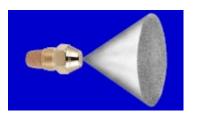
DELAVAN

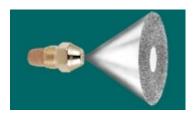
THE INSIDE STORY

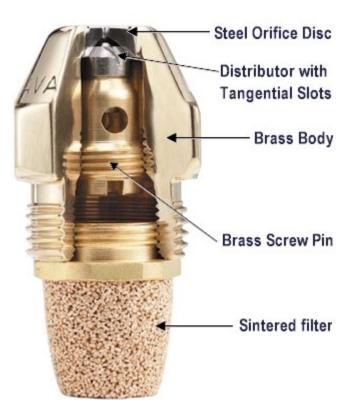
At the forefront of nozzle development, Delavan created its nozzle using bi-metal construction. The Brass body and stainless steel metering parts permit machining to close tolerances for precision and consistently high performance. Brass transmits heat fast from the nozzle face to reduce the possibility of varnish and oil residue buildup. Stainless steel provides that extra durability for metering parts where wear is a factor.











TYPE A - HOLLOW-CONE (RED)

Type A nozzles are mainly used on burners with a hollow cone air pattern and for throughputs up to 2.00 GPH. The droplet distribution is concentrated on the outside of the cone and results in good ignition and low-noise combustion.

TYPE B - SOLID-CONE (BLUE)

Type B nozzles produce a spray that distributes droplets fairly uniformly throughout the complete pattern. The spray pattern becomes progressively more hollow at higher flow rates, particularly above 8.00 GPH. Provides smooth ignition and efficient combustion, particularly in larger burners.

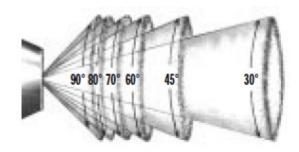
Type W - ALL PURPOSE (GREEN)

Type W nozzles are neither truly hollow nor solid. These nozzles frequently can be used in place of either solid or hollow cone nozzles between 0.40 and 8.00 GPH, regardless of the burner's air pattern. The lower flow rates tend to be more hollow. Higher flow rates tend to be more solid.

SPRAY ANGLE

Spray angles are available from 30° through 90° in most nozzle sizes to meet the requirements of a wide variety of burner air patterns and combustion chambers.

Usually it is desirable to fit the spray angle to the air pattern of the burner. In today's flame retention burner, it is possible to fire more than one spray angle with good results. Generally, round or square combustion chambers should be fired with 70° to 90° nozzles. Long, narrow chambers usually require 30° to 60°



FLOW RATE

Atomizing nozzles are available in a wide range of flow rates, all but eliminating the need for specially calibrated nozzles. Between 1.00GPH and 2.00GPH, for example, seven different flow rates are available. Generally, with hot water and warm air heat, the smallest firing rate that will adequately heat the house on the coldest day is the proper size to use and the most economical.

PROPER FLOW RATES

The proper size nozzle for a given burner unit is sometimes stamped on the nameplate of the unit. The following guidelines may be used for determining the proper flow rates:

If the unit rating is given in BTU per hour input, the nozzle size may be determined by...

GPH = <u>BTU INPUT</u> 140,000

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If the unit rating is given in BTU output...

GPH = <u>BTU OUTPUT</u>

(efficiency %) x 140,000

On a steam job, if the total square feet of steam radiation, including piping, is known...

GPH = TOTAL SQ.FT. OF STEAM x 240

(efficiency %) x 140,000

If the system is hot water operating at 180° and the total square feet of radiation, including piping, is known...

GPH = TOTAL SQ.FT. OF HOT WATER x 165

(efficiency %) x 140,000

EFFECT OF VARIABLES ON ATOMIZATION

Oil Viscosity

The viscosity of domestic fuels generally supplied today is very satisfactory with few exceptions. Any fuel, however, stored above ground in -20°F weather will be very viscous until it is warmed up. With any high viscosity fuel, the spray pattern of the nozzle tends to collapse or become narrower, resulting in a long, narrow fire. This is corrected by:

Increasing pump pressure to 120-125

Add #1 oil to the tank

High viscosity also causes the flow through the nozzle to increase due to the geometric design of an oil burner.

