FIRE MONITORS

First and only local manufacturer having **FM Certificate** in TÜRKİYE

Fire Monitors •

Monitor Nozzles •

FM APPROVED

Certificate of Compliance

This certificate is issued for the following:

Low Expansion Foam Systems
For Use with HD AFFF 3F-C6 and HD AR-AFFF 3x3-C6 Aqueous Film-Forming Foam Concentrates

Fire Protection Monitor Assemblies
Models: 3A WM1C, 3A WM2S, 3A WM3C, 3A WM4B

Firefighting Nozzles for use with Monitor Assemblies
Models: Model 3A MN1, Model 3A MN2

Prepared for:

3A Köpüklü Yangın Korunum Sistemleri San. ve Tic. Ltd. Şti.
Kultur Mahallesi, Efil Sokak No:2/414
Tatvan, Bitlis 13200
Turkiye

FM Approvals Class: 5130, 1421, 5511

Approval Identification: PR461429 Approval Granted: 28 June 2024

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

FM Approvals®
Member of the FM Global Group

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SCC Accredited CB-PS OCPS Accredité CCN

Önsöz

3A Köpüklü Yangın Korunum Sistemleri San. ve Tic. Ltd. Şti. *2024 yılında kuruldu. Kuruluş amacımız yangın sektöründe özellikle endüstriyel tesislerin korunması konusunda çalışmaktır.*

Temel amacımız, endüstriyel yangın tehlikelerine doğru ve akılcı çözümler üretmektir. Endüstriyel yangın tehlikelerine uygun çözümler üretirken, ulusal ve uluslararası kuralları uygulayarak bu kuralların gerektirdiği kalitede ve onaylara sahip ürünleri kullanarak çözüm üretmektir.

Temel hedefimiz sorun değil çözüm üretmektir. Bu yönü ile 3A Yangın, yetişmiş kadrosu, yurt dışı çözüm ortakları ve özel çözüm yöntemleri ile sektördeki yerini almıştır. Deneyimli kadrosu ile kendi içinde iş bölümü yapmış olup, malzeme satışı, sistem dizaynı ve projelendirme, taahhüt, teknik servis hizmetlerini farklı departmanları ile vermektedir.

3A Köpüklü Yangın Korunum Sistemleri San. ve Tic. Ltd. Şti. *Müşteri memnuniyetini, sürekli gelişmeyi, kaliteyi, ekip çalışmasını, sosyal sorumluluğu, profesyonel yönetim anlayışını, teknolojik gelişmelere uygunluğu ve paylaşımı esas alan bir anlayışla sektöründe lider bir kuruluş olmayı kendine "Vizyon" edinmiştir.*

Ayrıca belirlemiş olduğumuz bu vizyon çerçevesinde müşterilerimize, çalışanlarımıza, ülkemize kaynak ve değer yaratan örnek bir kuruluş olmayı kendimize "Misyon" edindik.

3A WM1C

3A WM1C MONITOR TECHNICAL DATA	
MODEL	3A WM1C
NOMINAL SIZE	3 Inch (80 MM)
MAX. SERVICE PRESSURE	175 PSI (12 Bar)
MAXIMUM FLOW	800 GPM (3030 LPM)
FACTORY HYDROSTATIC TEST PRESSURE	400 PSI (27.6 Bar)
SWIVEL JOINT	Bronze to IS 318 / ASTM B62 with double row of Stainless Steel Ball Bearing and Grease Fittings
NOZZLE THRUST REACTION IN Kg.	Flow in LPM X $\sqrt{\text{Pessure}}$ in Kg./sq.cm. X 0.0228
INLET CONNECTION	3"or 4" (80NB or 100NB) Flange to ANSI B16.5 # 150, R.F.
OUTLET CONNECTION	3" BSP (M)
MONITOR ELEVATION	90 Deg. above horizontal & 45 Deg. below horizontal
MONITOR ROTATION	360 Deg. continuous
MONITOR MOVEMENT	Handle with twist lock
BODY	Carbon steel, hot dip galvanized
FINISH	Red to RAL 3001
WEIGHT (Approx)	35 Kg
ORDERING INFORMATION	Specify Monitor Model and Inlet Flange Size
APPROVAL	FM Approved

DESCRIPTION

The Monitor Model-3A WM1C is durable manual controlled monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other Industrial application.

The monitor possess several design features that provides ease of operation, minimum maintenance and resistance to normally destructive environments. The monitor is used with aspirating, non-aspirating and water nozzles with flow range upto 800 GPM (3030 LPM).

The monitor has welded carbon steel 3 inch (80 MM) waterway. All steel parts are hot dip galvanized and epoxy painted for excellent corrosion resistant. The vertical and horizontal rotation is through corrosion resistant swiveling joints with double row of stainless steel ball bearing. Both vertical and horizontal movements are controlled by handle and twist lock.

The monitor has large flow capability and can be manually operated by a single fire fighter. The design ensures to prevent jet reaction forces from effecting the horizontal and the vertical position of the monitor.

The monitor has the ability for 360 deg.continuous horizontal rotation and angle of elevation +90 deg. above horizontal and -45 deg. below horizontal.

The water vanes in discharge tube reduces the turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, the friction, loss through monitor must be considered while selecting the nozzle and the flow through the monitor with reference to available base pressure at inlet of the monitor. For flow and jet reach data refer monitor nozzle data sheet.

