

Saffire Welding, Cutting and Process Nozzles

WELDING NOZZLES

Swaged and Lightweight Welding Nozzles

Swaged and lightweight nozzles are manufactured from high grade swaged tellurium copper. The unique mandrel swaging provides smooth accurate gas passages which, in turn, control the precise flame shape.



Size		*Plate Thickness		Part No
ft ³ /h	l/h	mm	in.(swg)	
1	26	0.9	(20)	0700122207
2	56	1.2	(18)	0700122208
3	88	2.0	(14)	0700122209
5	142	2.6	(12)	0700122210
7	198	3.2	1/8 (10)	0700122211
10	285	4.0	5/32 (8)	0700122212
13	360	5.0	3/16 (6)	0700122213
18	540	6.5	1/4 (3)	0700122214
25	740	8.2	5/16 (0)	0700122215
35	1000	10	3/8 (4/0)	0700122216

Equipment to be used with Saffire 5.



Saffire Lightweight Swaged Nozzles

Size		*Plate Thickness		Part No
ft ³ /h	l/h	mm	in.(swg)	
1	26	0.9	(20)	0700140200
2	56	1.2	(18)	0700140201
3	88	2.0	(14)	0700140202
5	142	2.6	(12)	0700140203
7	198	3.2	1/8 (10)	0700140204
10	285	4.0	5/32 (8)	0700140205
13	360	5.0	3/16 (6)	0700140206
18	540	6.5	1/4 (3)	0700140207
25	740	8.2	5/16 (0)	0700140208

Equipment to be used with Saffire DH Torches.

Model "O" Welding Tips

Model "O" tips are precision drilled to ensure the accuracy of the micro flame.



Size		*Plate Thickness		Part No
lead wt	ft ³ /h	l/h	lbs/in ²	
1	0.175	5	2 - 3	0700993260
2	0.425	12	4 - 5	0700993261
3	1.1	31	6 - 8	0700993262
4	2.2	62	10 - 2	0700993263
5	4.5	125	18 - 3	0700993264

Equipment to be used with Model 'O' blowpipe.

CUTTING NOZZLES

Acetylene Nozzle Mix – ANM

Saffire® ANM Series cutting nozzles are manufactured from Tellurium Copper and are of solid, one piece drawn construction. This technology provides the best conditions for a high velocity gas such as acetylene and enhances stability and cutting efficiency.



The seats of ANM nozzles are diamond turned to guarantee "metal to metal" seal with the blowpipe head. This is essential to ensure no head seat leaks, thereby reducing backfire risks.

Size		*Plate Thickness		Part No
mm	in.	mm	in.	
3 - 6	1/32	6	1/4	0700143016
5 - 12	3/64	12	1/2	0700143017
10 - 75	1/16	75	1 - 3	0700143018
70 - 100	5/64	100	4	0700143019
90 - 150	3/32	150	6	0700143020
190 - 300	1/8	300	12	0700143022

Equipment to be used with Saffire 5, Torches and NM Cutters.

A-NME (ANM Extended)

Size		*Plate Thickness		Part No
mm	in.	mm	in.	
3 - 6	1/32	6	1/4	0700016120
5 - 12	3/64	12	1/2	0700016121
10 - 75	1/16	75	1 - 3	0700016122
70 - 100	5/64	100	4	0700016123
90 - 150	3/32	150	6	0700016124
190 - 300	1/8	300	12	0700016125

Equipment to be used with Saffire 5, Torches and NM Cutters.

A-SNM

Size	*Plate Thickness		Part No
mm	mm	in (swg)	
One size only	3	1/8	0700126533

Equipment to be used with Saffire 5, Torches and NM Cutters.

A-FN

Size		*Plate Thickness		Part No
mm	in.	mm	in.	
3 - 6	1/32	3 - 6	1/8 1/4	0700144735
6 - 20	3/64	6 - 20	1/4 3/4	0700144736
20 - 25	1/16	20 - 50	3/4 2	0700144737

Equipment to be used with Portapak & DH3.

