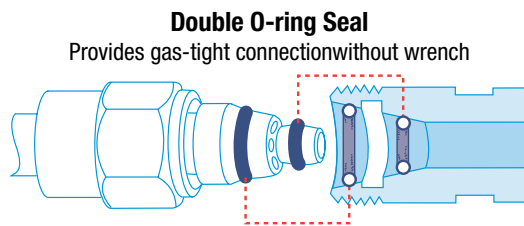
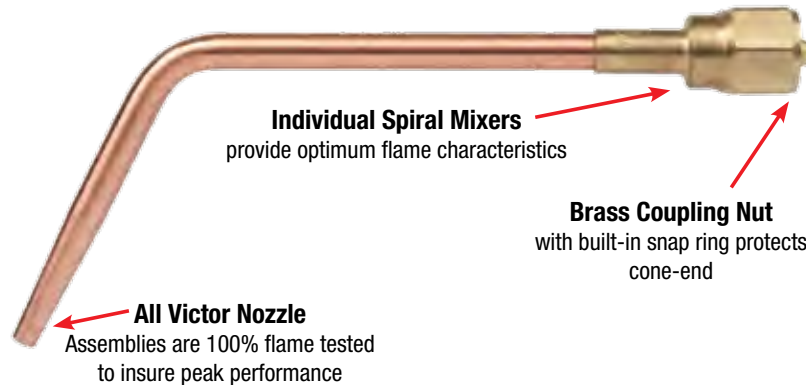
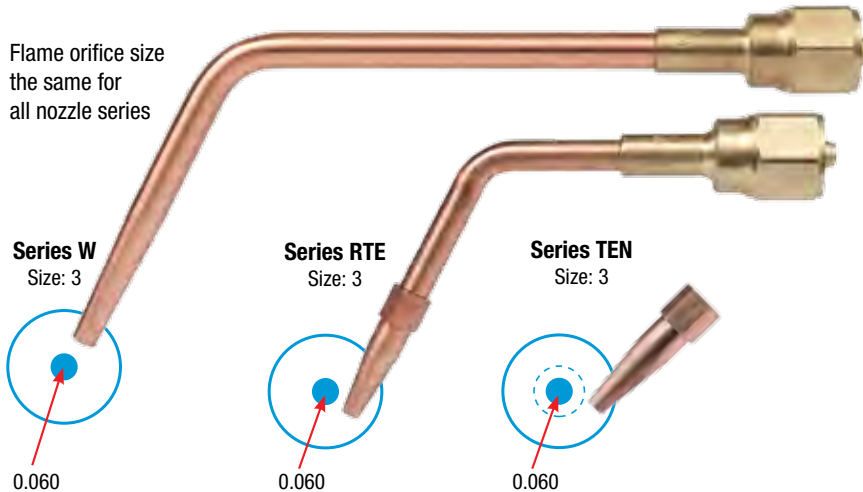


Welding & Heating Nozzles/Tips

HEATING NOZZLES / HEATING TIPS / WELDING NOZZLES



Flame orifice size the same for all nozzle series

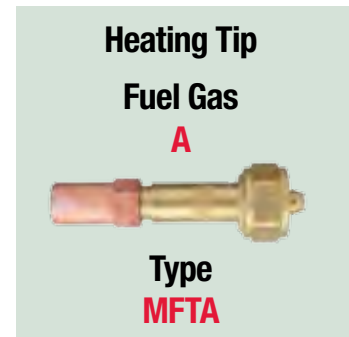


Exclusive "OPTIMIZED" nozzles with a large choice of types and sizes, plus uniformity of tip orifice and size for all series

Victor offers a complete range of nozzles, tips and elbows with a size for every application including: welding, brazing, heating, descaling, hard facing, flame priming, etc.

Nozzles designed for "optimum" performance— Each complete nozzle has its own built-in spiral mixer, individually designed for each tip size and flame characteristic. Each nozzle is individually swaged to insure proper alignment for uniform flame, sizing and free-flow contour.

Orifice sizes are common for all series — Regardless of nozzle series (W, W-1, W-J), flame characteristic or fuel gas used. The uniformity of orifice sizes simplifies nozzle selection, eliminates chances of ordering and wrong size when changing from one type of nozzle to another.