EFFECT OF PRESSURE ON FLOW RATE

Pressure (PSI)	100	125	150	200	250	300	
Flow Rate Factor	1.00	1.12	1.23	1.41	1.58	1.73	

NOTE: for other nozzle sizes multiply flow rate by factor given for the pressure. Do not use pressure less than 100psi.

FLOW RATE: mean droplet size is larger with higher flow rates. This is the reason for using double and triple adaptors. The smaller droplets with 2 or 3 smaller nozzles give a shorter fire.

SPRAY ANGLE: wider spray angles produce slightly smaller mean droplet diameter than the narrower angles in the same flow rate.

Burner Manufacturer's Recommendations*

Manufacturer Model Delavan Nozzle Aero F-AFC 80° W. A or B Burner HF-US 80° W. A or B SV-SSV 70° or 80° B AF/FG (F) 60°, 70° or 80° A or B (100-150 PSI) AF/FG (F) 60° or 70° A or B (100-150 PSI) AF/FG (F) 60° or 70° A or B (100-150 PSI) AF/II (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) 99 FRD (Std.) .50-75 GPH 60° A .85-3.00 GPH 45°A, 60°A or B 100 CRD (Std.) .50-75 GPH 60° A .85-225 GPH 45°A, 60°A or B .75-1.10 GPH 60° Co. Elite EZ-1 .50-100 GPH .100 CRD (Std.) .50-85 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A Mctron 3M 600 W, B, or Del-O-Flo A St .50-125 GPH 60° or 80° W or A F15, F20					
Aero Burner HF-US HF-AFC 80° W, A or B Burner HF-AFC 80° W, A or B SV-SSV 70° or 80° B AF/FG (F) 60°, 70° A or B (100-150 PSI) AF/FG (F) 60° or 70° A or B (100-150 PSI) AF/FG (F) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) 99 FRD (Std.) .5075 GPH 60° A .85-3.00 GPH 45°A, 60°A or B 100 CRD (Std.) .5075 GPH 60° A .85-2.25 GPH 45°A, 60°A or B .75-1.10 GPH 60° Co. Elite EZ-1 .50100 GPH .100 -1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS 100 CRD (Std.) .50125 GPH 60° or 80° W or A .51, F.5 .40-1.25 GPH 60° or 80° W or A .55, F.20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B	Manufacturer	Model	Delavan Nozzle		
Burner HF-AFC 80° W. A or B SV-SSV 70° or 80° B AF/FG (F) 60°, 70° or 80° A or B (100-150 PSI) AF/FG (F) 60° or 70° A or B (100-150 PSI) AF/AFG (M) 60° or 70° A wor B (140-200 PSI) Beckett AFII (FB) 45°, 60° or 70° A, wor B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, wor B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, wor B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, wor B (140-200 PSI) The AFII (HLX) 45°, 60° or 70° A, wor B (140-200 PSI) AFII (HLX) 45°, 60° or 70° A, wor B (140-200 PSI) Operation 99 FRD (Std.) .5075 GPH 60° A 60° A .85-3.00 GPH 45°A, 60°A or B .85-3.00 GPH 45°A, 60°A or B Carlin Elite EZ-1 .50100 GPH 70°A .5085 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Burners Mectron 3M 600 W, B, or Del-O-Flo A Mor A Elite (EZ-2,3) All Flow Rates 60° or 80° W or A Burners F15, F20 2.00-5.00 GPH 60° or 80° W or B Brass. S2.0-125 GPH		F-AFC			
Burner HF-AFC 80° W, A or B SV-SSV 70° or 80° B AF/EG (F) 60°, 70° or 80° A or B (100-150 PSI) AF/EG (M) 60° or 70° A or B (100-150 PSI) AF/EG (F) 60° or 70° A, W or B (140-200 PSI) Beckett AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) Press 99 FRD (Std.) .50-75 GPH 60° A .50-75 GPH 60° A 60° A .50-75 GPH 60° A 60° A .50-75 GPH 60° A B .50-75 GPH 60° A A .50-75 GPH 60° A B .50-75 GPH 60° A A .50-75 GPH 60° S A .50-75 GPH 60° S S .50-75 GPH 60° or 70° B Bilte EZ-1 .50-100 GPH 60° or 70° .50-75 GPH 60° or 70° B Burners F15, F20 .200-500 GP	Aero	HF-US	80° W, A or B		
