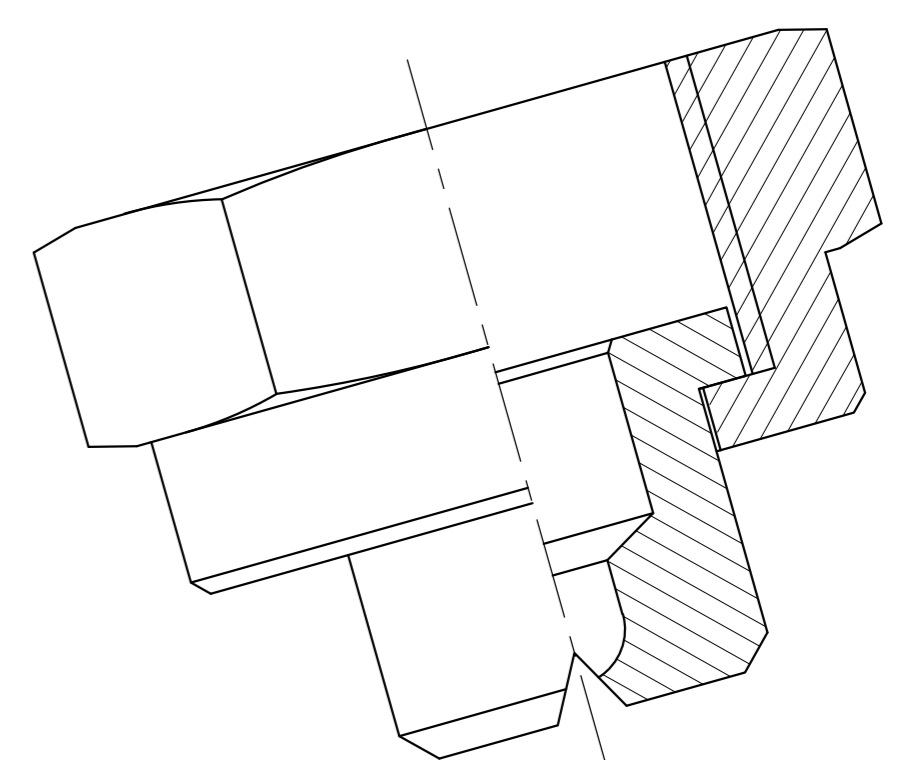
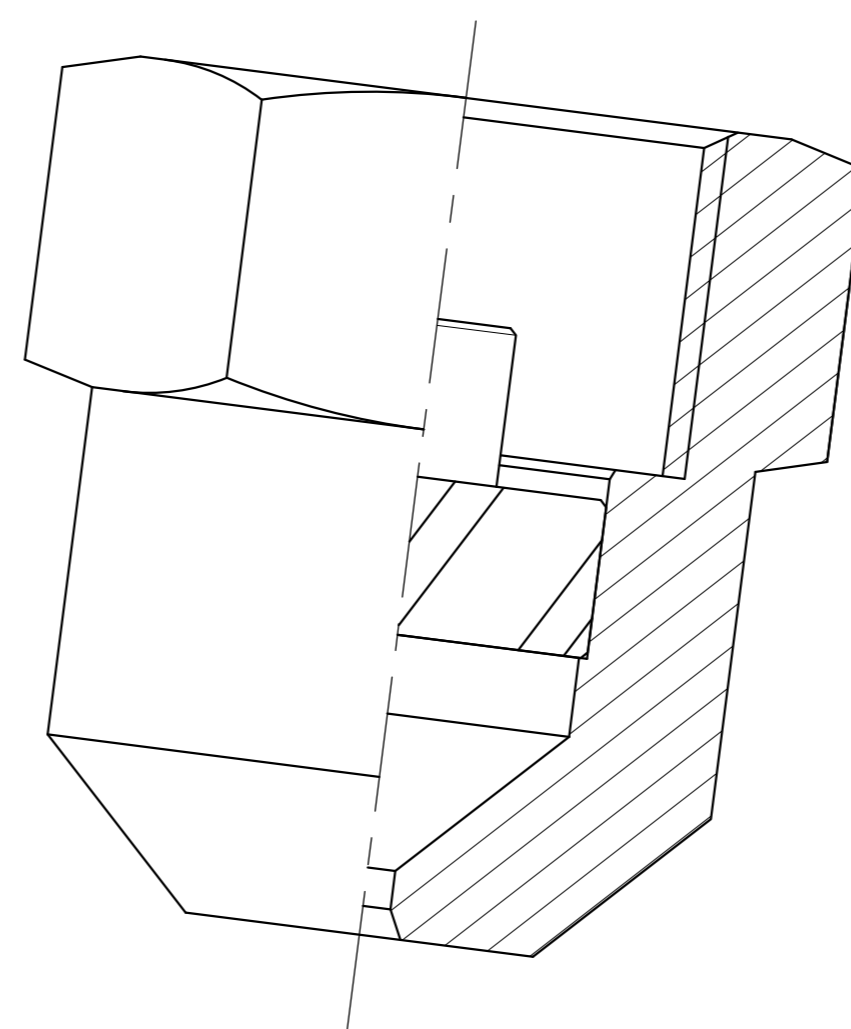
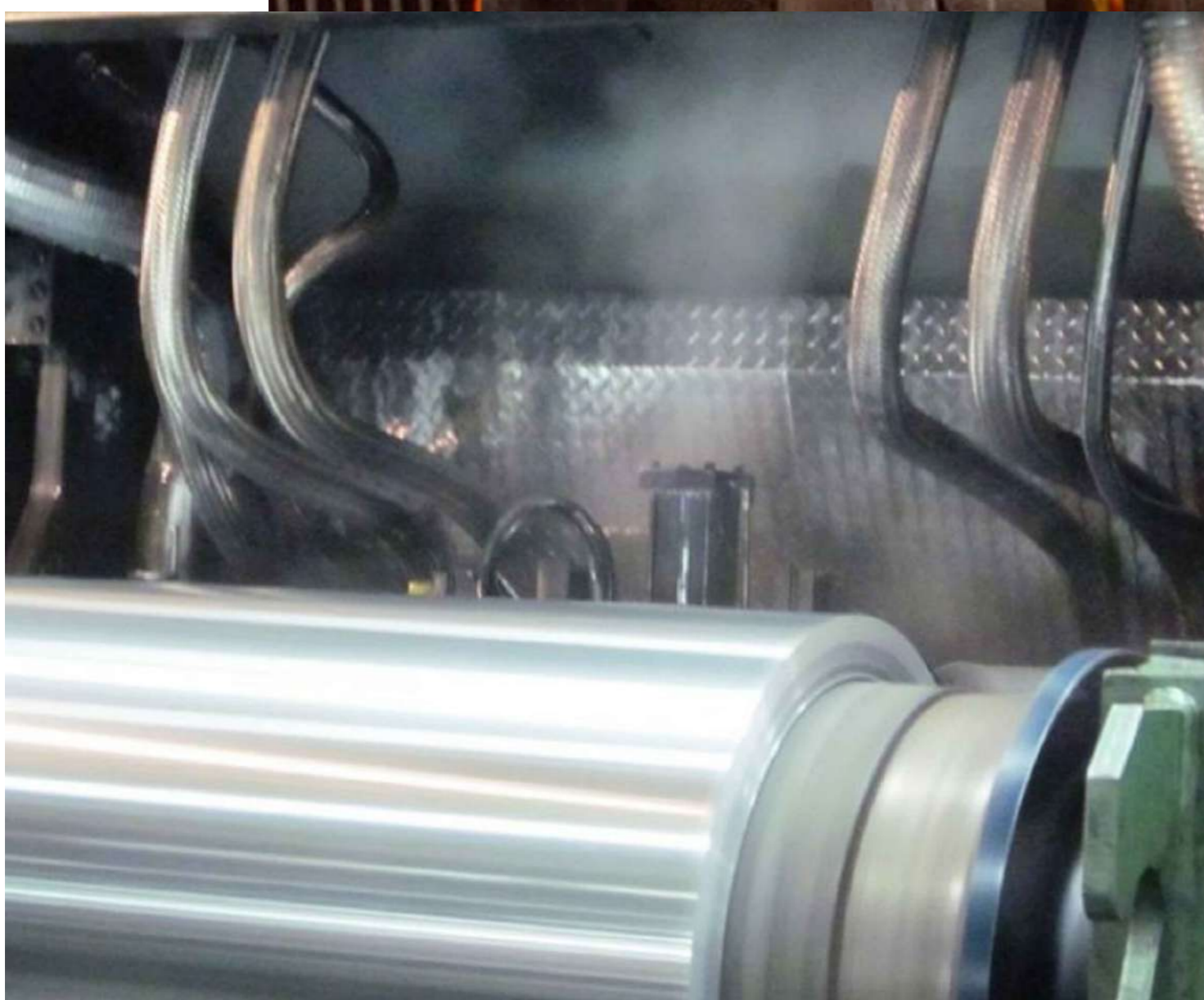


