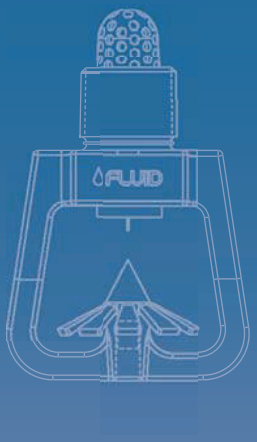
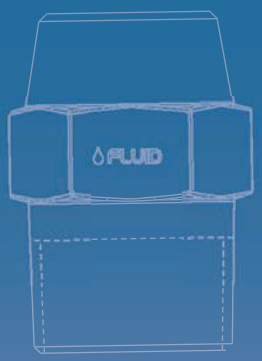
FLUID PUMPS & EQUIPMENT INDIA PVT. LTD.

FIRE PROTECTION

SPRAY NOZZLES





FLUID®

Model 212

Medium Velocity Open Spray Nozzles

UL LISTED EX16307

- Directional Spray Nozzle with cone shaped spray pattern.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Spray Nozzle Yoke is made of Brass conforming to CuZn36Pb2AS - ASTM B455 C38500.
- Suitable for a maximum working pressure of 175 psi (12.06 bar).
- Many orifice sizes and angles are available.
- Also available in SS316 construction.

Nozzle shown in pendent position for clarity, may be installed in any position as per design requirements.

Specification

Description	Material of Construction
Yoke	Brass
Deflector	Brass
Splitter	Brass
Strainer (optional)	Copper

Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Orifice mm / in	Effective Working Pressure Minimum bar / psi	L mm/in
15	90°,120°,150°	24	7.5	1.4	68
½	90°,120°,150°	1.7	19/64	20	2 11/16
15	90°, 120°	34	8.0	1.4	68
½	90°, 120°	2.4	5/16	20	2 11/16
15	90°,120°,150°	43	9.7	1.4	68
½	90°,120°,150°	3.0	3/8	20	2 11/16
15	90°, 120°	62	11.2	1.4	68
½	90°, 120°	4.3	7/16	20	2 11/16
15	90°, 120°	75	12.0	1.4	68
½	90°, 120°	5.2	15/32	20	2 11/16
*1 15	90°, 120°, 150°, 180°	80	12.15	1.4	68
*1 ½	90°, 120°, 150°, 180°	5.4	0.48	20	2 11/16

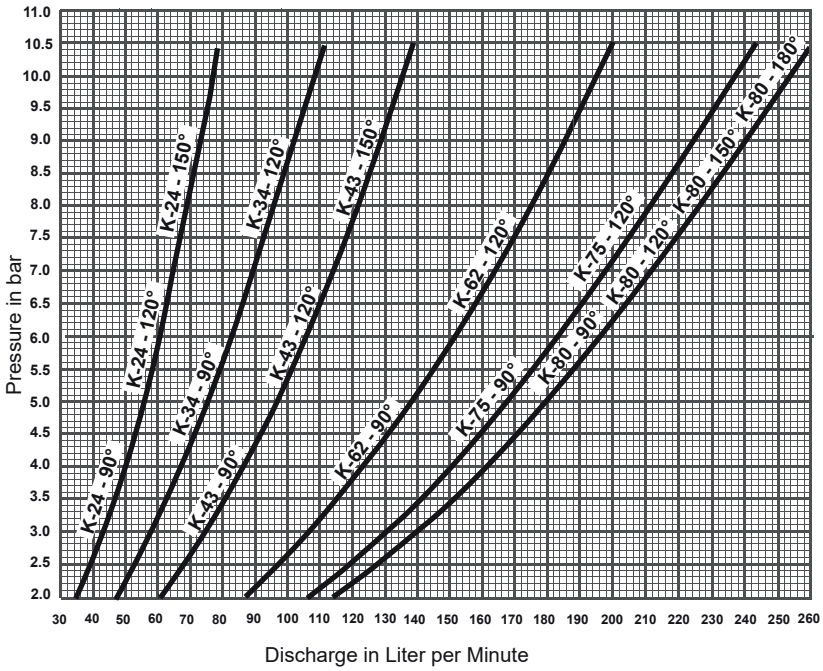
- Finish: Available in natural brass and electroplated finishes.
- Accessories: Nozzle Cap and Spanner are available.
- For flow details refer flow curves.

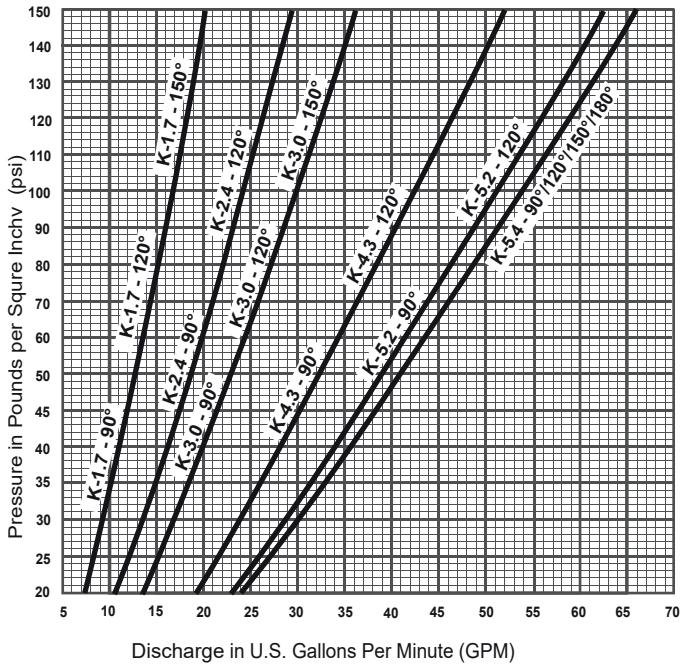
*1 Not UL listed.

Spray Nozzles

Model 212

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle. Make sure that deflector is not bent or damaged.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

The design of these water spray fixed systems must only be performed by experienced designers who understand the capabilities and limitation of these nozzles. These nozzles must be installed in accordance to applicable NFPA standards. Deviations from these standards or any alteration to the Nozzle after it leaves the factory including, but not limited to: painting, plating, coating or modification may render the unit in operative and will automatically nullify the approval and any guarantee made by FLUID.

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www.fluidequipment.in

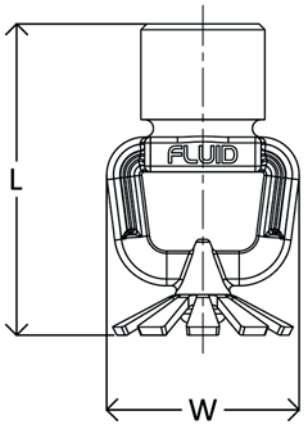
Model 213

Medium Velocity Spray Nozzles

UL LISTED EX16307

- Directional Spray Nozzle with cone shaped spray pattern.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Spray Nozzle Yoke is made of Brass conforming to CuZn36Pb2AS - ASTM B455 C38500.
- Suitable for a maximum working pressure of 175 psi (12.06 bar).
- Many orifice sizes and angles are available.
- Also available in SS316 construction.