Welding Nozzle Operational Data/Acetylene

Covers Series W (Heavy Duty), W-1 (Medium Duty) And W-J (Light Duty) Series

Operational & Performance Data						
Metal In	Thickness Mm	Tip Size	Drill Size	Oxygen (Psig)	Acetylene (Psig)	Acetylene (Scfh)
1/32"	0.8	000	75 (0.022)	3/5	3/5	1/2
3/64"	1.2	00	70 (0.028)	3/5	3/5	1.5/3
5/64"	1.9	0	65 (0.035)	3/5	3/5	2/4
3/32"	2.4	1	60 (0.040)	3/5	3/5	3/6
1/8"	3.2	2	56 (0.046)	3/5	3/5	5/10
3/16"	4.8	3	53 (0.060)	4/7	3/6	8/18
1/4"	6.4	4	49 (0.073)	5/10	4/7	10/25
1/2"	12.7	5	43 (0.089)	6/12	5/8	15/35
3/4"	19.0	6	36 (0.106)	7/14	6/9	25/45
1 1/4"	32.0	7	30 (0.128)	8/16	8/10	30/60
2"	51.0	8	29 (0.136)	10/19	9/12	35/75
2"	76.2	10	27 (0.144)	12/24	12/15	50/100

WARNING: At no time should the withdrawal rate of an individual acetylene cylinder exceed 1/7 of the cylinder contents per hour. If additional flow capacity is required use an acetylene manifold system of sufficient size to supply the necessary volume. Oxygen consumption (SCFH) is 1.1 times the acetylene under neutral flame conditions.

Oxy-Acetylene & Oxy-Hydrogen				
Application	Torch Series	Nozzle Type	Available Sizes	Illustration
General purpose welding & heating. Uses replaceable tip ends. Flame characteristic — Long cone	315FC	RTE	000-6, 8, 10	
	H 315FC			
General purpose welding and preheating. Swaged one-piece copper elbow. Flame characteristic — Long cone	315FC	W	000-8, 10	
	100FC	W-1	000-7	
	J-28 J-40	W-J	000-4	

Welding & Heating Nozzles/Tips

HEATING GUIDE / NOZZLE REFERENCE GUIDE

Type 55/55-1 Multi-Flame Heating Nozzles

For Use with 300, HD 310C Series Torch Handles

Victor Heavy Industry

The Type 55 Series multi-flame heating nozzles feature a raised center point on the head to prevent bumping the plate and compressing the flame. The center point and improved mixer design combine to provide greater resistance to sustained backfire and improved flow performance. Type 55s can be ordered as a complete assembly or as individual components.

- High capacity heating head for heat treating, straightening, & priming



Part No.	Type	Available Size	Available Length	Series
0323-0326	55	20*	28" (711.2 mm)	HD 310C
0323-0325	55	15*	28" (711.2 mm)	HD 310C
0323-0324	55	10*	28" (711.2 mm)	HD 310C
0323-0328	55	8	11" (279.4 mm)	HD 310C / 300
0323-0327	55	6	11" (279.4 mm)	300
0324-0188	55-1	6	11" (279.4 mm)	100

*Size 10, 15 and 20 Type 55 heating nozzles must be used with HD 310C torch handle and 3/8" (9.5 mm) hose.

WARNING: Type 55 for all alternative fuel gases – Not for use with acetylene

Type 55 – for use with Propylene based fuel gases, Methane, Propane, Butane, pressurized Natural Gas, all fuel gases except Acetylene

Tip Size	Oxygen Pressure (PSIG)	Fuel Pressure (PSIG)	Oxygen Consumption (SCFH)	Fuel Consumption (SCFH)	BTU Per Hour
6	70/80	15/20	160	65	See Chart
8	70/85	15/25	220	85	
10	70/100	15/25	356/460	150/200	
15	90/120	20/35	600/800	250/350	
20	100/150	30/50	900/1150	400/500	

WARNING: Not for use with acetylene

BTU Per Hour

To approximate gross BTU output, multiply flow rate by BTU value listed below:

Propane	2498
Natural Gas	1000
Butane	3374
Propylene	2371

WARNING:

- Use flashback arrestors
- Although built to Victor's quality and safety standards, due to the cutting capacity and/or design of each torch, flashback arrestors are not manufactured into the 310C Series Victor heavy industry torches
- To reduce the risk of personal injury, death and/or property damage, use sufficient capacity flashback arrestors with all Victor heavy industry torch products
- Alternative fuel gas only refers to propane, natural gas, propylene gases. Acetylene, hydrogen and gasoline are NOT included as an alternative gas

Type 55 Components

300 Series

Type 55 Series multi-flames are available as components. Threaded elbows give you the flexibility to easily service or extend the length of the nozzles. Use the special extensions adapter to extend the tip tube to the required length.