# JSR SPRAY SYSTEMS (INDIA)

DESIGNERS & MFG. OF INDL. SPRAY NOZZLE, ACCESSORIES  
AND SPRAY SYSTEMS

STEEL PLANTS

## STEEL PLANT SPRAY NOZZLES LANCES , SPRAY HEADERS AND SPRAY ENGINEERING SYSTEMS



# JATO FULL SPRAY NOZZLES

## Applications

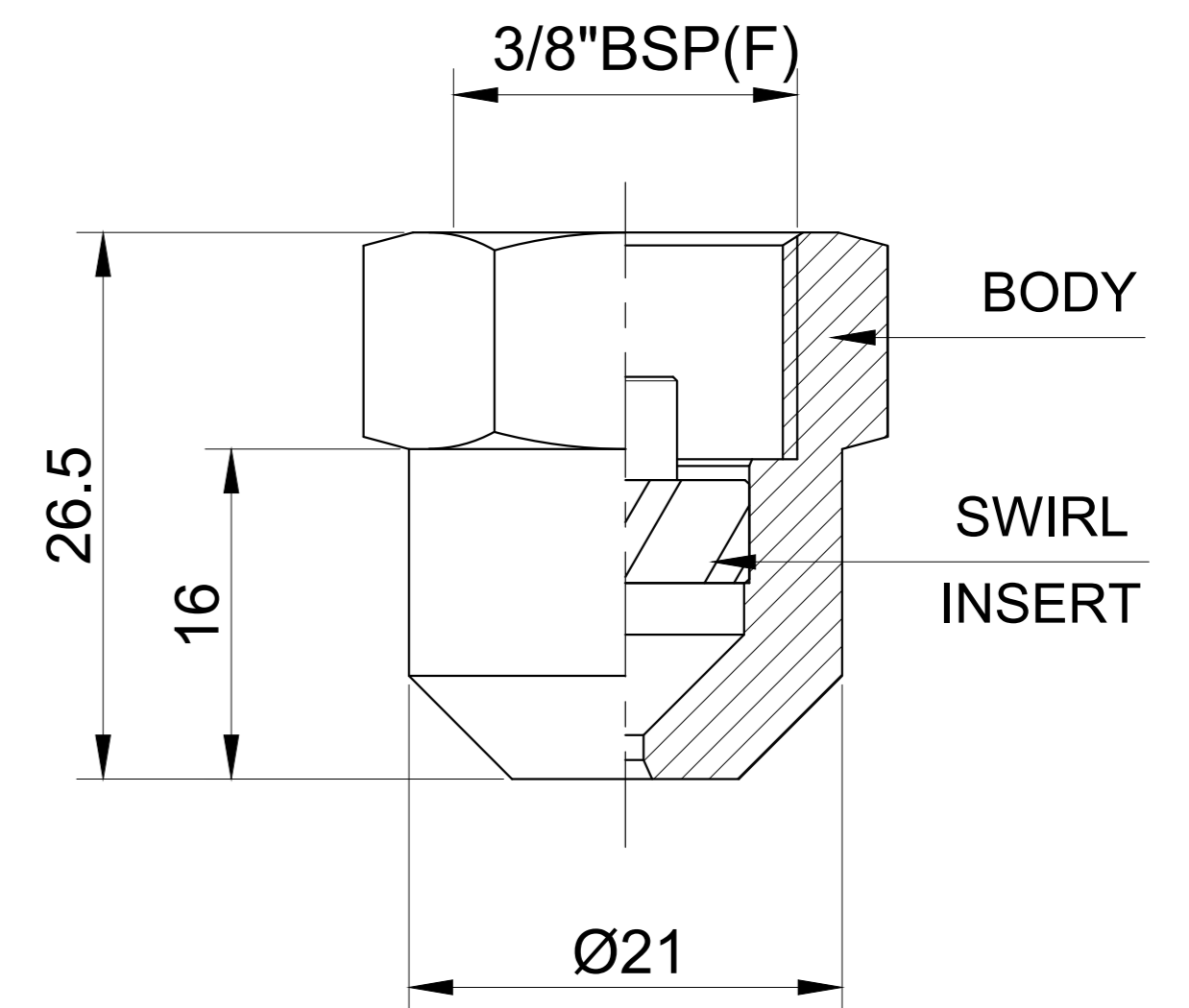
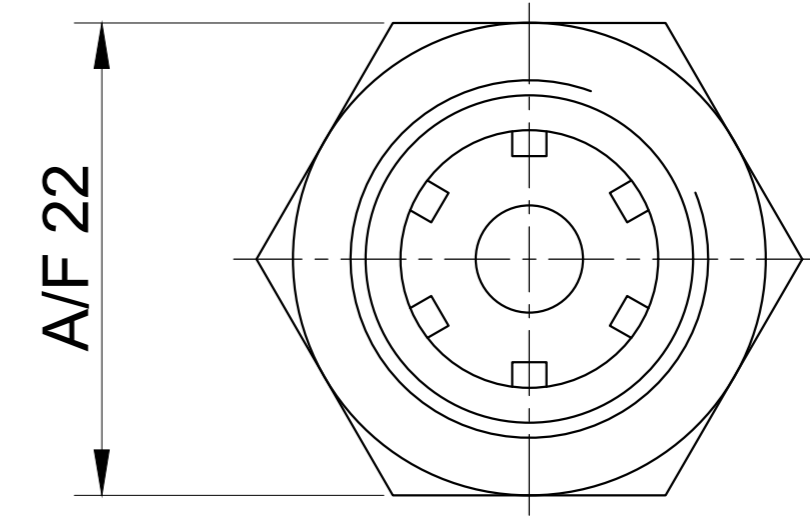
In Continuous casting machine For Secondary Cooling.

## Spray Characteristics :

1. It Produces Full spray Pattern.
2. The Volume of spray is Evenly distributed all Over spray pattern.
3. Different Flow rate and spray angles are available .

## Design Construction and Material :

1. Available Thread size are 3/8" BSP / 1/4" BSP .
2. A Good Resistance to Clogging .
3. The Material are Brass and Stainless steel.
4. Available Spray angles are 45°,65°,80° and 90° .



Flow Rate (l/min) @ Different Pressure (Bar) [ 45° SPRAY ANGLE ]									
Sr. No.	Model No.	Angle	1.0 Bar	2.0 Bar	2.8 Bar	4.0 Bar	5.0 Bar	6.0 Bar	7.0 Bar
1	JSR-H2045	45°	1.20	1.69	2.00	2.39	2.67	2.93	3.16
2	JSR-H2545	45°	1.99	2.11	2.50	2.98	3.34	3.65	3.95
3	JSR-H3045	45°	1.80	2.50	3.00	3.60	4.00	4.40	4.75
4	JSR-H3545	45°	2.10	2.95	3.50	4.20	4.70	5.10	5.55
5	JSR-H4045	45°	2.40	3.40	4.00	4.80	5.30	5.85	6.30
6	JSR-H4745	45°	2.80	4.00	4.70	5.60	6.30	6.90	7.40
7	JSR-H5045	45°	3.00	4.20	5.00	6.00	6.70	7.30	7.90
8	JSR-H6045	45°	3.60	5.10	6.00	7.20	8.00	8.80	9.50
9	JSR-H7045	45°	4.50	5.90	7.00	8.35	9.35	10.25	11.05
10	JSR-H8045	45°	4.80	6.80	8.00	9.60	10.70	11.70	12.65



● Brass



● Stainless Steel

Flow Rate (l/min) @ Different Pressure (Bar) [ 65° SPRAY ANGLE ]									
Sr. No.	Model No.	Angle	1.0 Bar	2.0 Bar	2.8 Bar	4.0 Bar	5.0 Bar	6.0 Bar	7.0 Bar
2	JSR-H2065	65°	1.20	1.70	2.00	2.40	2.70	2.90	3.15
3	JSR-H2465	65°	1.40	2.00	2.40	2.80	3.20	3.50	3.80
4	JSR-H2565	65°	1.49	2.11	2.50	2.98	3.34	3.65	3.95
5	JSR-H3065	65°	1.80	2.50	3.00	3.60	4.00	4.40	4.75
6	JSR-H3565	65°	2.10	2.95	3.50	4.20	4.70	5.10	5.55
7	JSR-H4065	65°	2.40	3.40	4.00	4.80	5.30	5.85	6.30
8	JSR-H4565	65°	2.69	3.80	4.50	5.38	6.01	6.59	7.12
9	JSR-H5065	65°	3.00	4.20	5.00	6.00	6.70	7.30	7.90
10	JSR-H5565	65°	3.28	4.64	5.50	6.57	7.34	8.05	8.69
11	JSR-H5965	65°	3.50	5.00	5.90	7.00	7.90	8.60	9.30
12	JSR-H6065	65°	3.60	5.10	6.00	7.20	8.00	8.80	9.50
13	JSR-H7065	65°	4.20	5.90	7.00	8.35	9.35	10.25	11.05
14	JSR-H7565	65°	4.50	6.35	7.50	8.95	10.00	10.95	11.85
15	JSR-H8065	65°	4.80	6.80	8.00	9.60	10.70	11.70	12.65
16	JSR-H9065	65°	5.40	7.60	9.00	10.75	12.00	13.15	14.25
17	JSR-H10065	65°	6.00	8.45	10.00	11.95	13.40	14.60	15.80
18	JSR-H12065	65°	7.20	10.10	12.00	14.30	16.00	17.60	18.95
19	JSR-H13065	65°	7.77	10.99	13.00	15.54	17.37	19.03	20.55
20	JSR-H15065	65°	8.96	12.68	15.00	17.93	20.04	22.96	23.72
21	JSR-H15065	65°	9.55	13.50	16.00	19.10	21.40	23.40	25.30

