

AFM-NEO SERIES – CONTAMINATION FREE AIRFLOW VISUALISATION IN CLEAN ROOMS ACC. TO ISO 14644-3 ANNEX B7



PRODUCT DESCRIPTION

Cleanrooms are dynamic systems. People and goods are constantly in motion. Installations, production lines and machines are periodically adjusted to the production of different products. According to the relevant standard ISO 14644-3 Annex B7 the operators of cleanrooms are obliged to give periodically evidence of the actual air flow situation by an air flow mapping basing e. g. on high purity water fog generators.

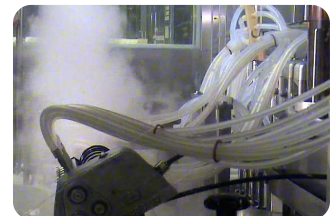
Sistema's ultrasonic water fog (aerosol) generators of the AFM-NEO Series do offer an unmatched potential for zero contamination air flow visualisation and tracking studies in cleanrooms according to ISO 14644-3 Annex B7. All versions of the AFM-NEO Series are portable, are operated with non-contaminating media (DI water) atomized into micro sized droplets.

FOG OUTPUT CHARACTERISTICS

- ✓ Unmatched Fog Output with up to 24 Piezos
- ✓ High Density
- ✓ High Purity
- ✓ Non-Contaminating
- ✓ No Fluid & No Oil

TYPICAL APPLICATIONS

- ✓ Air Flow Visualization and Tracking in Cleanrooms
- ✓ Containment Transport Studies on Process Tools
- ✓ Optimization of Equipment Locations
- ✓ Detection of unsuspected particulate and gaseous Containment Sources
- ✓ Tracking Routes of Air Infiltration into Cleanrooms
- ✓ Pressure Balancing (rooms and spaces)
- ✓ Operators Trainings



EXTRACT OF CUSTOMER LIST USING AFM-NEO AND PRECEDING SERIES



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MEDIA IN USE IN OPERATION

Purified Water = DI water (Deionised Water) or WFI (Water For Injection)

PIEZO FREQUENCY

1,7 MHz

DROPLET SIZE RANGE OF AFM-V SERIES ¹⁾

< 0.3 µm:	10 %
0.3 µm – 0.5 µm:	40 %
0.5 µm – 1.0 µm:	23 %
1.0 µm – 5.0 µm:	20 %
> 5.0 µm:	7 %

¹⁾ MEASURED 5 CM ABOVE PIEZO AT A WATER TEMPERATURE OF 7° C
(BEFORE RECOMBINATION EFFECTS)

AVERAGE WATER DROPLET SIZE AT

FOG OUTLET (TUBING END) OF AFM-NEO

2 – 4 µm ²⁾

²⁾ CONSIDERING RECOMBINATION EFFECTS DURING DROPLET TRANSPORT

DIMENSIONS (L X W X H)

420 x 260 x 280 (300) mm

WEIGHT FILLED (EMPTY)