SV-SSV 70° or 80° B R.W. Beckett AF/FG (F) 60°, 70° or 80° A or B (100-150 PSI) AF/AFG (M) 60° or 70° A or B (100-150 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AF II (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) AF II (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) 99 FRD (Std.) .5075 GPH 60°A .00 CRD (Std.) .5075 GPH 60°A .85-3.00 GPH 45°A, 60°A or B .100 CRD (Std.) .5075 GPH 60° A .85-2.25 GPH 45°A, 60°A or B .5085 GPH 60° SS 1.00 CRD (Std.) .5085 GPH 60° SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B or Del-O-Flo A (Up to to .85 GPH) 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80	Burnor		80° W. A or B		
R.W. Beckett AF/FG (F) AF/AFG (M) AF/AFG (M) AF/I (FB) AF/I (FB) A	Durrier				
R.W. Beckett AF/AFG (M) AFII (FB) 60° or 70° A or B (100-150 PSI) 45°, 60° or 70° A, W or B (140-200 PSI) AF II (HLX) The Carlin Co. 99 FRD (Std.) .5075 GPH .85-3.00 GPH 60° A .85-3.00 GPH 45° A, 60° A or B .00° A 100 CRD (Std.) .5075 GPH .85-2.25 GPH 60° A .85-2.25 GPH 45° A, 60° A or B .00° A .85-2.25 GPH 100 CRD (Std.) .5075 GPH .5085 GPH 60° .85-2.25 GPH 45° A, 60° A or B .75-1.10 GPH 60° Elite EZ-1 .50-1.00 GPH 70° A .5085 GPH 60° or 70° 60° or 70° Elite (EZ-2,3) All Flow Rates 60° and SS 1.00-1.65 GPH 60° or 80° W or A 600 W, B, or Del-0-Flo A Mectron 3M 600 W, B, or Del-0-Flo A 5M F10 1.25-2.50 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W 0° .579 MH MSH 086 .55 -			60°, 70° or 80° A or	B (100-150 PSI)	
Beckett AFII (FB) 45°, 60° or 70° A, W or B (140-200 PSI) AF II (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) 99 FRD (Std.) .5075 GPH 60° A .85-3.00 GPH 45°A, 60° A or B .85-3.00 GPH 45°A, 60° A or B .85-3.00 GPH 45°A, 60° A or B .00 CRD (Std.) .5075 GPH 60° A .85-2.25 GPH 45°A, 60° A or B .75-1.10 GPH 60° .85-2.25 GPH 45°A, 60° A or B .75-1.10 GPH 60° Co. Elite EZ-1 .50100 GPH 70° A .70° A .70° A Co. Elite (EZ-2,3) All Flow Rates 60° or 70° .5085 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° ar A or B .50125 GPH 60° or 80° W or A Burners F15, F20 .40-1.25 GPH 60° or 80° W or B .515, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W .50250 GPH 60° or 45° B or W Intertherm MAC 1265 P/N 6601-181 or .55 GPH 90° W .50300 GPH 80°, 70°, 60° *** Wayne	R.W. AF/AFG (M) Beckett AFII (FB)				
AF II (HLX) 45°, 60° or 70° A, W or B (140-200 PSI) 99 FRD (Std.) .5075 GPH 60° A .85-3.00 GPH 45° A, 60° A or B 100 CRD (Std.) .5075 GPH 60° A .85-2.25 GPH 45° A, 60° A or B .75-1.10 GPH 60° A .85-2.25 GPH 45° A, 60° A or B .75-1.10 GPH 60° Elite EZ-1 .50100 GPH .5085 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 100 - 1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS 1.00-1.65 GPH 60° or 80° W or A F10 F10 1.25-2.50 GPH F10 1.25-2.50 GPH F15, F20 2.00-50.00 GPH A0° or 45° B or W Series Press 2.00-12.00 GPH G0° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 086 MSR .75-2.75 GPH MSR .75-2.75 GPH MSR			45°, 60° or 70° A, W or B (140-200 PSI)		