0328-0012 & 0328-0013
Mixer and Nut Assembly

Part No.	Available Size	Application/Description	Available Length	Available Angles	Series
0311-0232	20*	Multi-Flame Heads	--	--	HD 310C
0311-0231	15*	Multi-Flame Heads	--	--	HD 310C
0311-0230	10*	Multi-Flame Heads	--	--	HD 310C
0311-0241	8	Multi-Flame Heads	--	--	HD 310C / 300
0311-0240	6	Multi-Flame Heads	--	--	300
0304-0002	--	Multi-Flame Elbows	14" (355.6 mm)	65°	HD 310C / 300
0304-0095	--	Multi-Flame Elbows	16" (406.4 mm)	180°	HD 310C / 300
0304-0011	--	Multi-Flame Elbows	26" (660.4 mm)	65°	HD 310C / 300
0328-0012		Mixer and nut assembly, for use with pressures from 10 PSIG and up.			HD 310C / 300
0328-0013		Mixer and nut assembly, for use with pressures from 2 - 10 PSIG.			HD 310C / 300
0312-0064		Extension Adapter - Thread specifications: 1/4"- 18 NPT(F) X 1/2"- 27 UNS(F)"			HD 310C / 300

*Size 10, 15 and 20 Type 55 heating nozzles must be used with HD 310C torch handle and 3/8" (9.5 mm) hose.

WARNING: Type 55 for all alternative fuel gases – Not for use with acetylene

MFN/MFN-1 Heating Nozzles

For Use with 100, 300 & HD310C Series
Torch Handles

Victor Heavy Industry

- Multi-flame heating head for preheating priming, straightening, etc



Part No.	Type	Size	Tip End Replacement	Length	Series
0323-0303	MFN	12*	--	17.5" (444.5 mm)	HD 310C
0323-0304	MFN	15*	--	17.5" (444.5 mm)	HD 310C
0323-0305	MFN	20*	--	17.5" (444.5 mm)	HD 310C
0323-0292	MFN	8	--	12.0" (304.8 mm)	300
0323-0302	MFN	10	--	17.5" (444.5 mm)	300
0324-0117	MFN-1	6	0311-0611	12.0" (304.8 mm)	100
0324-0118	MFN-1	8	0311-0612	12.0" (304.8 mm)	100

*Size 12, 15 and 20 MFN heating nozzles must be used with HD 310C torch handle and 3/8" (9.5 mm) hose.

WARNING: MFN for all alternative fuel gases – Not for use with acetylene

Type MFN, MFN-1 – for use with Propane & Natural Gas

Tip Size	Oxygen Pressure (PSIG)	Fuel Pressure (PSIG)	Oxygen Consumption (SCFH)	Fuel Consumption (SCFH)	BTU Per Hour
6	8/20	2/10	20/80	5.5/20	See Chart
8	10/20	10/15	40/140	10/35	
10	10/30	12/20	80/320	20/80	
12	30/125	15/25	120/640	30/160	
15	30/125	15/25	200/800	50/200	
20	40/135	15/25	300/1000	75/250	

WARNING: Not for use with acetylene

BTU Per Hour

To approximate gross BTU output, multiply flow rate by BTU value listed below:	
Propane	2498
Natural Gas	1000
Butane	3374
Propylene	2371

WARNING:

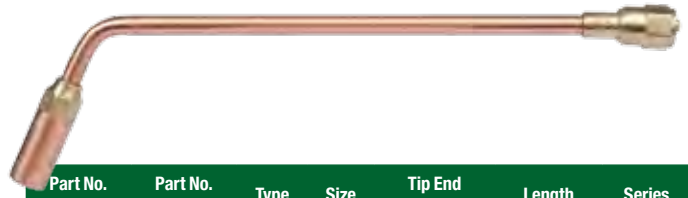
- Use flashback arrestors
- Although built to Victor's quality and safety standards, due to the cutting capacity and/or design of each torch, flashback arrestors are not manufactured into the 310C Series Victor heavy industry torches
- To reduce the risk of personal injury, death and/or property damage, use sufficient capacity flashback arrestors with all Victor heavy industry torch products
- Alternative fuel gas only refers to propane, natural gas, propylene gases. Acetylene, hydrogen and gasoline are NOT included as an alternative gas