# JATO FULL SPRAY NOZZLES

## Applications

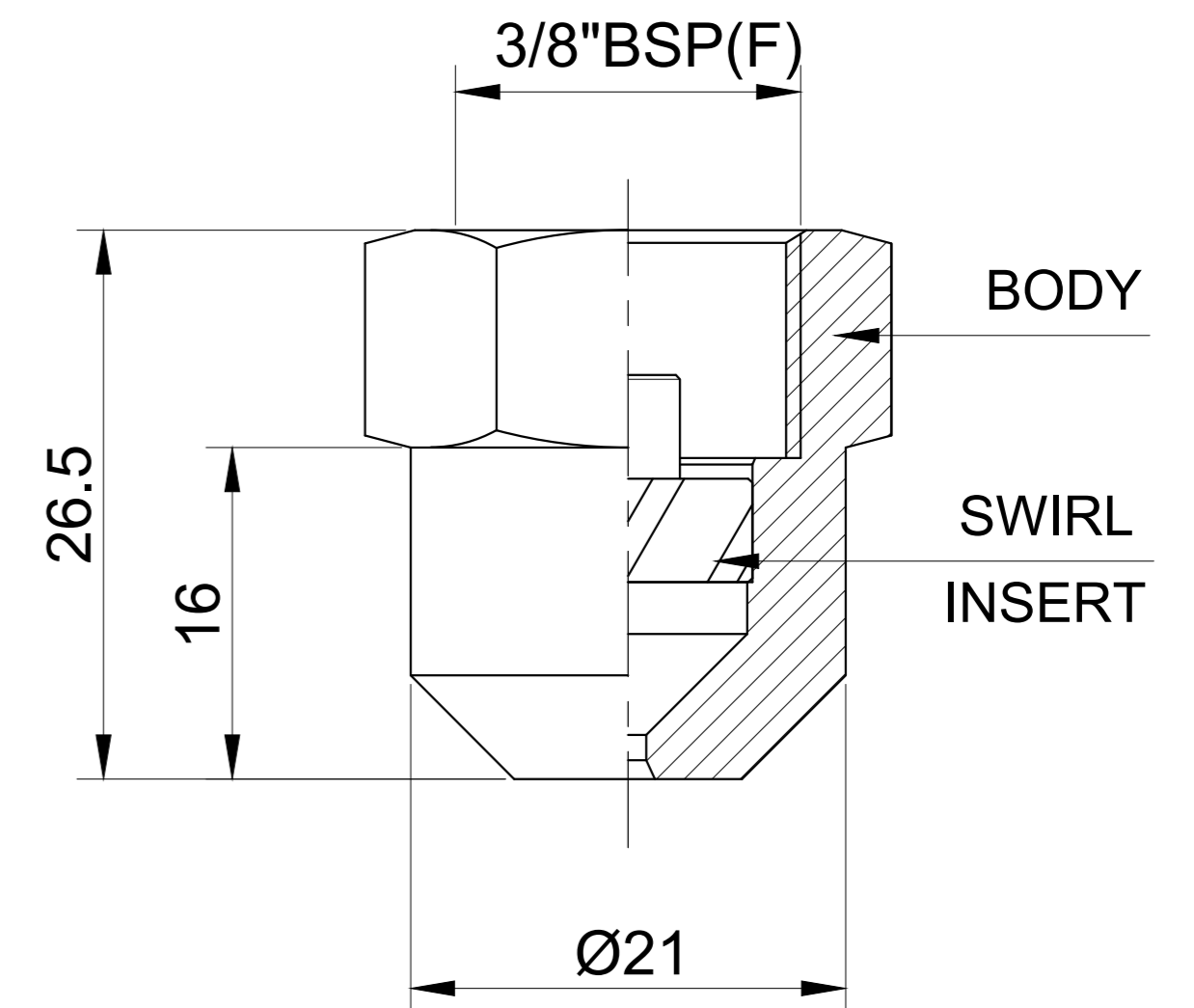
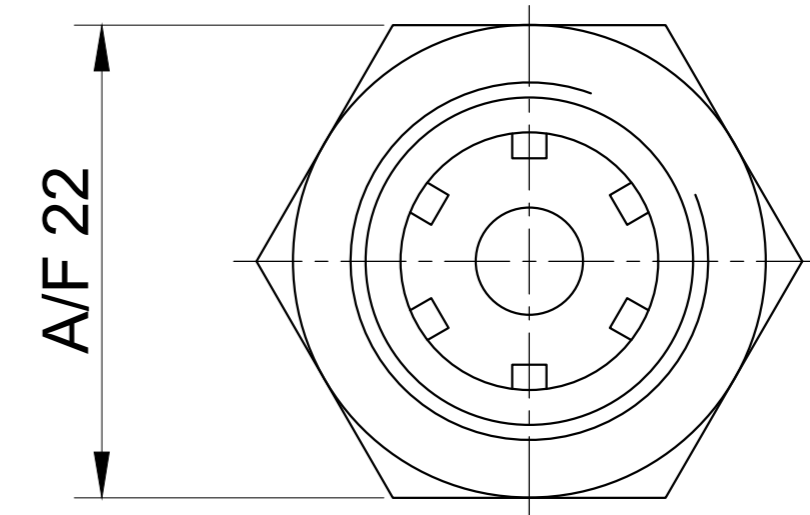
In Continuous casting machine For Secondary Cooling.

## Spray Characteristics :

1. It Produces Full spray Pattern.
2. The Volume of spray is Evenly distributed all Over spray pattern.
3. Different Flow rate and spray angles are available .

## Design Construction and Material :

1. Available Thread size are 3/8" BSP / 1/4" BSP .
2. A Good Resistance to Clogging .
3. The Materials are Brass and Stainless steel.
4. Available Spray angles are 45°, 65°, 80° and 90° .



Flow Rate (l/min) @ Different Pressure (Bar) [ 80° Spray Angle ]									
Sr. No.	Model No.	Angle	1.0 Bar	2.0 Bar	2.8 Bar	4.0 Bar	5.0 Bar	6.0 Bar	7.0 Bar
1	JSR-H1580	80°	0.90	1.25	1.50	1.80	2.00	2.20	2.35
2	JSR-H2080	80°	1.20	1.70	2.00	2.40	2.65	2.20	3.15
3	JSR-H3080	80°	1.80	2.50	3.00	3.60	4.00	4.40	4.75
4	JSR-H3580	80°	1.80	2.50	3.50	3.60	4.00	4.40	4.75
5	JSR-H4080	80°	2.40	3.40	4.00	4.80	5.30	5.85	6.30
6	JSR-H5080	80°	3.00	4.20	5.00	6.00	6.70	7.30	7.90
7	JSR-H6080	80°	3.60	5.10	6.00	7.20	8.00	8.80	9.50



● Stainless Steel



● Brass

Flow Rate (l/min)@ Different Pressure (Bar) [ 90° Spray Angle ]									
Sr. No.	Model No.	Angle	1.0 Bar	2.0 Bar	2.8 Bar	4.0 Bar	5.0 Bar	6.0 Bar	7.0 Bar
1	JSR-H1590	90°	0.90	1.25	1.50	1.80	2.00	2.20	2.35
2	JSR-H2090	90°	1.20	1.70	2.00	2.40	2.65	2.90	3.15
3	JSR-H3090	90°	1.80	2.50	3.00	3.60	4.00	4.40	4.75
4	JSR-H3590	90°	1.80	2.50	3.50	3.60	4.00	4.40	4.75
5	JSR-H4090	90°	2.40	3.40	4.00	4.80	5.30	5.85	6.30
6	JSR-H5090	90°	3.00	4.20	5.00	6.00	6.70	7.30	7.90
7	JSR-H6090	90°	3.60	5.10	6.00	7.20	8.00	8.80	9.50

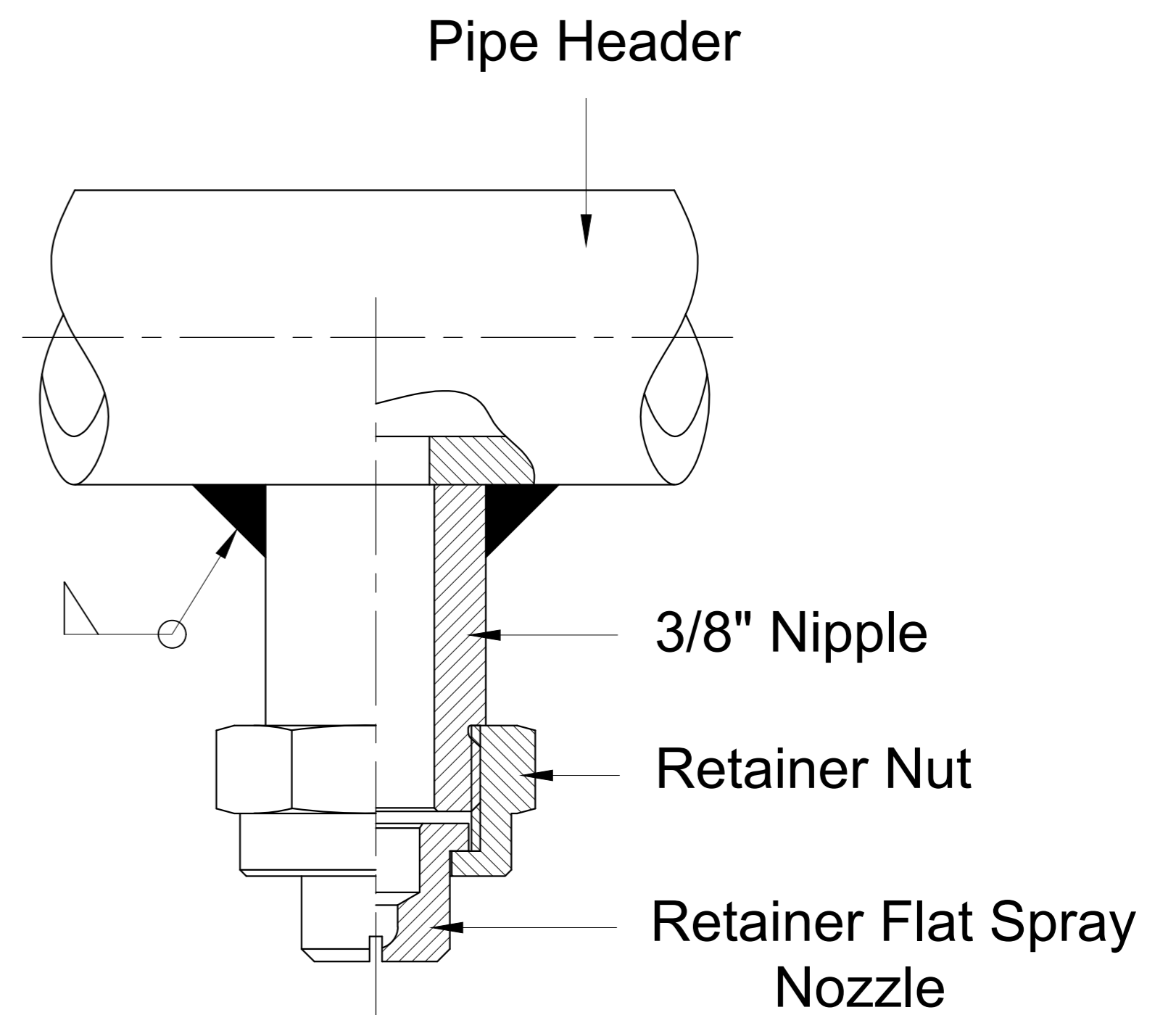
The Given Model Number Will help us to Find Actual Requirement of Spray Nozzles