The Carlin Co. .85-3.00 GPH 45° A, 60° A or B 100 CRD (Std.) .5075 GPH 60° A .85-2.25 GPH 45° A, 60° A or B .75-1.10 GPH 60° Elite EZ-1 .50100 GPH .5085 GPH 60° SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° a, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B Press 2.00-12.00 GPH 60° or 45° B or W Series 90° A 60° or 45° B or W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 086 .65 - 80° A 90°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** MSR .52-2.50 GPH	Deenett				
The Carlin Co. 100 CRD (Std.) .5075 GPH 60°A Burners Elite EZ-1 .50-1.00 GPH 70°A Image: Second S		99 FRD (Std.)	.5075 GPH	60°A	
Ihe Carlin Co. .85-2.25 GPH 45°A, 60°A or B Co. Elite EZ-1 .50-1.00 GPH 70°A .5085 GPH 60° SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .5719 MH MSH 086 .65 - 80° A P100 MSR .75-2.75 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** HS <			.85-3.00 GPH	45°A, 60°A or B	
Ine Carlin Co. .85-2.25 GPH 45°A, 60°A or B Co. Elite EZ-1 .50-1.00 GPH 70°A .5085 GPH 60° SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAR 1265 P/N 6601-181 or .55 GPH 90° W MAR 1265 P/N 6601-181 or .55 GPH 90° W Belias .50-3.00 GPH MSR .75-2.75 GPH Home So-2.50 GPH 80°, 70		100 CRD (Std.)	.5075 GPH	60°A	
Co. Elite EZ-1 .50-1.00 GPH 70°A .5085 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Series 0.0-12.00 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series 0.0-12.00 GPH 60° or 45° B or W Vayne MAC 1265 P/N 6601-181 or .55 GPH 90° W NSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B Equipment MSR .75-2.75 GPH 80°, 70°, 60° ** MSR HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** HS	lhe		.85-2.25 GPH		
Co. Elite EZ-1 .50-1.00 GPH 70°A Solution Elite EZ-1 .50-3.85 GPH 60° SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W Wayne MAC 1265 P/N 6601-181 or .55 GPH 90° W Wayne MSH 086 .65 - 80° A P100 .50-1.00 GPH 80°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°,	Carlin		.75-1.10 GPH	60°	
Non 1.00-1.65 GPH 60° SS 1.00-1.65 GPH 60° or 70° Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) 53 F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or 80° W or B F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W Wayne MAC 1265 P/N 6601-181 or .55 GPH 90° W Wayne MSH 066 .50 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B Equipment EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** MSR HS .50-3.00 GPH 80°, 70°, 60° ** ** MSR .50-3.00 GPH 80°, 70°, 60° ** ** HS .50-3.00 GPH 80°, 70°, 60° ** <		Elite EZ-1	.50-1.00 GPH	70°A	
Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or W or B F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W NAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 086 .65 - 80° A P100 Series .50-1.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° **<	LO.		.5085 GPH	60° SS	