INSTALLATION, TESTING AND MAINTENANCE

The monitor must be installed and operated carefully by a trained person, having good knowledge of the equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with the full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

CAUTION

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly.

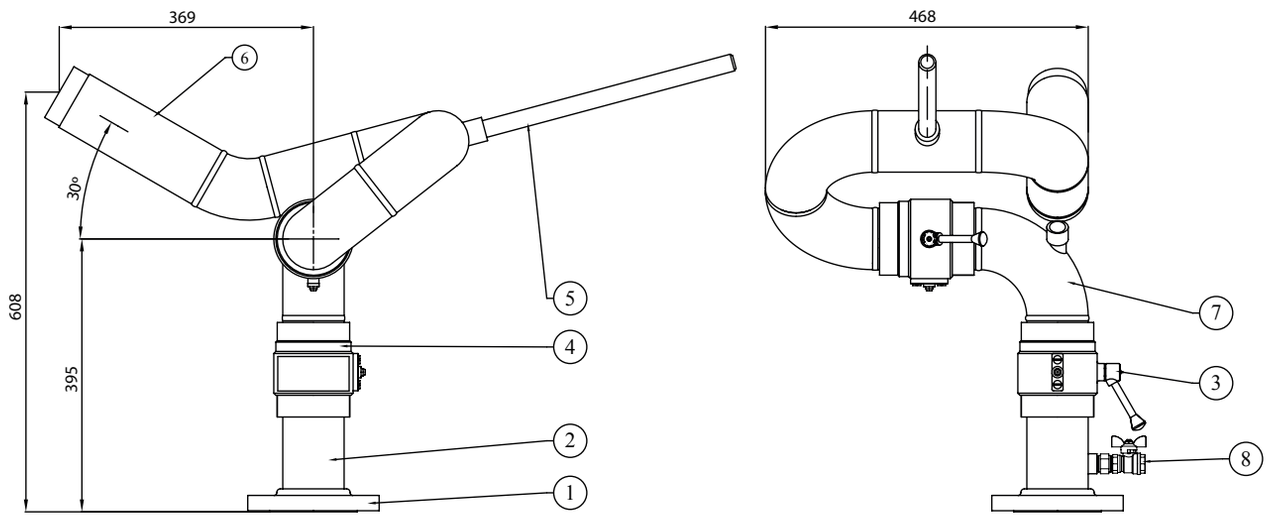
The piping must be able to with stand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

When installing monitor it is very essential that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

Application of water or foam on an electric appliance can cause serious injury.

The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.



ELEVATION SIDE VIEW

PART LIST

SR.NO	DESCRIPTION	MATERIAL SPECIFICATION
1	BASE FLANGE	ASTM A105
2	INLET PIPE	ASTM A106 WPB SCH40
3	LOCK V & H	BRONZE
4	SWIVEL JOINT	BRONZE IS:318/ ASTM B62
5	HANDLE	STEEL
6	BARREL PIPE	ASTM A106 SCH40
7	ELBOW	ASTM A234 WPB SCH40
8	BALL VALVE	BRASS

NOTE:

1. Monitor inlet flange standard size is 80NB (3”) to ANSI B16.5, 150# is standard supply, Other sizes like 100NB (4”) are optional.
2. All dimensions in mm and are approximate.
3. As the Monitor is hot dip galvanized, flange will be RF without serration.

3A WM2S

3A WM2S MONITOR TECHNICAL DATA	
MODEL	3A WM2S
NOMINAL SIZE	3 Inch (80 MM)
MAX. SERVICE PRESSURE	175 PSI (12 Bar)
MAXIMUM FLOW	800 GPM (3030 LPM)
FACTORY HYDROSTATIC TEST PRESSURE	27.6 Bar (400 PSI)
SWIVEL JOINT	Stainless Steel with double row of Ball Bearing and Grease Fittings
NOZZLE THRUST REACTION IN Kg.	Flow in LPM X $\sqrt{\text{Pressure}}$ in Kg./sq.cm. X 0.0228
INLET CONNECTION	3" OR 4" (80 OR 100NB) Flange to ANSI B 16.5 # 150, R.F.
OUTLET CONNECTION	3" BSP (M)
MONITOR ELEVATION	90 Deg. above horizontal & 45 Deg. below horizontal
MONITOR ROTATION	360 Deg. continuous
MONITOR MOVEMENT	Handle with twist lock
BODY	Stainless Steel
FINISH	Red RAL 3001
WEIGHT (Approx)	36 Kg
ORDERING INFORMATION	Specify Monitor Model and Inlet Flange Size
APPROVAL	FM Approved

Note: The nozzle image shown above is representative.
Please select appropriate monitor nozzle as per requirement.

The monitor has large flow capability and can be manually operated by a single fire fighter. The design ensures to prevent jet reaction forces from effecting the horizontal and the vertical position of the monitor. The monitor has the ability for 360 deg. continuous horizontal rotation and angle of elevation from 90 deg. above horizontal and 45 deg. below horizontal.

The water vanes in discharge tube reduces the turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, the friction loss through monitor must be considered while selecting the nozzle and the flow through the monitor with reference to available base pressure at inlet of the monitor. For flow and jet reach data refer monitor nozzle data sheet.