MFA/MFA-1 Heating Nozzles

For Use with J, 100, 300 & HD310C Series
Torch Handles

Victor Heavy Industry

- Multi-flame heating head for heat treating, straightening & priming



Part No. Boxed	Part No. Clamshell	Type	Size	Tip End Replacement	Length	Series
0323-0261	0387-0064	MFA	12	0311-0540	17.5" (444.5 mm)	HD 310C
0323-0262	0387-0065	MFA	15	-	17.5" (444.5 mm)	HD 310C
0323-0250	0387-0060	MFA	4	0311-0536	12.0" (304.8 mm)	300
0323-0251	0387-0061	MFA	6	0311-0537	12.0" (304.8 mm)	300
0323-0252	0387-0062	MFA	8	0311-0538	12.0" (304.8 mm)	300
0323-0260	0387-0063	MFA	10	0311-0539*	17.5" (304.8 mm)	300
0324-0108	-	MFA-1	2	0311-0598	12.0" (304.8 mm)	100
0324-0109	0387-0071	MFA-1	4	0311-0599	12.0" (304.8 mm)	100
0324-0110	0387-0072	MFA-1	6	0311-0600	12.0" (304.8 mm)	100
0324-0111	0387-0073	MFA-1	8	0311-0601	12.0" (304.8 mm)	100
0325-0104	-	MFA-J	2	-		J
0325-0105	-	MFA-J	4	-		J
0325-0106	0387-0077	MFA-J	6	-		J

*Size 12, 20 and MFA heating nozzles must be used with HD 310C torch handle and 3/8" (9.5 mm) hose.

Type MFA, MFA-1 – for use with Acetylene

Tip Size	Oxygen Pressure (PSIG)	Acetylene Pressure (PSIG)	Oxygen Consumption (SCFH)	Acetylene Consumption (SCFH)	BTU Per Hour
2	4/8	4/8	3/10	3/9	See Chart
4	8/12	6/10	7/22	6/20	
6	10/15	8/12	15/44	14/40	
8	20/30	10/15	33/88	30/80	
10	30/40	12/15	44/110	40/100	
12	50/60	12/15	66/165	60/150	
15	50/60	12/15	99/244	90/220	

BTU Per Hour

To approximate gross BTU output, multiply flow rate by BTU value listed below:	
Acetylene	1470
Methane	1000

WARNING: At no time should the withdrawal rate of an individual acetylene cylinder exceed 1/7 of the cylinder contents per hour. If additional flow capacity is required use an acetylene manifold system of sufficient size to supply the necessary volume.

Welding & Heating Nozzles/Tips

HEATING NOZZLES / HEATING TIPS / WELDING NOZZLES

Series 1 Heating Tips

Type MFTA
Acetylene



For preheating before welding, descaling and paint burning etc.

Size	Part No.
6	0323-0527
8	0323-0528
*10	0323-0523
*12	0323-0524

*Use 3/8" (9.5m) hose and straight torch

Required pressures:

12/15 Acetylene; 70/80 PSIG Oxygen

Size 8 is maximum size for use with cutting attachments

Series 1 Heating Tips

Type MFTN
LP (Propane/Natural Gas)



For preheating before welding, descaling and paint burning etc.

Size	Part No.
10	0330-0521
12	0330-0522

Not for use with cutting attachments

CHT Adaptor (0312-0089)

Concentrated Heating Tip Adaptor for straightening, bending and forming of plate

- For Use with Alternate Fuels
- Use with HPP or HPN size 5 cutting tip, multi-flame elbow, or mixer and nut assembly



W Series Welding Nozzles

For use with
300 Series torch
handles



W-1

For use with
100 Series torch handles



W-J

For use with
J Series torch handles



- General purpose welding & preheating
- Fuel gas usage - acetylene, hydrogen
- 65° tip angle
- Long cone flame
- One piece copper elbow tip