# FLAT SPRAY NOZZLE TIP FOR CONTINUOUS CASTING

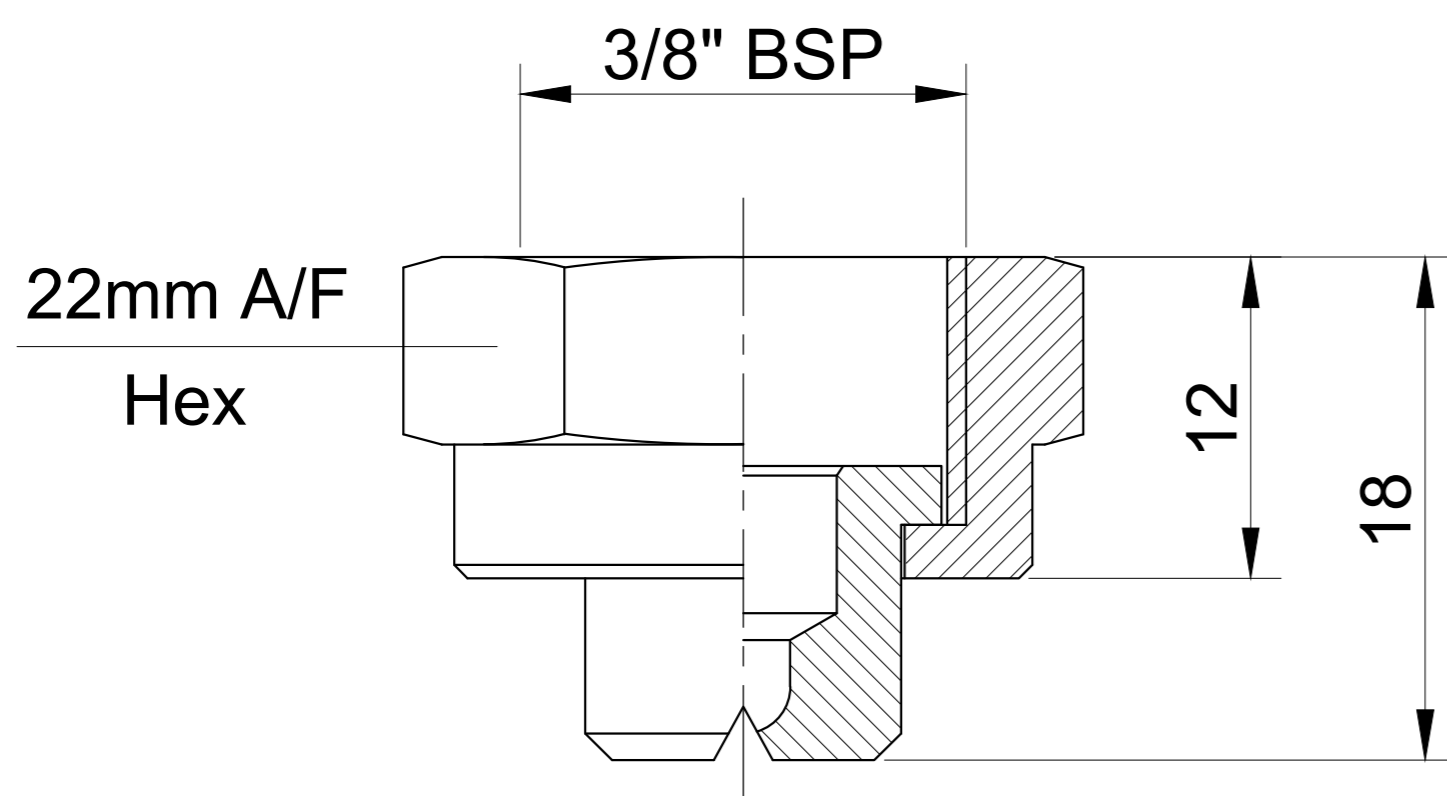
An assembly of Flat spray Nozzle tip is Designed for Securing Correct Spray Position optimal stand surface quality and Easy maintenance.

## Design Features :

1. It Has Usually mounted Onto a Pipe Using a Welded 3/8" Nipple with a Retainer Nut .
2. Clear Machined Orifice that helps Clog free water Flow.



Assembly Drawing



Nozzle Tip With Retainer Nut

Flow Rate (l/min)@ Different Pressure (Bar)									
Sr. No.	Model No.	Spray Angle	1.0 Bar	2.0 Bar	2.8 Bar	4.0 Bar	5.0 Bar	6.0 Bar	7.0 Bar
1	JSR-P2065	65°	1.20	1.70	2.00	2.40	2.70	2.90	3.15
2	JSR-P2565	65°	1.49	2.11	2.50	2.98	3.34	3.65	3.95
3	JSR-P3065	65°	1.80	2.50	3.00	3.60	4.00	4.40	4.75
4	JSR-P3565	65°	2.10	2.95	3.50	4.20	4.70	5.10	5.55
5	JSR-P4065	65°	2.40	3.40	4.00	4.80	5.30	5.85	6.30
6	JSR-P5065	65°	3.00	4.20	5.00	6.00	6.70	7.30	7.90
7	JSR-P5765	65°	3.28	4.64	5.70	6.57	7.34	8.05	8.69
8	JSR-P6065	65°	3.60	5.10	6.00	7.20	8.00	8.80	9.50
9	JSR-P8065	65°	4.80	6.80	8.00	9.60	10.70	11.70	12.65

The Given Model Number Will help us to Find Actual Requirement of Spray Nozzles

# ROLL COOLING DOVETAIL FLAT SPRAY NOZZLES

**JSR Dovetail Flat spray Nozzle** for Roll cooling are Design for Self Aligning feature which ensure that every nozzle will always be installed Under the correct Spray Offset angles towards the Roll center Line . The Nozzle tip has two locating LUGS For Self Alignment and seal.

In This Dovetail Nozzle Assembly the tip is put in axial direction of the welding nipple. It is safe and one handed nozzle tip mounting is guaranteed because thread alignment does not take place before the two locating lugs have been correctly positioned on the opposite nipple side.

These Nozzles are available with a wide verity of standard offset angles which simplifies spray header fabrication significantly . It also helps to prevent wrong fabrication of headers .