DESCRIPTION

Corrosion resistant stainless steel monitor Model-M 341 is durable manual controlled monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other industrial applications.

The Monitor possess several design features that provides ease of operation, minimum maintenance and resistance to normally destructive environments. The monitor is used with aspirating, non-aspirating and water nozzles with flow range upto 800 GPM (3030 LPM).

The monitor has welded stainless steel 3 inch (80MM) water way. The vertical and horizontal rotation is through stainless steel swiveling joints with double row of stainless steel ball bearing. Both vertical and horizontal movements are controlled by handle with twist lock.

INSTALLATION, TESTING AND MAINTENANCE

The monitor must be installed and operated carefully by a trained person, having good knowledge of the equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with the full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

CAUTION ⚠

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly.

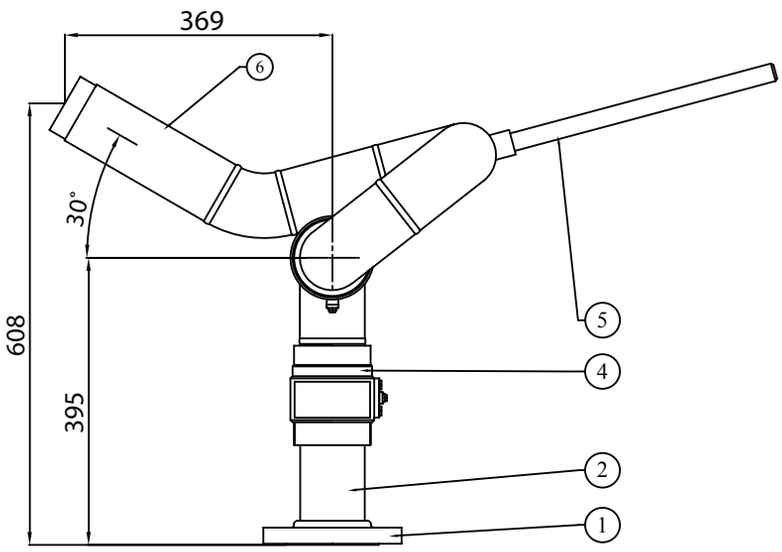
The piping must be able to with stand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

When installing monitor it is very essential that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

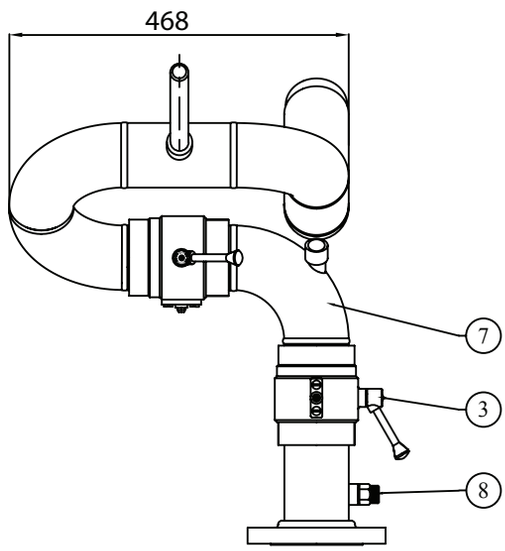
Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

Application of water or foam on an electric appliance can cause serious injury.

The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.



ELEVATION



SIDE VIEW

PART LIST

SR NO	DESCRIPTION	MATERIAL SPECIFICATION
1	BASE FLANGE	STAINLESS STEEL
2	REDUCER	STAINLESS STEEL
3	LOCK V & H	STAINLESS STEEL
4	SWIVEL JOINT	STAINLESS STEEL
5	HANDLE	STAINLESS STEEL
6	BARREL PIPE	STAINLESS STEEL
7	ELBOW	STAINLESS STEEL
8	DRAIN VALVE	BRASS

Note :

1) Monitor inlet flange standard size is 80 NB (3") to ANSI B16.5, 150#, other sizes 100 NB (4") or 150 NB (6") are optional.

2) All dimensions in mm and are approximate.

3) Nozzle suitable to this Monitor is 3A MN1

3A WM3C

3A WM3C MONITOR TECHNICAL DATA	
MODEL	3A WM3C
NOMINAL SIZE	4 Inch (100 MM)
MAX. SERVICE PRESSURE	175 PSI (12 Bar)
MAXIMUM FLOW	1250 GPM (4730 LPM)
FACTORY HYDROSTATIC TEST PRESSURE	25 Bar (500 PSI)
SWIVEL JOINT	Bronze to IS 318 / ASTM B62 with double row of Stainless Steel Ball Bearing and Grease Fittings
NOZZLE THRUST REACTION IN Kg.	Flow in LPM X $\sqrt{\text{Pessure}}$ in Kg./sq.cm. X 0.0228
INLET CONNECTION	4"or 6" (100NB or 150NB) Flange to ANSI B16.5 # 150, R.F.
OUTLET CONNECTION	4" BSP
MONITOR ELEVATION	90 Deg. above horizontal & 45 Deg. below horizontal
MONITOR ROTATION	360 Deg. continuous
MONITOR MOVEMENT	Handle wheel driven fully enclosed worm gear
BODY	Carbon steel, hot dip galvanized
FINISH	Red to RAL 3001
WEIGHT (Approx)	76 Kg
ORDERING INFORMATION	Specify Monitor Model and Inlet Flange Size
APPROVAL	FM Approved

DESCRIPTION

Monitor Model-3A WM3C is durable manual controlled monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other Industrial application.