21,84 (17,64) Kg



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LINE	PICTURE	ITEM #	ITEM DESCRIPTION
1	 <p>12 PIEZOS</p> <p>MAX. VISUALIZATION DISTANCE (VOLUME) 12 METERS (108 CBM)*</p> <p>* DEPENDING SITE CONDITIONS</p>	AFM12-NEO	 <p>ULTRASONIC WATER FOG GENERATOR AIR FLOW MAPPER AFM12 INCLUDING SYSTEM AIR FLOW MAPPER AFM12 ULTRASONIC MODULE WITH 12 PIEZOS 0 - 100 % ADJUSTMENT OF FOG INTENSITY AND DENSITY MICRO FAN, 24 V, IP 68 FOG OUTLET (Ø: 80 MM) <u>DOTMATRIX DISPLAY (ALPHANUMERIC USER INTERFACE) FOR INDICATION OF OPERATING STATE AND ALL OPERATING FUNCTIONS</u> FLEXIBLE TUBE (L X Ø: 3.000 X 80 MM) <u>ELECTRONICAL WATER FILL LEVEL SURVEY VIA CAPACITIVE SENSOR</u> COMPACT DIMENSIONS (L X W X H): 420 X 260 X 280 (300) MM NET WEIGHT 16,4 KG <u>TEMPERATURE SURVEY FUNCTION</u> <u>ELAPSED TIME MET</u> <u>REDUNDANCY FUNCTION</u> <u>SOFT START ELECTRONIC</u> 240 V 60 HZ POWER SUPPLY POWER CABLE USER MANUAL CE-CERTIFICATE 24 MONTHS WARRANTY</p>
2	 <p>18 PIEZOS</p> <p>MAX. VISUALIZATION DISTANCE (VOLUME) 15 METERS (135 CBM)</p> <p>* DEPENDING SITE CONDITIONS</p>	AFM18-NEO	 <p>ULTRASONIC WATER FOG GENERATOR AIR FLOW MAPPER AFM18 INCLUDING SYSTEM AIR FLOW MAPPER AFM18 ULTRASONIC MODULE WITH 18 PIEZOS 0 - 100 % ADJUSTMENT OF FOG INTENSITY AND DENSITY MICRO FAN, 24 V, IP 68 FOG OUTLET (Ø: 80 MM) <u>DOTMATRIX DISPLAY (ALPHANUMERIC USER INTERFACE) FOR INDICATION OF OPERATING STATE AND ALL OPERATING FUNCTIONS</u> FLEXIBLE TUBE (L X Ø: 3.000 X 80 MM) <u>ELECTRONICAL WATER FILL LEVEL SURVEY VIA CAPACITIVE SENSOR</u> COMPACT DIMENSIONS (L X W X H): 420 X 260 X 280 (300) MM NET WEIGHT 17,8 KG <u>TEMPERATURE SURVEY FUNCTION</u> <u>ELAPSED TIME MET</u> <u>REDUNDANCY FUNCTION</u> <u>SOFT START ELECTRONIC</u> 240 V 60 HZ POWER SUPPLY POWER CABLE USER MANUAL CE-CERTIFICATE 24 MONTHS WARRANTY</p>

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	 <p>24 PIEZOS MAX. VISUALIZATION DISTANCE (VOLUME) 18 METERS (162 CBM)</p> <p>* DEPENDING SITE CONDITIONS</p>	AFM24-NEO	 <p>ULTRASONIC WATER FOG GENERATOR AIR FLOW MAPPER AFM24 INCLUDING SYSTEM AIR FLOW MAPPER AFM24 ULTRASONIC MODULE WITH 24 PIEZOS 0 - 100 % ADJUSTMENT OF FOG INTENSITY AND DENSITY MICRO FAN, 24 V, IP 68 FOG OUTLET (Ø: 80 MM) <u>DOTMATRIX DISPLAY (ALPHANUMERIC USER INTERFACE) FOR INDICATION OF OPERATING STATE AND ALL OPERATING FUNCTIONS</u> FLEXIBLE TUBE (L X Ø: 3.000 X 80 MM) <u>ELECTRONICAL WATER FILL LEVEL SURVEY VIA CAPACITIVE SENSOR</u> COMPACT DIMENSIONS (L X W X H): 420 X 260 X 280 (300) MM NET WEIGHT 18,7 KG <u>TEMPERATURE SURVEY FUNCTION</u> <u>ELAPSED TIME MET</u> <u>REDUNDANCY FUNCTION</u> <u>SOFT START ELECTRONIC</u> 240 V 60 HZ POWER SUPPLY <u>POWER CABLE</u> <u>USER MANUAL</u> <u>CE-CERTIFICATE</u> 24 MONTHS WARRANTY</p>
			SURCHARGE ACCESSORIES
4		FL.TH.400	FOG LANCE STANDARD VERSION FOR FOG CURTAINS (L X Ø: 400 X 60 MM) PLUS BUTTERFLY THROTTLE VALVE W/HANDLE 60 (Ø 60 MM) FOR A 0-100 % PERFORMANCE ADJUSTMENT
5		FL.TH.800	FOG LANCE STANDARD VERSION FOR FOG CURTAINS (L X Ø: 800 X 60 MM) PLUS BUTTERFLY THROTTLE VALVE W/HANDLE 60 (Ø 60 MM) FOR A 0-100 % PERFORMANCE ADJUSTMENT
6		FL.TH.1.200	SET OF FOG LANCE EXTRA LONG VERSION FOR FOG CURTAINS (L X Ø: 1.200 X 60 MM) PLUS BUTTERFLY THROTTLE VALVE W/HANDLE 60 (Ø 60 MM) FOR A 0-100 % PERFORMANCE ADJUSTMENT
7		FL.TH.1.600	SET OF FOG LANCE EXTRA LONG VERSION FOR FOG CURTAINS (L X Ø: 1.600 X 60 MM) PLUS BUTTERFLY THROTTLE VALVE W/HANDLE 60 (Ø 60 MM) FOR A 0-100 % PERFORMANCE ADJUSTMENT