ASSEMBLY



DOVETAIL NIPPLE



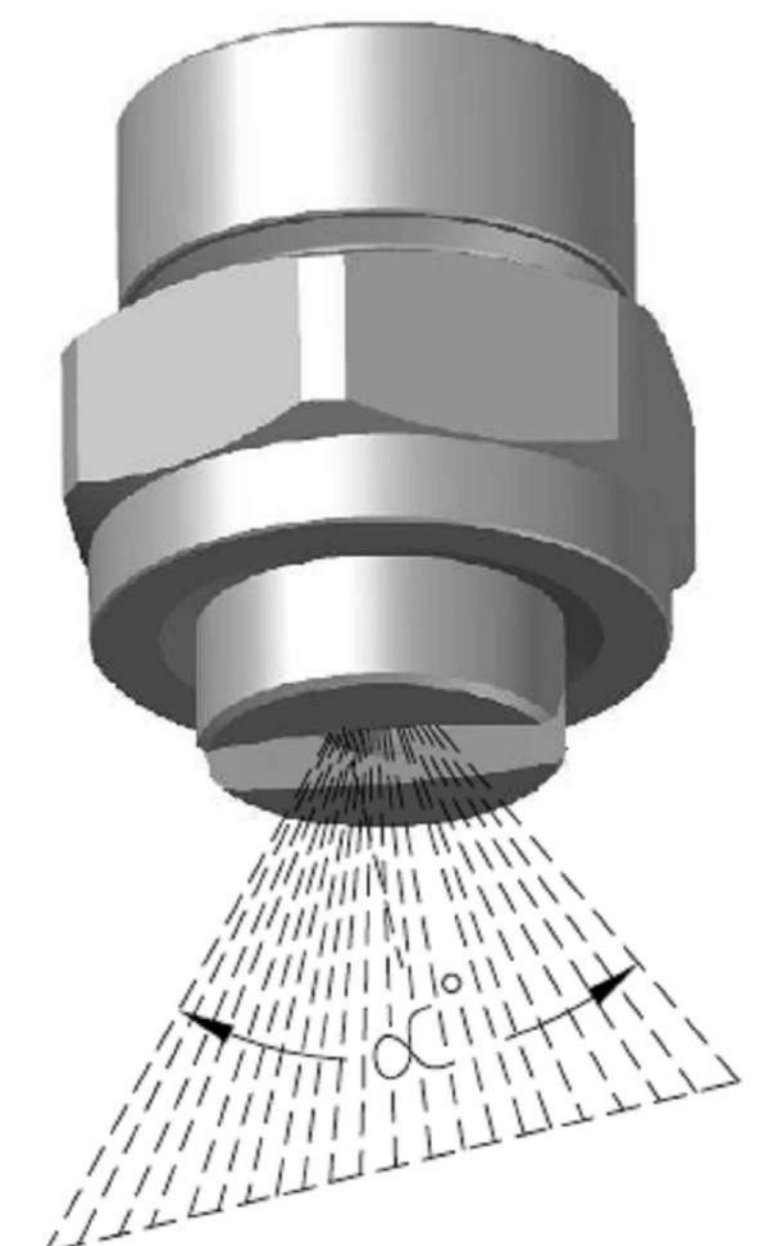
DOVETAIL FLAT SPRAY NOZZLE



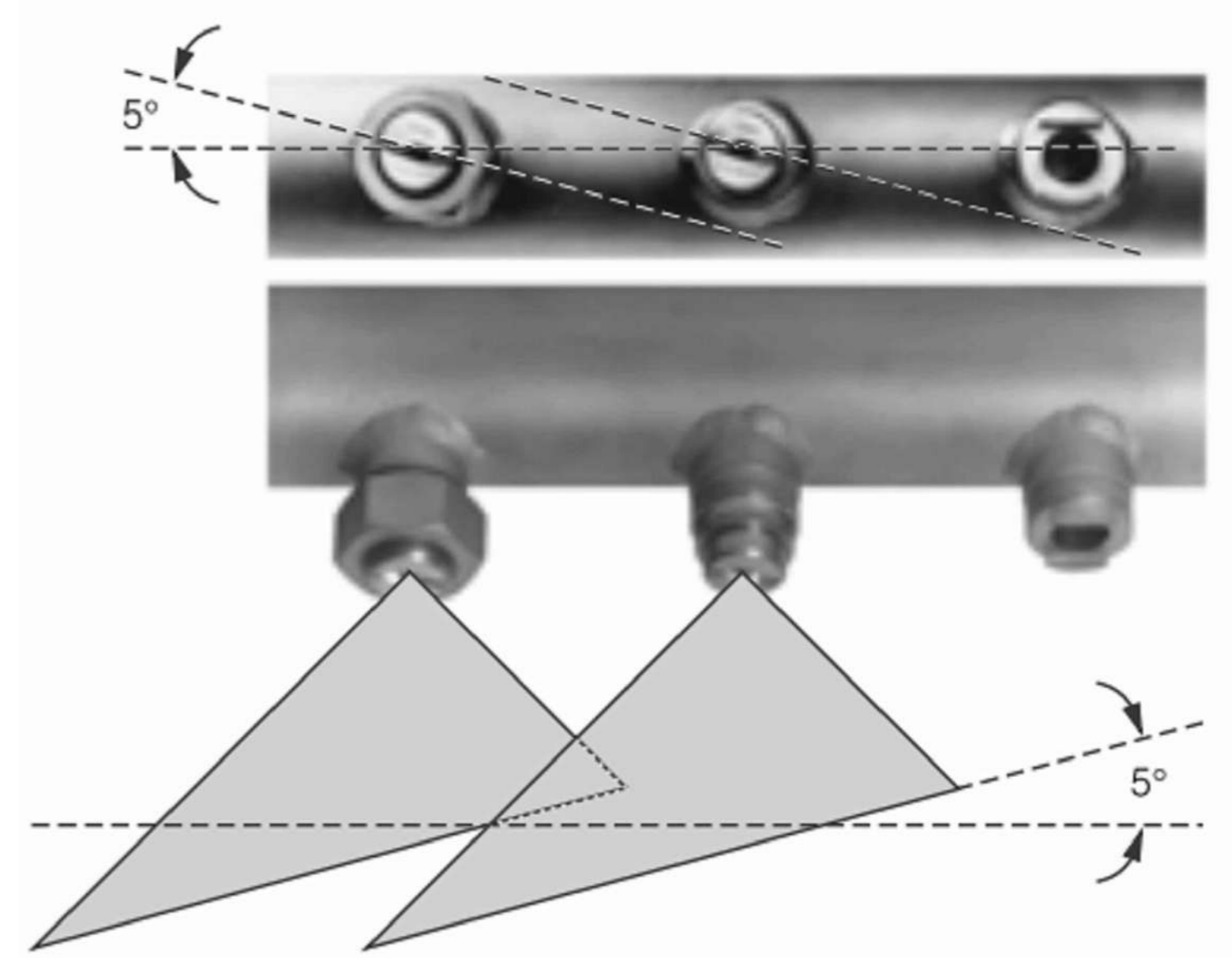
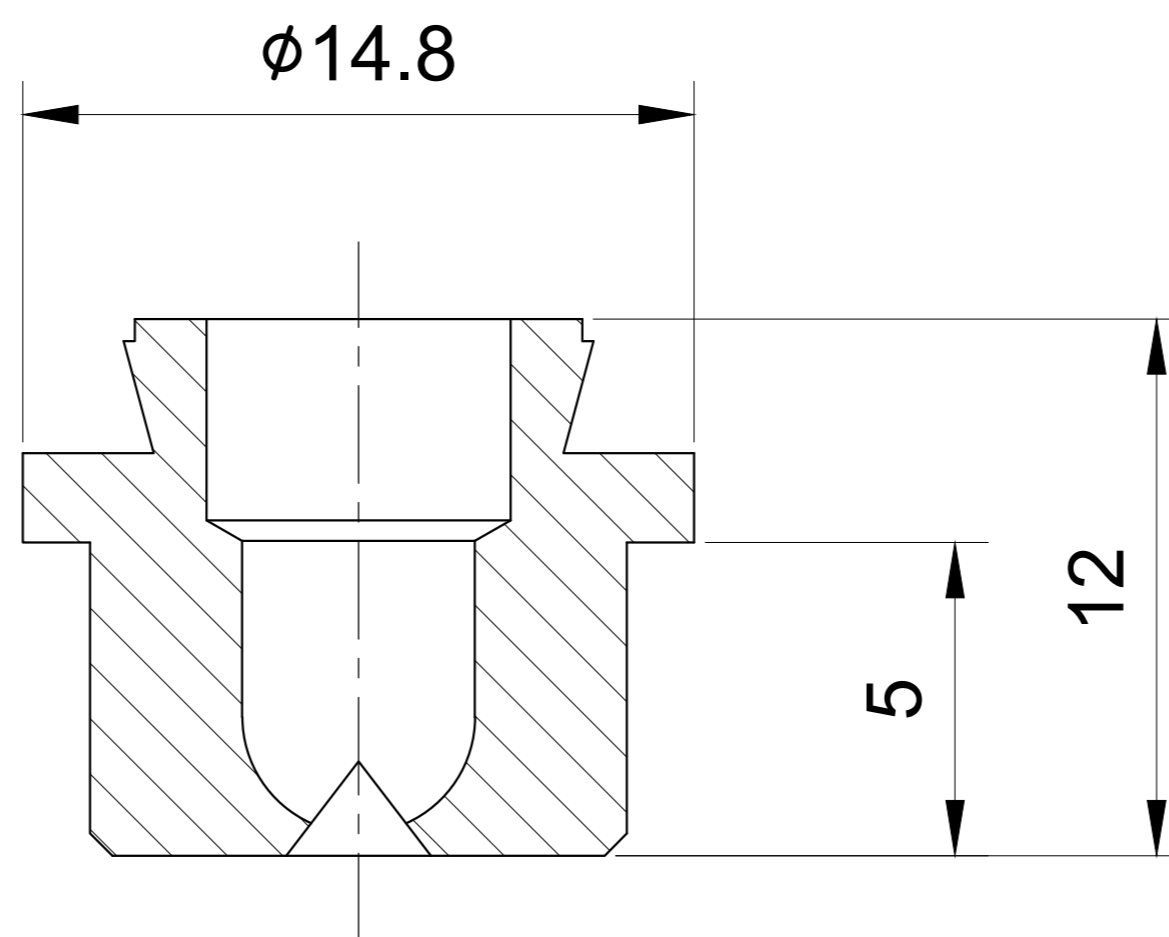
RETAINER NUT



