

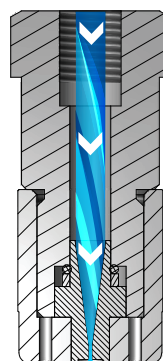
**FLAT  
SPRAY**

**ULTRA-HIGH PRESSURE NOZZLES**

**S** STANDARD ANGLE SPRAY

**OVERVIEW: ULTRA-HIGH PRESSURE FS AND VS**

- Ultra-high pressure, high impact flat spray or solid stream
- Operating pressures are up to 10 times higher than other high pressure nozzles – up to 60,000 psi (4000 bar)
- Traditional and quick-connect options;
  - Save on nozzle replacement costs – nozzle bodies can be reused – only spray tips are replaced
- Long wear life – nozzles are hardened stainless steel. Spray tips are available with extra hard sapphire inserts for maximum wear resistance
- Spray angles from 0° to 45°
- Uniform spray distribution from 0.03 to 78 gpm (0.11 to 295 lpm)
- Nozzle bodies include O-ring, gasket (58833 only) and tip retainer



**Ultra-High Pressure Nozzles**

As liquid passes through the engineered orifice, a very high impact spray pattern is produced in either zero degree (solid stream) or flat spray pattern.







**FS AND VS OPTIONS**



**VS010 Spray Tip + 58834 Body**  
Operating pressure up to 20,000 psi (1400 bar)



**VS625**  
1/4" male conn.  
Operating pressure up to 17,500 psi (1200 bar)

 <p><b>VS940</b> 1/16" male conn. Operating pressure up to 15,000 psi (1000 bar)</p>	 <p><b>58833 Body</b> 3/8" to 1/2" male or female conn.</p>
 <p><b>VS020 Spray Tip</b> Use with 58834 nozzle body Operating pressure up to 30,000 psi (2000 bar)</p>	 <p><b>VS051 Spray Tip</b> No threads* Operating pressure up to 60,000 psi (4000 bar)</p>
 <p><b>FS013 Spray Tip</b> Use with 58834 nozzle body Operating pressure up to 30,000 psi (2000 bar)</p>	 <p><b>FS020 Spray Tip</b> Use with 58833 nozzle body Operating pressure up to 30,000 psi (2000 bar)</p>

\*Customer supplies holder

**RELATIVE DROP SIZE  
IN MICRONS**

 10 to 100	 100 to 500	 500 to 1000	 1000 to 5000
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Drop size will vary based on flow rate and pressure.

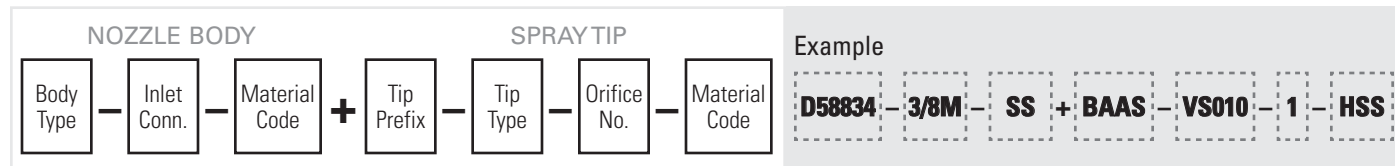


**ORDERING INFORMATION**

**ULTRA-HIGH PRESSURE VS625 AND VS940**

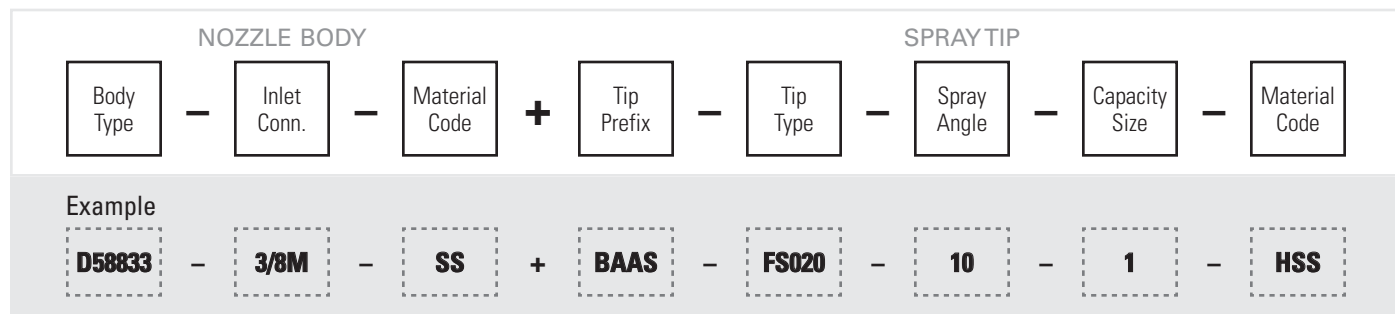


**ULTRA-HIGH PRESSURE D58834 BODY WITH FS013, VS010 OR VS020 SPRAY TIP\***



\*Note: VS051 is available as a spray tip only.