The Monitor possess several design features that provides ease of operation, minimum maintenance and resistance to normally destructive environments. The monitor is used with aspirating, non-aspirating and water nozzles with flow range upto 1250 GPM (4730 LPM).

The monitor has welded carbon steel 4 inch (100 MM) water way. All steel parts are hot dip galvanized and epoxy painted for excellent corrosion resistance. The vertical and horizontal rotation is through corrosion resistant bronze swiveling joints with double row of stainless steel ball bearing. Both vertical and horizontal movements are controlled with hand wheel driven fully enclosed worm gears and protected from the elements.

The monitor has large flow capability and can be manually operated by a single fire fighter. The design ensures to prevent jet reaction forces from effecting the horizontal and the vertical position of the monitor. The counter balance is not required to offset the weight of the nozzle. The monitor has the ability for 360 deg. continuous horizontal rotation and angle of elevation from 90 deg. above horizontal to 45 deg. below horizontal.

The water vanes in discharge tube reduces the turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, the friction loss through monitor must be considered while selecting the nozzle and the flow through the monitor with reference to available base pressure at inlet of the monitor. For flow and jet reach data refer monitor nozzle data sheet.

INSTALLATION, TESTING AND MAINTENANCE

The monitor must be installed and operated carefully by a trained person, having good knowledge of equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with the full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

CAUTION

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly.

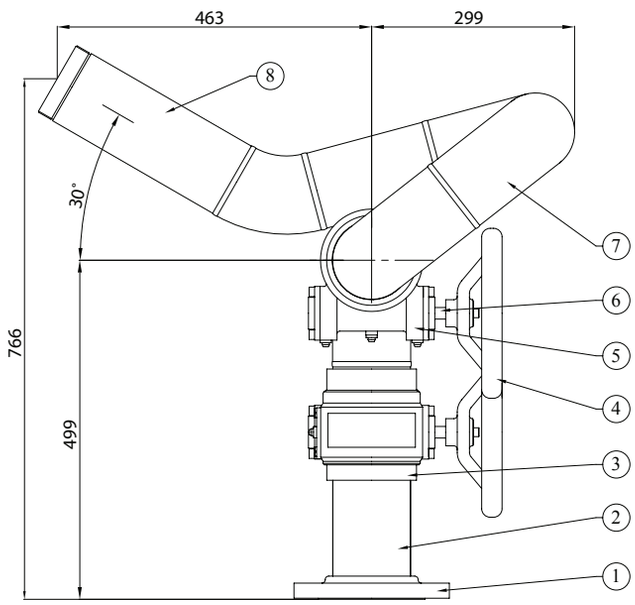
The piping must be able to with stand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

When installing monitor it is critical that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

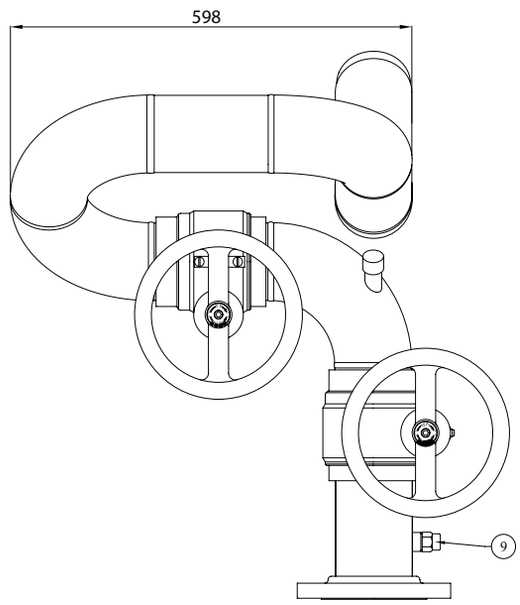
Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

Application of water or foam on an electric appliance can cause serious injury.

The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.



ELEVATION



SIDE VIEW

PART LIST

SR.NO	DESCRIPTION	MATERIAL SPECIFICATION
1	BASE FLANGE	ASTM A105
2	INLET PIPE	ASTM A106 WPB SCH40
3	SWIVEL JOINT	BRONZE IS:318/ ASTM B62
4	HANDLE WHEEL	CAST IRON
5	WORM WHEEL	BRONZE IS:318/ ASTM B62
6	WORM SHAFT	STAINLESS STEEL
7	ELBOW	ASTM A234 WPB SCH40
8	BARREL PIPE	ASTM A106 SCH 40
9	DRAIN VALVE	BRASS

NOTE:

1. Monitor inlet flange standard size is 80NB (3”) to ANSI B16.5, 150#, Other sizes 65NB (2.5”) or 100NB (4”) are optional.
2. All dimensions in mm and are approximate.
3. As the Monitor is hot dip galvanized, flange will be RF without serration.