SPRAY HEADER



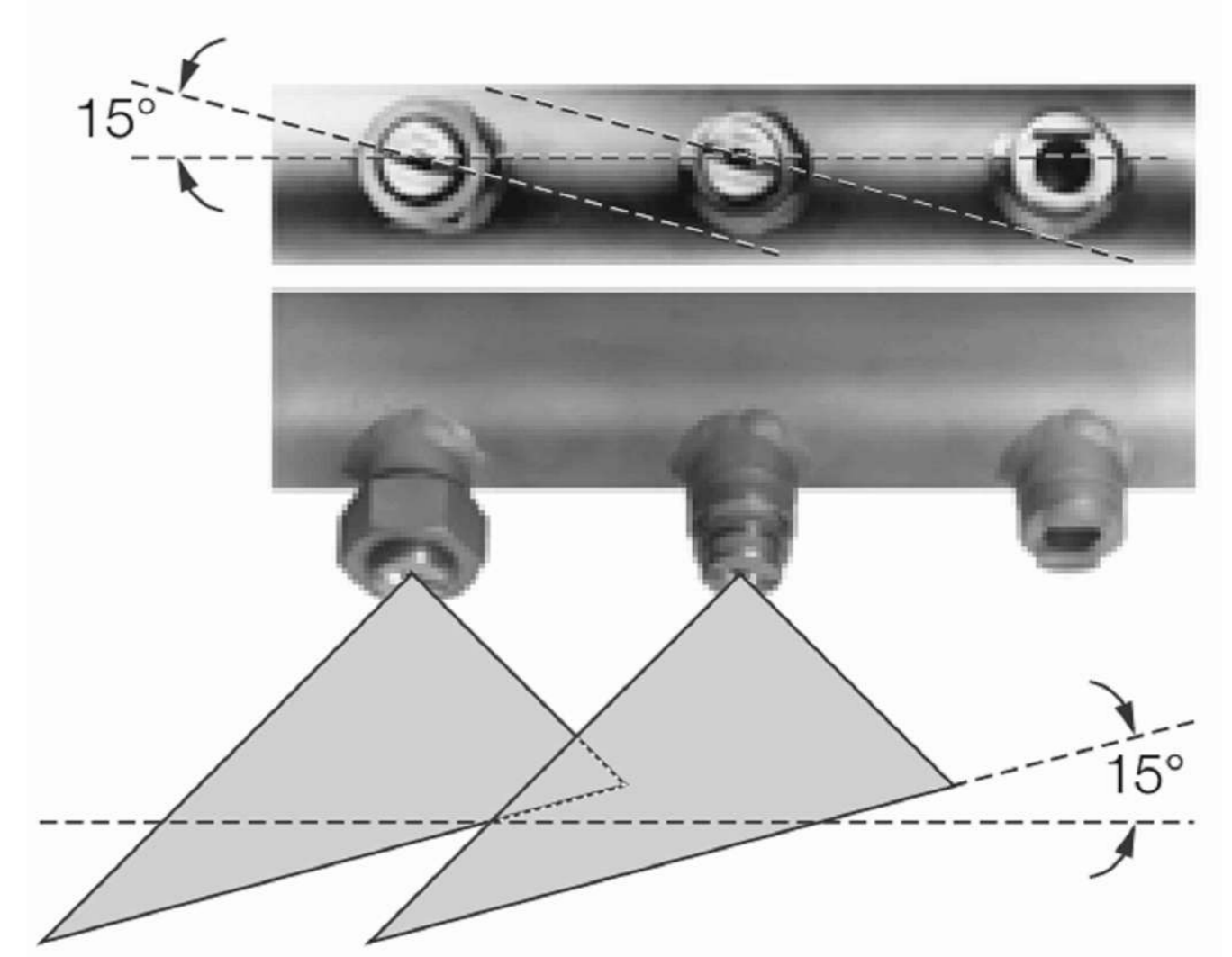
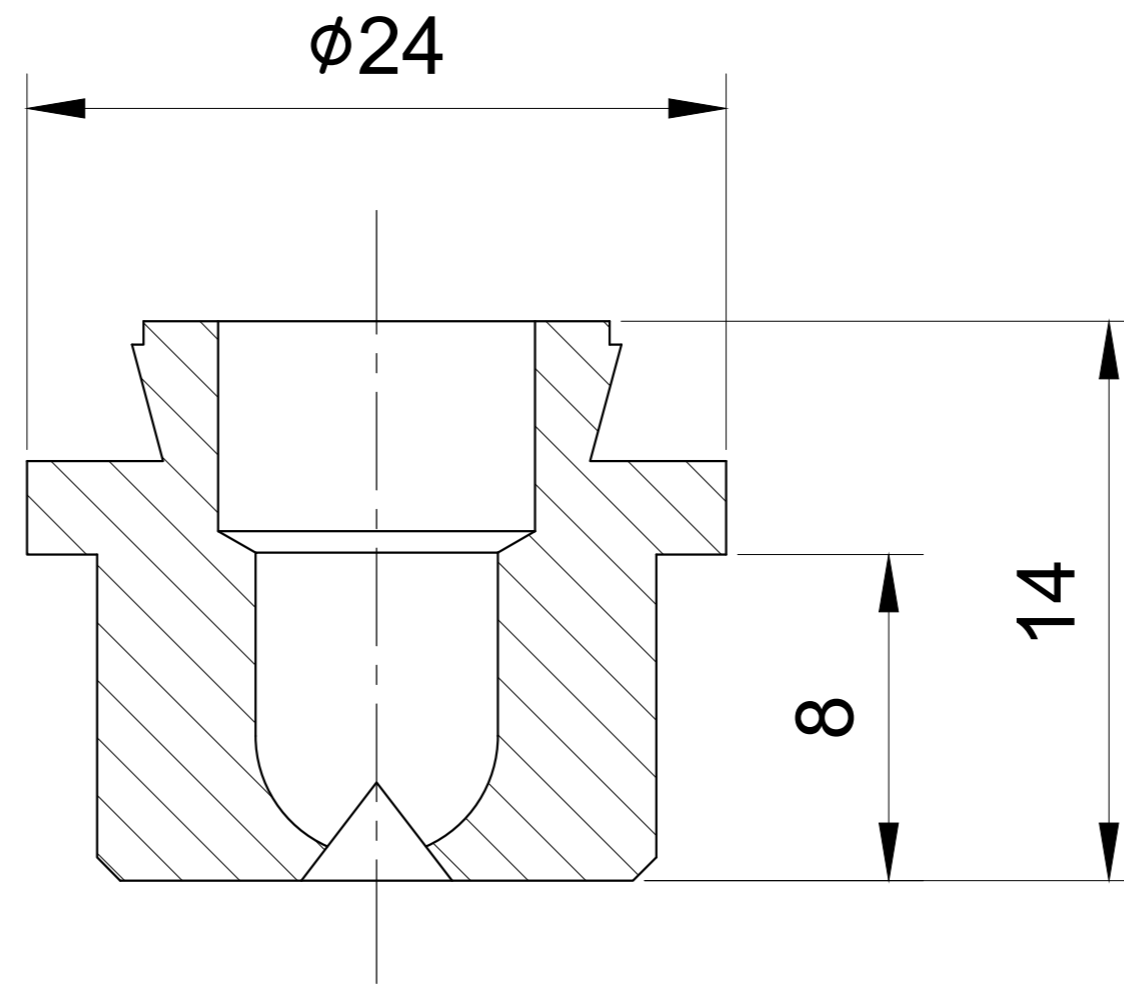
# SERIES P60 (DOVETAIL FLAT SPRAY NOZZLE)



Spray Coverage	MODEL NUMBER			Volume (l/min)							Spray width A (at pressure = 2 Kg)		
	Type	Material Code			Pressure (kg)								
		3A	3D	3L	0,5	1,0	2,0	(US gal./min) at 40 psi	3,0	5,0	10,0		
20°	P60. 301				0,16*	0,23*	0,32	0,10	0,39	0,51	0,72	60	110
	P60. 361	✓	✓	✓	0,31*	0,44*	0,63	0,20	0,77	1,00	1,40	65	125
	P60. 441	✓	✓	✓	0,62*	0,88	1,25	0,39	1,53	1,98	2,80	65	125
	P60. 481				0,80*	1,13	1,60	0,50	1,96	2,53	3,58	70	130
30°	P60. 302				0,16*	0,23*	0,32	0,10	0,39	0,51	0,72	110	205
	P60. 362				0,31*	0,44*	0,63	0,20	0,77	1,00	1,40	110	205
	P60. 402	✓	✓	✓	0,50*	0,71	1,00	0,31	1,23	1,58	2,24	110	205
	P60. 482	✓	✓	✓	0,80*	1,13	1,60	0,50	1,96	2,53	3,57	110	210
	P60. 562				1,25	1,76	2,50	0,78	3,06	3,95	5,59	110	210
45°	P60. 303				0,16*	0,23*	0,32	0,10	0,39	0,51	0,72	180	340
	P60. 363				0,31*	0,44*	0,63	0,20	0,77	1,00	1,40	185	340
	P60. 403				0,50*	0,71	1,00	0,31	1,23	1,58	2,24	185	340
	P60. 483	✓	✓	✓	0,80*	1,13	1,60	0,50	1,96	2,53	3,58	185	340
	P60. 563	✓	✓	✓	1,25	1,76	2,50	0,78	3,06	3,95	5,59	190	345
	P60. 643				2,00	2,83	4,00	1,24	4,90	6,33	8,94	190	350
60°	P60. 304				0,16*	0,23*	0,32	0,10	0,39	0,51	0,72	275	525
	P60. 334				0,22*	0,32*	0,45	0,14	0,55	0,71	1,01	275	525
	P60. 364				0,31*	0,44*	0,63	0,20	0,77	1,00	1,40	275	525
	P60. 404				0,50*	0,71	1,00	0,31	1,23	1,58	2,24	275	525
	P60. 444				0,62*	0,88	1,25	0,39	1,53	1,98	2,80	275	525
	P60. 484	✓	✓	✓	0,80*	1,13	1,60	0,50	1,96	2,53	3,58	275	525
	P60. 514	✓	✓	✓	0,95*	1,34	1,90	0,59	2,33	3,00	4,25	275	525
	P60. 564				1,25	1,77	2,50	0,78	3,06	3,95	5,59	275	525
	P60. 604				1,58	2,23	3,15	0,98	3,86	4,98	7,04	275	525
	P60. 644				2,00	2,83	4,00	1,24	4,90	6,33	8,94	275	525
	P60. 724				3,15	4,46	6,30	1,95	7,72	9,96	14,09	275	520
P60. 804				5,00	7,07	10,00	3,10	12,25	15,81	22,36	270	520	
75°	P60. 145				-	0,04*	0,05	0,02	0,06	0,08	0,11	320	600
	P60. 165				-	0,05*	0,07	0,02	0,08	0,10	0,15	330	620
	P60. 185				-	0,06*	0,08	0,02	0,10	0,13	0,18	335	625
	P60. 215	✓	✓	✓	-	0,08*	0,11	0,03	0,14	0,18	0,25	340	630
	P60. 245				-	0,12*	0,16	0,05	0,20	0,26	0,36	345	640
	P60. 275				0,11*	0,16*	0,22	0,07	0,27	0,35	0,49	345	645

The Given Model Number Will help us to Find Actual Requirement of Spray Nozzles

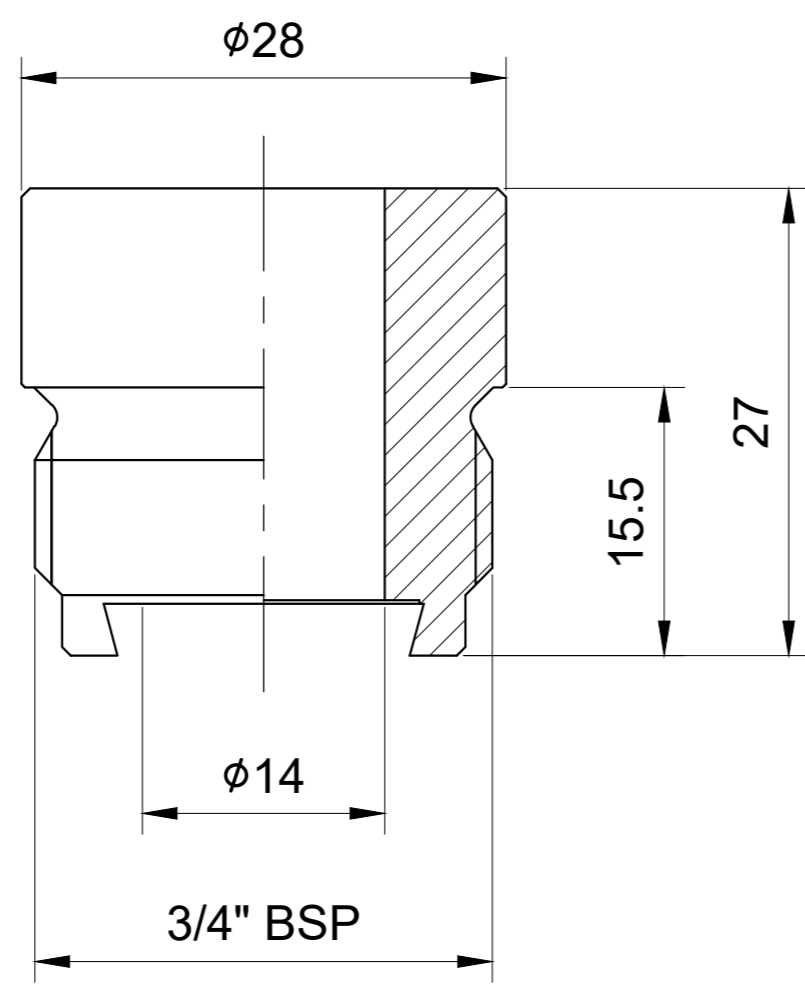
# SERIES P64 (DOVETAIL FLAT SPRAY NOZZLE)