Nozzle shown in pendent position for clarity, may b installed in any position as per design requirements



Specification

Description	Material of Construction
Yoke	Brass / ASTM A351 CF8M
Deflector	Brass / SS316
Washer	Brass / SS316
Screw	Brass / SS316

Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Orifice mm / in	Effective Working Pressure Minimum bar / psi	L mm / in	W mm / in
*1 15	90°	13	4.5	1.4	53.5	33.0
½	90°	0.9	0.177	20	2.11	1.30
*1 15	90°	17	6.0	1.4	53.5	33.0
½	90°	1.2	0.236	20	2.11	1.30
15	90°,120°,150°	24	7.5	1.4	53.5	33.0
½	90°,120°,150°	1.7	0.295	20	2.11	1.30
15	90°, 120°	34	8.0	1.4	53.5	33.0
½	90°, 120°	2.4	0.315	20	2.11	1.30
15	90°,120°,150°	43	9.7	1.4	53.5	33.0
½	90°,120°,150°	3.0	0.382	20	2.11	1.30
15	90°, 120°	62	11.2	1.4	53.5	33.0
½	90°, 120°	4.3	0.441	20	2.11	1.30
15	90°, 120°	75	12.0	1.4	53.5	33.0
½	90°, 120°	5.2	0.472	20	2.11	1.30

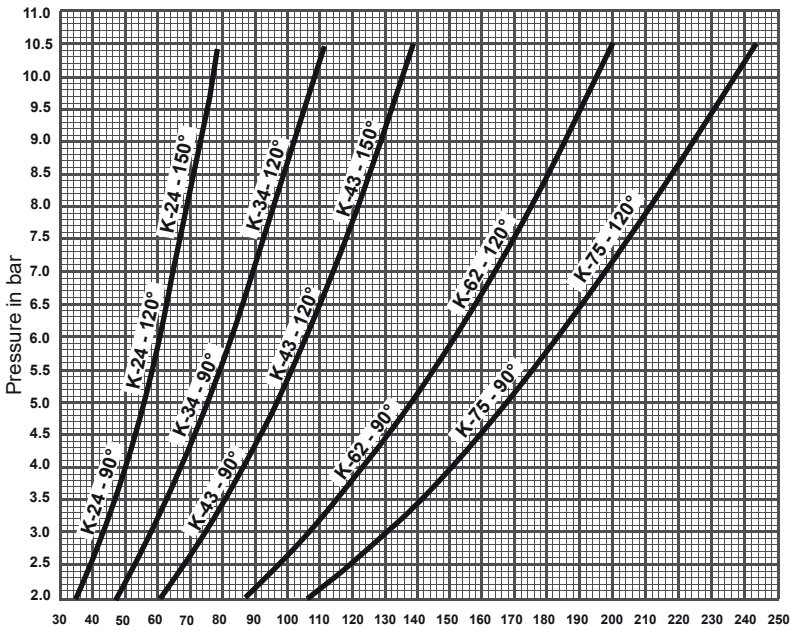
- Finish: Available in natural brass and electroplated finishes.
- Accessories: Nozzle Cap and Spanner are available.
- For flow details refer flow curves.

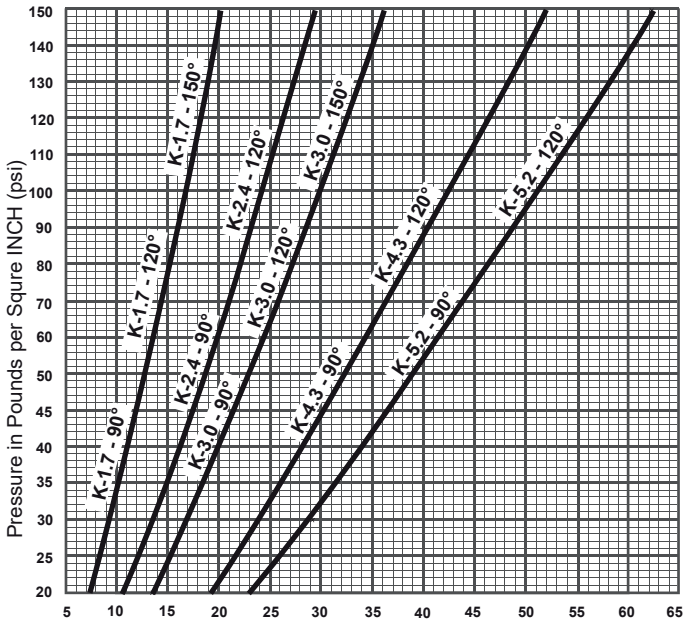
*1 Not UL Listed.

Spary Nozzles

Model 213

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle. Make sure that deflector is not bent or damaged.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

The design of these water spray fixed systems must only be performed by experienced designers who understand the capabilities and limitation of these nozzles. These nozzles must be installed in accordance to applicable NFPA standards. Deviations from these standards or any alteration to the Nozzle after it leaves the factory including, but not limited to: painting, plating, coating or modification may render the unit in operative and will automatically nullify the approval and any guarantee made by FLUID.

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Model 230 NC

High Velocity
Narrow Coverage Standard Full Cone

UL LISTED EX16307

- FLUID® spray nozzle provides a full (Solid) cone pattern in a narrow angle with uniform droplet distribution.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Uses an Internal vane design to produce a solid cone shaped spray pattern.
- Spray Nozzle body and deflector are made of Brass conforming to CuZn39Pb3 - ASTM B455 C38500. 1
- Suitable for a maximum working pressure of 250 psi (17.2 bar).
- This Nozzle is ideal for exposure protection and to fight fuel fires.

1. Also available in SS316 construction.
2. Blow off caps available (dust cap) as optional.
3. Strainer available as optional.
4. Finish: Available in natural brass and electroplated finishes.

Nozzle may be installed in any position as per design requirements.

Specifications

Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Effective Working Pressure Minimum bar / psi	Dimensions	
				dia mm/in	Overall Length mm/in
25	60°	29	1.4	25 - NPT	42
1	60°	2.0	20	1 - NPT	1.65
25	60°	43	1.4	25 - NPT	42
1	60°	3.0	20	1 - NPT	1.65

General Description

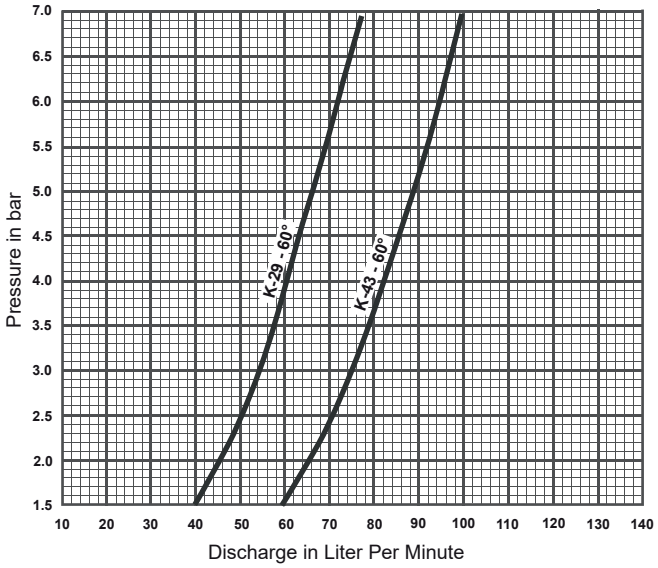
The Model 230NC Nozzles are open directional spray nozzles. They are designed to be used in waterspray fixed fire protection systems which are designed as per NFPA 15.