3A WM4B

3A WM4B MONITOR TECHNICAL DATA	
MODEL	3A WM4B
NOMINAL SIZE	4 Inch (100 MM)
MAX. SERVICE PRESSURE	175 PSI (12 Bar)
MAXIMUM FLOW	2000 GPM (7570 LPM)
FACTORY HYDROSTATIC TEST PRESSURE	27.6 Bar (400 PSI)
SWIVEL JOINT	Bronze to IS 318 / ASTM B62 with double row of Stainless Steel Ball Bearing and Grease Fittings
NOZZLE THRUST REACTION IN Kg.	Flow in LPM X $\sqrt{\text{Pessure}}$ in Kg./sq.cm. X 0.0228
INLET CONNECTION	4"or 6" (100 or 150NB) Flange to ANSI B16.24 #150, F.F.
OUTLET CONNECTION	4" BSP (M)
MONITOR ELEVATION	90 Deg. above horizontal & 65 Deg. below horizontal
MONITOR ROTATION	360 Deg. continuous
MONITOR MOVEMENT	Hand wheel driven fully enclosed worm gear
BODY	Cast Bronze
FINISH	Red to RAL 3001
WEIGHT (Approx)	92 Kg
ORDERING INFORMATION	Specify Monitor Model and Inlet Flange Size
APPROVAL	FM Approved

DESCRIPTION

Corrosion Resistant Bronze Monitor Model-3A WM4B, is durable manual controlled monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other Industrial application.

The monitor possess several design features that provides ease of operation, minimum maintenance and resistance to corrosive environments. The monitor is used with aspirating, non-aspirating and water nozzles with flow range upto 2000 GPM (7570 LPM).

The monitor has rugged, corrosion resistant cast bronze construction. The vertical and horizontal rotation is through corrosion resistant bronze swivel joints with double row of stainless steel ball bearing.

Both vertical and horizontal movements are controlled with handwheel driven fully enclosed worm gears and protected from the elements.

The monitor has large flow capability and can be manually operated by a single fire fighter. The design ensures to prevent jet reaction forces from effecting the horizontal and the vertical position of the monitor. The counter balance is not required to offset the weight of the nozzle. The monitor has the ability for 360 deg. continuous horizontal rotation and angle of elevation is 90 deg. above horizontal and 65 deg. below horizontal.

The water vanes in discharge tube reduces the turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, the friction loss through monitor must be considered while selecting the nozzle and the flow through the monitor with reference to available base pressure at inlet of the monitor. For flow and jet reach data refer monitor nozzle data sheet.

Note: (i) Pressure Gauge is optional supply

(ii) *For flow, refer 3A MN2 FM approved nozzle Data Sheet No. A-210109

INSTALLATION, TESTING AND MAINTENANCE

The monitor must be installed and operated carefully by a trained person, having good knowledge of equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with the full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

CAUTION

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly.

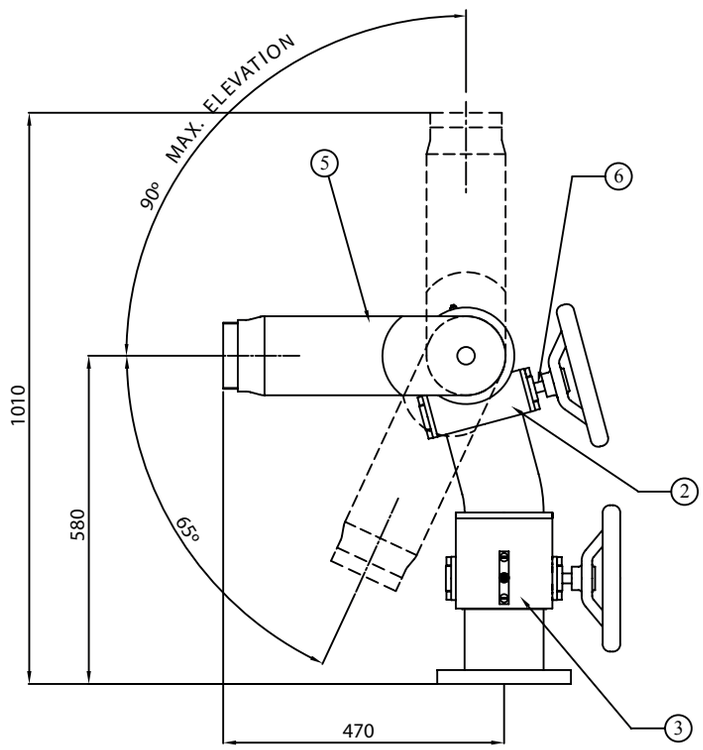
The piping must be able to with stand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

When installing monitor it is critical that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

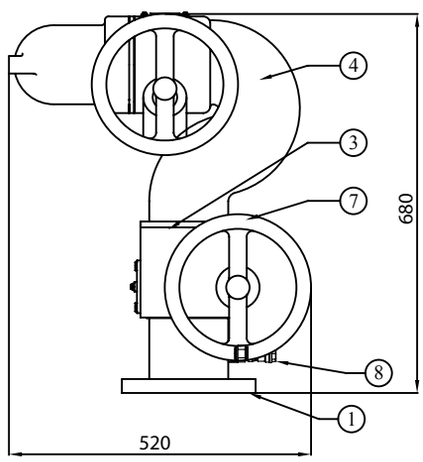
Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

Application of water or foam on an electric appliance can cause serious injury.

The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.