Model	Size	Part No.		Length	Series
		Boxed	Clamshell		
W	000	0323-0110	-	4.5"	300
	00	0323-0111	0387-0019	4.5"	300
	0	0323-0112	0387-0020	4.5"	300
	1	0323-0120	0387-0021	4.5"	300
	2	0323-0121	0387-0022	4.5"	300
	3	0323-0122	0387-0023	4.5"	300
	4	0323-0130	0387-0024	4.5"	300
	5	0323-0131	-	4.5"	300
	6	0323-0132	-	4.5"	300
	7	0323-0140	-	4.5"	300
	8	0323-0141	-	4.5"	300
10	0323-0142	-	14"	300	
W-1	000	0324-0068	0387-0028	4.5"	100
	00	0324-0069	0387-0029	4.5"	100
	0	0324-0070	0387-0030	4.5"	100
	1	0324-0071	0387-0031	4.5"	100
	2	0324-0072	0387-0032	4.5"	100
	3	0324-0073	0387-0033	4.5"	100
	4	0324-0074	0387-0034	4.5"	100
5	0324-0075	-	4.5"	100	
6	0324-0076	-	4.5"	100	
W-J	000	0325-0081	-	4.5"	J
	00	0325-0082	0387-0039	4.5"	J
	0	0325-0083	0387-0040	4.5"	J
	1	0325-0084	0387-0041	4.5"	J
	2	0325-0085	0387-0042	4.5"	J
	3	0325-0086	0387-0043	4.5"	J
	5	0325-0088	-	4.5"	J
6	0325-0089	-	4.5"	J	
7	0325-0090	-	4.5"	J	

NOZZLES

ET Series Elbow Tips

For use with 300 Series torch handles



ET-1

For use with 100 Series torch handles



ET-J

For use with J Series torch handles



- One piece copper elbow tip
- Long cone flame
- Fuel gas usage - acetylene, hydrogen

Model	Size	Part No.	Series
ET	000	0311-0055	300
	00	0311-0056	300
	0	0311-0057	300
	1	0311-0058	300
	2	0311-0059	300
	3	0311-0572	300
	4	0311-0573	300
	5	0311-0574	300
	6	0311-0575	300
	7	0311-0576	300
8	0311-0577	300	
10	0311-0073	300	
ET	000	0311-0055	100
	00	0311-0056	100
	0	0311-0057	100
	1	0311-0058	100
	2	0311-0059	100
ET-1	3	0311-0345	100
	4	0311-0340	100
	5	0311-0602	100
	6	0311-0603	100
	ET-J	000	0311-0123
00		0311-0124	J
0		0311-0125	J
1		0311-0126	J
2		0311-0127	J
4		0311-0129	J

UM Series Universal Mixers



- Oxy-Acetylene universal mixers used when exact performance & Individual nozzles are not needed.

Type	Part No.	Fuel Gas Usage	Elbow Tips	Length	Series
4-UM-1	0328-0005	Oxy-Acetylene	000-2 ET, 3 ET-1, 4 ET-1	1.75" (44.5 mm)	100
7-UM-1	0328-0009	Oxy-Acetylene	5 ET-1, 6 ET-1	1.75" (44.5 mm)	100

RTE Series Replaceable Tip Ends

For use with 300 Series torch handles

- General purpose welding & preheating
- Uses replacement tip ends (TE Series)
- 65° tip angle



RTE

- General purpose brazing & preheating
- Long cone flame
- Uses TEN tip ends

Model	Size	Part No.	Fuel Gas Usage	Series
RTE	00	0323-0307	Acetylene, Hydrogen	300
	0	0323-0308	Acetylene, Hydrogen	300
	1	0323-0309	Acetylene, Hydrogen	300
	2	0323-0310	Acetylene, Hydrogen	300
	3	0323-0311	Acetylene, Hydrogen	300
	4	0323-0312	Acetylene, Hydrogen	300
	5	0323-0313	Acetylene, Hydrogen	300
	6	0323-0314	Acetylene, Hydrogen	300
	8	0323-0316	Acetylene, Hydrogen	300
	10	0323-0317	Acetylene, Hydrogen	300
RTE	6	0323-0284	N/G, Propane	300

Welding & Heating Nozzles/Tips

WELDING NOZZLES

FE Series Flexible Elbow



- Flexible elbow for special welding, brazing, and heating needs
- Multi-fuel gas service
- **Uses replaceable tip ends**
- Thread: 5/16"-27

Type	Part No.	Fuel Gas Usage	Tip End Replacements	Length	Series
FE	0323-0191	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	11.5" (292.1 mm)	300
FE-1	0324-0066	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	11.5" (292.1 mm)	100
FE-J	0325-0102	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	11.5" (292.1 mm)	J