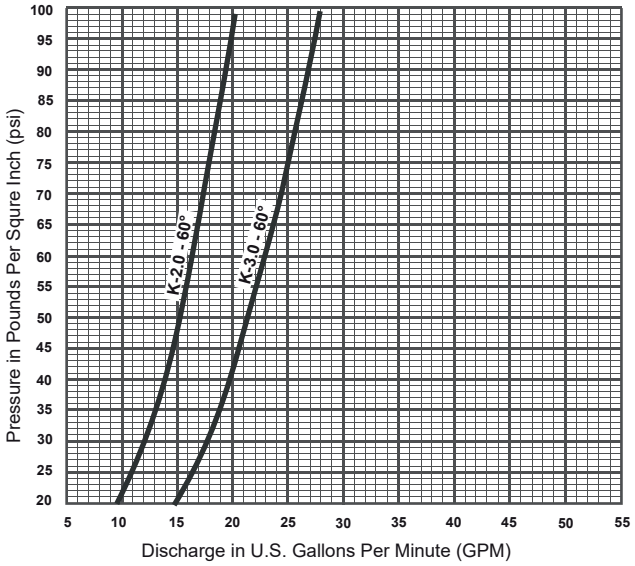
As water passes through the internal swirl deflector, a swirling action is produced resulting in a full solid conical spray pattern. High velocity type nozzles are used for the protection of hazards such as transformers, oil fired boilers etc. These nozzles due to their fine droplet size are capable of extinguishing oil fire by emulsification. Emulsification is a process by which oil surface is broken down into small globules of water & oil which is incapable of sustaining a fire. The surface cooling effect of this nozzle also minimises the possibility of re-ignition after the fire has been extinguished. Nozzles may be applied to control or extinguish fire of the protected area depending on the design application density. If the Nozzles are used outdoors the recommended minimum working pressure shall be 30 psi.

Spray Nozzles

Model 230 NC

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

The design of these water spray fixed systems must only be performed by experienced designers who understand the capabilities and limitation of these nozzles. These nozzles must be installed in accordance to applicable NFPA standards. Deviations from these standards or any alteration to the Nozzle after it leaves the factory including, but not limited to: painting, plating, coating or modification may render the unit in operative and will automatically nullify the approval and any guarantee made by FLUID.

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www.fluidequipment.in

Model 230 MC

High Velocity
Medium Coverage Standard Full Cone

UL LISTED EX16307

- FLUID® spray nozzle provides a full (Solid) cone pattern in a medium angle with uniform droplet distribution.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Uses an Internal vane design to produce a solid cone shaped spray pattern.
- Spray Nozzle body and deflector are made of Brass conforming to CuZn39Pb3 - ASTM B455 C38500. [1]
- Suitable for a maximum working pressure of 250 psi (17.2 bar).
- This Nozzle is ideal for exposure protection and to fight fuel fires.

Nozzle may be installed in any position as per design requirements.

1. Also available in SS316 construction.
2. Blow off caps available (dust cap) as optional.
3. Strainer available as optional.
4. Finish: Available in natural brass and electroplated finishes.

Specifications

Pipe Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Effective Working Pressure Min / Max bar / psi	Dimensions	
				dia mm/in	Overall Length mm/in
* 25	90°	17	1.4	25 - NPT	42
* 1	90°	1.2	20	1 - NPT	1.65
25	90°	23	1.4	25 - NPT	42
1	90°	1.6	20	1 - NPT	1.65
25	90°	33	1.4	25 - NPT	42
1	90°	2.3	20	1 - NPT	1.65
25	90°	36	1.4	25 - NPT	42
1	90°	2.5	20	1 - NPT	1.65

* Nozzle Fitted with Strainer as Standard

General Description

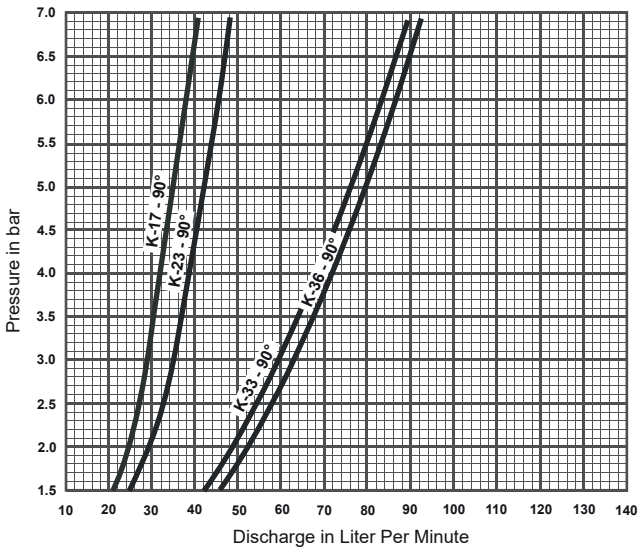
The Model 230MC Nozzles are open directional spray nozzles. They are designed to be used in waterspray fixed fire protection systems which are designed as per NFPA 15.

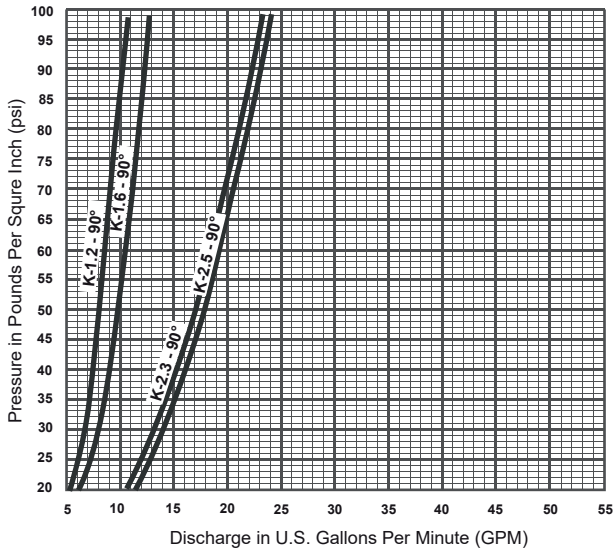
As water passes through the internal swirl deflector, a swirling action is produced resulting in a full solid conical spray pattern. High velocity type nozzles are used for the protection of hazards such as transformers, oil fired boilers etc. These nozzles due to their fine droplet size are capable of extinguishing oil fire by emulsification. Emulsification is a process by which oil surface is broken down into small globules of water & oil which is incapable of sustaining a fire. The surface cooling effect of this nozzle also minimises the possibility of re-ignition after the fire has been extinguished. Nozzles may be applied to control or extinguish fire of the protected area depending on the design application density. If the Nozzles are used outdoors the recommended minimum working pressure shall be 30 psi.

Spray Nozzle

Model 230 MC

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

The design of these water spray fixed systems must only be performed by experienced designers who understand the capabilities and limitation of these nozzles. These nozzles must be installed in accordance to applicable NFPA standards. Deviations from these standards or any alteration to the Nozzle after it leaves the factory including, but not limited to: painting, plating, coating or modification may render the unit in operative and will automatically nullify the approval and any guarantee made by FLUID.

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www.fluidequipment.in

Model 230 WC

High Velocity
Wide Coverage Standard Full Cone

UL LISTED EX16307

- FLUID® spray nozzle provides a full (Solid) cone pattern in wide angle with uniform droplet distribution.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Uses an Internal vane design to produce a solid cone shaped spray pattern.
- Spray Nozzle body and deflector are made of Brass conforming to CuZn39Pb3 - ASTM B455 C38500. 1
- Suitable for a maximum working pressure of 250 psi (17.2 bar).
- This Nozzle is ideal for exposure protection and to fight fuel fires.

1. Also available in SS316 construction.
2. Blow off caps available (dust cap) as optional.
3. Strainer available as optional.
4. Finish: Available in natural brass and electroplated f

Nozzle may be installed in any position as per design requirements.