ELEVATION



SIDE VIEW

PART LIST

SR. NO	DESCRIPTION	MATERIAL SPECIFICATION
1	BASE FLANGE	BRONZE IS:318/ ASTM B62
2	WORM WHEEL	BRONZE IS:318/ ASTM B62
3	SWIVEL JOINT V & H ROTATION	BRONZE IS:318/ ASTM B62
4	ELBOW	BRONZE IS:318/ ASTM B62
5	DISCHARGE ELBOW	BRONZE IS:318/ ASTM B62
6	WORM SHAFT	STAINLESS STEEL
7	HANDLE WHEEL	CAST IRON
8	DRAIN VALVE	BRASS

NOTE:

1. Monitor inlet flange standard size is 100 NB (4”) to ANSI B16.24, 150#, other sizes 150 NB (6”) optional.
2. All dimensions in mm and are approximate.
3. Nozzle suitable to this Monitor is 3A MN2 (FM Approved)
4. Pressure Guage is optional supply.

3A MN1

3A MN1 NOZZLE TECHNICAL DATA	
NOZZLE FLOW RANGE	AS PER TABLE - 1
WATER INLET CONNECTION	Swivel Female 3" BSP
MATERIAL OF CONSTRUCTION	Bronze, Stainless Steel, Hard Anodized Aluminium with Stainless Steel internals
MAXIMUM SERVICE PRESSURE	12 Bar (175 PSI)
JET & FOG PATTERN	With Spinning teeth 120 degree angle
WEIGHT (Approx)	Bronze Nozzle - 9.2 Kg SS Nozzle - 8.8 Kg Aluminium Nozzle - 4.8 Kg
APPROVAL	FM Approved

DESCRIPTION

3A MN1, is fixed gallonage master stream nozzle, designed for heavy-duty use on fixed monitors. The nozzle is factory set for required flow between 400 to 800 GPM. The flow can be changed in the field by replacing plunger or addition of spacer. The flow pattern easily changeable under flowing condition. Superior fog pattern with field changeable spinning teeth. Excellent for AFFF application when used with premixed water-foam solution.

The nozzle is available with three different materials, bronze, stainless steel and hard coat anodized aluminium, all with stainless steel internals.

The performance data shown in this catalogue is effective stream trajectory in stand still air condition. The maximum overall reach of last water drop is approximately 3-5% more than the effective stream performance data given. The effective stream de-creases by about 10% when used as foam nozzle with premixed water foam solution. The jet stream may get effected considerably with tail or head wind.

MAINTENANCE

The nozzle must be inspected regularly for possible damage or dirt around the moving parts. If any abnormal conditions are observed such as poor discharge, excessive wear, water leak, corrosion effect, damage etc., then nozzle must be taken out of service and repaired by qualified technician or replaced.

The debris trapped in the nozzle may effect the nozzle performance. To remove trapped debris, the water flow must be stopped and thereafter carefully unscrew and remove the nozzle deflector.

Clean the nozzle and reassemble. While re-assembling the nozzle or as a normal preventive maintenance, water proof lubricant must be used on seal and moving parts for smooth operation. The nozzle must be operated periodically under full flow straight stream and for fog pattern.

Under normal condition water must be flown through the nozzle periodically and dirt around exterior moving parts must be cleaned, allowing nozzle to operate properly.

The nozzle must be inspected prior to and after each use. Greasing the moving parts and 'O' ring is required periodically. Over a time the seals may need to be replaced.

The owner is responsible for maintenance of the nozzle in proper operating condition.

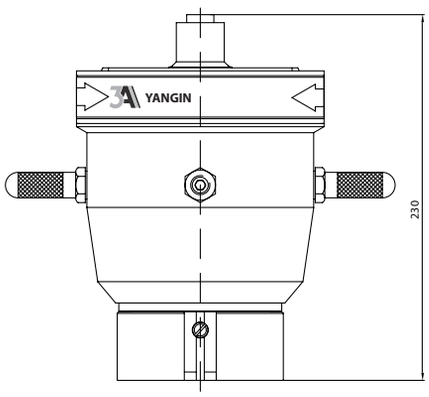
After use with foam, nozzle to be flushed with fresh water.

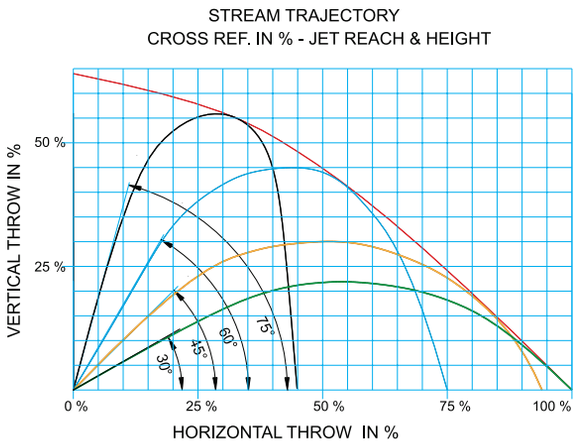
CAUTION

A trained personnel for fire fighting, with appropriate guidance & training must use the product to reduce the risk or injury. The nozzle must be fixed to the monitor carefully. The mismatched or damaged threads may cause leakage or uncouple the nozzle during operation.

Application of water or foam on an electric appliance can cause serious injury by electrocution, as water is a conductor of electricity.

The water supply to the nozzle must be gradual. Sudden surge of water supply must be avoided. The monitor mounting must be supported properly to support the nozzle reaction force.