Elite (EZ-2,3) All Flow Rates 60° A, B or SS Mectron 3M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or W or B F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W NAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 086 .65 - 80° A P100 Series .50-1.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° **<			1.00-1.65 GPH	60° or 70°	
Riello Mectron 3M 5M 600 W, B, or Del-O-Flo A (Up to to .85 GPH) Burners F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B Press 2.00-5.00 GPH 45° or 60° W or B Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 066 .50 - 80° A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** EG-1 .50-3.00 GPH 88°, 70°, 60° **		Elite (EZ-2,3)	All Flow Rates	60° A, B or SS	
Riello Burners F3, F.5 .40-1.25 GPH 60° or 80° W or A F10 1.25-2.50 GPH 60° or W or B F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 066 .50 - 80° A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** **Under 1.00 GPH use A; above 1.00 use B. **Under 1.00 GPH use A; above 1.00 use A,			600 W, B, or Del-O-F	lo A	
Riello Burners F10 1.25-2.50 GPH 60° or W or B Burners F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 086 MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** EG-1 .50-3.00 GPH 80°, 70°, 60° ** **Under 1.00 GPH use A; above 1.			(Up to to .85 GPH)		
Burners F15, F20 2.00-5.00 GPH 45° or 60° W or B R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B Press 2.00-12.00 GPH 60° or 45° B or W Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W Burners MAC 1265 MAC 1265 P/N 6601-181 or .55 GPH 90° W OF .579 MH MSH 086 MSH 086 .65 - 80° A P100 .50-1.00 GPH S0°, 70°, 80° A or B EHASR HS .50-2.50 GPH MSP, 70°, 60° ** HS HS .50-3.00 GPH B0°, 70°, 60° ** ** HS .50-3.00 GPH B0°, 70°, 60° ** ** HS<	D : 11	F3, F.5	.40-1.25 GPH	60° or 80° W or A	
Barrier R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B Press 2.00-12.00 GPH 60° or 45° B or W Series P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 066 MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** MSR .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** Equipment HS .50-3.00 GPH 80°, 70°, 60° ** CP190 (150 DSI) 55 1.90 GPH 80°, 70°, 60° ** 80° **	Riello	F10		60° or W or B	
R35.3, R35.5 .50-1.25 GPH 60° or 80° W or B Press 2.00-12.00 GPH 60° or 45° B or W Series MAC 1265 P/N 6601-181 or .55 GPH 90° W MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 066 MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 88°, 70°, 60° **	Burners	F15, F20	2.00-5.00 GPH	45° or 60° W or B	
Series P/N 6601-181 or .55 GPH 90° W Intertherm MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 066 .50 - 80°A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° **		R35.3, R35.5	.50-1.25 GPH		
Intertherm MAC 1265 P/N 6601-181 or .55 GPH 90° W or .579 MH MSH 066 .50 - 80° A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH MSR .75-2.75 GPH MSR .75-2.75 GPH MSR .75-2.50 GPH HS .50-3.00 GPH EG-1 .50-3.00 GPH **Under 1.00 GPH 88°, 70°, 60° ** **Under 1.00 GPH 88°, 70°, 60° **		Press	2.00-12.00 GPH	60° or 45° B or W	
Intertherm or .579 MH MSH 066 .50 - 80°A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH MSR .75-2.75 GPH MSR .75-2.50 GPH MSR .75-2.50 GPH HS .50-3.00 GPH BC°, 70°, 60° ** **Under 1.00 GPH use A; above 1.00 use B. CP1490 (450 DSI) 55 1.90 CPU					