Specification

Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Effective Working Pressure Minimum bar / psi	Dimensions	
				dia mm/in	Overall Length mm/in
* 25	120°	23	1.4	25 - NPT	42
* 1	120°	1.6	20	1 - NPT	1.65
25	120°	33	1.4	25 - NPT	42
1	120°	2.3	20	1 - NPT	1.65

* Nozzle fitted with strainer as standard.

General Description

The Model 230WC Nozzles are open directional spray nozzles. They are designed to be used in waterspray fixed fire protection systems which are designed as per NFPA 15.

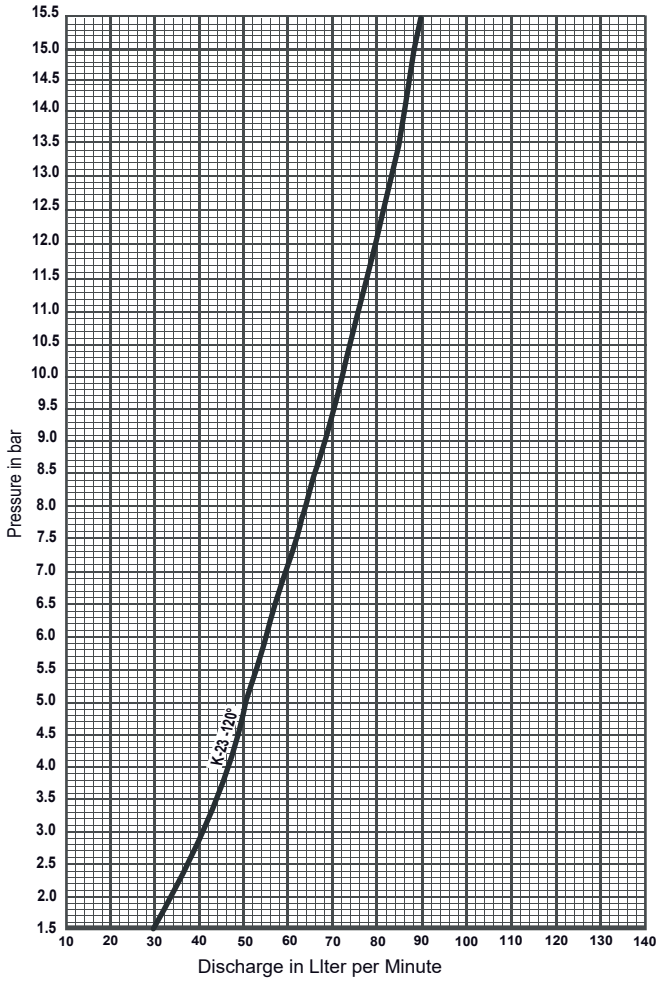
As water passes through the internal swirl deflector, a swirling action is produced resulting in a full solid conical spray pattern. High velocity type nozzles are used for the protection of hazards such as transformers, oil fired boilers etc. These nozzles due to their fine droplet size are capable of extinguishing oil fire by emulsification. Emulsification is a process by which oil surface is broken down into small globules of water & oil which is incapable of sustaining a fire. The surface cooling effect of this nozzle also minimises the possibility of re-ignition after the fire has been extinguished. Nozzles may be applied to control or extinguish fire of the protected area depending on the design application density. If the Nozzles are used outdoors the recommended minimum working pressure shall be 30 psi.

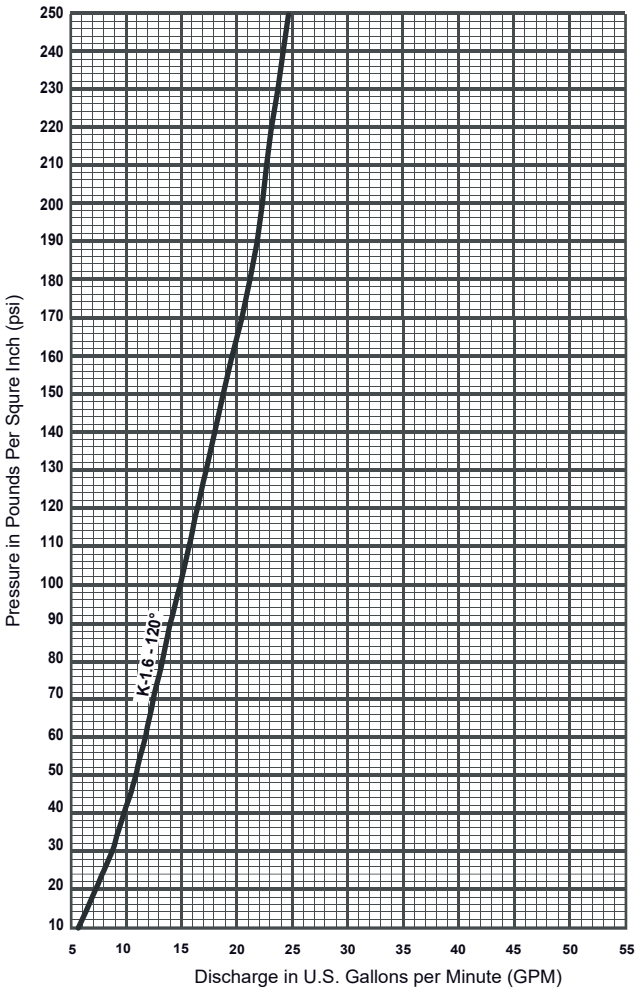
Spray Nozzle

Model 230 WC

Discharge Curve

K-23-120





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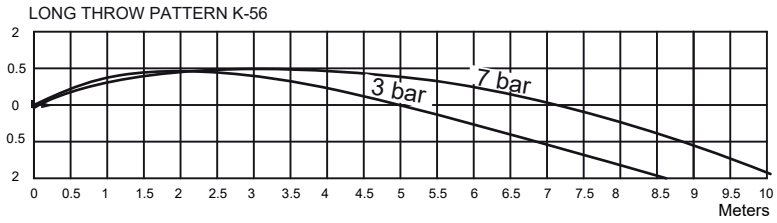
Model 230 LT

High Velocity
Long Throw Type

UL LISTED EX16307

- FLUID® spray nozzle provides a full (Solid) cone pattern in a narrow angle with uniform droplet distribution.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Uses an Internal vane design to produce a solid cone shaped spray pattern.
- Spray Nozzle body and deflector are made of Brass conforming to CuZn39Pb3 - ASTM B455 C38500. 1
- Suitable for a maximum working pressure of 250 psi (17.2 bar).
- This Nozzle is ideal for exposure protection and to fight fuel fires.



1. Also available in SS316 construction.
2. Blow off caps available (dust cap) as optional.
3. Strainer available as optional.
4. Finish: Available in natural brass and electroplated finishes.