PERFORMANCE DATA

TABLE - I

SET FLOW RATE LPM (GPM)	PRESSURE KG/CM.SQ. (PSI)	ACTUAL FLOW RATE LPM (GPM)	STRAIGHT STREAM RANGE METERS (FEET)
1500 (400)	5.6 (80) 7.0 (100) 8.4 (120)	1342 (354) 1500 (396) 1643 (434)	54 (177) 58 (190) 60 (196)
1900 (500)	5.6 (80) 7.0 (100) 8.4 (120)	1700 (450) 1900 (502) 2080 (550)	57 (187) 61 (200) 63 (207)
2270 (600)	5.6 (80) 7.0 (100) 8.4 (120)	2030 (536) 2270 (600) 2485 (656)	58 (190) 62 (203) 64 (210)
2650 (700)	5.6 (80) 7.0 (100) 8.4 (120)	2370 (626) 2650 (700) 2903 (767)	61 (200) 63 (207) 64 (210)
3030 (800)	5.6 (80) 7.0 (100) 8.4 (120)	2710 (716) 3030 (800) 3319 (876)	63 (207) 65 (213) 66 (216)

Performance data for water stream range are based at 30 deg. Nozzle elevation in still air condition And with hd monitor. When used with premixed water foam solution the foam reach will decrease by Approximately 10% to 15%. The above nozzle data is with hd monitor inlet pressure.

LIMITED WARRANTY

3A KÖPÜKLÜ YANGIN KORUNUM SİSTEMLERİ SAN. VE TİC. LTD. ŞTİ. hereby referred to as 3A YANGIN warrants to the original purchaser of the fire protection products manufactured by 3A YANGIN and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by 3A YANGIN. Products or Components supplied or used by 3A YANGIN, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. 3A YANGIN shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. 3A YANGIN will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. 3A YANGIN shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by 3A YANGIN. 3A YANGIN shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. 3A YANGIN shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall 3A YANGIN's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

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3A MN2

3A MN2 NOZZLE TECHNICAL DATA	
NOZZLE FLOW RANGE	As Per Table - 1
WATER INLET CONNECTION	Swivel Female 4" BSP
MATERIAL OF CONSTRUCTION	Hard Anodized Aluminium / Bronze / Stainless steel
MAXIMUM WORKING PRESSURE	12 Bar (175 PSI)
JET & SPRAY PATTERN	With Spinning teeth 120 degree angle
WEIGHT (Approx)	Aluminium material - 7.8 Kg Bronze material - 13.2 Kg Stainless steel - 12.0 Kg
APPROVAL	FM APPROAD

FM APPROVED

DESCRIPTION

3A MN2, is fixed gallonage master stream nozzle, designed for heavy-duty use on fixed monitors. The nozzle is factory set for required flow between 800 to 2000 GPM. The flow can be changed in the field by replacing plunger or addition of spacer. The flow pattern easily changeable under flowing condition. Superior fog pattern with field changeable spinning teeth. Excellent for AFFF application when used with premix water-foam solution.

The nozzle is available with three different materials, bronze, stainless steel and hard coat anodized aluminium, all with stainless steel internals.

The performance data shown in this catalogue is effective stream trajectory in stand still air condition. The maximum overall reach of last water drop is approximately 3-5% more than the effective stream performance data given. The effective stream decreases by about 10% when used as foam nozzle with premixed water foam solution. The jet stream may get effected considerably with tail or head wind.

MAINTENANCE

The nozzle must be inspected regularly for possible damage or dirt around the moving parts. If any abnormal conditions are observed such as poor discharge, excessive wear, water leak, corrosion effect, damage etc., then nozzle must be taken out of service and repaired by qualified technician or replaced.

The debris trapped in the nozzle may effect the nozzle performance. To remove trapped debris, the water flow must be stopped and thereafter carefully unscrew and remove the nozzle deflector. Clean the nozzle and reassemble.

While re-assembling the nozzle or as a normal preventive maintenance, water proof lubricant must be used on seal and moving parts for smooth operation. The nozzle must be operated periodically under full flow straight stream and for fog pattern.

Under normal condition water must be flown through the nozzle periodically and dirt, around exterior moving parts must be cleaned, allowing nozzle to operate properly.

The nozzle must be inspected prior to and after each use. Greasing the moving parts and 'O' ring is required periodically. Over a time the seals may need to be replaced.

The owner is responsible for maintenance of the nozzle in proper operating condition.

After use with foam, nozzle should be flushed with fresh water.

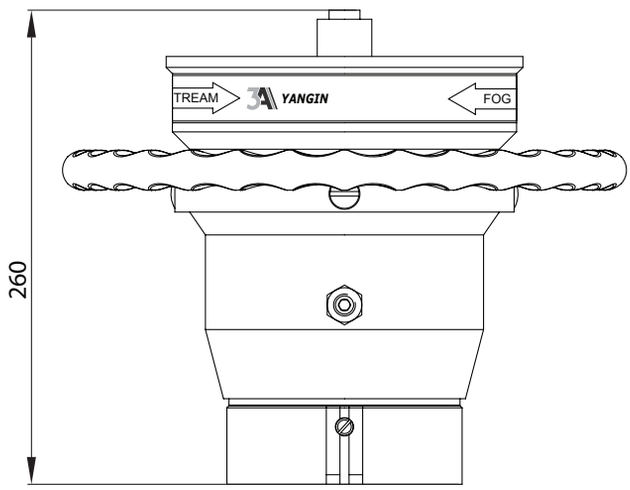
CAUTION

A trained personnel for fire fighting, with appropriate guidance & training must use the product to reduce the risk or injury. The nozzle must be fixed to the monitor carefully. The mismatched or damaged threads may cause leakage or uncouple the nozzle during operation.

