  
FOR C-C  
CONNECTING NIPPLE

H-



AIR CHAMBER  
FOR 3-WAY MIXER  
(CENTER PIECE)

I-



AIR OR OXYGEN  
CHAMBER FOR  
2 OR 3 WAY  
MIXER (END PIECE)

# **MACHINE & TOOL COMPANY** **BURNERS AND MIXERS**

22 DELAWANNA AVENUE • CLIFTON (DELAWANNA), NEW JERSEY 07014 • Area Code 201 - 779-6158

Drill Size	Decimal Inch	Millimeters	Drill Size	Decimal Inch	Millimeters	Drill Size	Decimal Inch	Millimeters
80	.0135	0.34290	1/8	.1250	3.17500	O	.3160	8.02640
79	.0145	0.36830	30	.1285	3.26390	P	.3230	8.20420
1/64	.0156	0.39624	29	.1360	3.45440	21/64	.3281	8.33374
78	.0160	0.40640	28	.1405	3.56870	Q	.3320	8.43280
77	.0180	0.45720	9/64	.1406	3.57124	R	.3390	8.61060
76	.0200	0.50800	27	.1440	3.65760	11/32	.3438	8.73252
75	.0210	0.53340	26	.1470	3.73380	S	.3480	8.83920
74	.0225	0.57150	25	.1495	3.79730	T	.3580	9.09320
73	.0240	0.60960	24	.1520	3.86080	23/64	.3594	9.12876
72	.0250	0.63500	23	.1540	3.91160	U	.3680	9.34720
71	.0260	0.66040	5/32	.1562	3.96748	3/8	.3750	9.52500
70	.0280	0.71120	22	.1570	3.98780	V	.3770	9.57580
69	.0292	0.74168	21	.1590	4.03860	W	.3860	9.80440
68	.0310	0.78740	20	.1610	4.08940	25/64	.3906	9.92124
1/32	.0312	0.79248	19	.1660	4.21640	X	.3970	10.08380
67	.0320	0.81280	18	.1695	4.30530	Y	.4040	10.26160
66	.0330	0.83820	11/64	.1719	4.36626	13/32	.4062	10.31748
65	.0350	0.88900	17	.1730	4.39420	Z	.4130	10.49020
64	.0360	0.91440	16	.1770	4.49580	27/64	.4219	10.71626
63	.0370	0.93980	15	.1800	4.57200	7/16	.4375	11.11250
62	.0380	0.96520	14	.1820	4.62280	29/64	.4531	11.50874
61	.0390	0.99060	13	.1850	4.69900	15/32	.4688	11.90752
60	.0400	1.01600	3/16	.1875	4.76250	31/64	.4844	12.30376
59	.0410	1.04140	12	.1890	4.80060	1/2	.5000	12.70000
58	.0420	1.06680	11	.1910	4.85140	33/64	.5156	13.09624
57	.0430	1.09220	10	.1935	4.91490	17/32	.5312	13.49248
56	.0465	1.18110	9	.1960	4.97840	35/64	.5469	13.89126
3/64	.0469	1.19126	8	.1990	5.05460	9/16	.5625	14.28750
55	.0520	1.32080	7	.2010	5.10540	37/64	.5781	14.68374
54	.0550	1.39700	13/64	.2031	5.15874	19/32	.5938	15.08252
53	.0595	1.51130	6	.2040	5.18160	39/64	.6094	15.47876
1/16	.0625	1.58750	5	.2055	5.21970	5/8	.6250	15.87500
52	.0635	1.61290	4	.2090	5.30860	41/64	.6406	16.27124
51	.0670	1.70180	3	.2130	5.41020	21/32	.6562	16.66748
50	.0700	1.77800	7/32	.2188	5.55752	43/64	.6719	17.06626
49	.0730	1.85420	2	.2210	5.61340	11/16	.6875	17.46250
48	.0760	1.93040	1	.2280	5.79120	45/64	.7031	17.85874
5/64	.0781	1.98374	A	.2340	5.94360	23/32	.7188	18.25752
47	.0785	1.99390	15/64	.2344	5.95376	47/64	.7344	18.65376
46	.0810	2.05740	B	.2380	6.04520	3/4	.7500	19.05000
45	.0820	2.08280	C	.2420	6.14680	49/64	.7656	19.44624
44	.0860	2.18440	D	.2460	6.24840	25/32	.7812	19.84248
43	.0890	2.26060	1/4	.2500	6.35000	51/64	.7969	20.24126
42	.0935	2.37490	E	.2500	6.35000	13/16	.8125	20.63750
3/32	.0938	2.38252	F	.2570	6.52780	53/64	.8281	21.03374
41	.0960	2.43840	G	.2610	6.62940	27/32	.8438	21.43252
40	.0980	2.48920	17/64	.2656	6.74624	55/64	.8594	21.82876
39	.0995	2.52730	H	.2660	6.75640	7/8	.8750	22.22500
38	.1015	2.57810	I	.2720	6.90880	57/64	.8906	22.62124
37	.1040	2.64160	J	.2770	7.03580	29/32	.9062	23.01748
36	.1065	2.70510	K	.2810	7.13740	59/64	.9219	23.41626
7/64	.1094	2.77876	9/32	.2812	7.14248	15/16	.9375	23.81250
35	.1100	2.79400	L	.2900	7.36600	61/64	.9531	24.20874
34	.1110	2.81940	M	.2950	7.49300	31/32	.9688	24.60752
33	.1130	2.87020	19/64	.2969	7.54126	63/64	.9844	25.00376
32	.1160	2.94640	N	.3020	7.67080	1	1.0000	25.40000
31	.1200	3.04800	5/16	.3125	7.93750			