Specification

Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Effective Working Pressure Minimumm bar / psi	Dimensions	
				dia mm / in	Overall Lenght mm / in
25	45°	56	2	25 - NPT	42
1	45°	3.8	30	1 - NPT	1.65

General Description

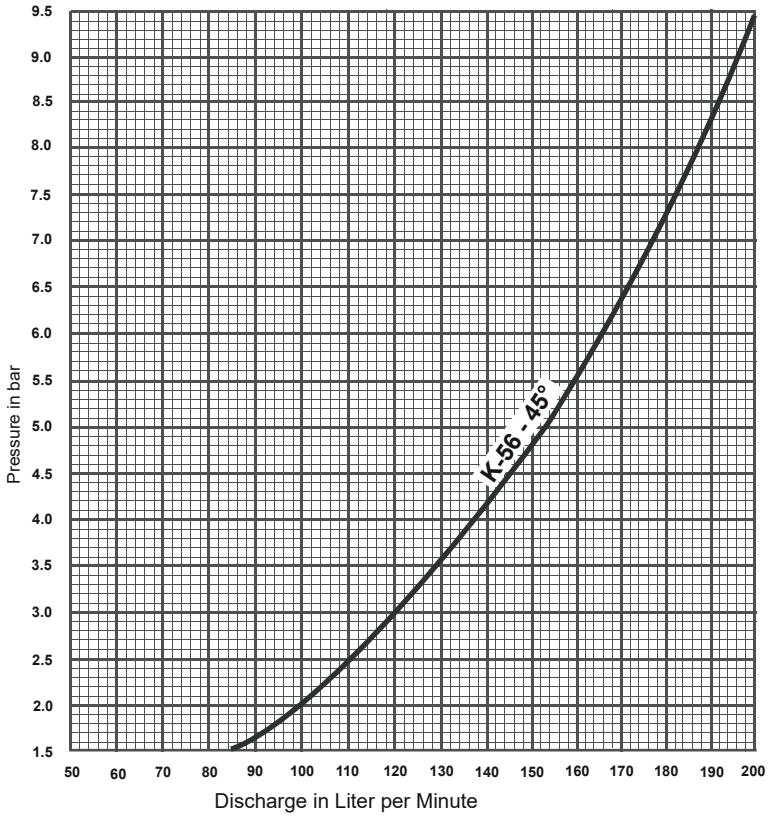
The Model 230 LT Nozzles are long throw type open directional spray nozzles. They are designed to be used in waterspray fixed fire protection systems which are designed as per NFPA 15.

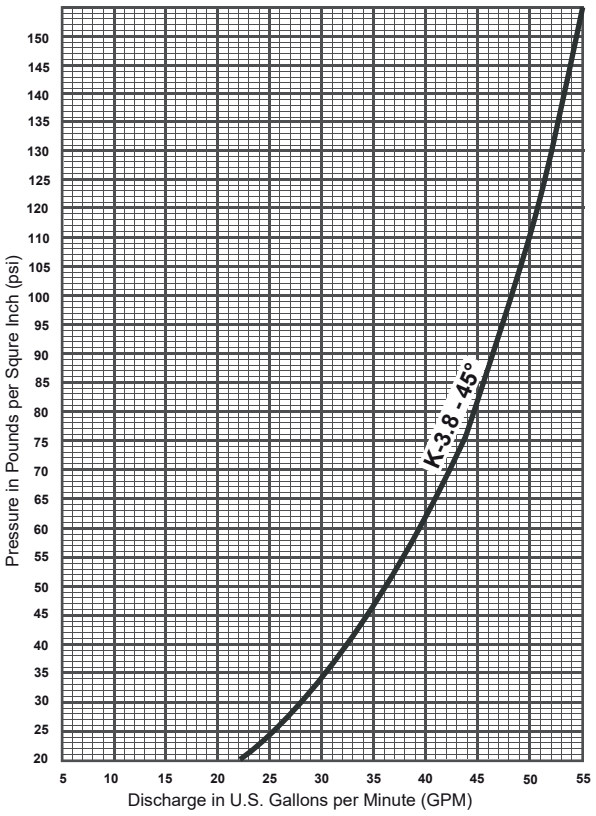
As water passes through the internal swirl deflector, a swirling action is produced resulting in a full solid conical spray pattern. High velocity type nozzles are used for the protection of hazards such as transformers, oil fired boilers etc. These nozzles due to their fine droplet size are capable of extinguishing oil fire by emulsification. Emulsification is a process by which oil surface is broken down into small globules of water & oil which is incapable of sustaining a fire. The surface cooling effect of this nozzle also minimises the possibility of re-ignition after the fire has been extinguished. Nozzles may be applied to control or extinguish fire of the protected area depending on the design application density. If the Nozzles are used outdoors the recommended minimum working pressure shall be 30 psi.

Spray Nozzle

Model 230LT

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

The design of these water spray fixed systems must only be performed by experienced designers who understand the capabilities and limitation of these nozzles. These nozzles must be installed in accordance to applicable NFPA standards. Deviations from these standards or any alteration to the Nozzle after it leaves the factory including, but not limited to: painting, plating, coating or modification may render the unit in operative and will automatically nullify the approval and any guarantee made by FLUID®.

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WAREHOUSE (UAE)
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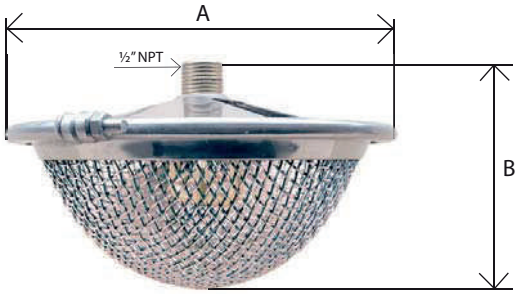
Model F226

Foam Spray Nozzles

LISTED EX27281

- Directional Spray Nozzle with cone shaped spray pattern.
- Spray Nozzles are designed to produce extremely uniform coverage.
- Spray Nozzle Yoke is made of Brass conforming to CuZn36Pb2AS - ASTM B455 C38500.
- Suitable for a maximum working pressure of 175 psi (12 bar).
- Many orifice sizes and angles are available.
- Also available in SS316 Nozzle construction.



Nozzle shown in pendent position for clarity, may be installed in any position as per design requirements.

Description	Material of Construction
Yoke	Brass
Deflector	Brass
Splitter	Brass
Screen	Stainless Steel

Specification

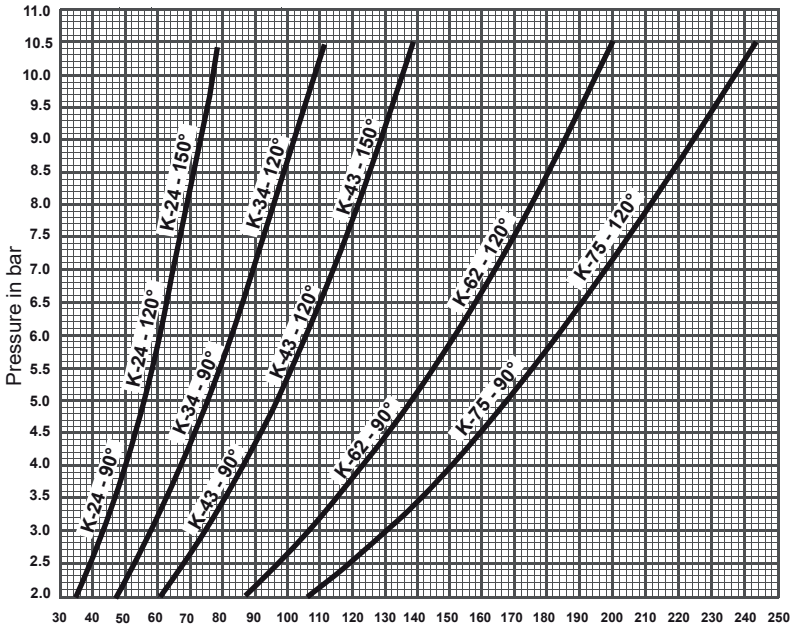
Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Orifice mm / in	Effective Working Pressure Minimum bar / psi	Dimensions		Weight Kg / Lbs	Approval
					A mm/in	B mm/in		
15	120°	24	7.5	1.4	197	108.3	0.60	-
½	120°	1.70	19/64	20	7.8	4.3	1.32	-
15	120°	34	8.0	1.4	197	108.3	0.60	-
½	120°	2.4	5/16	20	7.8	4.3	1.32	-
15	120°	43	9.7	1.4	197	108.3	0.60	UL
½	120°	3.0	3/8	20	7.8	4.3	1.32	UL
15	120°	62	11.2	1.4	197	108.3	0.60	-
½	120°	4.3	7/16	20	7.8	4.3	1.32	-
15	120°	75	12.0	1.4	197	108.3	0.60	UL
½	120°	5.2	15/32	20	7.8	4.3	1.32	UL