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LINE	PICTURE	ITEM #	ITEM DESCRIPTION
8		TUBE.3000	ADDITIONAL/SECOND FLEXIBLE TUBE STANDARD (L X Ø: 3.000 X 80 MM)
9		TUBE.5000	ADDITIONAL/SECOND FLEXIBLE TUBE EXTRA LONG (L X Ø: 5.000 X 80 MM)
10		Y.AFM	Y-PATTERN TUBE TO TUBE CONNECTOR FOR 1 IN 2 TUBING ARRANGEMENTS, TUBE EXTENSIONS OR COUPLING OF TWO AFM-NEO SYSTEMS
11		EXT.350	EXTENSION PIPE OF 350 MM ADDING UP TO THE FLEXIBLE TUBING AND BRING THE FOG INTO MORE REMOTE AREAS
12		EXT.700	EXTENSION PIPE OF 700 MM ADDING UP TO THE FLEXIBLE TUBING AND BRING THE FOG INTO MORE REMOTE AREAS
13	WR.PS	WR.PS	BUILT IN WIDE RANGE POWER SUPPLY COVERING 240 V 60 HZ & 110 V 50 HZ & OTHERS
14		BOX.AFM	TRANSPORT TROLLEY FITTED WITH HANDLES AND HEAVY DUTY FOAM FOR AFM UNIT AND ACCESSORIES, DIMENSIONS (L X W X H) @ 560 X 480 X 505 MM, COLOUR: GREY

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LINE	PICTURE	ITEM #	ITEM DESCRIPTION
15		LED.BOOST * * AVAILABLE BY SEP 8 TH , 2015	LED LUMINAIRE WITH ADJUSTABLE SPOT SIZE AND TWO SPECIAL MULTI LENSE ARRAYS FOR CREATING RECTANGULAR OR LINE PATTERNS. CREATES A HIGHER CONTRAST AND BY THIS AN IMPROVED FOG VISIBILITY AT SPECIFIC IN FIELD ILLUMINATION APPLICATIONS. <u>BOOSTING, SUPPORTING AND ENHANCING OVERALL SYSTEM PERFORMANCE (VISIBILITY OF FOG & VISUALISATION DISTANCE) BY APPROX. 50 %*</u> . LENSE ARRAY #1 (EASY TO SNAP IN) OFFERS TURNING THE LIGHT PATTERN INTO ANY ANGLE. LENSE ARRAY #2 (USED WITH ADDITIONAL FILTER-HOLDER) SUPPORTS BLOCKING OF STRAY LIGHT AROUND THE CENTER BEAM. COLOUR TEMPERATURE: 3000-3200K (INCLUDING DIMMING). POSSIBLE REMOTE CONTROL VIA DMX. POWER CONSUMPTION @LESS THAN 100W AT FULL POWER.
16		RE.AFM	RANGE EXTENDER FOR AFM.NEO <u>DOUBLING OPERATION CYCLE WITH ONE TANK FILLING</u> BY EXTRACTING LARGE DROPLETS FROM AEROSOL. CAN BE EQUIPPED EITHER AFTER PURCHASE.
17		RC.AFM	INFRARED REMOTE CONTROL FOR ALL MAJOR SYSTEM FUNCTIONS AND MODES
18		LF.AFM	2R STAINLESS STEEL TRANSPORT "LAFETTE" ON WHEELS (TWO MOVABLE) W/LONG HANDLE FOR MOVING THE AFM ON PROJECT WITHOUT LIFTING, DIMENSIONS (L X W): 450 X 780 MM 