MSH 066 .50 - 80° A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** Equipment HS .50-3.00 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** ** GP1490 (450 DSI) 51 400 GPH use A; above 1.00 use B. **Under 1.00 GPH use A; above 1.00 use B.		MAC 1265	P/N 6601-181 or .55	GPH 90° W	
With 066 .50 - 80° A MSH 086 .65 - 80° A P100 .50-1.00 GPH 60°, 70°, 80° A or B EHASR .75-3.00 GPH 80°, 70°, 60° ** MSR .75-2.75 GPH 80°, 70°, 60° ** Home HS .50-3.00 GPH 80°, 70°, 60° ** Equipment HS .50-3.00 GPH 80°, 70°, 60° ** EG-1 .50-3.00 GPH 80°, 70°, 60° ** ** MSR .50-3.00 GPH 80°, 70°, 60° ** B EG-1 .50-3.00 GPH 88°, 70°, 60° ** ** Moder .50-3.00 GPH 88°, 70°, 60° ** B	Interthorm		or .579 MH		
Wayne P100 .50-1.00 GPH 60°, 70°, 80° A or B Home EHASR .75-3.00 GPH 80°, 70°, 60° ** Home MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** Equipment HS .50-3.00 GPH 80°, 70°, 60° ** **Under 1.00 GPH 88°, 70°, 60° ** **	mermerm		.50 - 80°A		
Wayne Home EHASR .75-3.00 GPH 80°, 70°, 60° ** Home MSR .75-2.75 GPH 80°, 70°, 60° ** HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** Equipment HS .50-3.00 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° ** ** HS .50-3.00 GPH 88°, 70°, 60° ** ** HS .50-3.00 GPH 88°, 70°, 60° ** **					
Wayne MSR .75-2.75 GPH 80°, 70°, 60° ** Home HS .50-2.50 GPH 80°, 70°, 60° ** Equipment HS .50-3.00 GPH 80°, 70°, 60° ** EG-1 .50-3.00 GPH 88°, 70°, 60° ** **Under 1.00 GPH use A; above 1.00 use B. **Under 1.00 GPH use A; above 1.00 use A;			.50-1.00 GPH		
Home HS .50-2.50 GPH 80°, 70°, 60° ** HS .50-3.00 GPH 80°, 70°, 60° B Equipment EG-1 .50-3.00 GPH 88°, 70°, 60° ** **Under 1.00 GPH use A; above 1.00 use B. **Under 1.00 GPH use A; above 1.00 use B.	Wayno		.75-3.00 GPH		
Equipment HS .50-3.00 GPH 80°, 70°, 60° B EG-1 .50-3.00 GPH 88°, 70°, 60° ** **Under 1.00 GPH use A; above 1.00 use B. 001400 (150 DSI) 55 1.90 CPH 45° 50° 70°, 80° A colored					
EG-1 .50-3.00 GPH 88°, 70°, 60° ** **Under 1.00 GPH use A; above 1.00 use B.	Home				
**Under 1.00 GPH 88 , 70 , 60 ** **Under 1.00 GPH use A; above 1.00 use B.	Fauinment				
OD100 (150 DCI) E5 1 00 CDU 45° 60° 70° 00° A or	Equipment	EG-1			
		**Under 1.00 GPH use A; above 1.0			
Weil-Mclain UB180 (100 PSI) .35-1.80 GPH 45°, 60°, 70°, 80° A 0F1	Woil-Mclain	QB180 (150 PSI)	.55-1.80 GPH	45°, 60°, 70°, 80° A or B	
Well-Wiciain QB300 (140 PSI) 1.75-3.00 GPH 45°, 60°, 70°, 80° B	weil-wicidill	QB300 (140 PSI)	1.75-3.00 GPH	45°, 60°, 70°, 80° B	

Nozzie Interchange

Delavan Recommended Interchange

Nozzle Interchange Chart				
Spray Angles 30° through 90°				
HAGO/SID HARVEY	DELAVAN			
Н	Α			
SS (up to 2.0)	SS			
SS (over 2.0)	A or W			
ES/P	B*			
B	B*			
MONARCH	DELAVAN			
NS/PL	Α			
R/AR (up to 2.0)	R-D/AR-D			
D/AD (aver 2.0)	A/A == 14/			
R/AR (over 2.0)	A/A or W			
R/AR (over 2.0) PLP	AVA OF W B*			
PLP ´	B*			

*Effective February 1997. Subject to updating by burner manufacturers. For models not listed, contact burner manufacturer. Always follow the appliance manufacturer's instructions for the correct nozzle specification.