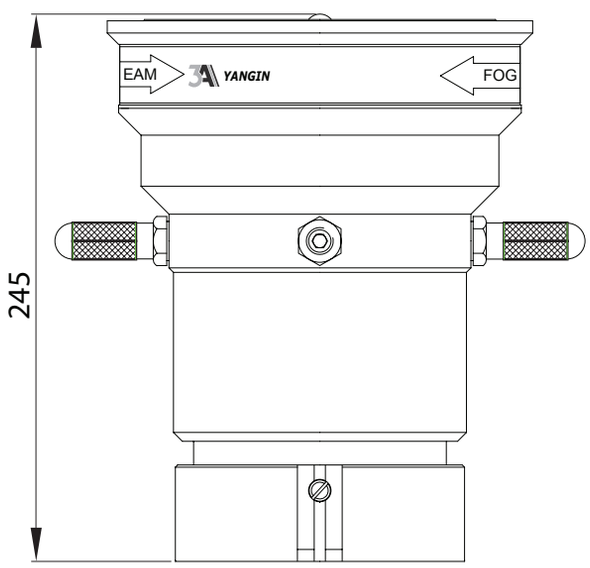
Application of water or foam on an electric appliance can cause serious injury by electrocution, as water is a conductor of electricity.

The water supply to the nozzle must be gradual. Sudden surge of water supply must be avoided. The monitor mounting must be supported properly to support the nozzle reaction force.

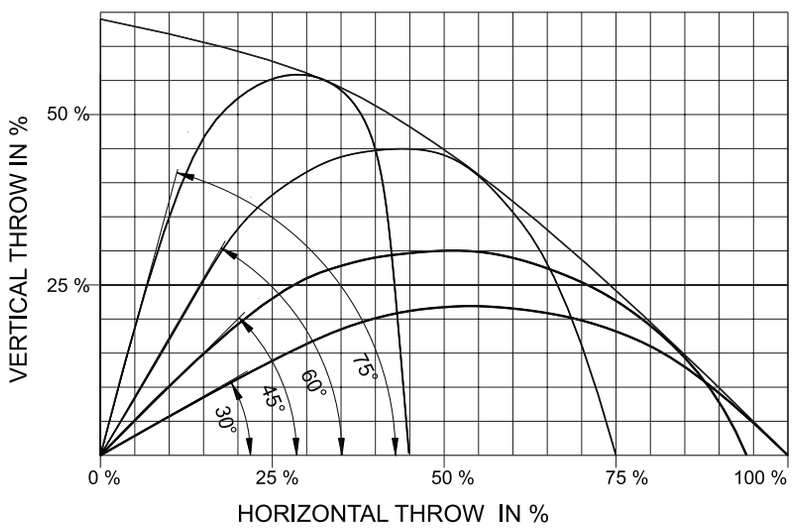
ALUMINIUM CONSTRUCTION



BRONZE CONSTRUCTION



STREAM TRAJECTORY
CROSS REF. IN % - JET REACH & HEIGHT



PERFORMANCE DATA

TABLE - I

SET FLOW RATE LPM (GPM)	PRESSURE KG/CM.SQ. (PSI)	ACTUAL FLOW RATE LPM (GPM)	STRAIGHT STREAM RANGE METERS (FEET)
3030 (800)	5.6 (80) 7.0 (100) 8.4 (120)	2710 (716) 3030 (800) 3319 (876)	64 (210) 68 (223) 70 (229)
3785 (1000)	5.6 (80) 7.0 (100) 8.4 (120)	3385 (894) 3785 (1000) 4146 (1095)	73 (240) 75 (246) 82 (269)
4165 (1100)	5.6 (80) 7.0 (100) 8.4 (120)	3725 (984) 4165 (1100) 4563 (1205)	75 (246) 78 (256) 80 (262)
4730 (1250)	5.6 (80) 7.0 (100) 8.4 (120)	4230 (1118) 4730 (1250) 5181 (1370)	75 (246) 79 (259) 80 (262)
* 5680 (1500)	5.6 (80) 7.0 (100) 8.4 (120)	5080 (1342) 5680 (1500) 6222 (1643)	76 (249) 80 (262) 81 (266)
* 6625 (1750)	5.6 (80) 7.0 (100) 8.4 (120)	5925 (1565) 6625 (1750) 7257 (1917)	75 (246) 81 (266) 82 (269)
* 7570 (2000)	5.6 (80) 7.0 (100) 8.4 (120)	6775 (1790) 7570 (2000) 8300 (2192)	77 (253) 82 (269) 83 (272)

Performance data for water stream range are based at 30 deg. Nozzle elevation in still Air condition and with hd monitor. When used with premixed water foam solution the foam Reach will decrease by approximately 10% to 15%.

* Flow with 3A Yangın monitor 3A WM4B only, for other monitors, flow is upto 1250 gpm.

The above nozzle data is with hd monitor inlet pressure.

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