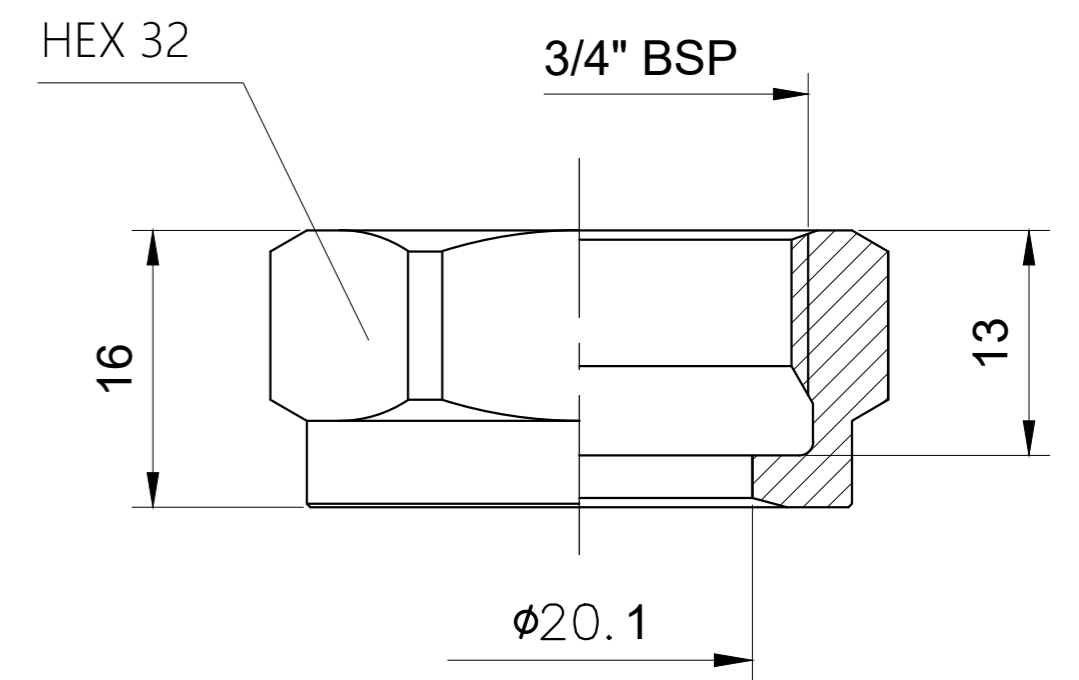
Spray Coverage	Ordering no.				Volume (l/min)							Spray width A at pressure = 2 Kg	
	Type	Material Code			Pressure (kg)								
		3A	3D	3L	0,5	1,0	2,0	(US gal./min) at 40 psi	3,0	5,0	10,0		
20°	P64. 721				3,15	4,45	6,30	1,95	7,72	9,96	14,09	110	205
	P64. 801	✓	✓	✓	5,00	7,07	10,00	3,10	12,25	15,81	22,36	110	205
	P64. 881	✓	✓	✓	8,00	11,31	16,00	4,96	19,60	25,30	35,78	110	205
	P64. 921				10,00	14,14	20,00	6,20	24,49	31,62	44,72	110	205
	P64. 961				12,50	17,68	25,00	7,75	30,62	39,53	55,90	100	205
30°	P64. 722				3,15	4,45	6,30	1,95	7,72	9,96	14,09	150	280
	P64. 762				4,00	5,66	8,00	2,48	9,80	12,65	17,89	150	280
	P64. 802				5,00	7,07	10,00	3,10	12,25	15,81	22,36	150	280
	P64. 882	✓	✓	✓	8,00	11,31	16,00	4,96	19,60	25,30	35,78	150	280
	P64. 922	✓	✓	✓	10,00	14,14	20,00	6,20	24,49	31,62	44,72	150	280
	P64. 962				12,50	17,68	25,00	7,75	30,62	39,53	55,90	150	280
	P64. 042				20,00	28,28	40,00	12,41	48,99	63,25	89,44	150	280
	P64. 122				31,50	44,55	63,00	19,54	77,16	99,61	140,87	150	280
45°	P64. 723				3,15	4,45	6,30	1,95	7,72	9,96	14,09	260	490
	P64. 763				4,00	5,66	8,00	2,48	9,80	12,65	17,89	260	490
	P64. 803				5,00	7,07	10,00	3,10	12,25	15,81	22,36	265	495
	P64. 843	✓	✓	✓	6,25	8,84	12,50	3,88	15,31	19,76	27,95	265	495
	P64. 883	✓	✓	✓	8,00	11,31	16,00	4,96	19,60	25,30	35,78	265	500
	P64. 923				10,00	14,14	20,00	6,20	24,49	31,62	44,72	270	505
	P64. 963				12,50	17,68	25,00	7,75	30,62	39,53	55,90	270	510
	P64. 043				20,00	28,28	40,00	12,41	48,99	63,25	89,44	275	520
60°	P64. 724				3,15	4,45	6,30	1,95	7,72	9,96	14,09	300	560
	P64. 764				4,00	5,66	8,00	2,48	9,80	12,65	17,89	300	565
	P64. 804				5,00	7,07	10,00	3,10	12,25	15,81	22,36	300	565
	P64. 844	✓	✓	✓	6,25	8,84	12,50	3,88	15,31	19,76	27,95	300	570
	P64. 884	✓	✓	✓	8,00	11,31	16,00	4,96	19,60	25,30	35,78	305	570
	P64. 924				10,00	14,14	20,00	6,20	24,49	31,62	44,72	305	575
	P64. 964				12,50	17,68	25,00	7,75	30,62	39,53	55,90	310	580
	P64. 044	-	-	-	20,00	28,28	40,00	12,41	48,99	63,25	89,44	315	585
	P64. 084	-	-	-	25,00	35,36	50,00	15,51	61,24	79,06	111,80	320	590
	P64. 124	-	-	-	31,50	34,55	63,00	19,54	77,16	99,61	140,87	325	600

The Given Model Number Will help us to Find Actual Requirement of Spray Nozzles

# ACCESSORIES FOR P64

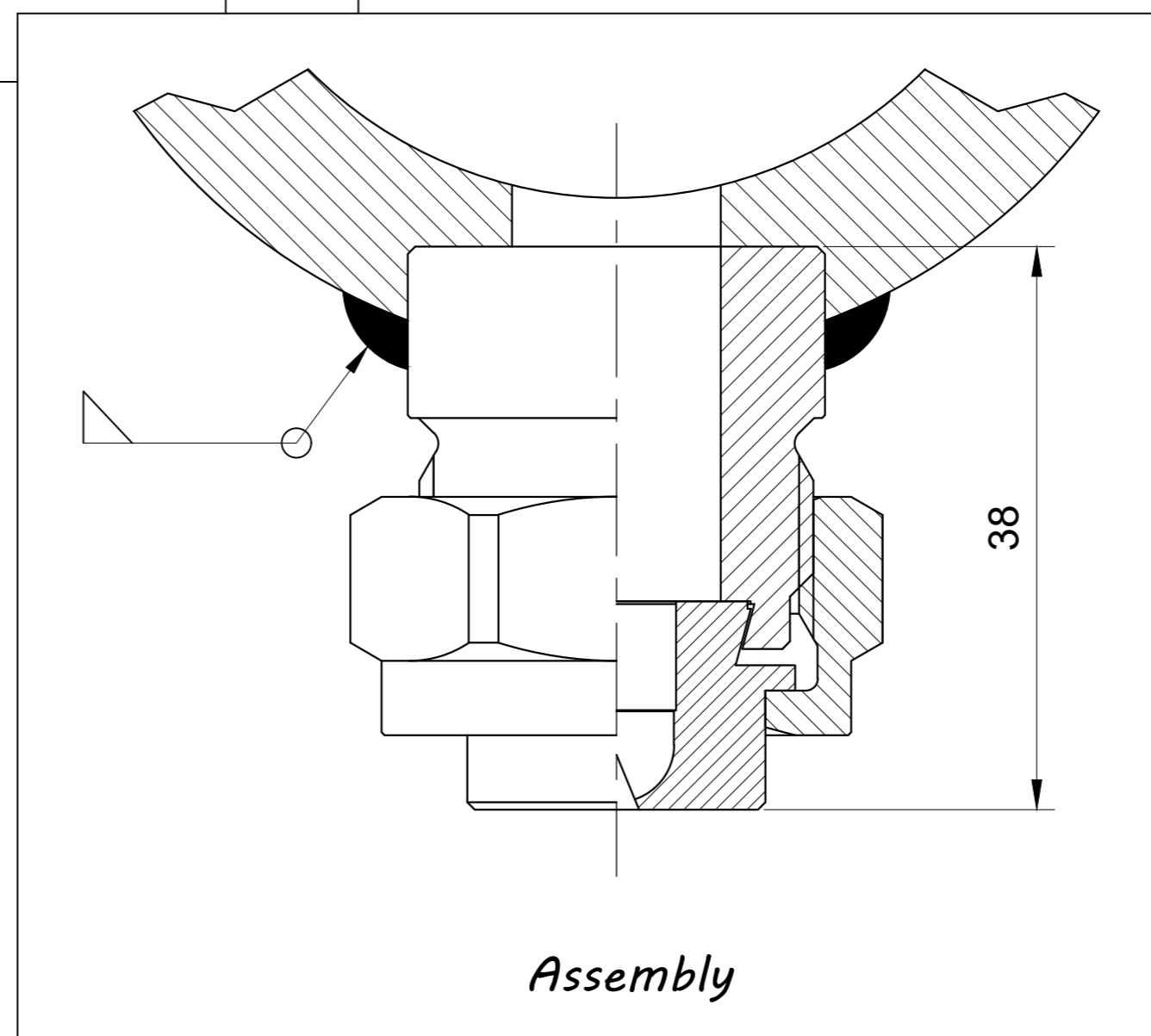


*Welding Nipple*  
 > B66-410-3D (SS 316)