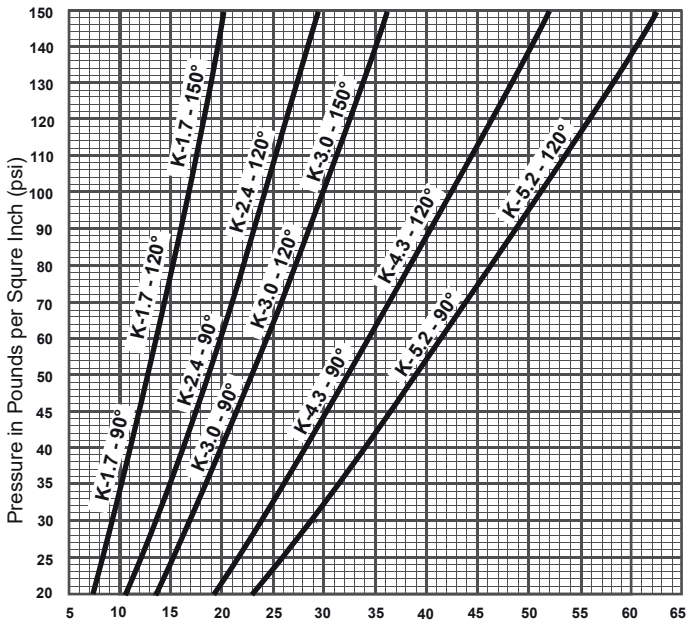
- Finish: Available in natural brass and electroplated finishes.
- Accessories: Nozzle Cap and Spanner are available.
- For flow details refer flow curves.

Spray Nozzles

Model F226

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle. Make sure that deflector is not bent or damaged.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

The design of these water spray fixed systems must only be performed by experienced designers who understand the capabilities and limitation of these nozzles. These nozzles must be installed in accordance to applicable NFPA standards. Deviations from these standards or any alteration to the Nozzle after it leaves the factory including, but not limited to: painting, plating, coating or modification may render the unit in operative and will automatically nullify the approval and any guarantee made by FLUID.

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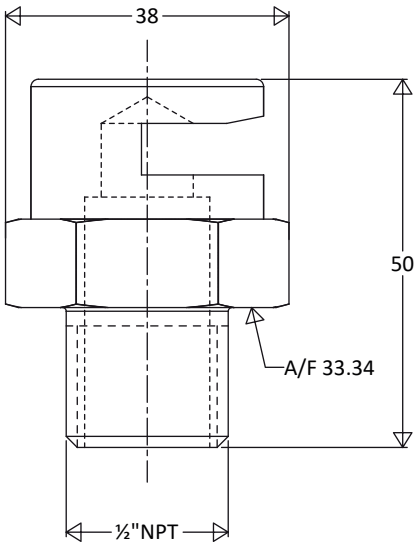
Model 214

Tank Spray Nozzle / Curtain Nozzle

- The Tank Spray Nozzle is designed for use of water spray on the tank wall of fuel storage tanks.
- Nozzle body is made of Brass conforming to CUZn39Pb3 - ASTM B455 C38500.
  Also available in SS316 Construction and Electroplated Finish.
- Suitable for a maximum working pressure of 175 psi (12 bar).
- Extinguishing Agent: Freshwater, Seawater or Foam.



The Tank Spray Nozzle is designed for use on the tank wall of fuel storage tanks. They can be used as cooling nozzles to prevent structural damage to tanks during a fire or alternatively may be used to combat fires in areas such as floating roof storage tanks. They can also be used to protect cable tray, pipe racks and Ideal for exposure protection.

The Tank Spray spray nozzle is ideally suited to the protection of assets such as storage tank shells and roofs. This is due to its cooling effects, achieved through the production of a wide angle flat fan spray with direct impingement and "wall run down" of water. The Tank Spray nozzle is available in a range of bore sizes and materials. For cooling purposes the media will normally be fresh water or seawater.

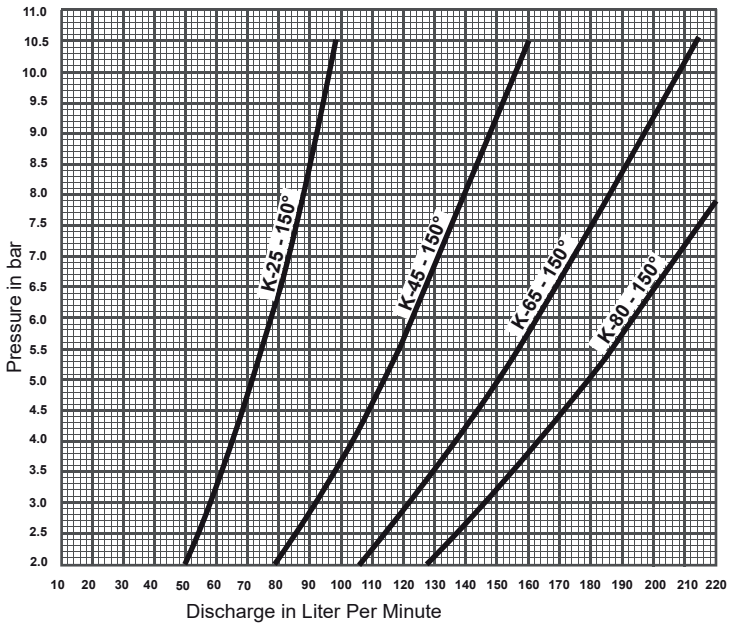
Specification

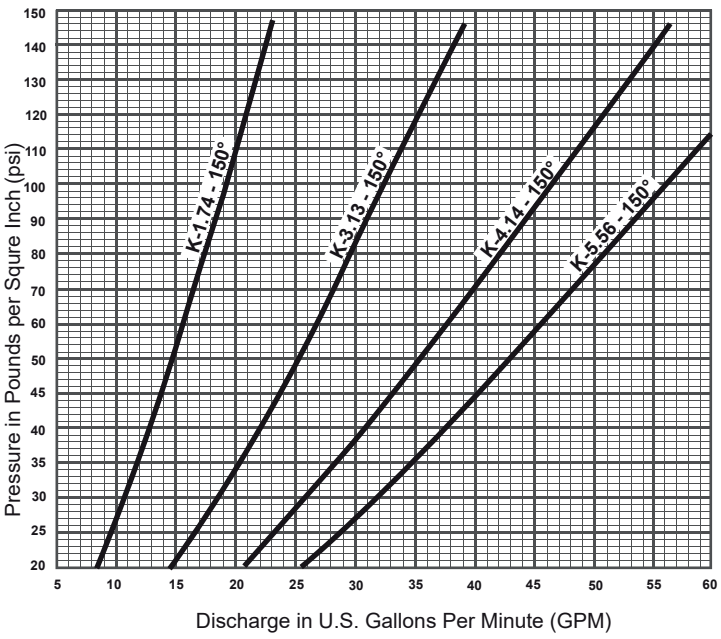
Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Effective Working Pressure Minimum bar / psi	Dimensions	
				dia mm/in	Overall Length mm/in
15	150°	25	1.4	15 - NPT	50
1/2	150°	1.74	20	1/2 - NPT	1 15/16
15	150°	45	1.4	15 - NPT	50
1/2	150°	3.13	20	1/2 - NPT	1 15/16
15	150°	65	1.4	15 - NPT	50
1/2	150°	4.14	20	1/2 - NPT	1 15/16
15	150°	80	1.4	15 - NPT	50
1/2	150°	5.86	20	1/2 - NPT	1 15/16

