



E-180

Variable flow nozzle

INDUSTRIAL OIL NOZZLE



The E-180-H Nozzles is a large Industrial Nozzles in which the orifice flow is varied by by-passing or "bleeding" liquid from the Nozzle swirl chamber while the line pressure to the Nozzle remains constant. Capacity is varied between maximum and minimum by controlling the by-pass line pressure, and excellent firing results are obtained with turn-down ratios of 3 to 4 to 1.

The capacity and spray angle ratings are based on operating at 300 PSIG line pressure on 100 SSU operating viscosity oil with the by-pass line closed. Spray angles available are 40°, 50°, 60° and 80° and it should be noted that spray angles increase from 5° to 10° when the by-pass line is wide open. These Nozzles may be used on No. 2 fuel oil, but capacities and spray angles will be approximately 10% less than on 100 SSU oil. Oil of 100 SSU operating viscosity is typically obtained by preheating U.S. No.6 fuel oil to 175°F to 265°F with a norm of about 240°F.

Accompanying charts show flow through the orifice when the bypass pressures are at various points from open to closed. Note that the total flow to the Nozzle (when the by-pass line is wide open) can be almost 50% greater than the nominal capacity of the Nozzle and this must be taken into account when sizing pumps. Pressure-flow curves can be supplied for any specific capacity size, on request.

Nozzles are made of cold rolled steel, with tips and discs case hardened and individually lapped together as mated sets. Complete E-180-H Nozzles have a net weight of approximately 18-1/2 ounces. The tip and disc set have a net weight of approximately 2 ounces.

MATERIAL

Please ask us for further information.

PIPE CONNECTION

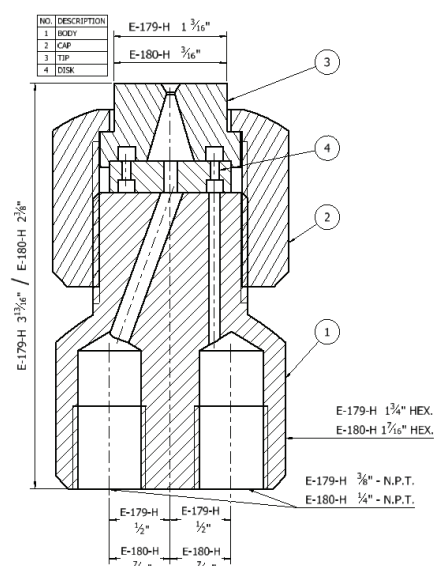
Please ask us for further information.

SPRAY ANGLES

60° or 80°

Other specifications are available on enquiry

CAPACITIES & DIMENSIONS



E-180

Variable flow nozzle

Minimum Capacity: Gallons Per Hour							
Nozzle No.	Function Pressure – By Inch-pound limit						
Nominal Capacity, GPH: BY-PASS CLOSED	By-Pass Pressure - PSIG					BY-PASS PRESSURE - BY-PASS CLOSED	TOTAL** FLOW: GPH TO NOZZLE BY-PASS OPEN
	0	50	100	150	200		
15.0	4.5	5.5	9.0	-	-	140	18.5
20.0	4.5	7.0	14.0	-	-	125	23.5
25.0	5.0	6.0	9.0	16.0	-	175	36.0
30.0	8.0	9.0	12.0	18.0	-	190	38.0
35.0	8.0	8.5	13.0	20.0	35.0	200	49.0
40.0	8.0	9.0	13.0	20.0	34.0	210	57.0
45.0	9.0	11.0	14.0	20.5	35.0	210	61.5
50.0	12.0	13.0	18.0	27.0	44.0	210	73.0
55.0	15.0	16.0	20.0	29.0	48.0	210	84.0
60.0	14.0	14.5	20.0	38.0	-	170	78.0
65.0	13.5	16.0	22.0	38.5	-	175	84.0
70.0	26.0	27.5	34.0	45.0	64.0	210	102.0
75.0	19.0	20.0	27.0	42.0	67.0	210	105.0
80.0	21.0	22.5	33.0	51.0	80.0	200	105.0
85.0	21.0	22.5	33.0	49.0	80.0	205	111.0
90.0	25.0	25.0	35.0	54.0	-	190	116.5
100.0	30.0	31.0	36.0	53.0	83.0	215	146.0
120.0	27.0	30.0	40.0	62.5	103.0	210	165.0
130.0	36.0	40.0	55.0	73.0	106.0	220	187.0
140.0	25.0	27.5	38.0	62.0	105.0	220	192.5
150.0	50.0	52.5	65.0	94.0	130.0	225	217.5