PNM – Cutting Nozzles

Saffire® PNM Series cutting nozzles are of two piece design made up of a brass inner nozzle with splines and a hollow drawn copper outer sheath. The reason that PNM's differ from ANM is that different gas mixing criteria apply. Oxy-propane has a lower burning velocity than oxy-acetylene and this requires two things to develop good flame conditions. First, turbulence must be created between the inner and outer parts of the nozzle to obtain adequate mixing of the propane and oxygen. Secondly, the volume of mixed oxy-propane needs to be more than double that of oxy-acetylene for the same usable heat. This is achieved by having very large channels (the splines) to conduct the greater gas volumes.



Propane Nozzle Mix – PNM

Size		*Plate Thickness		Part No
mm	in.	mm	in.	
3 - 6	1/32	6	1/4	0700143780
5 - 12	3/64	12	1/2	0700143781
10 - 75	1/16	75	1 - 3	0700143782
70 - 100	5/64	100	4	0700143783
90 - 150	3/32	150	6	0700143784
190 - 300	1/8	300	12	0700143786

Equipment to be used with Saffire 5, Torches and NM Cutters.

P-NME (PNM Extended)

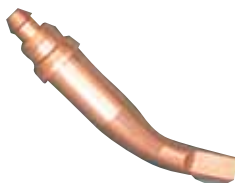
Size		*Plate Thickness		Part No
mm	in.	mm	in.	
3 - 6	1/32	6	1/4	0700016130
5 - 12	3/64	12	1/2	0700016131
10 - 75	1/16	75	1 - 3	0700016132
70 - 100	5/64	100	4	0700016133
90 - 150	3/32	150	6	0700016134
190 - 300	1/8	300	12	0700016135

Equipment to be used with Saffire 5, Torches and NM Cutters.

PROCESS NOZZLES

Acetylene Gouging Nozzles

AGNM nozzles employ the nozzle mix principle for gouging. In application the nozzle cuts a "U" shaped groove in the plate. The most common use is to "back gouge" butt welds to remove any defects prior to laying the final sealing run. They also find application in the removal of defective welds or flaws in steel plates. The use of oxy-acetylene allows for high speed cost effective production. There are 3 models in the range each providing a "U" groove of different dimensions.



Gouging – A-GNM

Size	Depth (in)	Groove width (in)	Part No
13	1/8 - 3/8	1/4 - 5/16	0700126809
19	1/4 - 7/16	5/16 - 7/16	0700126810
25	3/8 - 1/2	3/8 - 1/2	0700126811

Equipment to be used with Saffire 5, Torches and NM Cutters.

Propane Superheating Nozzles

The "H" Series are designed to provide a large flame giving a broad spread of heat over a large area. The nozzles are widely used for pre and post heating of weldments and for the shaping and forming of steel components. There are 5 models in the range provide a range of flame sizes.



Size	Btu/h	Part No
1H	72,000 - 163,000	0700157557
2H	102,000 - 188,000	0700157558
3H	183,000 - 361,000	0700157559
4H	236,000 - 406,000	0700157560
5H	281,000 - 618,000	0700157561

Equipment to be used with Saffire 5, torches with heavy duty mixer Part No. 0700143758. NM250 with adaptor Part No. 0701250458.

Note – up to 766,000 Btu/h can be obtained from 5H when used on NM250 with adaptor.

Acetylene Heating Nozzles

AHT heating nozzles are designed to provide intense focussed heat. They are used for spot heating of small areas quickly. There are 3 sizes in the range designated by their consumption of gas.



Size	BTU/h	Part No
25	52,000	0700126134
* 50	91,000	0700126135
* 100	139,000	0700126136

Equipment to be used with *Saffire 5, torches with heavy duty mixer Part No. 0700143525.

Note – Plate thickness refers to mild steel.



Note – Where applicable, blowpipes and nozzles are designed and manufactured to comply with BS EN 150 5172.