Spray Nozzle

Model 214

Discharge Curve

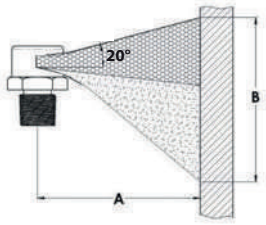




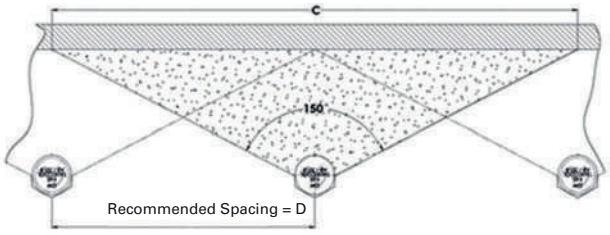
Spray Pattern

A max = 600 mm
B = 0.75 x A
C = 7.50 x A
D = 5.00 x A

Side view



Top view



Installation

- Nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle. Make sure that deflector is not bent or damaged.
- Install dust caps or blow off caps (if used).

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required.The owner is responsible for maintaining the spray system to ensure that it performs properly as Intended.

Warning

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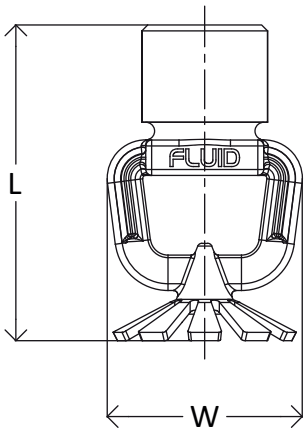
Model 215

Water Mist Nozzle

- Low pressure water mist nozzle.
- Spray Nozzles are designed to produce extremely uniform coverage with fine water droplets.
- Spray Nozzle Yoke is made of Brass conforming to CuZn36Pb2AS - ASTM B455 C38500.
- Suitable for a maximum working pressure of 235 psi (16 bar).
- Built in Strainer.
- Also available in SS316 construction.
- Suitable for sea water & fresh water.
- Available in low flow K8 & K13 K-Factors.

Material of Construction

Description	Material of Construction
Yoke	Brass / ASTM A351 CF8M
Deflector	Brass / SS316



Nozzle shown in pendent position for clarity, may be installed in any position as per design requirements.

Specifications

Size mm / in	Discharge Angle Deg.	Discharge Coefficient K	Effective Working Pressure bar / psi	L mm / in	W mm / in
15	90°	8	7 - 16	53.5	33.0
½	90°	0.60	101.5 - 232	2.11	1.30
15	90°	13	7 - 16	53.5	33.0
½	90°	0.9	101.5 - 232	2.11	1.30

- Finish: Available in natural brass and electroplated finishes.
- Accessories: Nozzle Cap and Spanner are available.

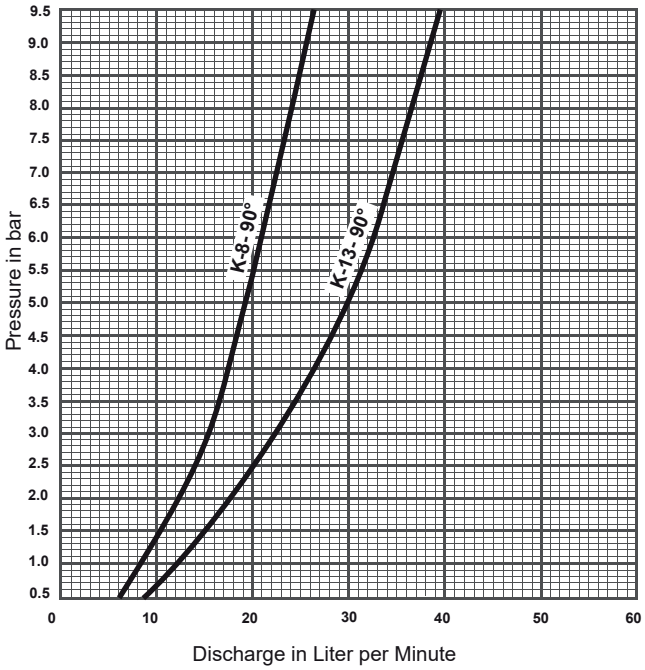
Applications

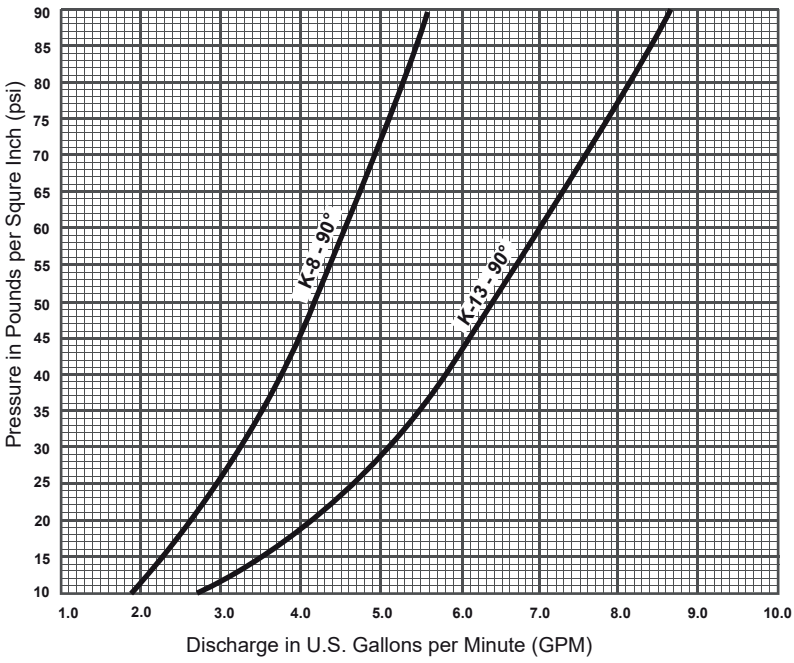
The Model 215 Nozzle is a low pressure water mist nozzle designed for a large variety of applications and hazards. They are designed for installation in dry pipe systems. The nozzles are designed to produce a fine mist of small water droplets. The nozzles are filled with blow off protection caps. The caps protect the nozzles after installation and automatically blow off due to pressure in the pipe work during discharge.

Spray Nozzles

Model 215

Discharge Curve





Installation

- Spray nozzles must be installed after the piping is in place to prevent mechanical damage.
- Before installing be sure to have the appropriate model, correct k-factor etc.
- Apply a small amount of thread sealant or tape to the external threads of the spray nozzle only, hand tighten the nozzle into the nozzle pipe fitting in the pipe work.
- Tighten the nozzle using an adjustable crescent wrench on the nozzle wrench hex. Do not over tighten, which may distort the nozzle inlet and cause impairment to nozzle. Make sure that deflector is not bent or damaged.
- Install dust caps or blow off caps which are supplied with the nozzles.