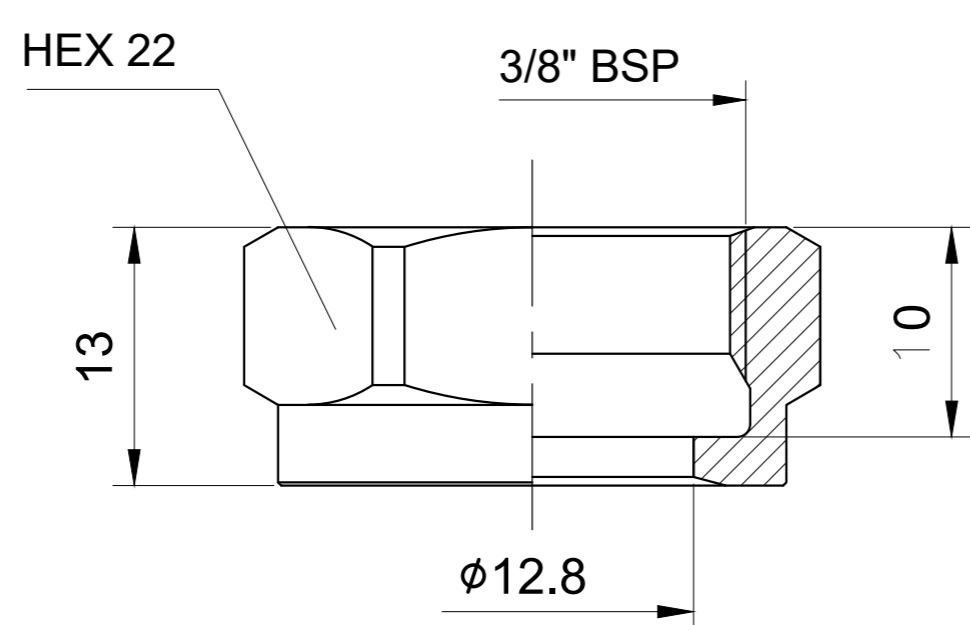


*Retaining Nut*  
 > B65-600-3D (316 SS)  
 > B65-600-3L (Brass)

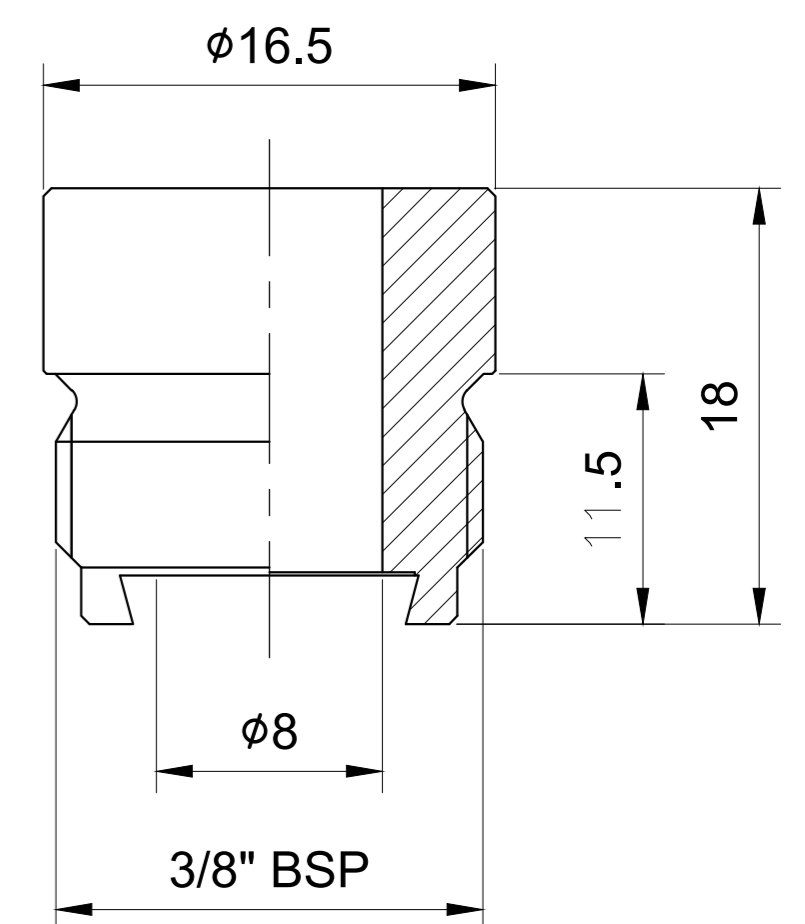
## SERIES P64



# ACCESSORIES FOR P60

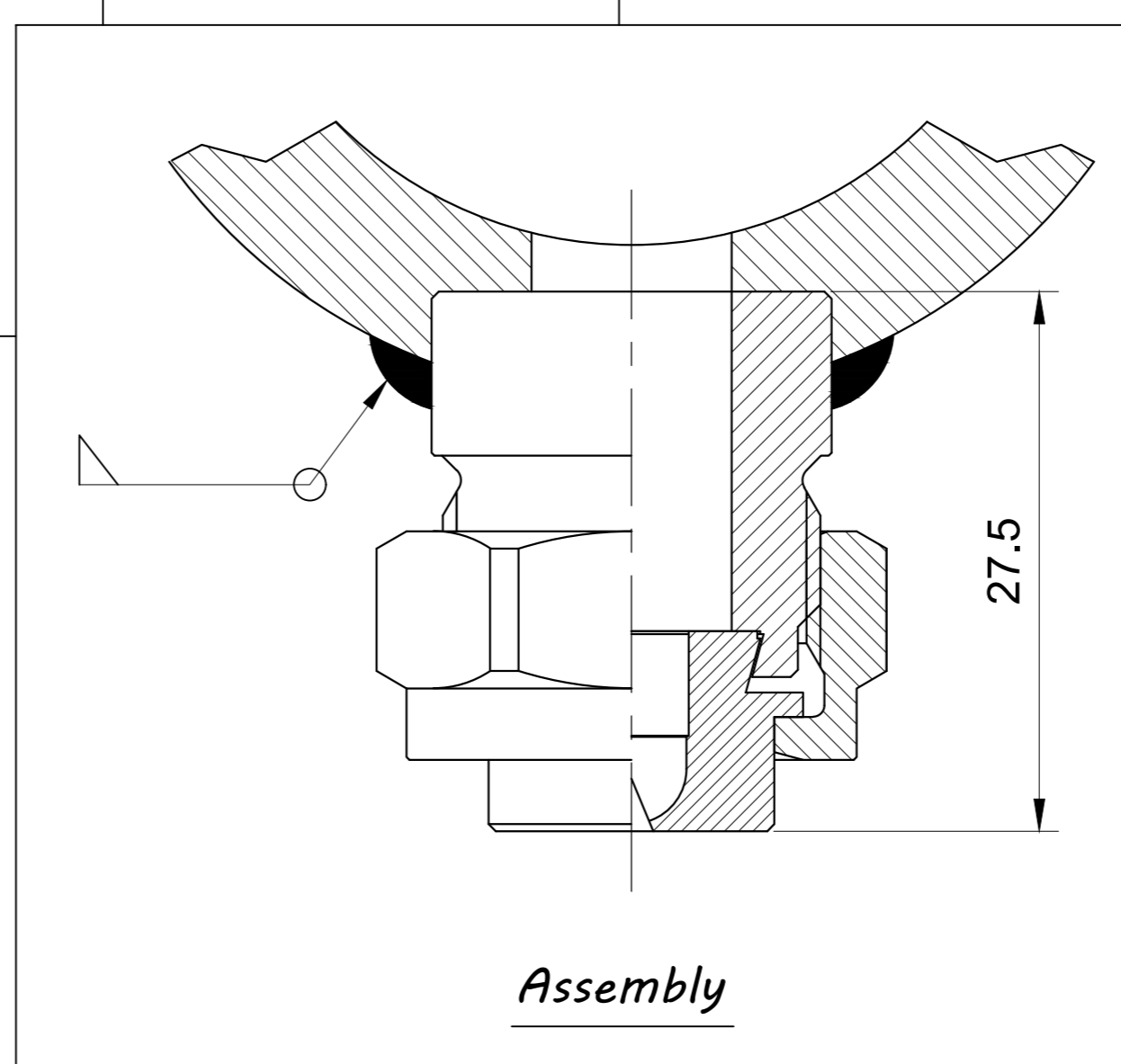


*Retaining Nut*  
 > B65-600-3D (SS 316)  
 > B65-600-3L (Brass)

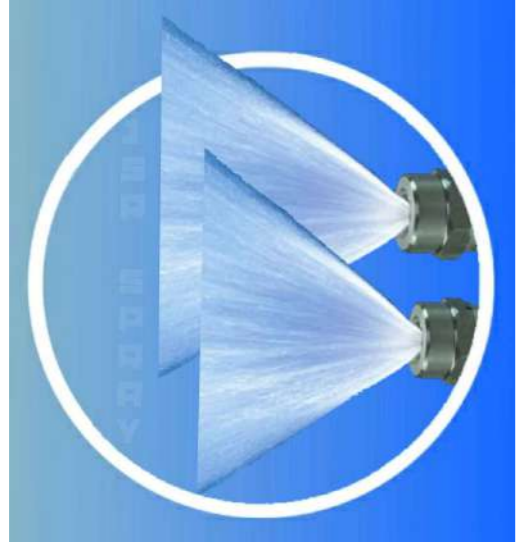


*Welding Nipple*  
 > B66-410-3D (SS 316)

## SERIES P60







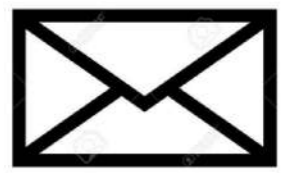
# JSR SPRAY SYSTEMS (INDIA)

DESIGNERS & MFG. OF INDL. SPRAY NOZZLE, ACCESSORIES  
AND SPRAY SYSTEMS

## Contact



Office : +91-9029947676, 9956673835



jsrspraynozzles@gmail.com



## FACTORY & OFFICE ADDRESS

Plot #512, Tulsi Gate, Kiccha road, Lalpur  
(Udham singh nagar) UTTARAKHAND 263148



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