**ULTRA-HIGH PRESSURE D58833 BODY WITH FS020 SPRAY TIP**



**QUICK REFERENCE GUIDE**

Model	Connection	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
<b>VS625 nozzle</b>	M	1/4	Stainless steel with sapphire insert (SSAP)	C52	C54
<b>VS940 nozzle</b>	M	1/16		C52	
<b>VS010 spray tip</b>	NA	NA	Hardened stainless steel (HSS)	C52	
<b>VS020 spray tip</b>	NA	NA	Stainless steel with sapphire insert (SSAP)	C53	
<b>VS051 spray tip</b>	NA	NA		C53	
<b>FS013 spray tip</b>	NA	NA	Hardened stainless steel (HSS)	C53	
<b>FS020 spray tip</b>	NA	NA		C53	
<b>58833 body</b>	M, F	3/8 to 1/2	Stainless steel (SS)	-	
<b>58834 body</b>	M, F	3/8 to 1/2		-	

F = female thread; M = male thread; NA = not applicable.  
For more dimensions and sizes, contact your sales engineer.

**S PERFORMANCE DATA:  
STANDARD ANGLE SPRAY**

Nozzle Type	Inlet Conn. (in.)	Spray Angle	Orifice No.	Equiv. Orifice Dia. (mm)	Flow Rate Capacity (liters per minute)			
					100 bar	500 bar	750 bar	1200 bar
VS625	1/4	0°	0.25	0.25	0.34	0.75	0.92	1.2
			0.5	0.5	1.3	3.0	3.7	4.6
			0.75	0.75	3.0	6.7	8.2	10.4
			1	1	5.3	12.0	14.6	18.5
			1.5	1.5	12.0	27	33	42
			2	2	21	48	59	74
			2.5	2.5	33	74	91	116

**S PERFORMANCE DATA:  
STANDARD ANGLE SPRAY**

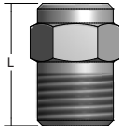

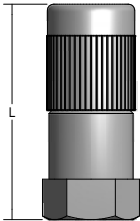
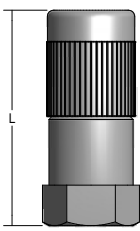
Nozzle Type	Inlet Conn. (in.)	Spray Angle	Orifice No.	Equiv. Orifice Dia. (mm)	Flow Rate Capacity (liters per minute)		
					500 bar	750 bar	1000 bar
VS940	1/16	0°	0.5	0.5	3.0	3.7	4.2
			0.75	0.75	6.7	8.3	9.5
			1	1	12.0	14.7	16.9
			1.5	1.5	27	33	38
			2	2	48	59	68
			2.5	2.5	75	92	105

**S PERFORMANCE DATA:  
STANDARD ANGLE SPRAY**

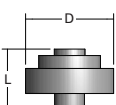
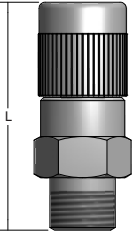
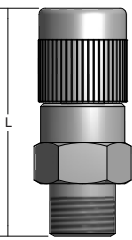
Tip Type	Spray Angle	Orifice No.	Equiv. Orifice Dia. (mm)	Flow Rate Capacity (liters per minute)						
				100 bar	250 bar	500 bar	750 bar	1000 bar	1200 bar	1400 bar
VS010	0°	1	1	6.4	10.0	14.2	17.4	20	22	24
		1.5	1.5	14.6	23	33	40	46	51	55
		2	2	25	40	56	69	79	88	94
		2.5	2.5	40	64	90	111	128	140	151
		3	3	61	97	137	167	193	211	228
		3.5	3.5	80	126	178	200	252	276	298



**DIMENSIONS AND WEIGHTS**

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (mm)	Hex. (in.)	D (Dia.) (mm)	Net Weight (kg)
	<b>VS625</b>	1/4 (M)	22	9/16	—	0.02
	<b>VS940</b>	1/16 (M)	6.5	—	7.9	0.002
	<b>58834 (M) + FS013</b>	3/8	70	1-1/16	—	0.27
	<b>58834 (F) + FS013</b>	3/8	70	1-1/16	—	0.27
	<b>58834 (M) + FS013</b>	1/2	70	1-1/16	—	0.27
	<b>58834 (F) + FS013</b>	1/2	70	1-1/16	—	0.27
	<b>58833 (M) + FS020</b>	3/8	70	1-1/16	—	0.28
	<b>58833 (F) + FS020</b>	3/8	70	1-1/16	—	0.28
	<b>58833 (M) + FS020</b>	1/2	70	1-1/16	—	0.28
	<b>58833 (F) + FS020</b>	1/2	70	1-1/16	—	0.28

Based on the largest/heaviest version of each type.

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (mm)	Hex. (in.)	D (Dia.) (mm)	Net Weight (kg)
	<b>VS051 spray tip</b>	—	5.8	—	9.5	0.002
	<b>58834 (M) + VS010</b>	3/8	73	1-1/16	—	0.28
	<b>58834 (F) + VS010</b>	3/8	73	1-1/16	—	0.28
	<b>58834 (M) + VS010</b>	1/2	73	1-1/16	—	0.28
	<b>58834 (F) + VS010</b>	1/2	73	1-1/16	—	0.28
	<b>58834 (M) + VS020</b>	3/8	73	1-1/16	—	0.28
	<b>58834 (F) + VS020</b>	3/8	73	1-1/16	—	0.28
	<b>58834 (M) + VS020</b>	1/2	73	1-1/16	—	0.28
	<b>58834 (F) + VS020</b>	1/2	73	1-1/16	—	0.28

Based on the largest/heaviest version of each type.