Care and Maintenance

Care must be exercised to avoid damage to the nozzles. For minimum maintenance and inspection requirements refer to NFPA25. In addition the authority having jurisdiction may have additional maintenance, testing and inspection requirements. Frequent visual inspections are required where nozzles are installed in potentially corrosive areas. The nozzle is to be cleaned or replaced if required. The owner is responsible for maintaining the spray system to ensure that it performs properly as intended.

Warning

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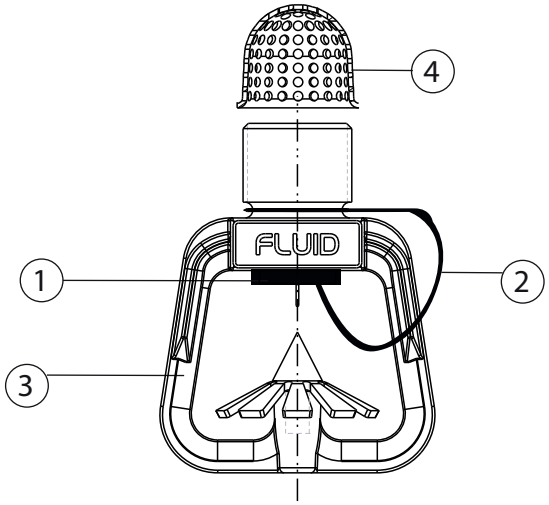
Blow Off Plugs, Caps & Strainers

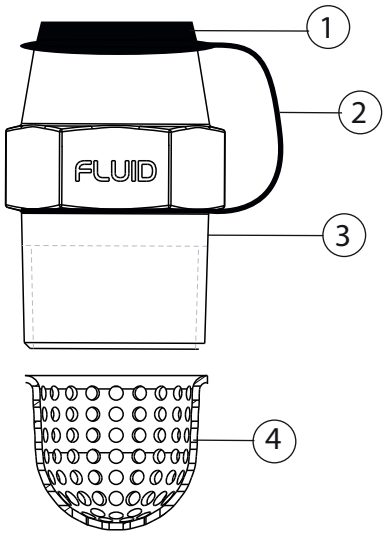
General Description

Blow-off plug and dust caps Dust caps are used in applications where protection is required against accumulation of debris with in the orifice of an open Nozzle. Blow off plugs are used in Model 212 Nozzle and Blow off caps are used in Model 230 Nozzle.



Model 212 with blow off plug & Strainer

1. Blow Off Plug
2. Stainless Steel Wire
3. Model 212 Nozzle
4. Strainer



Model 230 with blow off cap & Strainer

1. Blow Off Cap
2. Stainless Steel Wire
3. Model 230 Nozzle
4. Strainer

Specifications

The dust caps and blow off plug are rated for indoor and outdoor use for a temperature range of 0°C to 65°C. A minimum flowing pressure of 1 bar is required to assure release of the dust cap/blow off plug. The blow off Cap/Plug prevents the accumulation of foreign matter in the nozzle orifice which could interfere with the discharge. The blow off Plug/Cap is attached to the nozzle by means of stainless steel wire periodic inspection of the cap and nozzle is recommended for proper nozzle performance. Blow off Plug/Cap are available as separate items for use as replacement parts. Model 212 all sprayers can be provided with plugs. Model 230 all nozzles can be provided with blow off caps. Strainer can be added for all Models 212 & 230 Nozzles. These are accessories and are to be ordered along with the Nozzles if required.

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Confirmation Letter

UL CUSTOMER	FLUID PUMPS & EQUIPMENT INDIA PVT LTD 7/222 Nagamanaickenpalayam Pattanam Coimbatore, Tamil Nadu 641016 India
UL CUSTOMER FILE #	EX16307
CATEGORY	Nozzles, Spray Type, Fixed | VGYZ

May 17, 2022

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Leadership & Governance Team
UL Product iQ

UL LLC
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T: 847.272.8800 / F: 847.272.8129 / W: UL.com

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VGYZ.EX16307 - Nozzles, Spray Type, Fixed

Nozzles, Spray Type, Fixed

See General Information for Nozzles, Spray Type, Fixed

FLUID PUMPS & EQUIPMENT INDIA PVT LTD
7/222 Nagamanaickenpalayam Pattanam
Coimbatore, Tamil Nadu 641016 INDIA

EX16307

NONAUTOMATIC TYPE

Model	Discharge Angle, Deg	Discharge Coefficient, K	
		K ($GPM/(psig)^{1/2}$)	K-m ($LPM/(kg/cm^2)^{1/2}$)
230LT	45	3.8	56
230NC	60	2.0	29
230NC	60	3.0	43
230MC	90	1.2	17
230MC	90	1.6	23
230MC	90	2.3	33
230MC	90	2.5	36
230WC	120	1.6	23
230WC	120	2.3	33
212	90	1.7	24
212	90	2.4	34
212	90	3.0	43
212	90	4.3	62
212	90	5.2	75
212	120	1.7	24
212	120	2.4	34
212	120	3.0	43
212	120	4.3	62
212	120	5.2	75
212	150	1.7	24
212	150	3.0	43

213	90	1.7	24
213	90	2.4	34
213	90	3.0	43
213	90	4.3	62
213	90	5.2	75
213	120	1.7	24
213	120	2.4	34
213	120	3.0	43
213	120	4.3	62
213	120	5.2	75
213	150	1.7	24
213	150	3.0	43

NONAUTOMATIC TYPE

		Discharge Coefficient, K	
Model	**Discharge Angle, Deg**	**K (GPM/(psig)$^{1/2}$)**	**K-m (LPM/(kg/cm^2)$^{1/2}$)**
230N	80	1.26	18
230N	75	1.54	22
230N	120	1.61	23
230N	100	1.82	26
230N	90	2.24	32
230N	115	2.94	42
213N	120	1.3	18
213N	80,120	1.5	22
213N	120	2.1	30
213N	140	2.5	35
213N	120	2.9	41
213N	120	3.6	51
213N	120,140	4.5	64
213N	120	5.5	79
213N	120	6.4	91
213N	65,80,90,100,110,140	1.3	18
213N	65,90,100,110,140	1.5	22
213N	65,80,90,100,110,140	2.1	30

213N	65,80,90,100,110,120	2.5	35
213N	65,80,90,100,110,140	2.9	41
213N	65,80,90,100,110,140	3.6	51
213N	65,80,90,100,110	4.5	64
213N	65,80,90,100,110,140	5.5	79
213N	65,80,90,100,110,140	6.4	91
213N	65,80,90,100,110,120,140	7.2	102

Last Updated on 2020-09-30

Confirmation Letter

UL CUSTOMER	FLUID PUMPS & EQUIPMENT INDIA PVT LTD 7/222 Nagamanaickenpalayam Pattanam Coimbatore, Tamil Nadu 641016 India
UL CUSTOMER FILE #	EX27281
CATEGORY	Nozzles, Fixed Spray, Foam | VIHU

May 17, 2022

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Sincerely,

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VIHU.EX27281 - Nozzles, Fixed Spray, Foam

Nozzles, Fixed Spray, Foam

FLUID PUMPS & EQUIPMENT INDIA PVT LTD EX27281
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Model(s): F226

Last Updated on 2022-03-03