UN Series Universal Nozzle

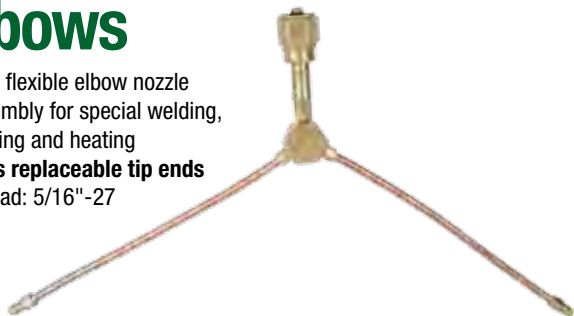
- Standard bend nozzle for welding, brazing and heating
- **Uses replaceable tip ends**
- 65° tip angle
- Thread: 5/16"-27



Type	Part No.	Fuel Gas Usage	Tip End Replacements	Length	Series
UN	0323-0242	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	5" (127.0 mm)	300
UN-1	0324-0094	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	5" (127.0 mm)	100
UN-J	0325-0101	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	5" (127.0 mm)	J

DFE Series Dual Flexible Elbows

- Dual flexible elbow nozzle assembly for special welding, brazing and heating
- **Uses replaceable tip ends**
- Thread: 5/16"-27



Type	Part No.	Fuel Gas Usage	Tip End Replacements	Length	Series
DFE	0323-0192	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	-	300
DFE-1	0324-0092	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	-	100
DFE-J	0325-0108	Multi-Gas Fuel Service	TE, TEN, TEMFA, TEMFN, TEMF	-	J

Replaceable Tip Ends

TE, TEN, TEMFA, TEMFN & TEMF 300, 100 & J Series

For All Nozzles Using Replaceable Tip Ends			
Type	Application, Description	Fuel Gas	Illustration
TE	Welding, brazing Flame – long Cone One piece	Acetylene	
TEN	Brazing, silver brazing Flame – long Cone One piece	Natural Gas, Propane	
TEMFA	Brazing, silver brazing, heating Flame – multi-flame One piece	Acetylene	
TEMFN	Brazing, silver brazing, heating Flame – multi-flame One piece	All Fuel Gases Except Acetylene	
TEMF	Brazing, soldering, heating Flame – multi-flame Two piece	All Fuel Gases Except Acetylene	

Tip Size, Length, Thread Size				
Type	Size(s)	Length	Thread	Part No.
TE	000	1.5" (38.1 mm)	5/16"-27	0311-0471
	00	1.5" (38.1 mm)	5/16"-27	0311-0472
	0	1.5" (38.1 mm)	5/16"-27	0311-0473
	1	1.5" (38.1 mm)	5/16"-27	0311-0474
	2	1.5" (38.1 mm)	5/16"-27	0311-0475
	3	1.63" (41.4 mm)	5/16"-27	0311-0587
	4	1.88" (47.8 mm)	5/16"-27	0311-0588
	5	2" (50.8 mm)	5/16"-27	0311-0589
	6	2.25" (57.2 mm)	0.393-27	*0311-0590
	8	2.75" (69.9 mm)	0.393-27	*0311-0592
TEN	10	3" (76.2 mm)	0.440-27	*0311-0593
	0	1.5" (38.1 mm)	5/16"-27	0311-0483
	2	1.5" (38.1 mm)	5/16"-27	0311-0485
	3	1.63" (41.4 mm)	5/16"-27	0311-0486
	4	1.88" (47.8 mm)	5/16"-27	0311-0487
	5	2" (50.8 mm)	5/16"-27	0311-0488
TEMFA	6	2.25" (57.2 mm)	0.393-27	*0311-0585
	1	1.5" (38.1 mm)	5/16"-27	0311-0215
	2	1.5" (38.1 mm)	5/16"-27	0311-0216
	3	1.5" (38.1 mm)	5/16"-27	0311-0217
	4	1.5" (38.1 mm)	5/16"-27	0311-0218
TEMFN	5	1.5" (38.1 mm)	5/16"-27	0311-0219
	3	1.5" (38.1 mm)	5/16"-27	0311-0306
	4	1.5" (38.1 mm)	5/16"-27	0311-0307
TEMF	5	1.5" (38.1 mm)	5/16"-27	0311-0308
	6	1.5" (38.1 mm)	5/16"-27	0311-0676
	7	1.5" (38.1 mm)	5/16"-27	0311-0677
	8	1.5" (38.1 mm)	5/16"-27	0311-0678
	9	1.5" (38.1 mm)	5/16"-27	0311-0679
	10	1.5" (38.1 mm)	5/16"-27	0311-0680

Adapter for tip ends to fit tip tube: 5/16"-27(F) x 1/8"-27(M) 0312-0071
*Fit nozzles RTE only